
**REFERENCE
DOCUMENT
ANNUAL FINANCIAL
REPORT**

2014



Public limited company
with a share capital of €930,004,234
Registered office: 22-30, avenue de Wagram
75382 Paris cedex 08 - France
552 081 317 RCS Paris

EDF group

Reference Document

2014 Annual Financial Report



This Reference Document was filed with the Autorité des marchés financiers (the “AMF”) on 14 April 2015 in accordance with Article 212-13 of the AMF General Regulations. It may be used for purposes of a financial transaction if supplemented with an offering memorandum (*note d’opération*) that received a visa from the AMF. This document has been prepared by the issuer and its signatories are responsible for its content.

Pursuant to Article 28 of the European Commission Regulation (EC) no. 809/2004, the following information is incorporated by reference into this Reference Document:

- consolidated financial statements of the EDF group for the fiscal year ended 31 December 2013, prepared in accordance with international accounting standards, as well as the accompanying Statutory Auditors’ reports, set forth respectively in Chapter 20, sections 20.1 (pages 281 to 386) and 20.2 (pages 387 and 388) of the EDF group’s 2013 Reference Document;
- consolidated financial statements of the EDF group for the fiscal year ended 31 December 2012, prepared in accordance with international accounting standards, as well as the accompanying Statutory Auditors’ reports, set forth respectively in Chapter 20, sections 20.1 (pages 267 to 365) and 20.2 (pages 366 and 367) of the EDF group’s 2012 Reference Document;
- the review of the financial position and results of the EDF group for the fiscal year ended 31 December 2013, presented in Chapter 9 (pages 175 to 210) of the EDF group’s 2013 Reference Document;
- the review of the financial position and results of the EDF group for the fiscal year ended 31 December 2012, presented in Chapter 9 (pages 165 to 199) of the EDF group’s 2012 Reference Document.

Copies of this Reference Document are available free of charge at EDF (22-30, avenue de Wagram, 75382 Paris cedex 08) and on the EDF website (<http://www.edf.com>) as well as on the AMF website (<http://www.amf-france.org>).

In this Reference Document, unless otherwise stated, references to “**Company**” and “**EDF**” refer to EDF SA, the parent company, and references to “**EDF group**” and “**Group**” refer to EDF and its subsidiaries and affiliates.

In addition to the information contained in this Reference Document, investors should carefully consider the risk factors described in section 4.1 (“**Risk factors**”). These risks, or one of these risks, could negatively impact the Group’s activities, its financial position or its financial results. Furthermore, other risks, which have not yet been identified or considered as material by the Group, could have the same negative impact and investors could consequently lose all or part of their investment in the Company.

This Reference Document also contains information relating to the markets in which the EDF group is present. This information has been taken from surveys carried out by external sources. Considering the very rapid changes that characterise the energy sector in France and globally, it is possible that this information could prove to be erroneous or no longer up to date on the filing date of this Reference Document or thereafter. The Group’s activities could consequently evolve in a manner different from those described in this Reference Document and the declarations or information appearing in this Reference Document could prove to be erroneous.

Forward-looking statements in this Reference Document, notably in section 6.1 (“**Strategy**”) could also be impacted by risks, uncertainties or other factors that may cause the future income, performances and achievements of the Group to differ significantly from the objectives expressed and suggested. These factors may include changes in the economic and commercial environment, in regulations, as well as the factors set forth in section 4.1 (“**Risk factors**”).

Pursuant to European and French legislation, the entities responsible for the transmission and distribution of electricity within the EDF group may not communicate certain information they gather within the framework of their activities to the other entities of the Group, including its Management. Similarly, certain data specific to generation and supply activities may not be communicated to the entities responsible for transmission and distribution. This Reference Document has been prepared by the EDF group in compliance with these rules.

A glossary for the major technical terms is provided at the end of this Reference Document, before the Appendices.

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EDF – Guillaume Murat

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Person responsible

1.1 Person responsible for the Reference Document

Jean-Bernard Lévy, Chairman and Chief Executive Officer of EDF.

1.2 Certification from the person responsible for the Reference Document containing the annual financial report

Having taken all reasonable care to ensure that such is the case, I certify that, to the best of my knowledge, the information contained in this Reference Document accurately reflects the facts and contains no omission likely to affect its meaning.

I certify that, to the best of my knowledge, the financial statements are prepared in accordance with accounting standards and that they give a true and fair view of the assets and liabilities, financial position and the income of the Company and of all the companies included in the consolidation, and that the management report (*Rapport de gestion*) presents a true and fair view of the business trends, income and financial position of the Company and of all the companies included in the consolidation and a description of the main risks and uncertainties they face.

I have obtained a letter from the Statutory Auditors certifying that they have verified the financial and accounting information provided in this Reference Document and that they have read the document in entirety. This letter contains no comments.

The consolidated financial statements for the year ended 31 December 2014 presented in the Reference Document have been reviewed by the Statutory Auditors; their report, set forth on pages 429 and 430 of this document, contains comments in respect of:

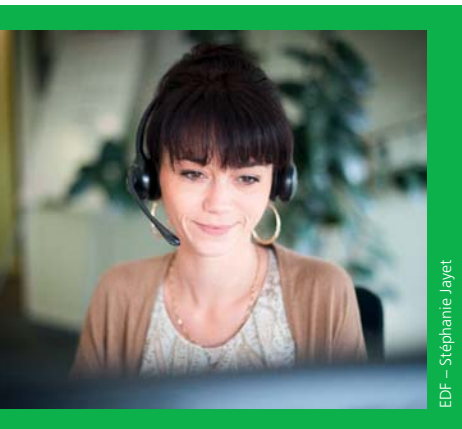
- the change in accounting principles described in note 1.2.1.1 and 2.1, and related to the application as of 1 January 2014 of IFRS 10 "Consolidated financial statements", IFRS 11 "Joint arrangements" and IFRS 12 "Disclosure of Interests in Other Entities" standards; and

- the valuation of long-term provisions relating to nuclear electricity production, which results from management's best estimates and assumptions as described in notes 1.3.2.1 and 29; this valuation is sensitive to the assumptions made concerning technical processes, costs, inflation rates, long-term discount rates and forecast cash outflows; changes in these parameters could lead to a material revision of the level of provisioning.

The consolidated financial statements for the year ended 31 December 2013 presented in the Reference Document have been reviewed by the Statutory Auditors; their report and comments are set forth on pages 387 and 388 of this document which contain comments in respect of the application as of 1 January 2013 of IAS 19 revised *Employee benefits* and the valuation of long term provision relating to nuclear generation.

The consolidated financial statements for the year ended 31 December 2012 presented in the Reference Document have been reviewed by the Statutory Auditors; their report and comments are set forth on pages 366 and 367 of this document which contain comments in respect of the change in accounting method for actuarial gains and losses on post-employment benefits and the valuation of long term provision relating to nuclear generation.

Jean-Bernard Lévy,
Chairman and Chief Executive Officer of EDF



2

Auditors

2.1 Statutory Auditors

Deloitte et Associés

185, avenue Charles-de-Gaulle, 92200 Neuilly-sur-Seine, represented by Mr. Patrick Suissa.

KPMG SA

Immeuble Le Palatin, 3, cours du Triangle, 92939 Paris – La Défense cedex, represented by Mr. Jacques-François Lethu.

The Statutory Auditors were initially appointed by decision of the Shareholders' Meeting of 6 June 2005 for a period of six fiscal years expiring

at the end of the Shareholders' Meeting ruling on the financial statements covering the fiscal year closing 31 December 2010.

Their terms of office were renewed by decision of the Combined Shareholders' Meeting of 24 May 2011 for a new period of six fiscal years expiring at the end of the Shareholders' Meeting ruling on the financial statements covering the fiscal year closing 31 December 2016.

The aforementioned Auditors consequently certified the financial statements reproduced in this Reference Document.

2.2 Deputy Auditors

BEAS

195, avenue Charles-de-Gaulle, 92200 Neuilly-sur-Seine.

KPMG Audit IS

Immeuble Le Palatin, 3, cours du Triangle, 92939 Paris – La Défense cedex.

The term of office of the company BEAS, initially appointed as Alternate Auditors by decision of the Shareholders' Meeting of 6 June 2005 for a period of six fiscal years expiring at the end of the Shareholders' Meeting ruling on the financial statements covering the fiscal year closing 31 December

2010, was renewed by decision of the Combined Shareholders' Meeting of 24 May 2011 for a new period of six fiscal years expiring at the end of the Shareholders' Meeting ruling on the financial statements covering the fiscal year closing 31 December 2016.

The company KPMG Audit IS was appointed as Alternate Auditors by decision of the Combined Shareholders' Meeting of 24 May 2011, replacing SCP Jean-Claude André, for a period of six fiscal years expiring at the end of the Shareholders' Meeting ruling on the financial statements covering the fiscal year closing 31 December 2016.



3

Key financial information

Pursuant to European Regulation no. 1606/2002/EC of 19 July 2002 on the adoption of international accounting standards, the EDF group's consolidated financial statements for the year ended 31 December 2014 are prepared under the international accounting standards published by the IASB and

approved by the European Union for application as of 31 December 2014. These international standards are the IAS (International Accounting Standards), IFRS (International Financial Reporting Standards) and their interpretations (SIC and IFRIC).

Key financial information

The selected financial information presented below is taken from the EDF group's consolidated financial statements for the year ended 31 December 2014, which have been audited by EDF's Statutory Auditors.

The selected financial information below should be read in conjunction with (i) the consolidated financial statements included in section 20.1 ("Historical Financial Information") and (ii) the operating and financial review contained in Chapter 9 of this Reference Document.

Extracts from the consolidated income statements

(in millions of Euros)	2014	2013 ⁽¹⁾	2012 ⁽²⁾
Sales	72,874	71,916	72,178
Operating profit before depreciation and amortisation (EBITDA)	17,279	16,099	15,998
Operating profit (EBIT)	7,984	8,334	8,159
Income before tax of consolidated companies	5,433	5,392	4,825
EDF NET INCOME	3,701	3,517	3,275

(1) Figures published in 2014 for the 2013 financial year restated for the impact of retrospective application of IFRS 10 and IFRS 11.

(2) Figures published in 2013 for the 2012 financial year restated for the impact of retrospective application of IAS 19 revised and the change in presentation of disposals of generation assets by EDF Énergies Nouvelles as part of its Development and Sale of Structured Assets (DSSA) business.

Extracts from the consolidated balance sheets

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013 ⁽¹⁾	31/12/2012 ⁽²⁾
Non-current assets	195,202	182,933	181,758
Current assets	72,769	66,832	68,085
Assets classified as held for sale	18	1,154	241
TOTAL ASSETS	267,989	250,919	250,084
Equity – Group share	35,191	34,207	26,257
Non-controlling interests	5,419	4,998	4,854
Non-current provisions	68,596	61,470	61,267
Other non-current liabilities	100,891	94,110	99,350
Current liabilities	57,892	56,134	58,307
Liabilities related to assets classified as held for sale	–	–	49
TOTAL EQUITY AND LIABILITIES	267,989	250,919	250,084

(1) Figures published in 2014 for the 2013 financial year restated for the impact of retrospective application of IFRS 10 and IFRS 11 and change of allocation from current to non-current of other accounts receivable and other accounts payable.

(2) Figures published in 2013 for the 2012 financial year restated for the impact of retrospective application of IAS 19 revised and the change in presentation of disposals of generation assets by EDF Énergies Nouvelles as part of its Development and Sale of Structured Assets (DSSA) business.

Extracts from the consolidated cash flow statements

<i>(in millions of Euros)</i>	2014	2013 ⁽¹⁾	2012
Net cash flow from operating activities	10,625	10,865	9,924
Net cash flow used in investing activities	(12,393)	(11,707)	(14,410)
Net cash flow from financing activities	1,223	896	4,657
NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS	(545)	54	171

(1) Figures published in 2014 for the 2013 financial year restated for the impact of retrospective application of IFRS 10 and IFRS 11.

Information concerning net indebtedness

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013 ⁽¹⁾	31/12/2012
Loans and other financial liabilities	55,652	51,637	59,932
Derivatives used to hedge liabilities	(3,083)	128	(797)
Cash and cash equivalents	(4,701)	(5,096)	(5,874)
Liquid assets	(12,990)	(12,566)	(10,289)
Loans to RTE ⁽²⁾ and to jointly-controlled subsidiaries ⁽³⁾	(670)	(670)	(1,397)
NET INDEBTEDNESS	34,208	33,433	41,575

(1) Figures published in 2014 for the 2013 financial year restated for the impact of retrospective application of IFRS 10 and IFRS 11.

(2) RTE: Réseau de Transport d'Électricité (RTE).

(3) Includes loans to jointly controlled subsidiaries (consolidated by the proportional method) for figures to 31 December 2012 only.

4

Risk Factors



EDF – Cyrus Cornut ▲ Jean-Louis Burnod ▼



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4.1 Risk factors

The Group operates in an environment that is experiencing profound change, which generates various risks, some of which are beyond its control and which are in addition to the risks inherent in its business operations. Below the Group describes the material risks to which it considers itself exposed. One or more of these risks could have an adverse effect on the Group's activities or results. Moreover, other risks, of which it is currently unaware, or which it currently believes are not material, may also have an adverse effect.

In particular, the Group faces legal risks in all of its activities and in its various markets. Legal risks associated with *inter alia* the statutory and regulatory framework, operating activities, partnerships set up and contracts concluded with customers and suppliers are described below and mentioned in section 4.3 ("Dependency factors"). Key litigation, proceedings and arbitrations in which the Group is involved are described in section 20.5 ("Legal proceedings and arbitration").

The risks described below are risks associated with the European energy markets and the Group's activities, risks specifically related to the Group's nuclear activities, risks related to the structure of the Group and changes thereto and, lastly, risks associated with EDF's capital structure and the listing of its shares.

4.1.1 Risks associated with the European energy markets

The Group faces stiff competition in the European energy markets and, in particular, in the French electricity market, which is its main market.

In France, since 1 July 2007, the electricity market has been totally open to competition. All EDF customers may choose their electricity supplier and can therefore choose any of EDF's competitors (see section 6.2.1.2 ("Sales and marketing")). EDF is prepared to meet the competition, but the changing competitive landscape (new regulations, emergence of new players, mergers between existing players, changes in market prices, etc.) could cause EDF to lose market share. The end of regulated prices as of 31 December 2015 for sites signing up for power greater than 36kVA could lead to EDF losing market share (see section 6.2.1.2.1.3 ("Regulated tariff sales contracts")). This loss of market share could, at constant consumption and price levels, have an adverse impact on the Group's sales in France. Lastly, to achieve its objectives, EDF could be forced to increase its supply expenditures or reduce its margins (especially in the event of price competition), which would have a negative effect on its profitability.

Elsewhere in Europe, the Group faces differing contexts, depending on the competitive situation (more or less totally open markets, position of competitors, regulations, etc.). Therefore, in some countries, or in certain regions within a country, the Group must pursue a defensive strategy to protect its market share, as it does in France. On the other hand, in other countries, the Group must pursue an offensive strategy to gain market share. The type of competition, the expansion of such competition and its effect on the Group's activities and its results vary from one country to another. These factors depend on the degree of deregulation in the country in question and on various other factors over which the Group has no control.

Within this context, despite the fact that the Group considers that the European electricity market offers opportunities, the Group may not be able to defend its market share or gain expected market shares, or it may see its margins decrease, which would have a negative effect on its activities, its strategy and its financial results.

The legal framework governing the liberalisation of the energy sector is recent. This framework may change in the future and become more restrictive.

The Group's activities in France and abroad are subject to numerous regulations (see section 6.5 ("Legislative and regulatory environment")). Moreover, laws may vary from one country to another, including in the European Union where directives only establish a general framework.

This legal framework organizing the liberalisation of the energy sector is relatively recent and does not necessarily provide comprehensive solutions to the difficulties created by market liberalisation. The legal framework is therefore subject to change in the future, and such changes could be unfavourable to the Group. Such future changes to the legal framework, whether in France or abroad, could generate additional costs, be inconsistent with the Group's growth model or change the competitive context in which the Group operates.

All of these regulatory changes in the various countries may lead to higher costs for operators and impact the profitability of current and future generating units.

Due to its position in the French market, the Group faces the risk of having its expansion limited more than its competitors.

Although it has seen a decrease in its market share due to market liberalisation, EDF should remain the largest operator in the French electricity market over the next few years, particularly with respect to power generation and supply.

The transmission and distribution activities operated by Réseau de Transport d'Électricité (RTE) and Électricité Réseau Distribution France ("ERDF"), respectively, are required to be operated in a manner that ensures they are independent from generation and supply activities in order to ensure non-discriminatory access to all users (see section 6.2.2 ("Regulated activities in France")).

The draft bill on energy transition for green growth, currently under review by Parliament, should, after being adopted in 2015, lead to additional constraints with regard to the power generation tools (cap of the nuclear share in the French electricity generation to 50%, cap of the total authorised capacity of nuclear generation to 63.2GW, see section 6.5.8.2 ("Future regulations at national level" – "Draft bill on energy transition for green growth")) and the company's governance (obligation for any operator producing more than a third of the national electricity generation to draft a strategic plan outlining the actions it agrees to implement to meet the targets set in the multiannual energy programme (PPE) and appointment of a commissioner to these operators empowered to object to investment decisions whose implementation would be incompatible with the objectives of the strategic plan or the multiannual energy programme).

Although EDF complies and will continue to strictly comply with the applicable competition and non-discrimination rules, competitors have initiated and may initiate litigation on the grounds of non-compliance with these rules, and such litigations could be decided against the Group's interests.

In addition, the competent authorities or certain governments could, in order to maintain or enhance competition in certain energy markets, take decisions contrary to the Group's economic or financial interests or that impact its model as an integrated and balanced operator (see in particular section 6.5.3.1 ("European legislation") and section 20.5.1 ("Legal proceedings concerning EDF")), which could have a material adverse impact on the Group's model, activities and financial results.

On 4 November 2014, the government announced that the decree specifying the identification and accounting procedures for the constituent costs of the regulated access to electricity generated by existing nuclear capacity (*Accès Régulé à l'Électricité Nucléaire Historique* or ARENH) should be published in the first half of 2015 for implementation from 1 July 2015. Until said date, the price is maintained at €42/MWh. The draft decree was submitted to the European Commission in early July 2014. In its report on regulated electricity sales tariffs of October 2014, the CRE estimated at +2€/MWh the necessary change in the price of the ARENH in 2015.

Other European countries may also claim that the liberalisation of the French market is insufficient and implement measures intended to slow the Group's expansion in their own countries.

Laws and regulations that require transmission and distribution activities to be managed independently are limiting control over these activities.

In accordance with current laws and regulations, EDF manages its transmission and distribution networks independently from its generation and supply activities and has transferred its distribution and transmission activities to wholly-owned subsidiaries. EDF has been and may be affected by the loss of control over certain strategic and operational decisions, which may have an impact on the outlook for and profitability of its transmission and distribution activities in France (see section 6.5 ("Legislative and regulatory environment")). At the same time, EDF will continue to bear certain risks associated with its operations, potential liability to third parties and factors that may affect the profitability of its assets.

The Group may face similar risks in countries where it owns or manages transmission or distribution networks and where it is subject to similar regulatory restrictions.

4.1.2 Risks associated with the Group's activities

The Group operates facilities that may cause significant harm to the natural or human environment or for which accidents, natural disasters or external attacks may have serious consequences.

The risks specific to nuclear facilities are described separately below in section 4.1.3 ("Specific risks related to the Group's nuclear activities").

Persons working in or near electricity transmission and distribution facilities may, in the event of an accident, error or negligence, be exposed to the risks of electric shock and electrocution. In this field, the Group implements necessary accident prevention and safety measures. However, the Group cannot guarantee that these measures will prove sufficient in all cases.

Questions concerning the risks to human health from exposure to electromagnetic fields (EMF), in particular, from power lines operated by the Group, have been raised both in France and abroad. Based on studies completed over the past 20 years, the existence of health risks due to exposure to EMFs has not been proven. Furthermore, in a report published in June 2007, the World Health Organisation considers that health risks, if any, are low and that adopting arbitrarily low exposure limits is unjustified. In 2010, RTE, in conjunction with the French Mayor's Association, launched an information and measurement campaign on the subject of very low-frequency (50Hz) electromagnetic fields for the mayors of 18,000 municipalities that are crossed by high and very high voltage power lines. This joint campaign reinforces existing communication on EMFs and aims to respond openly to questions that neighbours may have about such structures.

The French government supports and bolsters RTE's transparency efforts on this topic: in application of the Grenelle 2 Act of 12 July 2010, a decree of 1 December 2011 adopted a plan for controlling and monitoring electromagnetic fields emitted by high-voltage structures. In this connection, RTE provides the public with measurements online on its "Key to the fields" information website dedicated to EMFs. At this time, results from 30 years of research are available, but it cannot be excluded that medical knowledge about health risks related to exposure to EMFs may evolve, public sensitivity about such risks could increase or the precautionary principle could be applied very broadly. Despite these efforts, the possibility remains that the EDF group could be exposed to increased litigation or that the issue may lead to the adoption of more stringent and costly measures for the operation or construction of transmission or distribution networks (see section 6.5.6.1 ("Basic regulations applicable to the environment, health, hygiene and safety")).

More generally, the Group operates or has operated in France and abroad facilities which, as currently operated, could be or could have been the source of industrial accidents or environmental and public health impacts (such as inadequately controlled emissions, leakages in electricity supply lines insulated with pressurized oil, a failure of decontamination facilities, pathogenic micro-organisms, asbestos, polychlorinated biphenyls ("PCBs"), greenhouse gas emissions, etc.). In particular, large quantities of hazardous materials (in particular, explosive or flammable materials, such as gas and fuel oil) are stored in certain facilities (thermal power plants, electrical transformer, exploration and generation of hydrocarbons, storage capacities, etc.). These facilities may be located in industrial areas where other activities subject to similar risks are conducted, which means that the Group's own facilities may be impacted by accidents occurring at neighbouring facilities owned by other operators and not under the Group's control.

In accordance with ISO 14001 (see section 4.2.2.4 ("Management of risks associated with industrial accidents or the Group's environmental and health impacts")), the Group implements appropriate measures to prevent and, if necessary, repair any industrial accidents or environmental damage caused by the facilities that it operates. These measures are intended, in particular, to protect the Group not only from the risk of an accident (such as explosion, fire, etc.) occurring in its own facilities, but also from the impact of such an accident occurring in a neighbouring facility owned by a third party. However, in general, the Group cannot guarantee that the measures taken to control these risks will prove fully effective if any of the events listed above were to occur. An accident of the type described above could have serious consequences for persons, property and business continuity, and the Group could be found liable. Insurance policies for civil liability and damages taken out by the Group could prove to be significantly inadequate, and the Group cannot guarantee that it will always be able to maintain a level of cover at least equal to current cover levels and at the same cost. The frequency and magnitude of natural disasters seen over the past few years could have and have had a significant impact on the capacities of the insurance and reinsurance market and on the costs of civil liability and damage insurance cover for the Group. Such accidents could also lead to the shutdown of the facility affected and, possibly, of similar facilities that may be considered to present the same risks (see 4.2.2. ("Management of industrial and environmental risks") and 4.2.3 ("Insurance")).

Lastly, facilities or assets operated by the Group may be the target of external attacks or malicious acts of any kind. Safety measures were incorporated into the design of the facilities and sites, and protective measures have been taken by EDF. Moreover, safety measures to counter all forms of attacks have been implemented in conjunction with the public authorities. Nonetheless, like any safety measures intended to counter an external threat, the Group cannot guarantee that these will prove fully effective in all cases. An attack

or malicious act committed on these facilities could have consequences such as injury to persons and damage to property, the Group being held liable on the grounds of measures judged to be inadequate and interruptions to operations. In addition, the Group cannot guarantee that European and national legislation regarding the protection of sensitive sites and critical infrastructure will not become more restrictive, which could generate additional investments or costs for the Group.

Any one of these events may have material negative consequences on the Group's image, activities, results and financial position.

A significant share of the Group's revenue is generated from activities subject to regulated rates, and changes in such rates may have an impact on the Group's results.

In France, a significant share of the EDF group's revenue depends on regulated rates that are set by public or regulatory authorities (integrated regulated sale rates and TURPE – see section 6.2.2.4 ("Tariffs for Using the Public Electricity Transmission and Distribution Networks (TURPE)"). This method of setting rates with the participation of regulatory authorities also applies in other countries where the Group operates.

The principles defining rights to tariffs are described in the NOME Act of 7 December 2010 and codified in Articles L. 337-7 to L. 337-9 and Article L. 445-5 of the French Energy Code (see section 6.2.1.2.1.3 ("Regulated sales tariff contracts")). The public and regulatory authorities may decide to limit or block rate increases, yet require quality of service to remain unchanged. These authorities may also change the conditions of access for such regulated rates. Certain stakeholders may also challenge in court the decisions setting rates, to the Group's detriment.

The Group cannot guarantee that the regulated sales or purchase rates will always be set at a level which would allow it to maintain its short-, medium- or long-term investment capacity or its property interests, while ensuring a fair return on the capital invested by the Group in its generation, transmission and distribution assets.

EDF has certain obligations, in particular public service obligations, that are remunerated by mechanisms that may not provide complete compensation for additional costs incurred in connection with such obligations, or that are subject to change.

The public service contract entered into by the French government and EDF on 24 October 2005 specifies the objectives and terms for performing the public service obligations that EDF is appointed to perform under law (in particular Articles L. 121-1 *et seq.* of the French Energy Code), and also sets out the mechanisms under which EDF is compensated for the performance of these obligations (see section 6.5.2 ("Public service in France")).

The development of renewable energies connected directly to the distribution network may, in certain regions, saturate the reception capacities of the source substations and networks. This situation may possibly generate local imbalances, or disputes if ERDF must disconnect certain producers or connect them with significant delays. New investments may be required in these regions, with the risk that the costs associated therewith may not be taken into account.

EDF cannot be sure that the compensation mechanisms provided in the laws and regulations applicable to it for performing these public service obligations and adopting regulated rates will fully compensate additional costs incurred to perform such obligations and adopt such rates. Furthermore, EDF cannot guarantee that these compensation mechanisms will never be subject to change or that existing mechanisms will fully cover potential additional costs that may be incurred in relation with new duties imposed on EDF in connection with its public service obligations, in particular when a new public service contract is negotiated.

The occurrence of any of these events may have an adverse impact on EDF's activities and financial results.

The Group's activities require numerous administrative permits that may be difficult to obtain or that may be obtained only subject to conditions that may become significantly more stringent. Administrative appeals may also be filed against such permits, which may hurt the Group's business.

The operation and expansion of the Group's industrial activities – generation, transmission and distribution – require numerous administrative permits, at both local and national levels, in France and abroad. The procedures for obtaining and renewing these permits can be drawn-out and complex. These permits are not obtained systematically and the requirements for obtaining them may change and are not always predictable. Even when these permits have been granted, stakeholders may file administrative appeals against them (see, in particular, section 20.5 ("Legal proceedings and arbitration")). Accordingly, the EDF group may incur significant expenses in complying with the requirements for obtaining or renewing these permits (for example, costs of preparing permit applications, investments associated with installing equipment required before a permit will be issued, setoffs of environmental impacts of structures to be built). This may also handicap the Group's industrial activities. Delays, overly high costs or the suspension of its industrial activities due to the inability to retain or renew permits may have an adverse impact on the Group's activities and profitability. In addition, the Group may also invest resources without obtaining necessary permits and authorisations and therefore have to cancel or withdraw from a project, which may have an adverse impact on its business, expansion or financial results.

At times, the Group operates its generation, transmission, distribution or supply businesses pursuant to public service concession arrangements and it is not always the owner of the assets it operates.

The Group does not always own the assets that it uses for its activities and, in such case, frequently operates them pursuant to a public service concession arrangement.

In France, for example, ERDF does not own all distribution network assets, but operates them under concession agreements negotiated with local authorities (see section 6.2.2.2.2 ("Distribution activities")), which guarantee it the exclusive right to engage in expansion actions and operate the public electricity distribution network. Under the law, only ERDF can be appointed by local authorities to operate their distribution networks, except for networks operated by local distribution companies (LDCs). Therefore, at this time, when a concession agreement is renewed, ERDF does not compete with other operators. However, the Group cannot guarantee that such provisions will not be amended by law in the future (see section 6.5.5 ("Public electricity distribution concessions")). Furthermore, the Group may not obtain the renewal of these contracts under the same financial terms and conditions (see section 6.2.2.2.2 ("Distribution activities")).

ERDF's deployment of smart meters (Linky) has been planned and broken down into two stages, with the first invitation to tender for the supply and installation of three million meters, which should be rolled out by 2016 (see section 6.2.2.2.5 ("Future challenges (replacement, development, smart meters)")).

In France, RTE is both the owner and operator of the public transmission system pursuant to the standard concession terms of reference signed by the Minister of Industry (Decree no. 2006-1731 of 23 December 2006 – see section 6.2.2.1 ("Transmission – Réseau de Transport d'Électricité (RTE)")) and section 6.5.3.2 ("French legislation: Energy Code")).

Hydropower generation facilities of 4.5MW or more are also operated under concessions awarded by the French government. When they expire, these concessions are renewed pursuant to the so-called "Sapin Act" procedure

(see section 6.2.1.1.4.4 ("Hydropower generation issues")). In addition, the Water Act adopted on 30 December 2006 eliminated the preferential right of the incumbent concession holder at the time of renewal, and Decree no. 2008-1009 of 26 September 2008 sets out the conditions under which these concessions may be renewed. If an expired concession is not renewed, under current regulations, the incumbent concession holder will not receive any compensation. However, the French Energy Code provides for either reimbursement of non-amortised expenditures incurred for modernisation works or works for increasing generation capacity if such works are built during the second half of the concession's term. If the French government shortens the term of a concession, for example in order to group them by valley, it may compensate the incumbent concession holder for the loss of revenue caused by the early termination of the concession, in accordance with the concession's specifications. When renewed, hydropower concessions are subject to an annual fee indexed to the revenue from sales of electricity produced by the concession hydropower facilities, which is paid to the French government and allocated to the local authorities through which the watercourses used flow. The Grenelle 2 Act of 12 July 2010 provides that the fee shall not exceed a limit set on a case-by-case basis by the concession grantor as part of each renewal procedure. However, the renewal schedule and procedures have not yet been specified within the new framework of the bill on energy transition for green growth, with the possible creation of mixed-economy hydropower companies (see section 6.2.1.1.4.4 ("Hydropower generation issues")).

The EDF group cannot guarantee that each of the concessions that it currently operates will be renewed, or that any concession will be renewed under the same financial terms and conditions as the initial concession. Furthermore, the Group cannot guarantee that the compensation paid by the government in the event of early termination of a concession's operations will fully compensate the Group's consequent loss of revenue, or that future regulations regarding the limitation of fees will not change in a way that could negatively affect the Group. These factors could have an adverse impact on its activities and financial results.

Outside France, the Group also operates under electricity distribution or generation concessions in other countries where it does business, particularly in Italy in the field of hydropower generation. Depending on the conditions in each country, the transmission, distribution or generation concessions may not be continued or may not be renewed in its favour with changes to the financial terms and conditions of the concession specifications, which would have an adverse impact on the Group's activities and financial results.

The Group must comply with increasingly restrictive environmental and public health regulations, which generate costs and are sources of potential liability.

The Group's activities are subject to environmental protection and public health regulations, which are increasingly numerous and restrictive. These regulations relate to the Group's energy generation, transmission and distribution industrial activities, as well as to energy supply and energy-related services, which must, for example, incorporate the concept of energy demand management into their offers (for a description of the environmental, health and safety regulations applicable to the Group, as well as future regulations likely to have an impact on its activities, see section 6.5.6.1 ("Basic regulations applicable to the environment, health, hygiene and safety")). Failure to comply with these regulations could expose the Group to significant litigation. The Group could be found liable, even if it is not at fault or has not breached applicable regulations. Furthermore, the Group may be compelled to compensate breaches, damage or loss caused by entities that were not part of the EDF group at the time they were committed, if the Group thereafter takes over their facilities.

Furthermore, these regulations may be significantly reinforced by national or European authorities (see section 6.5.8 ("Principal planned regulations

that are likely to have an impact on EDF group's business")), which would have an adverse effect on the Group's activities and financial results.

Current regulations, and future changes to such regulations, have resulted and are likely to continue to result in an increasing level of operating costs and investments necessary in order to comply with such regulations. The Group may even be required to close facilities that cannot be made compliant with new regulations. In addition, other regulations, which may be more restrictive or which may apply to new areas which are not currently foreseeable, may be adopted by the competent authorities and have a similar effect.

Lastly, stakeholders' external perception of the Group's sustainable development policy might change, resulting in a deterioration of the Group's non-financial rating and image.

Changes to regulations concerning energy savings certificates (ESC) could impose additional obligations on EDF and generate costs in relation thereto.

In France, the energy savings certificates (ESC) measure, which is set out in Article L. 221-1 *et seq.* of the French Energy Code, imposes energy savings obligations on energy suppliers.

Three-year energy savings objectives were established and allocated among parties subject to the obligation to achieve energy savings (the "obligors") on the basis of their sales volumes. Subject to financial penalties, payment of which discharges liability, by the end of the relevant period, obligors, including EDF, must produce energy savings certificates corresponding to their obligation, which are obtained in exchange for directly or indirectly carrying out energy savings actions, or which may be purchased from other so-called "eligible" economic entities through the National Certificates Register.

EDF has met the objective set for the second period (2011-2013, which has been extended until 31 December 2014). However, increased competition and a decrease in the principal mineral deposits associated with more stringent regulatory requirements have slowed the rate at which ESCs are produced and made them more expensive. This trend has been accentuated by the economic crisis, which has reduced households' investment capacity and hurt the construction sector.

In a press release dated 10 October 2014, the Minister for Ecology, Sustainable Development and Energy announced the launch of the third period with a target of 700TWh cumac. The third period began on 1 January 2015 and will end on 31 December 2017, pursuant to Decree 2014-1668 of 29 December 2014. The more stringent obligation could significantly increase EDF's sales costs and require a considerable increase in regulated sale rates. Because such rates are set by the public authorities, EDF cannot guarantee that increased sales costs will be completely reflected in the rates, which could have an adverse impact on the Group's results (see section 6.5.6.1 ("Basic regulations applicable to the environment, health, hygiene and safety")).

The expansion of an integrated European electricity market may be slowed by a lack of cross-border transmission system interconnections.

The development of an integrated European electricity market is inhibited by a lack of cross-border interconnections. This situation limits exchange capacity between operators in different countries, in particular the capacity to rapidly adapt supply to demand (blackout risk), and allows price differences in different countries to persist, which would be significantly reduced in an efficient integrated European market. It also helps to slow the emergence of efficient operators with a European scope as it limits the possibilities for synergies between companies within a same group located on different sides of a border. Although there are currently several projects to develop interconnections, in particular the line between France and Spain East of the Pyrenees which should be commissioned in 2015 and between France and Italy (investments are determined by transmission network managers

independently from producers), their construction has nonetheless been slowed down, mainly by environmental, regulatory and local acceptability considerations.

Furthermore, the lack of adequate interconnections between countries where the Group is based or the failure to develop such interconnections at an adequate pace may limit the industrial synergies that the Group strives to achieve between its various entities or may cause network interruptions in countries in which the Group is established, which could have an adverse impact on its results, business and outlook.

Moreover, the increase in wind power generation in certain European regions will require modifications to the distribution network at the European level in order to rebalance supply and demand. In addition, distribution network expansion will be necessary in order for the network to carry the power generated by major new wind and solar power projects (mainly offshore wind farms).

Repeated or widespread blackouts in France or in an area served by a Group subsidiary, particularly if they are attributable to the Group, may have consequences for the Group's activities, financial results and image.

The Group may be the source of repeated or widespread blackouts or be blamed for such blackouts, even if the causal event occurred in another network or was attributable to another operator.

The causes of blackouts vary: local or regional imbalances between electricity generation and consumption, accidental interruptions to the power supply, cascading power failures (more difficult to circumscribe in a market with cross-border exchanges), interconnection problems at borders and difficulty in coordinating operators in a liberalised market.

The initial impact of such power failures would be repair costs incurred to re-establish power or restore the network. Power failures may also generate capital expenditures if it were decided, for example, to install additional generation or network capacity. This could also cause a decline in the Group's turnover. Lastly, power failures may have an adverse impact on the Group's image with its customers, particularly if the blackouts are attributable to the Group.

Natural disasters, significant weather changes and any major event on a scale that is difficult to predict may have a material adverse impact on the Group's industrial and commercial activities.

EDF and its subsidiaries have developed crisis management plans to deal with natural disasters or major events. These crisis management plans are assessed and tested on a regular basis (see section 4.2.4 ("Crisis management")).

As was the case with storms Klaus (2009) and Xynthia (2010) in France, natural disasters (floods, landslides, earthquakes, etc.), other significant weather changes (droughts, etc.), or any other event on a scale that is difficult to predict (large-scale epidemics, etc.) may affect the Group's activities. Based on its experience with these types of events, the EDF group implements measures aimed at limiting the consequences should such events reoccur. In this regard, RTE is conducting an ambitious programme to mechanically reinforce its aerial distribution network, which already proved its effectiveness during storms Klaus and Xynthia.

Such measures may generate costs in addition to the costs of repairing the damage caused by the natural disaster and the loss of earnings from the interruption to supply.

ERDF has taken out a policy covering its aerial distribution network against the consequences of major storms (see section 4.2.3.5.3 ("Storm cover")). Neither RTE's aerial distribution networks nor the Isolated Energy Systems' are covered for property damage. Damage to these networks could have an adverse impact on the Group's financial position in the absence of insurance cover or if cover is inadequate. In addition, renewing or taking

out these specific covers may be difficult or more costly due to the impact, frequency and magnitude of natural disasters experienced in recent years by the alternative risk transfer markets.

In the event of a wide-spread health epidemic, EDF has created a plan intended to ensure the continuity of electricity supply, depending on the intensity of the crisis, while guaranteeing the safety of facilities and reducing the health risks to which its employees are exposed.

Lastly, after its initial analyses following the Fukushima accident, EDF supplemented its crisis management organisation with the Nuclear Rapid Action Force (FARN), a national team capable of quickly delivering material and human assistance to a site in great difficulty (see section 6.2.1.1.3.3 ("Environment, safety, radiation protection")).

Despite having set up a crisis management structure that enables it to react promptly to such events (see section 4.2.4 ("Crisis management")), the Group cannot guarantee that the occurrence of a natural disaster, a weather event or any other event on a scale that, by its nature, is difficult to predict will not have material adverse consequences on its activities, income and financial position.

The Group is exposed to risks associated with weather conditions and seasonal variations in the business.

Electricity consumption is seasonal and depends to a great extent on weather conditions. For example, in France, electricity consumption is generally higher during winter months. Furthermore, available power may also depend on weather conditions. Thus, low water levels or heat waves may limit nuclear power generation due to the requirement that rivers downstream of facilities not exceed maximum temperatures. Hydropower generation is also sensitive to rainfall (quantity and annual distribution) and snowfall with respect to mountain ranges. Similarly, power generated by wind power or solar plants depends on wind conditions or hours of sunshine at the sites where such facilities are installed (see section 9.2.1 ("Economic environment")). This is also true for service business activities, frequently associated with the winter heating period.

Therefore, the Group's results reflect the seasonal character of the demand for electricity and may be adversely affected by exceptional weather conditions or by rain, snow, wind or sunshine conditions that are less favourable than anticipated. For example, the Group may have to compensate the reduced availability of economical power generation means by using other means with higher production costs, or by having to access the wholesale markets at high prices.

The Group's activities may be handicapped by unfavourable economic conditions.

The Group's activities are sensitive to economic cycles and economic conditions in the geographical areas in which the Group does business. Any economic slowdown in these areas would result in a drop in energy consumption, investments and industrial production by the Group's customers and, consequently, would have a negative effect on the demand for electricity and other services offered by the Group. Such economic conditions could, for example, threaten the profitability of certain of the Group's existing or planned power generation assets or weaken certain of the Group's counterparties (see section 9.2.1 ("Economic environment")).

The Group cannot guarantee that the effects of an economic downturn in the geographical areas where it does business will not have a significant adverse impact on its activities, operating income, financial position or outlook.

Technological choices made by the Group may be outperformed by more efficient technologies.

Although the Group at all times seeks to stay abreast of sustaining and disrupting technological innovations, the Group's business activities rely on a certain number of choices, which may be outperformed by other technologies

that prove more efficient, more profitable, safer or more pertinent in light of possible future standardisation and standards than the technologies used by the Group. The use of such technologies by the Group's competitors could reduce or eliminate the competitive advantage that the Group has obtained from certain of its technologies, and thus have an adverse impact on its activities, financial results and outlook.

The Group is exposed to risks associated with the wholesale energy and CO₂ emission allowances.

In conducting its production and supply activities, the Group does business in deregulated energy markets, primarily in Europe. Therefore, the Group is exposed to price fluctuations in the wholesale energy markets (electricity, gas, coal, petroleum products) and the CO₂ emissions allowances markets. These fluctuations are particularly significant in the current context of major tensions and volatility in the energy markets (see section 9.2.1 ("Economic environment")).

The Group manages its exposure to these risks primarily through purchases and sales on wholesale markets. With the exception of petroleum products markets, these are recent markets that are still under development. Therefore, a lack of liquidity may limit the Group's ability to hedge its exposure to risks in the energy market. Moreover, certain of these markets continue to be partially partitioned by country due to, in particular, a lack of interconnections. Furthermore, these markets may experience significant price increases or decreases that are difficult to foresee, as well as liquidity crises.

Energy market risks are managed in accordance with the "Energy market risks" policy adopted by the Group (see section 4.2.1.2 ("Management and control of risks associated with energy markets")). The Group hedges its positions on these markets through derivatives, such as futures, forwards, swaps and options traded on organised markets or over the counter. However, the Group cannot guarantee that it is totally protected, in particular against liquidity risks and significant price fluctuations, which could have an adverse impact on its financial results.

Furthermore, the current context of prices in the European wholesale energy markets has hurt the profitability of certain production tools, in particular thermal power plants, for all European producers. Setting up capacity markets is currently under study in several European countries, but with different approaches. This may limit the risk that certain power generation assets could be closed or mothballed, but creates impairment risk for certain Group assets.

The Group is exposed to fluctuations in the price and availability of materials and services (other than nuclear fuels) that it purchases in connection with its business operations.

In the event of significant and sustained increases in the prices of raw materials, the Group may experience higher procurement costs for certain critical products or services. Such increases may also lead certain suppliers to reduce supply due to reduced profit margins. In addition, there is an increased demand for certain equipment or services, which may have an impact on their availability, in particular equipment used for gas-fired combined cycle power stations, wind turbines and services and equipment in the nuclear sector.

The Group is exposed to risks related to the financial markets.

As a result of its activities, the EDF group is exposed to risks related to the financial markets:

- **liquidity risk:** the Group must at all times have sufficient financial resources to finance its day-to-day business activities, the investments necessary for its expansion and the annual appropriations to the dedicated portfolio of assets covering long-term nuclear commitments, as well as to deal with any exceptional events that may arise. Furthermore, in accordance with the practice in the organised energy and financial markets, some Group entities have set up a margin call system for certain over-the-counter transactions in order to limit counterparty risk. In light of the regulations

in the process of being implemented in the derivatives markets, these margin call systems may in the near future have a broader scope for the Group. This may require the Group to mobilise cash in the event of high volatility on financial and energy markets (see section 4.2.1.3.3 ("Liquidity risk"));

- **currency risk:** due to the diversity of its activities and the geographical distribution thereof, the Group is exposed to the risks of fluctuations in foreign exchange rates, which may impact currency translation adjustments, balance sheet items and the Group's financial expenses, equity and financial results (see section 4.2.1.3.4 ("Currency risk"));
- **equity risk:** the Group is exposed to equity risk on securities held primarily as dedicated assets constituted to cover the cost of long-term commitments in relation with the nuclear business, in connection with outsourced pension funds and, to a lesser extent, in connection with its cash assets and investments held directly by the Group (see section 4.2.1.3.5 ("Equity risk"));
- **interest rate risk:** the Group's exposure to changes in interest rates involves two types of risks: (i) the risk of changes in the value of fixed-rate financial assets and liabilities and (ii) the risk of changes in cash flows associated with variable-rate financial assets and liabilities. Interest rate risk is also associated with debt securities held in connection with the management of dedicated assets constituted to cover the Group's long-term commitments in relation with the nuclear business and its commitments with respect to pensions and other specific employee benefits (see section 4.2.1.3.6 ("Interest rate risk")).

The manner in which these risks are organised and the management principles applied thereto are described in section 4.2.1.3 ("Management and control of risks associated with financial markets"), and the measures taken to control these risks are explained in section 9.5.1 ("Management and control of financial risks"). However, the Group cannot guarantee that it is totally protected, in particular in the event of significant fluctuations in foreign exchange rates, interest rates and the equities markets.

Changes in financial regulations may adversely impact the profitability of trading activities and increase the cost of energy and financial markets risk hedging operations.

In response to the financial crisis of 2008, and following the commitments made by the major economic powers at the G20 summit in Pittsburgh in 2009, in order to mitigate systemic risks, the derivatives markets have been or are in the process of being reformed. In Europe, this reform has led to the adoption of EMIR (European Market Infrastructure Regulation, Regulation no. 648/2012 adopted on 4 July 2012 by the French Parliament and Council). This European initiative has been followed in other jurisdictions in different forms, such as the Dodd-Frank Act in the United States. These reforms are gradually being implemented under the supervision of financial regulators. They seek *inter alia* to impose general clearing or collateral exchange requirements on derivatives transactions, but contain exemptions for companies that typically do not engage in bank-like activities.

In connection with its energy markets risk management activities (which are part of the Group's "Energies Markets Risks" policy (see section 4.2.1.2 ("Management and control of risks associated with energy markets"))) and financial risk management activities (which are part of the internal policies described in section 4.2.1.3 ("Management and control of risks associated with financial markets")), the EDF group carries out derivatives transactions for hedging and trading purposes (only in the energies markets in the case of trading transactions).

EDF group subsidiaries that carry out derivatives transactions should come within the exemptions provided for in the new regulations. However, discussions with national financial regulators on the implementation conditions for these exemptions are still on-going, and EMSA (European Securities and Market Authority) may yet change these conditions in order to harmonise the interpretation and application of the rules at the Community

level. Furthermore, current financial regulations may be amended or made more stringent by the European authorities (see section 6.5.8.1 ("Future regulations at Community level")), which may significantly restrict the scope of these exemptions for trading activities.

Therefore, the Group cannot guarantee that, either due to the direct impact of these new regulations or because market practices evolve in this direction, it will not be required to clear or exchange collateral for a greater share of its derivative transactions or to place all or some of its trading activities subject to banking regulations. If this were the case, this would ultimately require that the Group furnish additional financial guarantees (in the form of cash, bank guarantees, equity, etc.) to execute its energies and financial market risk hedging and trading transactions, which would increase hedging costs and reduce trading profitability.

A default by the Group's counterparties (partners, subcontractors, service providers, suppliers or customers) may have an impact on its activities and results.

Like all economic operators, the Group is exposed to possible default by certain counterparties (partners, subcontractors, service providers, suppliers or customers). A default by these counterparties may impact the Group financially (additional costs, in particular if EDF is required to find satisfactory alternatives or take over the relevant activates or pay contractual penalties). Such defaults could also impact the quality of work performed, completion deadlines or the procurement of certain critical products or services, and exposes the Group to reputational risk, business continuity risk for certain projects or the loss of contracts.

The monitoring and oversight procedures applied within the Group in connection with its exposure to the counterparty risk inherent in its contractual relationships are described in section 4.2.1.4 ("Management and control of counterparty risk").

Prohibited and unethical practices carried out by employees or third parties in the conduct of business could, in certain circumstances, adversely affect the Group's reputation and shareholder value.

The globalisation of the Group's activities and the strengthening of regulatory frameworks repressing unethical practices in the conduct of business could expose the Group, its employees, or third parties acting on the Group's behalf to criminal and civil sanctions that could adversely affect EDF's reputation and shareholder value.

The Group could be held liable for the occurrence of occupational illnesses or accidents.

Although the Group has for many years taken the steps necessary to comply with the health and safety laws and regulations in the various countries in which it operates, and considers that it has taken the measures required to ensure the health and safety of its employees and those of its subcontractors', the risk of occupational illnesses or accidents cannot be excluded. The occurrence of such events may lead to lawsuits against the Group and may result in the payment of damages, which could be significant.

For a description of the measures taken by the Group with regards to ionizing radiation, see section 6.2.1.1.3.3 ("Environment, safety, radiation protection").

Regarding asbestos, the Group has taken measures to treat materials, as well as information and protection measures, as described in section 17.3.2 ("The health and safety of our employees: an absolute priority"). For a description of on-going legal proceedings, see section 20.5 ("Legal proceedings and arbitration").

4.1.3 Specific risks related to the Group's nuclear activities

The EDF group is the world's leading nuclear operator in terms of the number of plants in operation¹. Nuclear-generated electricity accounts for approximately 77% of total electricity generated in France². EDF also operates nuclear assets in the United Kingdom. In addition, the Group holds minority stakes in nuclear power plants in the United States (through CENG), Belgium and Switzerland, which it does not operate. The share of nuclear energy in the EDF group's electricity mix is thus a major competitive advantage. The Group also plays an active role in construction projects for new nuclear plants in France, the United Kingdom, China and potentially in other countries. Any event that has a negative effect on the nuclear business is likely to have greater consequences for the Group's image, activities, productivity, financial position, results and outlook than for its competitors that generate proportionally less electricity using this source of energy.

Due to its nuclear activities, the Group is exposed to substantial liability risks and potentially significant additional operating costs.

Although the Group has adopted risk control strategies and procedures for its nuclear activities that are consistent with best standards, such activities, by their nature, still present potential risks. Therefore, the Group may face significant liability as a result of *inter alia* incidents and accidents, security breaches, malicious or terrorist acts, aircraft crashes, natural disasters (such as floods or earthquakes), equipment malfunctions or problems in the course of storing, handling, transporting, processing or packaging nuclear substances and materials. Such events could lead to significantly stricter operating requirements for nuclear plants, or to a partial or total halt of the operation of the Group's power generation plants, and may have serious consequences, especially in the event of radioactive contamination or irradiation of persons working for the Group, or the general population and the environment, as well as a material adverse impact on the Group's activities, strategy, outlook and financial position.

A nuclear operator is responsible for the nuclear safety of its facilities. The liability scheme that applies to European nuclear facility operators, and the insurance applicable thereto, are described in section 6.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities") and section 4.2.3.6 ("Specific insurance for nuclear facility operations"). This scheme is based on the principle of the operator's strict liability. Accordingly, if an event occurs that causes damage, the Group would be automatically liable up to a monetary maximum set by the law applicable in the country where the event occurs, regardless of the source of the event that caused the damage and any safety measures that may have been taken.

The Group cannot guarantee that in countries where it operates nuclear facilities the maximum liability set by law will not be increased or cancelled. For example, the protocols amending the Paris Convention and the Brussels Convention, which are currently being ratified (see section 6.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities")), provide for these maximum amounts to be increased. The entry into force of these amending protocols or any other reform that seeks to increase the maximum liability of nuclear plant operators, in spite of the Group's preparation over the last few years, could have a significant impact on the cost of insurance. Furthermore, the Group cannot guarantee that insurance covering this liability will always be available or that it will always be able to maintain such insurance.

1. Source: Nuclear Power Reactors in the World, International Atomic Energy Agency, table 24, 2014 edition (figures as at 31 December 2013).

2. Source: 2014 Electricity Report - RTE.

Property damage to EDF's nuclear facilities is covered by insurance programmes (see section 4.2.3.6.3 ("Damage insurance for nuclear facilities")). Despite this cover, any event that may cause significant damage to a nuclear facility of the Group could have an adverse impact on the Group's business, financial results and financial position.

Lastly, the Group cannot guarantee that the insurers that cover both its liability as a nuclear plant operator and property damage to its facilities will always have available capacity or that the costs of cover will not significantly increase, particularly in light of the impacts on the insurance market of events such as the nuclear accident in Japan that occurred on 11 March 2011.

A serious nuclear accident anywhere in the world may have significant consequences for the Group.

Despite the precautions taken in their design and operation, a serious accident at a nuclear facility cannot be excluded, such as the nuclear accident in Japan, following the earthquake and tsunami that devastated the north of the country on 11 March 2011. This type of accident may turn public opinion against nuclear power and lead the competent authorities to substantially tighten power plant operating requirements or to refuse authorisation for proposed extensions of the operating life of power plants, leading to a temporary or permanent suspension of the operation of one or more nuclear facilities, or leading the authorities to consider a moratorium on the use of nuclear power to generate electricity and, therefore, also to suspend or cancel all on-going nuclear power plant development projects. Such decisions were taken in Germany (suspension of nuclear power generation) and Italy (suspension of nuclear power plant construction projects) following the Fukushima accident. Such decisions could be taken even if no accident occurs.

If such an accident were to occur near one or more of the Group's facilities, it could also contaminate the environment and thus jeopardise their operation.

Such events would have a material adverse impact on the business model, strategy, activities, results, financial position and outlook of the Group.

The Group's nuclear business is subject to particularly detailed and restrictive regulations that may become more stringent.

The Group's nuclear business is subject to detailed and stringent regulations, with a system in place, in particular in France, that monitors and periodically re-examines operating conditions, which focus, firstly, on nuclear safety, environmental and public health protection, but also on national security considerations (terrorist threats, in particular). These regulations may be significantly tightened by national and Community authorities (see section 6.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities")). Furthermore, stricter regulations or possible non-compliance with current or future regulations could result in the temporary or permanent shutdown of one or more of the Group's plants or financial penalties. The consequences of the implementation of the Order of 12 December 2005 on nuclear pressure equipment are a current example with regard to the existing power plants in France (see section 6.2.1.1.3.2 ("Operation and technical performance of the nuclear fleet" – "Investment programme for the nuclear fleet in France")).

Such events may result in a significant increase in the costs of the Group's nuclear power plants, which may have an adverse impact on its financial position.

For its nuclear business, the Group depends on a limited number of contractors.

Although the Group has adopted a policy to diversify the suppliers and service providers for its nuclear business, it is currently dependent on a limited number of contractors and persons who have the necessary qualifications and experience. This limits competition in the markets in which EDF is a

buyer and exposes the Group to the risk of a default of one or more of these suppliers or service providers with specific expertise, which could have an adverse impact on the Group's results and financial position. This is especially the case for AREVA and Alstom, but also for most nuclear industry manufacturers and the principal maintenance service providers (see section 4.3 ("Dependency factors")). Changes to the shareholding or governance of these various providers may also have an impact on the cost or quality of the services carried out.

The Group is exposed to changes in the conditions for procuring uranium and conversion and enrichment services.

The Group's operating costs include nuclear fuel purchases.

For its nuclear power plants in France and in the United Kingdom, EDF purchases uranium and conversion and enrichment services through long-term contracts containing hedging mechanisms that mitigate and smooth price fluctuations over time. Its main supplier is the AREVA group, but EDF pursues a diversification policy by also buying supplies from other industrial companies (see section 4.3 ("Dependency factors") and section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues")). Prices and availability of uranium and conversion and enrichment services are subject to fluctuations due to factors that are *inter alia* political and economic and that the Group cannot control (in particular, the profitability outlook of mining investments, imbalances between supply and demand or supply shortages associated with, for example, an operating accident in a uranium mine or a combined cycle plant, delays in commissioning new mines or events leading to political instability in a uranium producing country).

However, the Group cannot guarantee that its contracts, in France and abroad, will completely protect it from sudden or significant price increases. The Group cannot guarantee that when these long-term contracts expire, it will be able to renew them, in particular at an equivalent price. This could have an adverse impact on the Group's financial results.

To operate its nuclear power plants, the Group relies on proper functioning of road and rail transport, in particular for the transport of fuel.

The transport of new or spent nuclear fuel is a very particular operation that requires specific and restrictive safety and security measures. These constraints could become more stringent, generating additional difficulties and costs for the Group. Furthermore, several factors that are beyond the Group's control (such as opposition by local residents or anti-nuclear associations, for example, in the form of manoeuvres to prevent nuclear material from being shipped) may slow these operations. Operations may also be interrupted, in particular, in the event of an accident. In such case, the Group may be required to slow or halt some or all power generation at the relevant sites, either due to non-delivery of new fuel assemblies or the saturation of onsite storage facilities, which may have an adverse impact on the Group's financial results (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues")).

The nuclear power plants that the Group operates may require significant or costly repairs or modifications.

The nuclear facilities that the Group currently operates in France is highly standardised (see section 6.2.1.1.3.1 ("EDF's nuclear fleet")). This enables the Group, in particular, to achieve economies of scale in equipment purchases and engineering, to apply improvements made to its newest power plants to all plants and, in the event of a malfunction in a facility, to anticipate the measures to be taken in other plants. However, such standardisation carries the risk of a malfunction that is common to several power plants or series of power plants (see section 6.2.1.1.3.2 ("Operation and technical performance of the nuclear fleet")). The Group cannot guarantee that it

will not be required to make significant or costly repairs or modifications to all or some of its plants, or that events will not occur that may have an impact on the operation of its plants or their output or cause a temporary or permanent shutdown of all or some of its plants.

Thus, at the time of the safety re-evaluations conducted during the ten-year inspections and following the Fukushima accident, the Group was led, both on its own and as a result of the requirements of the French Nuclear Safety Agency ("ASN"), to draw up a substantial work programme. This programme, called the "*Grand carénage*" is intended to renovate existing plants, increase the safety level of reactors and, if the conditions are met, extend their service life. This programme should involve additional investments over the coming years and bringing forward certain expenditures that were already planned before the Fukushima accident (see section 6.2.1.1.3.2 ("Operation and technical performance of the nuclear fleet" – "Investment programme for the nuclear fleet in France") and section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France")). Industrial implementation of these works in power generation facilities will involve increased costs and a greater use of internal resources and the industrial fabric, and may also result in a loss of availability in future years.

The Group operates or holds equity interests in nuclear power plants elsewhere in the world, in particular the United Kingdom and the United States, and it may also be required to make costly repairs or modifications to these units or it could be faced with events that may impact their performance, power generation or availability. Like in France, safety authorities may take decisions that require additional works.

Despite the maintenance work carried out by the Group on its power plants, it is possible that certain plants may not operate at full capacity, in particular due to the age of certain equipment. This is currently the case in the United Kingdom, where a fault detected on an advanced gas-cooled reactor (AGR) unit led to further tests being conducted on three other similar units and where, as a precaution, pending, the results of the on-going expertise, the four units were authorised to restart at reduced power (see section 6.3.1.4.2 ("Generation business unit" – "Nuclear Generation" – "Plant status")).

All such events may have an adverse impact on the Group's financial results and activities.

The Group may not be able to obtain the authorisations necessary to extend the operating life of its power plants beyond the periods currently planned or it may not be authorised to operate its power plants until the end of such periods.

In France, in connection with the studies associated with the third ten-year inspections of the 900MW units, in early July 2009 the ASN publicly stated that it had not detected any generic problem calling into question EDF's ability to ensure the safety of its 900MW reactors for up to 40 years. As required by the regulations, the ASN's position has been supplemented by an agreement on each reactor following each of the third ten-year inspections (see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France")). Accordingly, at the end of 2014, more than two-thirds of the 900MW segment units have undergone their third ten-year inspection and, for 6 of them, the ASN has already submitted its final advice to the Minister and has not objected to their continued operation, subject to their complying with additional requirements.

To postpone construction of new units and the investments associated therewith, and to continue to receive cash flows from its existing fleet, the Group seeks to extend the operating life of its nuclear power plants in France beyond 40 years. In 2012, the ASN had the improvement proposals submitted by EDF reviewed by the permanent "reactors" group, which judged these proposals positively, although it recommended that they be supplemented and, in certain cases, reinforced. Discussions with the ASN continued on this basis in 2013 and 2014 and the ASN indicated that it would issue in 2015 an initial opinion on the broad guidelines of the safety

re-evaluation associated with the fourth ten-year inspections of the 900MW reactors and, in 2018/2019, a final opinion on the "generic" phase of this re-evaluation (see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France")).

However, the Group cannot guarantee that it will receive the expected extension from the competent authorities. Furthermore, such extensions could also be obtained under certain conditions, whose financial impact, in particular in terms of investments, could affect the Group's strategy with respect to extending the operating life of its power plants or the Group's ability to pursue its global investment strategy.

In the United Kingdom, the current projected operating life of EDF Energy's nuclear power plants ranges between 35 and 47 years on average for advanced gas-cooled reactor (AGR) power plants and is 40 years for the pressurised water reactor (PWR). The objective is to increase the operating life of the most recent AGR power plants by 7 to 10 years and to increase the operating life of the PWR by 20 years (see section 6.3.1.4.2 ("Generation business unit" – "Nuclear generation")). However, in light of the safety rules applicable in the United Kingdom, the Group cannot guarantee that EDF Energy will obtain the necessary authorisations at the appropriate times to operate its existing nuclear power plants until the end of their currently projected operating life, or that such authorisations will not be obtained subject to conditions that entail significant expenditures or investments for the Group.

For nuclear power plants where EDF is not responsible for the operation, but in which it has financial interests (United States, Belgium, Switzerland), the Group is exposed to the same risks financially: loss of revenue and depreciation of assets in the event of a stoppage or necessity of making additional investments to continue to operate. However, the Group cannot guarantee that these power plants will be actually operated for the periods currently anticipated, particularly in the event of an incident affecting the safety or availability of the facilities.

If any of these events occur they may have a material adverse impact on the Group's financial results and financial position.

A decision by the French public authorities to halt one or more nuclear power generation units could have material adverse consequences for the Group.

During the discussions on the energy transition in 2013, the French President and the French government have undertaken to ultimately reduce the share of nuclear power in France's electricity generation mix from 75% to 50%. This goal is set out in the draft bill on energy transition for green growth, currently under review by Parliament, which plans to reduce the share of nuclear power in the generation of electricity to 50% by 2025. It also plans to cap at current levels (63.2GW) the total authorised capacity of nuclear electricity generation (see section 6.5.8.2 ("Future regulations at national level" – "Draft bill on energy transition for green growth")). In practical terms, if such a provision were adopted, this would force EDF, in order to obtain permission for the commissioning of any new nuclear generating capacity (e.g. permission from the Flamanville EPR), to shut down any equivalent capacity.

This could thus lead to a decision to close one or more units of EDF's fleet early, made not on the basis of industrial considerations, but as a result of a decision of the political authorities. Furthermore, a decision to halt all nuclear power generation by a specific date can also not be completely excluded. Lastly, it may be decided that new nuclear construction projects, in which the Group has already invested considerable sums, should be halted. This issue potentially concerns all the Group's nuclear assets.

Such events would have material adverse consequences on the outlook, financial position, results and image of the Group, which would lead the latter to request compensation that it is not certain to obtain.

Construction of EPRs may encounter problems or not be completed.

The Group has undertaken construction of the European Pressurised Water Reactor (EPR) in Flamanville (see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France")) in order to renew its nuclear power generation facilities in France and to serve as a model for the construction of new facilities abroad.

In December 2012, EDF submitted an upward cost revision for the construction of the Flamanville 3 project for a total of €8.5 billion at 2012 economic conditions. In November 2014, the project schedule was revised, with the first marketable production scheduled for 2017. The analysis of the causes for this delay is presented in section 6.2.1.1.3.5 (Preparing for the future of the nuclear fleet in France). The Group may not obtain the authorisations required for the construction, commissioning and operation of EPRs, or authorisations may be challenged by court or administrative rulings. In particular with respect to the Flamanville EPR, which is a "prototype" reactor, technical or other difficulties may occur during development and construction, or during early stages of the operation of the EPRs. These difficulties could slow or prevent the construction of other EPRs, alter the schedule for commissioning them or affect their performance. Stricter regulatory constraints (such as the implementation of the ESPN decree) may have similar effects. In addition, total construction costs, which have already been reassessed, could be higher than EDF currently estimates.

In the United Kingdom, the EDF group and the British government reached an agreement in October 2013 on the main terms of an investment contract for the construction of two EPRs at the Hinkley Point C site. The project is expected to be covered by a financial guarantee pursuant to a programme set up by the British government. This project would be developed with other investors. Despite the European Commission's having approved the main terms of the investment contract and the financial guarantee under the rules on state aid in 2014, the final investment decision is still subject to a certain number of conditions, in particular an agreement on the overall investment contract and finalisation of an agreement with industrial partners and on debt financing. In the event of disagreement on these various points, the investment decision and the project as a whole could be postponed or not be completed.

Austria and Greenpeace Energy have indicated that they plan to appeal the European Commission's decision, which presents a risk for EDF and its partners. In this case and in the event of an unfavourable ruling from the Court of the European Union, the economic conditions of the transaction could be substantially affected.

The EPR programme is an essential component of the Group's strategy. Any event that delays or blocks this programme or affects the construction of the "prototype" EPR or subsequent units would thus have a material adverse impact on the Group's activity and financial position.

The Group is responsible for most spent fuel and radioactive waste from its nuclear power plants, especially long life medium- and high-level waste from spent fuel.

The nuclear fuel cycle is described in section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues"). In France, as an operator and waste producer, EDF is legally responsible for spent fuel from the time it leaves the power plant and for radioactive waste processing and long-term management operations. EDF assumes this responsibility in accordance with guidelines laid down by the public authorities and under their supervision.

The Group's liability may be alleged, in particular as a nuclear power operator or producer within the meaning of applicable legislation on waste, in the event of an accident or any damage to third parties or the environment from spent fuel or waste, even if they are handled, transported, kept, warehoused or stored by contractors other than the Group (especially, in France, the AREVA group and ANDRA), in particular in the event of a breach by such contractors. If the Group were held liable for damage to third parties,

the specific strict liability scheme applicable to nuclear plant operators would apply, up to the maximum amounts specified by this scheme (see section 6.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities")).

In France, the long-term management of radioactive waste has been the subject of various initiatives under the programme Acts of 30 December 1991 and 28 June 2006 on sustainable management of radioactive materials and waste (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues" – "Back-end (downstream) in France" – "Storing conditioned ultimate waste" – "Long-Lived High-Level Waste (HLW-LL)")). The Group cannot guarantee that all long-life high- and medium-level waste will constitute "final radioactive waste" within the meaning of Article 6 of the Act of 28 June 2006 and, therefore, that such waste may be directly stored in deep geological layers. Furthermore, the Group cannot guarantee the timeframe in which the public authorities will authorise such storage, or predict the technical instructions related to such authorisations, which creates uncertainties about the future of the waste, the resulting liability and costs for EDF (see the progress update in section 6.2.1.1.3.4 on the public debate organised in 2013 and the difficulties encountered in 2014 to reach an assessment of the costs shared by all actors).

In the United Kingdom, when British Energy was restructured, agreements were entered into with the authorities concerning the management of certain radioactive waste from existing nuclear power plants (see section 6.3.1.4.2 ("Generation business unit" – "Nuclear Generation" – "Costs relating to radioactive waste management and decommissioning – Restructuring agreements of British Energy Group")). Under the terms of these agreements, the liability and certain costs associated with the management of certain radioactive waste are transferred to the British government. However, EDF Energy Nuclear Generation Group Ltd. remains financially, technically and legally liable for the management, storage and processing of waste that does not come within the scope of the aforementioned agreements.

Directive no. 2011/70/Euratom of 19 July 2011 confirms the Commission's intention to establish a shared Community framework for the responsible and safe management of spent fuel and radioactive waste (see section 6.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities")).

For nuclear power plants which EDF does not operate, but in which it has financial interests (United States, Belgium, Switzerland), the Group is exposed financially in proportion to its shareholding to contribute to future expenditures related to the management of spent fuel and waste. The Group cannot guarantee that it will have available, in a timely manner and under acceptable financial conditions, long-term storage and treatment solutions for the radioactive waste generated by the power plants which it operates in the relevant countries, which could have an adverse impact on the Group's financial results and financial position.

Provisions booked by the Group for spent fuel processing operations and long-term waste management may increase significantly in the event that costs estimates are revised.

In France, EDF has booked provisions for spent nuclear fuel management operations (transport, processing, conditioning for recycling) (see note 29 to the consolidated financial statements for the financial year ended 31 December 2014) based on the price and volume conditions in the master agreement signed with AREVA in December 2008 and broken down in an agreement signed on 12 July 2010, which covered the period from 2008 to 2012 (see note 29.1.1 to the consolidated financial statements for the financial year ended 31 December 2014). For the period from 2013 to 2020, the terms of reference were approved in June 2014 and an agreement should be concluded during the first semester 2015 (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues" – "Back-end (downstream) in France" – "Processing of spent fuel from EDF's nuclear power stations")). The amount of provisions currently booked to cover the period after 2014 should be reassessed if the terms under which this agreement is renewed for such future period prove more onerous than those currently applicable.

EDF has booked provisions for long-term waste management based on an assumption of geological storage, and on a reasonable interpretation of the work conducted in 2006 by a working group comprising ANDRA, the public authorities and nuclear waste producers (see note 29 to the consolidated financial statements for the financial year ended 31 December 2014 and section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues" – "Back-end (downstream) in France" – "Storing conditioned ultimate waste")). Although the programme Act of 28 June 2006 on sustainable management of radioactive materials and waste confirms, without excluding other areas for additional research, that "final radioactive waste" will be stored in deep geological layers, the Group cannot guarantee that all long-life high- and medium-level waste will be considered as such or within what timeframe this type of storage, if it is selected, can be used. Consequently, the Group's final costs for long-term waste management may exceed the provisions booked in its financial statements. New calculations of the costs of deep storage are underway under the supervision of the DGE; following the consultation process initiated by the DGE to which EDF answered in the first quarter of 2015, the Minister for Ecology, Sustainable Development and Energy will set the new reference cost that should be taken into account in the Group's financial statements (see note 29.1.2 to the consolidated financial statements for the financial year ended 31 December 2014).

The amount of the provisions currently booked is subject to change. Determining the amount of these provisions is sensitive to assumptions made in terms of costs, inflation rate, long-term discount rate and payment schedules. Given these sensitivity factors, changes in certain parameters may require significant adjustments of the provisions booked. In such case, any insufficiency of provisions for long-term nuclear commitments may have a material adverse impact on the Group's financial results and financial position (see note 29.1.5 to the consolidated financial statements for the financial year ended 31 December 2014).

Decommissioning existing nuclear facilities may present currently unforeseen difficulties or be much more costly than currently anticipated.

Given the size of the Group's nuclear fleet, decommissioning presents a significant technical and financial challenge. Although the Group has assessed the challenges, in particular the technical challenges, involved in decommissioning (particularly decommissioning the first-generation power plants in France), and has identified the solutions to be developed, it has never decommissioned nuclear power plants similar to those currently in service.

In France, the Group has booked provisions to cover the anticipated costs of decommissioning and managing the last cores. Determining the amount of these provisions is sensitive to assumptions made in terms of costs, inflation rate, long-term discount rate and payment schedules. The timeframe and costs of these works also depend on administrative authorisations and the availability, at required times, of radioactive waste storage centres or other facilities required for conditioning or storing waste packages (see section 6.2.1.1.3.6 ("Decommissioning of nuclear power plants")). The Act of 28 June 2006 provided for a dedicated storage centre for low-level long-life waste (FAVL), such as graphite. The initial search for a site was unsuccessful, and in 2013 ANDRA initiated a new search and is expected to present the result of this work before the end of 2015. Construction of the Conditioning and Storage Facility for Activated Waste (ICEDA) is moreover three years behind schedule due to the cancellation of building permits (see section 20.5 ("Legal proceedings and arbitration")). Given these sensitivity factors, changes in certain parameters may require significant adjustments of the provisions booked and, therefore, the Group cannot guarantee that the provisions booked will equal the costs actually incurred at the relevant time, which would have an adverse impact on the Group's financial results and financial position. To limit the impact in its financial statements, the Group regularly conducts an update of the key assumptions underlying the provisions (see note 29.1.3 to the consolidated financial statements for the financial year ended 31 December 2014).

In the United Kingdom, under the agreements concluded in connection with the restructuring of British Energy, the costs of decommissioning EDF Energy Nuclear Generation Group Ltd.'s existing nuclear power plants will be paid by the Nuclear Liabilities Fund. If the assets of this Fund prove insufficient, these costs will be borne by the UK Government (see section 6.3.1.4.2 ("Generation business unit" – "Nuclear Generation" – "Costs relating to radioactive waste management and decommissioning – Restructuring agreements of British Energy Group")).

For nuclear power plants which EDF does not operate, but has financial interests (United States, Belgium, Switzerland), the Group is exposed financially in proportion to its participation to contribute to future decommissioning costs.

Dedicated assets allocated by the Group to cover the costs of its long-term nuclear business commitments (radioactive waste and decommissioning) may prove insufficient and require additional expenditures.

In France, as of 31 December 2014, the market value of EDF's portfolio of dedicated assets was €23 billion, compared to €21.7 billion on 31 December 2013 (see section 6.2.1.1.3.7 ("Assets available to cover long-term nuclear commitments (outside the operating cycle)")). Since the incorporation of the CSPE claim in February 2013, the amount of dedicated assets covers all eligible nuclear liabilities (see section 6.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities")) and note 47 to the consolidated financial statements for the financial year ended 31 December 2014).

In the case of a significant change in the provisions determining the dedicated assets' reference base, additional expenditures could be necessary in order to adjust these assets' value, which could have a material adverse impact on EDF's financial position. Moreover, stricter regulations at the national level (in particular those that impact the base for determining the dedicated assets to be constituted by EDF) or Community level may lead to more stringent requirements regarding the constitution of dedicated assets and have an effect on EDF's financial position.

Lastly, although these assets are constituted and managed in accordance with strict prudential rules (see section 6.2.1.1.3.7 ("Assets available to cover long-term nuclear commitments (outside the operating cycle)")), the Group cannot guarantee that price fluctuations in the financial markets will not have a material adverse impact on the value of these assets (see section 9.5.1.6 ("Management of financial risk on EDF's dedicated asset portfolio")) for a sensitivity analysis), which could require EDF to disburse additional amounts to restore the value of these assets. Such events could have an adverse impact on the Group's financial position.

In the United Kingdom, funds to finance nuclear commitments are managed by an independent organisation created by the UK government (Nuclear Liabilities Fund – NLF). Operators therefore have no assets to manage for this purpose (see section 6.3.1.4.2 ("Generation business unit" – "Nuclear Generation" – "Costs relating to radioactive waste management and decommissioning – Restructuring agreements of British Energy Group")).

Such events could have an adverse impact on the Group's financial position.

4.1.4 Risks related to the Group's structure and changes within the Group

The Group's expansion strategy may not be implemented in accordance with the objectives set by the Group.

The Group intends to continue its expansion in the electricity, gas and energy services industries, both in France and abroad, in line with its industrial development plan, in accordance with its business model for each geographical area and in light of any relevant experience

(upstream/downstream balance, supply strategy, development of renewable energy sources or other production methods, such as nuclear, hydropower, coal, gas combined-cycle power plants, etc.). The Group thus implements programmes that focus on expansion, reorganisation, increasing profitability (see the discussion below of the risk factor entitled "The Group has set up programmes that aim to improve its operating and financial performance and increase its financial flexibility") and disposals.

In the field of nuclear power generation, the Group may not achieve the expansion it anticipates, or it may be unable to carry out projects it has initiated abroad or it may be unable to carry out such projects under satisfactory economic, financial and legal conditions.

Through partnerships or equity investments, the EDF group is indeed committed to international projects for the construction and operation of nuclear power plants (in particular, in China and the United Kingdom). During the development phase, these projects require obtaining administrative authorisations, licences, permits and, in certain cases, setting up additional partnerships. These are major projects involving significant investment, and their funding conditions are subject to confirmation. Given the current economic climate, obtaining such funding may be delayed. Furthermore, the regulatory framework in some countries is in the process of being updated, which could have an impact on EDF's commitments and liability. Even when it has negotiated protective contractual arrangements, the Group cannot guarantee that any or all of these projects will be carried out in accordance with the anticipated schedules, under satisfactory economic, financial, regulatory or legal conditions or that they will, in the long term, generate the profitability anticipated at the outset, which could have a material adverse impact on the Group and its financial position.

In the new energies field, EDF relies primarily on its EDF Énergies Nouvelles subsidiary (see section 6.4.1.2.2 ("EDF Énergies Nouvelles")), which does business in numerous countries. However, the profitability of these developments is often dependent on the support policies adopted in the various countries. The Group cannot guarantee that the support programmes will not change in some of these countries and adversely impact the profitability of investments made.

Furthermore, the expansion of the Group's gas business is an important issue, both in terms of the use of gas in power generation and the development of gas offers (see section 6.4.2 ("Gas activities")). The outlook for global supply and demand for gas is changing (the boom in unconventional sources of gas, particularly in the United States, rising demand in emerging countries, etc.). The competitive environment for the gas sector is evolving in France and in Europe with the emergence of new operators and the mergers of energy companies. The dependence of European countries on imports of natural gas is already high and continues to increase, due mainly to the depletion of local resources and increasingly distant supply sources. To implement its gas strategy, the Group must not only have access to competitive sources of supply, but also to logistical infrastructure (such as storage, gas pipelines and LNG terminals) that allow it to transport its gas to locations near points of consumption, have the requisite flexibility and generate synergies between the various entities of the Group, including those which it does not control. The Group cannot guarantee that it will always, under competitive financial conditions, have access to gas supply sources (through long-term contracts or the acquisition of gas fields, for example) or to gas infrastructure, or be able to generate the synergies anticipated. All of these factors may slow the expansion of the Group's gas strategy, which would have an adverse impact on its activities, financial results and outlook. Moreover, in the event of a harsher global geopolitical context, the Group cannot guarantee that it could withdraw from projects in which it has committed itself either rapidly or under acceptable economic conditions (see section 6.3.3.1.3 ("Russia")).

Lastly, the Group also intends to develop and reinforce its offer of integrated services, including eco-efficiency energy services, as part of a sustainable

development approach. The energy services market is very competitive, and the energy efficiency market has strong development potential (see section 6.4.1.3 ("Energy Services")). The integration of Dalkia into the Group since 25 July 2014 will reinforce this expertise and development sector (see section 6.4.1.3.1 ("Dalkia")). However, the Group cannot guarantee that its service offer will be successful or that it will always be able to implement its expansion policy in this area, which may have an adverse impact on its financial results and outlook.

More generally, the Group may face unexpected changes in its regulatory, economic and competitive context, which may render its decisions inappropriate, or it may encounter difficulties in implementing or changing its strategy, which may have an adverse impact on the Group's business, financial results and outlook.

The Group's acquisition and disposal transactions carry risks and may not always achieve the objectives pursued.

As part of its development strategy, the Group has carried out and may carry out transactions involving the acquisition of assets or equity interests, as well as the creation of joint ventures and, more generally, all types of external growth transactions (see section 9.2.2.2 ("Investments and partnerships")).

External growth transactions involve *inter alia* the following risks: (i) the assumptions used by the Group in valuing an acquisition may not prove accurate, particularly concerning anticipated market prices, cost savings, profits, synergies and profitability; (ii) difficulties concerning the quality and performance of assets acquired may be encountered or the liabilities of acquired companies may be undervalued; (iii) difficulties integrating the businesses or companies acquired may occur; (iv) the Group may not be able to retain certain key employees, customers or suppliers of the acquired companies; (v) the Group may be required or wish to terminate certain pre-existing contractual relationships on costly or unfavourable financial terms; (vi) the Group may increase its debt to finance these acquisitions, thus limiting its financial flexibility and the opportunity to obtain additional loans in the future; and (vii) the Group may be required to make commitments to the antitrust authorities, which may be implemented on terms that are less favourable than anticipated by the Group.

Consequently, the benefits expected from external growth operations may be lower or may not be obtained as quickly as expected, which could have an adverse impact on the Group's financial results, financial position and outlook.

The Group has also carried out and may carry out transactions involving the disposal of assets or equity investments. In connection with such disposals, the Group may provide guarantees concerning the assets sold and, consequently, may have to pay compensation or make price adjustments to the purchaser, which could have an adverse impact on the Group's financial results, financial position and outlook.

The Group may also decide to not carry out external growth transactions and disposals it has planned, or to carry them out for a price other than the desired price, due *inter alia* to contractual, financial or regulatory limitations, or political intervention. This may have an adverse impact on the Group's financial results, financial position and outlook.

The Group may not hold a controlling majority or it may share control in certain of its subsidiaries and equity interests.

Certain of the Group's business activities are conducted, or may in the future be conducted, through entities in which the Group shares control or in which it is the minority shareholder. In such situations, the Group may experience a deadlock if the partners are unable to agree, or decisions may be taken that are contrary to its interests, which may limit the Group's ability to implement the strategies it has adopted and have an adverse impact on its business activities, financial results, financial position and outlook.

The various reorganisations required by market liberalisation could have operational and financial consequences for the EDF group.

The organisation that has been put in place since the market has been liberalised, in which regulated activities are separated from competing activities, may yet generate difficulties for customers that may impact the image of the Group and, in particular, the energy supplier.

The Group's activities are dependent on information systems that may be defective or subject to malicious attacks.

The Group operates multiple and highly complex information systems (servers, networks, applications, databases, etc.), which are essential for the conduct of its commercial and industrial business, and which must adapt to a rapidly changing environment. A failure of one of these systems could have significant adverse consequences for the Group.

In particular, the EDF group's activities may be adversely affected if the information systems or call centres in place, to be put in place or to be adapted following full liberalisation of the market are not sufficiently reliable or productive.

The Group has set up test procedures for these systems to ensure as far as possible, during changes, an operating quality level suited to the Group's needs and set out incident management and crisis control procedures to be able to provide solutions in the event of an isolated failure. These procedures also address possible cases of malicious attacks.

Furthermore, the Group has adopted a policy to reinforce and improve the backup programmes for its information systems, which are tested annually and crisis management procedures have been defined which are regularly improved by incident feedback. However, the Group cannot guarantee that these programmes will not experience technical deployment difficulties or delays in implementation in real world situations or that they will be able to limit, in the event of a serious incident, the adverse impact on the Group's business, financial results and financial position.

As the Group's majority shareholder, the French government may interfere in decisions that are important for the Group.

Pursuant to Article L. 111-67 of the French Energy Code, the French government is EDF's principal shareholder and must retain ownership of at least 70% of its share capital. Under French law, a majority shareholder controls most corporate decisions, including resolutions that must be adopted by general meetings (in particular, the appointment and dismissal of members of the Board of Directors, the distribution of dividends and amendments to the articles of association). In addition, the legal restriction on dilution of the French government's stake may limit EDF's capacity to access capital markets or carry out external growth transactions.

A non-negligible share of the Group's workforce is employed by organisations common to EDF and GDF Suez. Therefore, the Group depends in part on management mechanisms set up within these joint structures.

A non-negligible share of the Group's workforce is employed by organisations common to EDF and GDF Suez (almost all of them by the joint department of ERDF and GrDF, the two distribution subsidiaries of the EDF and GDF Suez groups). Therefore, certain decisions made within these joint organisations can have an impact on EDF, in particular on its costs and on the manner in which its resources are managed. Furthermore, EDF and GDF Suez may have divergent interests or views concerning these joint structures, which may have an adverse impact on the Group's labour relations, financial results and financial position (see section 6.2.2.2.4 ("Service shared by ERDF and GrDF")).

The Group does business in numerous countries and may face periods of political, economic or social instability.

Certain Group investments and commitments are exposed to risks and uncertainties associated with doing business in countries that may experience, or have experienced, periods of political or economic instability. Several countries in which the Group operates have regulations that are less advanced and less protective, practice or may introduce controls or restrictions on repatriation of profits and capital invested, levy or may levy specific taxes and fees affecting energy businesses and impose or may impose restrictive rules on the business of international groups. In these countries, the electricity sector is also subject to sometimes rapidly changing regulations or regulations which may be influenced by political, social and other considerations, which may affect the operations or financial position of Group subsidiaries in a way that is contrary to its interests. The occurrence of any of these events may have an adverse impact on the Group's activities, financial results and financial position.

Lastly, the Group has developed or built a portfolio of Independent Power Plants (IPPs) in different parts of the world, including Brazil, Vietnam, Laos and China, in which it plays one or more roles (engineering, project owner, project manager, investor, operator). In these different capacities, the Group may incur liability or its financial performance may be affected, especially if the return on capital employed for the IPPs is lower than expected, if long-term electricity contracts or pass-through clauses, if applicable, are challenged, or in the event of major changes to electricity market rules in the relevant country.

The Group must continually adapt its expertise in a rapidly changing environment and renew a significant share of its workforce, while ensuring experience and skills are transferred to new employees.

The challenges associated with achieving the Group's strategic objectives in a rapidly changing environment (in particular, the full liberalisation of markets, the international development of nuclear and "clean coal" power, the development of renewable energies, etc.) require continuously adapting and planning its expertise requirements, especially in functional and geographic areas.

In France, a large number of EDF employees reaches retirement age each year, despite the impact of the reform of the special pension scheme for Electricity and Gas Industry employees on average retirement age. For example, within the scope of EDF, around 20% of the workforce could retire between 2015 and 2020 (see section 17.3.1 ("Professional excellence: employment and skill development")). Although this situation represents an opportunity to adapt employees' expertise to the Group's new challenges, the renewal of this workforce requires planning the transfer of knowledge and involves competing in the market to recruit the most competent people.

The EDF group considers skills development to be a major challenge and, therefore, takes all necessary measures to recruit, retain, redeploy or renew such skills in a timely manner and under satisfactory conditions. However, it cannot guarantee that measures adopted will always prove sufficient, which may have an impact on its activities and financial results.

The Group may be required to meet significant commitments related to pensions and other employee benefits.

The pension plans applicable in the various countries in which the Group operates involve long-term commitments to pay benefits to the Group's employees (see note 31 to the consolidated financial statements for the financial year ended 31 December 2014). In France, in addition to these pension commitments, the Group also owes obligations for post-employment benefits and long-term benefits for employees currently in service.

To cover these commitments, the Group has set up outsourced funds or pension funds, as appropriate. At the end of 2014, such assets only partially covered these commitments, although, for the Group, the maturity dates of these obligations are relatively smoothed over time. At 31 December 2014, the average duration of employee benefits commitments was 18.1 years in France and 19.9 years in the United Kingdom.

The amounts of these commitments, the provisions booked, the outsourced funds or pension funds set up and the additional contributions required to make up insufficient funding are calculated based on certain actuarial assumptions, including a discount rate subject to adjustment depending on market conditions, the rules governing retirement benefits paid out by the general retirement scheme, and amounts owed by the Group. These assumptions and rules may be adjusted in the future, which could increase the Group's current commitments for pensions and other employee benefits and, therefore, require a corresponding increase in provisions.

Furthermore, if the value of outsourced funds or pension funds proves insufficient to meet the corresponding commitments, in particular in the United Kingdom or France, primarily due to calculation assumptions or developments in the financial markets, the Group may be obliged to make additional contributions to the relevant funds, which may have an adverse impact on its financial position and financial results.

Labour disputes could have an adverse impact on the Group's business.

The Group cannot exclude that labour disputes or unrest, such as strikes, walkouts, claims or other labour disturbances, will not disrupt its business. The Group has not taken out any insurance to cover losses due to business disruptions caused by labour movements. Consequently, its financial position and operating results may be adversely affected by labour unrest.

The Group has set up programmes that aim to improve its operating and financial performance and increase its financial flexibility. The objectives set for these programmes may not be achieved.

The Group has set up and may set up programmes that aim to improve its operating performance and increase its financial flexibility. For example, at the end of 2012, the Group initiated a new programme called "Spark", which complements the "Group Synergies and Transformation" programme, and which aims to optimise purchases relevant to both operating expenses and investments. The 2013 objective had been exceeded, with €1.3 billion in savings having been realised at the end of the year. In 2014, efforts focused on operating expenses whose organic growth remained less than in 2013. However, the Group cannot guarantee that the programmes to improve performance that it implements will have the expected results or that those results will be achieved on schedule.

Risks associated with amendments to the IFRS standards applicable to the Group.

The EDF group's consolidated financial statements for the financial year ended 31 December 2014 have been prepared in accordance with the applicable international accounting standards published by the International Accounting Standards Board (IASB), as approved by the European Union as at 31 December 2014 (see note 1 to the consolidated financial statements for the financial year ended 31 December 2014).

This accounting standards framework evolves and new standards and interpretations are currently in the process of being drafted or approved by the competent international bodies. The Group is studying the potential impact of these standards and interpretations, but cannot foresee their development or potential impact on its consolidated financial statements.

4.1.5 Risks associated with EDF's capital structure and the listing of its shares

Significant volatility in share price.

Stock markets have experienced significant fluctuations in recent years, which have not always been related to the performance of the specific companies whose shares are traded. Such fluctuations may significantly affect the EDF share price.

The EDF share price may also be significantly affected by a number of factors that affect the EDF group, its competitors, general economic conditions or the energy industry in particular, which may be due, for example, to political decisions concerning energy policy.

Foreign exchange rate fluctuations.

EDF shares are listed only in euros and any future payments of dividends will be made in euros. The equivalent amount in foreign currencies of the share price or of any dividends paid to an EDF shareholder could be adversely affected by a fall in the value of the euro.

Risks associated with sales of EDF shares by the French government.

As of 31 December 2014, the French government held 84.49% of EDF's share capital. If the French government decides to further reduce its equity stake in EDF, such sales by the French government, or the perception that such sales are imminent, could adversely affect EDF's share price.

4.2 Risk management and control in the EDF group

4.2.1 General system set up to manage and control the Group's risks

For many years, the EDF group has pursued a policy to manage its operational, financial and organisational risks (see the report of the Chairman of the EDF Board of Directors on corporate governance and internal control and risk management procedures in Appendix A to this reference document).

The objectives of the risk management and control policy implemented by the Corporate Risk Management Division (*Direction Contrôle des Risques Groupe* or DCRG) are to:

- contribute to securing the Group's strategic and operational progress by identifying and ranking risks in all fields in order to ensure increasingly firm control thereof, increasing awareness and mobilising all Group entities to identify, assess and handle risks in order that all managers are aware of the risks inherent in their activities and take the actions necessary to control such risks;
- provide the Group's officers and directors and governance bodies with a consolidated, regularly updated view of major risks and their level of control;
- meet stakeholders' increasing need for information regarding management of the company's risks.

4.2.1.1 Risk management and control principles

In general, the operational and functional entities are responsible for managing risks within the scope of their activity, under the responsibility of the Group's Executive Management.

The Group's risk control policy is applied either directly to EDF and its controlled subsidiaries or through the governing bodies of regulated subsidiaries (RTE and ERDF) or jointly-controlled subsidiaries.

This policy is based on a system of risk control that is completely independent of the risk management functions. This system ensures a standard approach with respect to the identification, assessment and control of risks.

Under those principles, each year, EDF prepares a consolidated mapping of its major risks for the entities under its operational control or under joint control, based on reports they provide. The consolidated mapping completed at the end of the year is approved by EDF's Executive Committee and is presented to the Board of Directors' Audit Committee (see section 16.3 ("Bodies created by Executive Management")). A mid-year update enables the integration of significant developments.

The risk mapping and control measures are closely associated with the Group's internal control and internal audit functions, and the audit programme is prepared on the basis of the major risks identified. The overall risk mapping process provides support for numerous other processes implemented by the Group, such as the policy concerning insurance and its implementation (see section 4.2.3 ("Insurance")), the crisis management policy and the analysis of risks concerning matters examined by the Group's decision-making bodies (the Executive Committee, the Executive Committee's Commitments Committee, the Upstream-Downstream Trading Committee, etc.). The risk management process contributes *inter alia* to securing the investment and long-term commitments process by ensuring that matters presented to the Executive Committee's Commitments Committee comply with risk analysis methodology principles.

RTE

With respect to RTE, risk management and control are organised at the two relevant management levels:

- at the national level, every six months, RTE's Executive Committee approves the mapping of its major risks, which is then submitted to the economic oversight and audit committee of RTE's Supervisory Board. The Executive Committee tasks a national manager with monitoring each of the risks identified. RTE's Audit and Risks Department performs the national audits ordered by the Chairman of the Management Board, to whom it reports its findings and recommendations;
- at the level of RTE's various business lines, managers are responsible for conducting their own analysis of the risks associated with their businesses and for ensuring control thereof by implementing appropriate actions within the relevant entities. They monitor and report on these risks to the national level using an assessment system, the results of which are consolidated annually by RTE's Audit and Risks Department.

ERDF

ERDF identifies and manages its risks in accordance with the Group's methodology. Risk control is implemented pursuant to the Group's control principles and is carried out by a unit that is independent of ERDF's operational entities, and which verifies, with reasonable certainty, control of its activities:

- a mapping of the major risks within ERDF's scope is updated semi-annually. After approval by ERDF's Management Board, it is submitted to ERDF's economic oversight and audit committee and to the Supervisory Board. A member of the ERDF executive committee is designated for each significant risk identified, and a national coordinator is tasked with implementing action plans covering related risks. An annual programme of national audits ordered by ERDF's Executive Committee, that is devised based on the risk analysis and overseen by ERDF's Audit, Internal Control and Risk department, supplements the control system;
- each regional operational division and each functional business line division is responsible for conducting its own analysis of the risks associated with its activities. For this purpose, it conducts an upstream risk analysis using the cross-disciplinary methodology applied within ERDF. Reports on internal control plans are submitted and consolidated at the national level.

The progress of the audit programme and the effectiveness of the improvement initiatives taken are also submitted for approval to the Management Board, and are presented semi-annually to the economic oversight and audit committee, and then to the Supervisory Board. An internal control report is approved and then presented each year to the same governance bodies respectively.

4.2.1.2 Management and control of risks associated with energy markets

Risk factors associated with wholesale energy markets and allowances are described in section 4.1.2 above ("Risks associated with the Group's activities").

4.2.1.2.1 System set up to manage risks associated with energy markets

As a result of the liberalisation of the end-user market, the development of wholesale markets and international expansion, the EDF group is exposed to fluctuations in market prices for energy, which may materially impact its financial statements.

Therefore, the EDF group has implemented an “Energy Markets Risks” policy covering all energy commodities, which is applicable to EDF and entities under its operational control (see section 9.5.2 (“Management and control of energy market risks”)).

In the case of Dalkia, EDF Energies Nouvelles and Edison, implementation of the principles of the energy markets risk policy is underway. These entities are managed by a risk management system approved by the Executive Committee of EDF and by their respective Boards of Directors.

For entities that are not controlled operationally by EDF, their risk management system is reviewed by their governing bodies.

The objectives of the Group’s “Energy Markets Risks” policy are to:

- establish a general framework pursuant to which the various Group entities carry out their operational activities (power generation, optimisation and distribution) and interact with EDF Trading;
- consolidate the exposure of the various entities over which EDF exercises operational control on the structured energy-related markets;
- implement a coordinated hedging policy at Group level.

The operational management principles applicable to energy market risks are based on clarifying responsibilities for managing energy market risks, making a clear distinction between matters that are under the responsibility of power generation assets management, on the one hand, and trading on the other hand.

Power generation and supply asset managers are responsible for implementing a risk management strategy that minimises the impact of energy market risks on their financial results. Nevertheless, they remain exposed to risks that cannot be hedged on the markets, in light of various factors such as a lack of liquidity or market depth, or uncertainty about volumes, which may have a significant impact on the Group’s financial results.

Within the Group, positions on the energy markets are taken primarily by EDF Trading, which is the Group’s trading entity. In such capacity, EDF Trading operates subject to a strict governance and control scheme (see section 6.5.7 (“Regulations on the wholesale energy market”)).

The operational management principles applicable to energy market risks include management indicators, limits and position sensitivity scenarios that ensure control of these risks (see section 9.5.2 (“Management and control of energy market risks”)).

4.2.1.2.2 Risk control organisation

For entities that are operationally controlled by the Group, the process for controlling energy market risks is based on:

- a governance and market risk exposure measurement system, clearly separating management and risk control responsibilities;
- explicit authority given to each entity, which defines *inter alia* hedging strategies and sets limits for related risks. This practice allows the Executive Committee to define each year a consolidated risk profile for this scope that is consistent with financial objectives and to direct operational management of energy market risks for a given market horizon (typically three years);
- a specific control process in light of their significant interactions with decisions taken within the power generation and supply businesses. This process is based on a system of risk indicators and measurements that includes, *inter alia* alert procedures, and involves the Group’s Management in the event risk limits are exceeded.

In the case of entities that EDF does not control, the control process is reviewed by the governing bodies of those entities.

The consolidated exposure to energy market risks of entities under EDF’s operational control is submitted to the company’s Executive Committee on a quarterly basis. The control processes are regularly reassessed and audited.

4.2.1.3 Management and control of risks associated with financial markets

Risk factors associated with financial markets are described in section 4.1.2 above (“Risks associated with the Group’s activities”).

4.2.1.3.1 System set up to manage risks associated with financial markets

EDF has set up a system of financial management (see section 9.5.1 (“Management and control of financial risks”)), which defines the policy and principles for managing the Group’s financial risks (liquidity, currency, and interest rate risks) and which are applicable to EDF and operationally controlled subsidiaries. The Group is exposed to equity risk mainly through dedicated assets that cover long-term nuclear commitments and that are managed in a specific manner, outsourced employee benefit funds and, to a lesser extent, through its cash management by direct equity investments. These principles are subject to management indicators and limits for controlling these risks, and seek in particular to reduce the volatility of the Group’s financial expenses.

All changes to the financial risk management system must be submitted to EDF’s Audit Committee and Board of Directors for approval.

4.2.1.3.2 Risk control organisation

The Financial Risks Control and Investments Department (*Département Contrôle des Risques Financiers et Investissements* or CRFI) is in charge of controlling financial risks at the Group level by verifying proper application of financial management framework principles. It performs controls of the trading room for “cash” activities, of the Listed Assets Management Division (financial portfolio), and of the EDF Invest Division (unlisted portfolio) for activities associated with dedicated assets. CRFI is also tasked with carrying out a second level control (methodology and organisation) of EDF and entities under its operational control:

- with respect to controls of “cash” activities: CRFI provides daily monitoring of positions on the basis of risk indicators and submits a weekly report to the Operational Coordination Committee of the Finance and Investments Department (*Direction Financements et Investissements* or DFI) of the corporate finance division. If limits are breached, corrective actions are decided by the mutual agreement of CRFI and the trading room. Any disagreements are referred to the Markets Committee of the corporate finance division, which, if applicable, decides on any specific changes to limits that may be necessary;
- with respect to controls of “dedicated assets” activities: CRFI provides monthly monitoring of positions of listed assets and submits a monthly report thereon to the Operational Management Committee to enable it to monitor the financial portfolio. The risks assumed by the portfolio are discussed and, if necessary, actions to reduce risks are decided by this committee. With the creation of the EDF Invest Division in the summer of 2013, which is dedicated to investments in unlisted assets, a specific control framework was set up. The Dedicated Assets Oversight Committee continues to be the body that manages and monitors risks associated with the entire dedicated assets portfolio.

In addition, regular internal audits ensure that controls are properly in place. The internal control mechanism covers two levels of control:

- internal control exercised at the DFI level: an internal control coordinator who reports directly to the Finance and Investments Director is responsible for developing an annual internal control plan;
- the control exercised by the Group Audit Department, which plans yearly audits of activities connected with financial markets and financial risk control.

Moreover, if necessary, EDF may hire external firms to audit the financial risk control procedures in addition to the systematic review conducted by the College of Statutory Auditors.

4.2.1.3.3 Liquidity risk

The objective of liquidity management is to look for resources at the best price and ensure that they may be obtained at any given time. These factors are described in section 9.5.1.1 ("Liquidity position and management of liquidity risks").

EDF has set up regular monitoring of the Group's liquidity risk, which is incorporated in the business management cycle, and includes stress tests. In addition, the Operational Coordination Committee reviews liquidity needs on a weekly basis.

During the financial crisis, EDF strengthened the monitoring and control of liquidity risk associated with margin calls on the financial and energy markets. Accordingly, specific risk indicators have been in place since 2009 to monitor liquidity needs associated with margin calls on these markets. In addition, a steering committee monitors liquidity needs associated with energy market activities and decides, if necessary, on appropriate corrective measures to be implemented.

4.2.1.3.4 Currency risk

To limit its exposure to currency risk, the Group has adopted the following management principles:

- foreign currency financing: to the extent possible given the local financial markets' capacities, each entity funds its operations in its operating currency. When financing is contracted in other currencies, derivative instruments may be used to limit currency risk;
- asset-liability matching: the net assets of subsidiaries located outside the euro zone expose the Group to currency risk. On the consolidated balance sheet, currency risk on assets held in foreign currency is managed either by matching such assets with acquisition debt in the same currency or by hedging contracts involving the use of financial derivatives. Hedging of net assets in foreign currencies complies with a risk/return ratio. If no hedging instruments are available, or if hedging costs are prohibitive, the risk on open foreign currency positions is monitored by sensitivity calculations;
- hedging of operating cash flows denominated in foreign currencies: in general, the operating cash flows of EDF and its subsidiaries are denominated in their local currency, with the exception of cash flows related to fuel purchases which are primarily denominated in US dollars and, to a lesser extent, certain cash flows related to equipment purchases. EDF and its main subsidiaries concerned by currency risk (EDF Energy, EDF Trading, Edison, and EDF Énergies Nouvelles) hedge firm or highly probable commitments related to these future operating cash flows.

The measurement of currency risk is described in section 9.5.1.3 ("Management of foreign exchange risk").

4.2.1.3.5 Equity risk

The management of this risk is explained in sections 9.5.1.5 ("Management of equity risks") and 9.5.1.6 ("Management of financial risk on EDF's dedicated asset portfolio").

4.2.1.3.6 Interest rate risk

To limit its exposure to interest rate risk, in connection with its general policies, the Group lays down principles for the purpose of limiting the risk of changes in the value of assets invested or of an increase in its financial expenses.

These principles are described in section 9.5.1.4 ("Management of interest rate risk").

4.2.1.4 Management and control of counterparty risk

Risk factors related to counterparty risk are described in section 4.1.2 above ("Risks related to the Group's activities").

The EDF group is exposed to counterparty risk, which is defined as all losses that the Group would sustain on its operating activities and on the markets if any of its counterparties were to default and consequently fail to perform its contractual obligations.

Accordingly, a "Group counterparty risk management" policy, approved by the Board of Directors, is applied to EDF and the entities over which it has operational control. This policy organises the management and monitoring of counterparty risk, and lays out reporting procedures and channels.

Three major principles are at the heart of this system: (i) the organisation's responsiveness; (ii) the independence of the risk control functions from the activities which generate risks and (iii) the entities' responsibility for the management of their exposures. The policy also sets a limit for the Group which is applied to each counterparty. In addition to this limit applied to each counterparty at the Group level, an additional limit for each counterparty was established in 2007, which is applicable to each EDF entity or subsidiary under the Group's operational control. Use of counterparty limits is monitored regularly at the entity level, and the Group's consolidated exposure to counterparty risk is updated quarterly for all controlled subsidiaries and monthly for all entities that are active on the energy or financial markets. The Group also actively monitors its major counterparties (see section 9.5.1.7 ("Management of counterparty/credit risk")).

In addition, in accordance with energy and financial markets practices, a margin call system has been adopted by certain Group entities to minimise counterparty risk.

RTE and ERDF subsidiaries that also make purchases on the energy markets to cover network losses also regularly monitor their counterparties and assign limits to each counterparty based on criteria defined by their governing bodies. In connection with its purchases on the energy markets to cover network losses, RTE also regularly monitors its counterparties based on criteria it defines.

4.2.1.5 Management of fraud and commercial non-compliance risk

As part of the priorities for action set out by the Group, procedures for combatting fraud and commercial non-compliance, including policies, benchmarks, training plans and specific controls have been implemented within the Group to prevent, detect and address unethical practices in business conduct and situations of non-compliance with applicable laws and regulations everywhere the Group conducts business.

In particular, these procedures incorporate guides to good practice for line management to prevent and detect fraud, a benchmark for addressing "fraud alerts" within the Group and control requirements targeted at fraud and corruption risks in all forms and non-compliance with international sanctions.

See also section 17.2.3.1 ("Ethics and transparency to stakeholders" – "Fraud prevention").

4.2.2 Management of industrial and environmental risks

4.2.2.1 Management of nuclear safety risk

The risk factors associated with nuclear safety are described in section 4.1.3 above ("Specific risks related to the Group's nuclear activity").

Like other operators, the Group assumes responsibility for the nuclear safety of its facilities. Nuclear safety includes all technical, organisational and human measures that are intended to anticipate accident risks and limit the effects of an accident, and which are taken at every stage of the life of a nuclear power plant, from design to operation, until decommissioning.

The methods implemented in connection with the nuclear safety system have allowed continuous performance improvement in the protection of employees against the effects of ionizing radiation. The entire nuclear safety approach is continuously monitored, both internally and externally (see below and section 6.2.1.1.3.3 ("Environment, safety, radiation protection")), and the appropriateness of the organisation and measures in place are continuously re-examined, based *inter alia* on progress in knowledge and experience. Accordingly, the Group has always actively participated in the analysis of past accidents. Thus, the Group has been able to learn lessons from the accidents at Three Mile Island (1979) and Chernobyl (1986), which led to significant material and organisational improvements in the safety of nuclear facilities. This review is currently on-going, incorporating feedback from the events which took place in Japan in March 2011. Based thereon, EDF quickly proposed several possibilities for improving safety based on the initial lessons learned from that accident, concerning (i) a reassessment of earthquake and flood scenarios, (ii) dealing with the simultaneous loss of electrical power sources and the cold source and (iii) dealing with the fusion of the core.

In France

The construction of the Group's nuclear power plants has led to the adoption of safety procedures that, starting at the design stage, take into account risks that may arise during plant operation, whether associated with the operation of the facilities, internal or external attacks or natural disasters. These procedures rely primarily on the application of strict operating rules and on the Group's integrated skills (nuclear engineering, research and development), which allow planning ahead for resolution of possible failures, continuous assessment of equipment, regular re-evaluation of safety margins, technological monitoring and the implementation of new high-performance techniques.

Maintaining and improving safety also relies on the concept of in-depth defence, which provides for systematically handling the risk of technical, organisational and human failures by placing successive and independent lines of defence for facilities, processes and the organisation.

The operating quality and safety of the Group's French nuclear plants is ensured by multiple internal inspections, which are carried out *inter alia* by the Inspector General for nuclear safety and radiation protection, who reports directly to EDF's Chairman and Chief Executive Officer, as well as external inspections, which are carried out *inter alia* by the ASN, an independent administrative authority. Nuclear power plants must comply with terms of reference, the objectives of which are established and controlled by the ASN. The crisis management system to be implemented in the event of an accident is regularly tested through accident simulation exercises. Each year, approximately 100 exercises are organised for all French nuclear plants. Approximately ten exercises are carried out at a national level. The liability scheme applicable to European operators and the associated insurance

are described in section 6.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities").

In September 2011, following the Fukushima accident, EDF submitted reports on the additional safety inspections ("ECS") of its facilities, as requested of all operators of nuclear facilities by the ASN (see section 6.2.1.1.3.5 ("Preparing for the future of nuclear fleet in France")). In its report on the ESCs, which was submitted to the Prime Minister in early January 2012, the ASN deemed that the safety level of facilities inspected was sufficient and that no plant required an immediate shutdown, followed in June 2012 by a first set of technical instructions. EDF has prepared an action plan based on a "central core", which is currently undergoing and will be carried out over several years, and which will cover the additional studies and changes decided.

Moreover, immediately following its initial analyses of the Fukushima accident, EDF decided to supplement its accident management organisation with a national team capable of quickly providing material and human assistance to a site experiencing major difficulties. Since the end of 2012, this team, called the National Rapid Action Force ("FARN"), has been able to intervene in a unit of any site in difficulty, and will be fully deployed by late 2015. The FARN will back up the existing crisis management organisation (see section 6.2.1.1.3.3 ("Environment, safety, radiation protection")).

In the United Kingdom

The safety and reliability of EDF Energy's nuclear power stations is based on an approach that integrates the concept of in-depth defence, as from the design stage, through the technical characteristics of facilities and safety systems.

Maintaining and improving the safety of facilities in operation is ensured by implementing initiatives based on regular assessment of the risks that may affect plants, including extreme events. The main objective is to prevent the occurrence of any event that may cause radiation emissions that are potentially harmful to the public, EDF Energy employees or the environment.

Safety is also an integral part of the operating conditions imposed by the site licenses issued pursuant to the Nuclear Installations Act and enforced by the Office for Nuclear Regulation (ONR) and the Agency of the Health and Safety Executive (HSE). An ONR inspector is assigned to each power plant to monitor compliance with the conditions set by the site license, with the power to direct a shutdown if appropriate. The approach to plant safety is based on standards and strict operating procedures, professional expertise and a process of organising and planning tasks to meet exacting standards and ensure compliance with quality assurance standards in force for each activity.

Pursuant to the Nuclear Installations Act, the Ionising Radiation Regulations of 1999, and the Radiation Emergency Preparedness and Public Information Regulation (REPPPIR), safe operation of power plants is ensured by accident prevention and control of crisis situations, while addressing the need to protect onsite personnel and the general public. It is therefore crucial, in accordance with licensing requirements, to be able to demonstrate to third parties and the public that the organisation set up to address any crisis situation has been thoroughly prepared, including through the training of personnel and conducting regular crisis drills. Local authorities and/or other external stakeholders must be consulted whenever these measures concern them.

Following the events in Fukushima, Japan, the UK Secretary of State requested the nuclear safety authority to prepare a report on the implications for the United Kingdom. Dr Weightman, the chief nuclear safety inspector, submitted his final report in October 2011. This report concluded that there is no reason to change current siting strategies for new nuclear power plants in the United Kingdom. The regulator stated that it was satisfied with the responses and plans initiated by the government and the nuclear industry in response to this report.

EDF's responses to the ONR in connection with the preparation of the Weightman report were incorporated into a comprehensive safety assessment, which was coordinated by a team of experienced nuclear safety professionals and verified by independent experts. This assessment confirmed the safe design of EDF Energy's nuclear fleet and the robust nature of its power plants, as well as their capacity to operate safely, even under the most extreme scenarios, including those whose likelihood of occurrence in the United Kingdom is extremely low. Nonetheless, EDF Energy has identified further means for enhancing the already very high current safety levels, which require investments in additional backup equipment for the cooling system electric supply, fuel pond cooling equipment, emergency commands and control equipment, as well as to provide additional training in accident management to key technical staff (see section 6.3.1.4.2 ("Generation business unit" – "Nuclear Generation" – "Safety")).

4.2.2.2 Management of hydropower safety risk

Risk factors relating to hydropower safety are described in section 4.1.2 above ("Risks associated with the Group's activities").

The Group operates hydroelectric facilities under concession agreements or administrative licenses. As operator, it is responsible for their safety.

There are three strategic activities in connection with the management of hydropower safety: monitoring dams and related facilities, managing structures during floods and managing flow variations (see section 6.2.1.1.4.2 ("Hydropower safety")). In order to further improve the management of these risks, in 1995, EDF initiated quality assurance procedures for these three activities in France and in the French overseas departments, which resulted in each of the Hydropower Operating Divisions obtaining ISO 9001 certification at the end of 2003. These certifications are the basis of a continuous progress program in hydropower safety management, and have been renewed by the certification authorities since then.

In addition, the detection, analysis of any incidents, implementation of corrective and preventive actions, feedback and experience sharing are the basis of the process for improving the safety level of the facilities. Continuing a process begun in 2005 to identify failure risks by type of equipment, and after a period in which certain problems caused facilities to be unavailable over the medium term (the Tuilières dam in Dordogne, etc.), EDF decided in 2006 to launch a program of technical upgrades and stepped-up maintenance of facilities in order to renovate certain sites and to maintain, on a long-term basis, a high level of hydropower safety and preserve the technical performance of its facilities in the future. This hydropower facilities renovation programme, known in French as "*Sûreté et performance de l'hydraulique*" (Hydropower safety and performance), or "SuPerHydro", has a budget dedicated to safety of €800 million for 2007-2016 (see section 6.2.1.1.4.3 ("Performance of the hydropower generation fleet")).

Public information and outreach campaigns on the hazards of hydroelectric installations, initiated about ten years ago, are repeated each year. The breach of a dam or related facility may have serious consequences for persons and property located downstream. Facilities monitoring and maintenance, which are the principal measures to prevent the major risk of a dam breach, are carried out under the control of the French regional environmental, land planning and housing departments (DREAL). The 68 largest dams are covered by a special action plan implemented under the authority of the prefect, pursuant to the laws on major risks.

EDF has taken out general civil liability insurance policies to cover these risks (see section 4.2.3.3 ("Civil liability insurance (not including nuclear civil liability)")).

4.2.2.3 Management of risks associated with the Group's transmission and distribution facilities

The risk factors associated with the Group's transmission and distribution facilities are described in section 4.1.2 above ("Risks associated with the Group's activities").

Investments made in transmission and distribution installations take into account the safety of persons and property.

In addition, in France:

- with respect to third parties, new partnerships have been established for the information campaign "Under aerial power lines, beware - keep your distance" including with the *Caisse centrale de la mutualité sociale agricole* (CCMSA) and the French Aerostat Federation. Communications have also been directed to non-profit associations and trade unions (fishermen, construction contractors, farm co-op funds, etc.) to remind the public of the hazards of using tools near aerial power lines, along with training for construction and public works professionals to reduce damage to installations;
- with respect to network operators and their contractors, work is done by personnel qualified under the UTE C 18-510 standard. Such personnel are trained to control electrical risk, and undergo periodic tests of their knowledge and checks by their superiors, particularly during site inspections. To maintain their certifications, personnel qualified to work in live voltage situations must also complete a minimum number of live voltage assignments, which varies by type of live voltage work.

4.2.2.4 Management of risks associated with industrial accidents or the group's environmental and health impacts

If not adequately managed, the Group's activities could cause industrial accidents or significant environmental and public health impacts in particular with regard to electricity, gas or oil generation, transport, or storage facilities.

Such risks of harm to the environment, the health of local residents or employees of the Group or its subcontractors are governed by increasingly stringent environmental and public health regulations. The corresponding risk factors are described in section 4.1.2 above ("Risks associated with the Group's activities").

The Group's environmental policy incorporates developments on major environmental issues, such as fighting climate change, adverse effects on biodiversity, etc.

Operational implementation of this policy relies on the deployment of an Environmental Management System (SME) in all of the Group's entities that have a direct or indirect influence on environmental impacts. The implementation of this EMS ensures improved management of the Group's knowledge of and compliance with regulations and anticipation of regulatory developments. This system has been ISO 14001 certified since April 2002 (see section 17.2.2.1.1 ("Environmental management system (SME)")). With respect to industrial accidents, the ISO 14001 standard requires taking a controlled set of planned and systematic actions, in particular, for prevention of major risks, emergency situation testing and safety management. In this regard, the Group has taken out a general civil liability insurance programme (see section 4.2.3.3 ("Civil liability insurance (not including nuclear civil liability)")).

Each year, an authorized organisation external to the EDF group carries out follow-up audits of the entities within the scope of the certification. In June 2013, the Group obtained a new ISO 14001 certificate that incorporates new Group entities (see section 17.2.2.1.1 ("Environmental management system (SME)")).

4.2.3 Insurance

To protect its assets and limit the impact of certain events on its financial position, the EDF group has dedicated insurance programmes that cover its major risks in terms of property damage, civil liability and insurance of persons. Nuclear risks are subject to the specific civil liability regime described below.

4.2.3.1 Insurance organisation and policy

The Group Insurance Division is tasked with developing the EDF group's insurance policy and organising its implementation throughout the Group in order to continuously optimise the total cost of its insurable risks¹.

Its duties are to:

- continuously analyse cover for the EDF group's risks in conjunction with the Group Risk Control Department: analysis by business line, entity and project;
- establish rules for the Group's entire scope that enable covering all risks that can and must be covered, as well as optimising the total cost thereof and reducing volatility;
- promoting and applying these rules to all Group entities, using appropriate means and in compliance with governance rules; and
- developing and managing the tools necessary to perform the above tasks, including within the subsidiaries that report to the Insurance Division: EDF Assurances and the Group's captive insurance companies (see section 4.2.3.2 ("Use of captive insurance companies and mutual insurance funds")).

The insurance managers of entities and controlled subsidiaries that join the Group's programmes are responsible for:

- ensuring that all risks are insured;
- scheduling prevention inspections and overseeing implementation of the resulting recommendations;
- reviewing cover strategies and amounts declared (risk quantification);
- analysing losses and claims handling.

This work, which is carried in close conjunction with the Group Insurance Division, continuously improves the quality of information about insurable risks as programmes are renewed (expert appraisal of insured values at numerous sites) and prevention inspections are carried out (assessment of maximum possible losses – MPL). In connection with prevention actions, the Insurance Division establishes and oversees implementation of the site inspections programmes.

The Group insurance policy was approved by the Group Senior Executive Vice President, Group Finance in October 2012. Its implementation is presented annually to EDF's Audit Committee.

Objectives

The insurance policy stipulates the risks that the Group decides to transfer to the market and the general principles for optimising such transfers: grouping purchases by setting up Group insurance programmes (common programmes for EDF and relevant subsidiaries), allocating risks between traditional markets and other types of cover (specialised mutual insurance funds, transfers to the financial markets, etc.), individual and Group excesses (in general, only major risks are transferred), optimising intermediation costs.

Implementation methods

In 2011, a Strategic Insurance Policy Committee (COSA) was created, which serves as a forum for discussing and setting policy regarding cover for major risks. The Committee also provides an opportunity for the operational teams and the Finance Division to reflect on changes to and procedures for implementing the Group's insurance policy.

Information exchanges between the Group Risk Management Division (see section 4.2.1.1 ("Risk management and control principles")) and the Group's Insurance Division have been made systematic to ensure that both divisions have a view of the Group's risks that is consolidated and as comprehensive as possible. As a result of this shared view, EDF is in a position to look for cover appropriate for its insurable risks in accordance with the principles established by the Group in this area.

EDF has set up its Group insurance programmes and extended them broadly to its controlled subsidiaries, as well as offering them to its regulated subsidiaries of the RTE and ERDF networks, in order to, firstly, harmonise risk cover and rationalise its management and, secondly, control the corresponding insurance costs.

The French Energy Code is gradually causing RTE to transfer to the insurance market the covers provided under the EDF group's insurance programmes. In 2013, RTE transferred supplementary health cover policies. RTE plans to completely withdraw from the EDF group insurance programmes as at 31 March 2015.

Insurance policies, according to market practice, include exclusions, limits and sub-limits.

4.2.3.2 Use of captive insurance companies and mutual insurance funds

Like all major French and foreign groups, EDF uses captive insurance companies and mutual insurance funds to supplement coverage provided by the traditional insurance markets.

The EDF captive insurance companies are:

- Wagram Ins. Cy Ltd., an insurance company founded in 2003 in Dublin, which is involved in the majority of the Group's insurance programmes.
- Oceane Re, a reinsurance company established in 2003 in Luxembourg, to reinsure EDF's nuclear civil liability.
- Scintilla Re, a reinsurance company founded in 2013 in Luxembourg, to pool nuclear civil liability with EDF Energy during the implementation of the revised Paris Convention.

EDF is a member of the Oil Insurance Limited (OIL) mutual insurance fund, which covers the risk of damage (other than to aerial networks) to the Group's own property or property managed under concession (by EDF and its consolidated subsidiaries). OIL is an insurance mutual fund dedicated to the needs of businesses in the energy sector and provides its members with cover for property damage. The scope covered includes *inter alia* nuclear power plants (the conventional portion), thermal power plants, hydropower facilities, network substations and exploration and production assets.

The Group's damage insurance programmes combine this cover provided by OIL and cover provided by market insurers.

EDF is also a member of the European Liability Insurance for the Nuclear Industry (ELINI), the European Mutual Association for Nuclear Insurance (EMANI), the Nuclear Industry Reinsurance Association (NIRA) and Blue Re, which are mutual insurance funds that manage cover in this area for European nuclear power operators.

Captive insurance companies and mutual insurance funds allow EDF to reduce the cost of its insurance programmes and the amount of premiums paid to the insurance market.

1. Risks that can be transferred to the insurance markets and the alternative markets.

4.2.3.3 Civil liability insurance (not including nuclear civil liability)

EDF has taken out general civil liability insurance covering EDF, ERDF and their controlled subsidiaries against the financial consequences of civil liability, not including nuclear damage, that they may incur in doing business as a result of damage caused to third parties. In particular, this programme covers the risks of civil liability associated with the operation of structures (hydroelectric dams, thermal power plants, substations and other network facilities), risks associated with development of the Group's renewable energy activities (wind, solar, etc.), as well as risks associated with environmental damage (emissions of solid, liquid or gaseous substances).

This cover is purchased to the extent of available capacity under acceptable financial terms on the insurance and reinsurance markets. Maximum cover is €1 billion. For this programme, the share of risk retained by the Group ("retention"), including the share of Wagram Insurance Company Ltd., does not exceed €5 million per claim. Subsidiaries generally opt for lower excesses that are more in line with their financial capacity.

4.2.3.4 Civil liability insurance for corporate officers and directors

EDF has concluded its civil liability insurance covering corporate officers and directors of EDF, RTE, ERDF and their controlled subsidiaries against the financial consequences of their civil liability incurred in performing their management functions.

4.2.3.5 Damage insurance (not including nuclear assets)

4.2.3.5.1 Contractual damage programme

The scope of the contractual damage programme includes EDF, ERDF, EDF Energy, Edison, Dalkia and numerous other subsidiaries.

Wagram Insurance Company Ltd., the Group's captive insurance company, together with other insurers and reinsurers, provide extensions of cover (property damage and operating loss bringing the maximum up to €1 billion) in addition to the covers provided by OIL.

For this contractual damage programme, the Group's retention per claim, including the excess (which varies by subsidiary) and the share of the risk retained by Wagram Insurance Company Ltd., does not exceed €25 million.

This programme provides cover for operating losses for most subsidiaries in the event of property damage, but not for EDF itself. The actions and measures taken to prevent industrial and environmental risks and limit their impact are described in section 4.2.2 ("Management of industrial and environmental risks").

RTE has taken out specific contractual damage insurance for its own property.

4.2.3.5.2 Cover for "construction" risks

EDF has taken out insurance policies covering specific construction risks (contractors' all-risk and construction all-risk policies). These policies are not included in any Group programme but are purchased on an ad hoc basis for major construction projects, such as the Flamanville EPR, the construction of combined cycle power plants, dams, combustion turbines, etc.

These covers are specifically monitored and are renegotiated if unforeseen events occur during the construction projects.

4.2.3.5.3 Storm cover

On 11 August 2011, ERDF took out a five-year policy with Natixis covering ERDF's aerial transmission network against the consequences of exceptional storms. This "cat-bond" provides maximum cover of €150 million, and in the event of a claim will pay parametric-based compensation tied to a wind-speed index.

This cover was supplemented by a policy signed on 16 December 2011 with Swiss Re, which increases total cover to €230 million.

4.2.3.6 Specific insurance for nuclear facility operations

4.2.3.6.1 Civil liability of nuclear facility operators

Current situation

EDF's current insurance policies are in compliance with French Act no. 68-943 of 30 October 1968, as amended by Act no. 90-488 of 16 June 1990, which codified the civil liability obligations imposed on nuclear facility operators by the Paris Convention (see section 6.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities")). These regulations were codified in the French Environmental Code. To guarantee availability of the funds to meet such obligations, EDF took out insurance policies with Allianz and the European Liability Insurance for the Nuclear Industry (ELINI), which provide cover equal to the limits of liability set by law in the event of an accident at a nuclear facility.

For onsite accidents, total cover is €91.5 million per nuclear accident. In accordance with the law, these policies do not include any excess. Océane Re, a Group captive reinsurance company, contributes to the cover for this risk through the reinsurance policy it has issued to Allianz and ELINI.

EDF Energy operates nuclear plants in the United Kingdom. In the UK, the liability scheme applicable to operators of nuclear facilities is similar to that in France. EDF Energy is insured for £140 million, the current limit of civil liability applicable to nuclear plant operators in the United Kingdom. Since 1 January 2014, this insurance cover has been provided by ELINI and Wagram Insurance Company Ltd. Océane Re contributes to the cover for this risk through the reinsurance policy it has issued to Wagram Insurance Company Ltd.

In the United States, the scheme of nuclear civil liability resulting from the Price Anderson Act introduced in 1957, expanded in 1988 and extended until 2025 by the Energy Policy Act of 8 August 2005. The cover mechanism is fully managed by the pool of US insurers (ANI, American Nuclear Insurers) and mandatory for all operators.

Foreseeable changes

Protocols amending the Paris and Brussels Conventions were signed on 12 February 2004.

In France, the TSN Act of 13 June 2006 on transparency and safety in the nuclear field provides for the transposition of these protocols into French law and will apply, as codified in the French Environmental Code, as of the date they come into force (see section 6.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities")). At such time, EDF will be required to adjust its insurance cover within a period of six months in order to meet the new guaranteed maximum compensation of €700 million and a wider scope of damages admissible for compensation for liability of nuclear facility operators.

In the United Kingdom, the draft bill aiming to transpose the protocols into English law stipulates that the obligations of British operators would be raised to €700 million and gradually increased over a five-year period to a total of €1.2 billion.

For several years now, the Group has been studying possible cover solutions (nuclear insurance pools, mutual insurance funds, etc.) in order to be ready to implement them when the requirements come into force. Consequently, EDF and EDF Energy are founding members of Blue Re, a European mutual reinsurance company created on 17 June 2011 that specialises in covering these risks (see section 4.2.3.2 ("Use of captive insurance companies and mutual insurance funds")).

The draft bill on energy transition for green growth, currently under review by Parliament, aims to increase the compensation limits for accidents (€700 million for facilities, €70 million for reduced-risk facilities and €80 million for transport) with an unchanged scope of damages admissible for compensation, applicable within six months from its scheduled promulgation in the second quarter of 2015. This increase could thus apply from 1 January 2016 (see section 6.5.8.2 ("Future regulations at national level" – "Draft bill on energy transition for green growth")).

For more information on the laws governing nuclear power plant operators' civil liability, see section 6.5.6.2.2 below ("Specific regulations applicable to basic nuclear facilities").

4.2.3.6.2 Civil liability for transport of nuclear substances

Under the Paris Convention, the operator that is the "shipper" is civilly liable for transport of nuclear substances and such liability is currently limited to €22.9 million. This amount will be increased to €80 million with an unchanged scope of damages within six months from the promulgation of the draft bill on energy transition for green growth (for further details see section 4.2.3.6.1 ("Civil liability of nuclear facility operators") and section 6.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities")), and then with a wider scope of damages admissible for compensation when the amended Paris Convention comes into force.

Therefore, prior to such transposition, insurance for 2014 has been renewed on the bases in effect for 2013.

4.2.3.6.3 Damage insurance for nuclear facilities

In addition to the cover obtained through EDF's membership in the OIL mutual insurance fund, property damage (including following a nuclear accident) to EDF's nuclear facilities in France and to EDF Energy's nuclear facilities in the United Kingdom, as well as nuclear decontamination costs, are covered by a joint insurance programme underwritten primarily by the NRI British insurance pool, insurers, some of which are reinsured by the French nuclear pool (Assuratome), and the EMANI (see section 4.2.3.2 ("Use of captive insurance companies and mutual insurance funds") and section 4.2.3.7 ("Premiums")), which has total capacity of €1,750 million, over and above an amount of US\$320 million. The Group programme covering power plants in France and the UK was renewed on 1 April 2012 for a period of 2 years, then extended for one year until 30 March 2015.

Furthermore, in connection with CENG's activities in the United States, EDF Inc. became a member of NEIL (Nuclear Electric Insurance Limited).

4.2.3.7 Premiums

The total amount of premiums for EDF insurances and Group programmes for all types of cover amounts to €146 million in 2014 compared with €125 million in 2013, excluding life and health insurance, including €62 million supported by EDF and €18 million cover for ERDF overhead networks. EDF deems that policies taken out under the Group Insurance Policy are in line with the insurance market's current supply capacity for players of similar size and activities in the world, particularly with regard to cover limits and deductibles. The nature, insured amounts and prices of insurance cover in place may be amended at any time based on market condition, the pace of deployment of insurance programmes and the assessment of EDF's Board of Directors regarding risks and suitability of coverage.

4.2.4 Crisis management

The EDF group has a crisis management policy that is designed to enable it to manage situations in which its assets, business, personnel, activities or image are threatened by a foreseen or unforeseen event.

For this purpose, the EDF group ensures that it at all times has the means available to respond to a crisis. A warning system is in place to immediately inform the company's executive management of any event that could potentially justify a decision to treat a situation as a Group crisis.

The crisis structure is based on crisis plans that are developed by the relevant divisions or entities, and which are specific by type of crisis (imbalance between generation and consumption, incidents affecting information systems, malicious acts, public health crisis, technical incident at a power generation facility, labour unrest, etc.), but which are consistent with the framework established by the Group's crisis structure.

In each entity, crisis management training is provided and structures are tested through crisis drills. A crisis drills programme is established each year at Group level (an average of two to three crisis drills per year involving the Group's crisis unit), in addition to the crisis drills organised by the divisions or entities (for example, 15 drills per year and per nuclear site).

Furthermore, following the Fukushima accident, EDF supplemented its national crisis teams with a National Rapid Action Force (FARN) capable of quickly delivering teams with "operational/maintenance" and "logistical" expertise to a nuclear power generating centre in difficulty (see section 6.2.1.1.3.3 ("Environment, safety, radiation protection")).

4.2.5 Ethics and oversight

The fact that the Group does business in many countries requires that it pays particular attention to compliance with the values and principles associated with the human and social rights derived from international laws and treaties. In addition, EDF believes that maximising its economic performance is inextricably linked not only to its environmental performance, but also to its social and ethical performance and, therefore, is particularly vigilant in ensuring that ethical and societal issues are considered in the conduct of its business.

See section 17.2.3.1 ("Ethics and transparency to stakeholders").

4.3 Dependency factors

The EDF group does not consider itself to be dependent on any single customer.

With regard to suppliers, EDF and ERDF use 26,349 suppliers in 2014 (compared with 24,620 in 2013 and 24,720 in 2012). The top five suppliers of EDF and ERDF account for 15% (12.6% in 2013 and 14% in 2012) of total EDF purchases (not including fuel purchases) and ERDF purchases, and the top ten suppliers account for 20.8% (17.5% in 2013 and 18.9% in 2012).

Certain suppliers and subcontractors that provide products or services that the Group purchases in conjunction with its operations cannot be replaced.

The issue of EDF's dependency vis-à-vis its suppliers arises primarily in the nuclear sector and, to a lesser extent, in IT and telecommunications.

The EDF group has developed expertise as an architect-builder of its power generation plants and as a nuclear fuel cycle integrator, which gives EDF technical expertise that is independent of that of its suppliers.

Lastly, the EDF group has a very important commercial relationship with the AREVA group, which is involved in each phase of the nuclear fuel cycle. The AREVA group is also active in the construction, equipping and maintenance of nuclear power generation plants. In France, the AREVA group is EDF's main supplier in the nuclear sector and EDF is the AREVA's group's main customer. Accordingly, EDF considers that there is a situation of interdependence with the AREVA group.

Nuclear fuel cycle domain

The relationship between EDF and the AREVA group with respect to the fuel cycle is governed by multi-year contracts.

For the front end of the nuclear fuel cycle (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues" – "Front-end (upstream)")), EDF still relies to a large but decreasing extent on the AREVA group, which accounted for approximately 50% of EDF's purchases in 2014 (44% in 2013):

- for its natural uranium needs, EDF follows a policy of diversifying the origins and suppliers of supply sources. The AREVA group continues to be an important supplier to EDF in this area;
- in terms of the nuclear conversion process, a significant share of EDF's needs are met by the AREVA group's Comurhex factory, which competes with other global suppliers;
- in the field of uranium enrichment, EDF has also diversified its supply sources and now uses several major worldwide suppliers. After an interruption due to the permanent closure of the Eurodif plant, AREVA's services on behalf of the EDF group resumed in 2013, and AREVA's new Georges Besse II plant now provides a significant share of these services (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues"));
- EDF uses two suppliers to manufacture fuel assemblies: AREVA and Westinghouse groups.

For the back-end nuclear fuel cycle (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues" – "Back-end (downstream) in France")), the AREVA group has been appointed to perform all operations in France.

Spent fuel management operations (removal, storage and treatment) are carried out in the AREVA group's plant at La Hague. The terms and conditions for these operations, as well as the recycling of processing by-products, have been agreed for the 2008-2040 period in the EDF-AREVA master agreement of 19 December 2008. EDF and AREVA agreed in mid-2014 to terms of reference covering the 2013-2020 period. The corresponding contract is expected to be finalised during the first semester of 2015.

Recycling, which covers the manufacture of MOX fuel, is carried out, for its part, in the MELOX plant.

Power plant development and maintenance domain

The AREVA group is EDF's main supplier of power plant construction and maintenance services. In particular, the AREVA group supplies nuclear boilers, their spare parts and the corresponding safety studies. In 2011, EDF signed two major contracts with AREVA, one for the production of 32 of the 44 steam generators for the 1,300MW segments, and the other for the renovation of the control-command systems for the 1,300MW reactors at the time of their third ten-year inspection. Nevertheless, a diversification program has been underway for several years, in particular, with Westinghouse and Mitsubishi, for the replacement of certain major components of the boiler (12 of the 44 steam generators for the 1,300MW segments will be provided by Westinghouse) and for maintenance services.

To prepare for the renewal of its power generation facilities, EDF has decided to use the EPR technology developed with the AREVA group, and has initiated construction of the Flamanville EPR power plant. In connection with this project, in 2007, EDF signed a contract with AREVA for the supply of the EPR boiler.

EDF also has a relationship with the Alstom group for the maintenance of certain components of nuclear and thermal power plants. In addition, Alstom is supplying the engine room for the Flamanville 3 EPR. Goods and services that Alstom supplies to EDF are particularly important for the maintenance of the nuclear power plants' turbo-generators and of certain major components of thermal generation facilities. EDF does not consider that it is dependent on the Alstom group, which competes for most of the business given to it. In particular, in 2008 this competition led to Alstom and Toshiba being jointly awarded the major contract for the renovation of the generators of the nuclear power fleet and in 2014 by the award of the electromechanical market for ultimate emergency diesel generators to companies other than Alstom.

5

Information about the issuer



EDF – Gabrielle Balloffet ▲ Franck Oddoux ▼



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5.1 History and development of the Company

In this Reference Document, references to the articles of association refer to the Company's articles of association as approved by Decree no. 2004-1224 of 17 November 2004, issued pursuant to Act no. 2004-803 of 9 August 2004 on public electricity and gas service and electricity and gas companies (the "Act of 9 August 2004"), as subsequently amended on several occasions.

5.1.1 Company name and registered office

The name of the Company is: "Électricité de France". The Company may also be legally designated by the acronym "EDF".

The Company's registered office is at 22-30 Avenue de Wagram in the 8th arrondissement of Paris.

5.1.2 Trade and Companies Registry, APE code

The Company is registered with the Paris Trade and Companies Registry under number 552 081 317. Its APE code is 401E.

5.1.3 Date of incorporation and term of the Company

EDF was incorporated pursuant to Act no. 46-628 of 8 April 1946 as a French public industrial and commercial establishment (EPIC). It was converted into a French *société anonyme* (limited company) by the Act of 9 August 2004 and the Decree of 17 November 2004.

The Company was incorporated for a term of 99 years as from 19 November 2004, unless the Company is dissolved before such date or unless its term is extended.

5.1.4 Legal form and applicable legislation

Since 20 November 2004, EDF has been a French *société anonyme* with a Board of Directors. It is governed by the laws and regulations applicable to commercial companies, in particular the French Commercial Code, except in the event of specific exceptions stipulated in the French Energy Code or Order no. 2014-948 of 20 August 2014 on the governance and capital transactions of companies with State holdings or by its articles of association.

5.1.5 History

The main stages in the Group's development are described below.

EDF was created in 1946. Before 1946, the electricity sector had developed around numerous local companies across France. At the end of the 1930s, there were approximately 200 generation companies, approximately 100 transmission companies and 1,150 distribution companies.

This multitude of private companies, plus some 250 local utilities, were responsible for about 20,000 distribution concessions. From this highly fragmented segment, a certain number of large groups emerged in the fields of generation and distribution.

In 1946, the electricity and gas sectors were nationalized. The Act of 8 April 1946 created EDF as an EPIC and created a special status for the personnel of the electric and gas industries (IEG). The law nevertheless left in existence a certain number of non-nationalized distributors (DNN) and local distribution companies (ELD).

Between 1946 and 2000, the Group's industrial base was developed. Initially, there was a fleet of thermal generation facilities using coal and then fuel oil, as well as hydropower facilities, in particular with the construction of the dams at Tignes in 1952 and Serre-Ponçon in 1960. In 1963, following the French government's decision to guarantee France's energy independence through nuclear power, EDF commissioned the first commercial-scale nuclear generation unit at Chinon (70MW), the first of a series of six generation units of the Uranium Natural Graphite Gas (UNGG) family, the construction of which continued until 1972. The oil crises of 1973 and 1979 led to accelerated replacement of thermal power with nuclear power. In 1969, the UNGG family was abandoned in favour of the Pressurised Water Reactor (PWR) family, which was used for new power plants: 34 generation units totalling 900MW, which were built until 1988; then, 20 generation units totalling 1,300MW, which were built until 1994; then, four N4 generation units totalling 1,450MW, which were commissioned in 2000 and 2002.

Beginning in the 1990s, EDF embarked on significant expansion abroad. In 1992, the Group acquired an interest in Edenor, a distribution and supply company in Argentina. It subsequently raised its stake in Edenor to 90%. In May 1996, EDF acquired a stake in the Brazilian electricity company Light, a distribution and supply company located in the state of Rio de Janeiro. As of 31 December 2004, EDF held 94.8% of the share capital of Light. In December 1998, EDF acquired 100% of London Electricity (which was renamed EDF Energy on 30 June 2003). This policy was pursued in 2000 with the acquisition of 20% of EnBW (a stake that was successively raised to 45.01% by 2005) and in 2001 with the acquisition of equity interests in the Italian company Edison by the IEB consortium (63.8%), in which EDF holds a stake of 18.03%, and in 2002, when London Electricity acquired 100% of the share capital of EPN Distribution Plc. and Seeboard Plc., two distribution companies located, respectively, in the east and the southeast of England.

In France, the major development in recent years has been the liberalisation of the market pursuant to European regulations. In February 1999, sites where electricity consumption exceeded 100GWh per year, i.e. 20% of the market, became entitled to choose their supplier. The eligibility threshold was then progressively lowered. In May 2000, 30% of the market was thus opened to competition, then 37% in February 2003. In July 2004, all of the market for non-household customers, equivalent to 69% of the entire market, was liberalised. Since July 2007, the market has been fully liberalised, including for residential customers.

At the same time, the structures necessary for a competitive market to function effectively were set up. The French Electricity Regulation Commission, which became the Energy Regulation Commission (*Commission de Régulation de l'Énergie* or CRE) was created in May 2000. That same year, in order to guarantee non-discriminatory access to all operators in the market, EDF created Réseau de Transport d'Électricité (which became a wholly-owned subsidiary of EDF in 2005 under the name RTE EDF Transport, and which has been renamed RTE Réseau de Transport d'Électricité), an independent internal entity responsible for managing the high voltage and very high voltage public electricity transmission network. In 2000, the Group formed the trading company, EDF Trading, with the trading specialist Louis Dreyfus. It became a wholly-owned subsidiary of EDF in 2003. In 2001, Euronext and various industrial and financial operators in the electricity market, including EDF, created Powernext, the French electricity exchange. In 2001, as a condition for authorising EDF's acquisition of a stake in EnBW, the European Commission required EDF to set up a system of power supply capacity auctions (Virtual Power Plants or VPP) to facilitate access to the market for competitors. In 2003, the EDF group sold its stake in Compagnie Nationale du Rhône to Suez (now GDF Suez).

On 20 November 2004, pursuant to the Act of 9 August 2004, EDF became a French société anonyme with a Board of Directors.

On 12 May 2005, EDF and A2A SA (formerly AEM SpA) entered into agreements for a joint takeover of Edison. A takeover bid was initiated on 4 October 2005, and the joint takeover was subsequently completed on 26 October 2005.

Since 2005, the EDF group has pursued a strategy of refocusing on Europe and sold its controlling interest in its subsidiaries Edenor and Light and its assets in Mexico.

EDF filed for an initial public offering in the second half of 2005. Pursuant to this transaction, the Company offered 196,371,090 newly issued shares and the French government sold over 34.5 million shares it held to employees and former employees of EDF and of certain EDF subsidiaries. Subsequently, on 3 December 2007, the French government sold an additional 45 million of its shares.

In late November 2006, EDF Énergies Nouvelles, a subsidiary in which the EDF group holds a 50% stake, filed for an initial public offering. Pursuant to this transaction, 18,946,854 new EDF Énergies Nouvelles shares were issued, of which 4,798,464 reserved to the EDF group.

Since 1 January 2008, EDF's distribution business has been conducted by Électricité Réseau Distribution France (ERDF), a wholly-owned subsidiary of EDF to which the distribution business was contributed pursuant to the Act of 7 December 2006 on the energy sector.

In 2008, the EDF group became a major player in the revival of nuclear power internationally, by creating a joint venture with the Chinese utility CGN, acquiring British Energy, one of the largest energy companies in the United Kingdom, in January 2009, and acquiring nearly half of the nuclear assets of US-based Constellation Energy in November 2009. EDF also acquired a 51% stake in the Belgian company EDF Luminus in late 2009, and subsequently raised its stake in EDF Luminus to 63.5% in June 2010.

On 29 October 2010, EDF finalised the sale of its British distribution networks to the Cheung Kong group of Hong Kong and, on 17 February 2011, it completed the sale of its 45.01% interest in EnBW to the German state of Baden-Württemberg.

In 2011, after ten years of a strategic partnership in which it held a 50% stake in EDF Énergies Nouvelles, EDF confirmed its positioning as a key player in the field of power generation using renewable energies by increasing its stake in the company to 100% pursuant to a simplified alternative cash

or exchange tender offer for EDF Énergies Nouvelles shares, followed by a squeeze-out of minority shareholders.

On 24 May 2012, after more than seven years of a strategic partnership with A2A, EDF took over Edison, the oldest Italian electricity company and one of the key players in the Italian electricity market, the fourth largest market in Europe. This transaction was carried out as part of the group's gas strategy, which will rely on Edison's expertise at all stages of the gas chain, from hydrocarbon exploration and production to direct sales of natural gas.

On 24 May 2013, EDF and Energetický a průmyslový holding, a.s. (EPH), the leading Czech energy company in central and Eastern Europe, signed a final agreement for the sale to EPH of 49% of Stredoslovenská Energetika a.s. (SSE), second electricity distributor and supplier in Slovakia. The transaction was completed on 27 November 2013.

On 1 April 2014, the transaction provided for in the agreement signed with Exelon on 29 July 2013 in relation to the Constellation Energy Nuclear Group (CENG) was completed. Following this transaction, CENG remains owned by EDF (49.99%) and Exelon (50.01%) and EDF has delegated to Exelon, the leading American nuclear operator, the operational management of the five nuclear reactors owned by CENG with a total power of 4.2GW spread over three sites located in the USA. EDF has an option to sell its holding in CENG to Exelon, which may be exercised between January 2016 and June 2022.

In 2014, EDF and Veolia Environnement terminated the partnership entered into in 2000 in relation to their joint subsidiary, Dalkia, one of the leading international players in the energy services field. The transaction provided for in the agreement signed on 25 March 2014 was completed on 25 July 2014. Following the implementation of these operations, EDF took over all of Dalkia's lines of business in France, including the Citelum group, and Veolia took over the Dalkia group's international business.

On 6 November 2014, F2i, Edison and EDF Énergies Nouvelles announced the completion of a transaction creating the third largest Italian operator in the renewable energy sector, with an installed capacity of approximately 600MW. The shareholders of the new company are F2i, holding 70% of the share capital, and a holding company owned by Edison and EDF Énergies Nouvelles holding the remaining 30%. Edison and EDF Énergies Nouvelles contribute their expertise in the management and optimisation of electricity production. Another company has also been formed, as an EDF group subsidiary, to provide operation and maintenance services for this new platform.

5.2 Investments

For a description of the Company's principal investments during 2013-2014, see section 9.4.1.2 ("Net cash flows used in investing activities") of this Reference Document. For a description of the Group's investment policy for future financial years, see section 6.1.4 below ("Investment policy").

6

Overview of activities



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The EDF group is an integrated utility, active in all electricity businesses: nuclear, renewable and thermal generation, transmission, distribution, supply, efficiency and energy services and trading. It is the leading player in the French electricity market and holds strong positions in Europe (United

Kingdom, Italy, central and eastern European countries), which makes it one of the world's leading electric utility and a renowned gas player.

(in gigawatts)	Net ⁽¹⁾ generation capacity		Gross ⁽²⁾ generation capacity	
	2014	2013	2014	2013
Nuclear	72.9	72.8	77.7	77.5
Thermal	35.0	36.5	43.1	47.3
Hydropower and other renewables	28.3	27.7	32.5	32.4

(1) Net capacity: Group's generation capacity on the basis of the consolidation accounting rules.

(2) Gross capacity: total physical capacity of the unit in which the Group has a stake.

With a global installed net generation capacity of 136.2GWe¹ as at 31 December 2014 producing 623.5TWh, EDF group has one of the largest generation fleet in the world. Among the ten largest global power suppliers, it produces the smallest amount of CO₂ per kilowatt-hour generated² thanks to the share of nuclear, hydro and other renewable energies in its generation mix.

The EDF group supplies electricity, gas and related services to 38.5 million customer accounts³ worldwide, of which 28.3 million are in France.

The Group's activities reflect the choice of a model balanced between France and international markets, between competitive and regulated operations, and based on an upstream-downstream integration. In 2014, the Group recorded consolidated sales of €72.9 billion, EBITDA of €17.3 billion and a net income excluding non-recurring items of €4.9 billion.

6.1 Strategy

6.1.1 Context

The industry in which EDF operates is structured around major global trends:

- a long-term growth in the energy sector (+40% in 2035 compared to 2009), especially in emerging countries with a growing population, which is even more sustained in the electricity sector (+70% in 2035); to date, 1.3 billion people⁴ have no access to electricity, which is a major hurdle on the road to progress;
- the rising cost of access in the long run to primary resources and energy;
- the need to meet the targets of CO₂ emissions reduction of energy generation, in order to limit the effects of climate change. The electricity sector plays a major role in meeting this requirement;
- the end of the exclusivity of developed countries on state-of-the-art technologies;

- a set of energy solutions fulfilling the demands of an increasingly urban world (today, 54% of the world's population lives in cities and the rate of urbanisation is expected to reach 66% in 2050⁵): urban systems, locally sourced energy, smart grids and meters;
- the growing consideration of safety regarding major industrial risks.

The global energy challenge consists in meeting the growing needs, in spite of the increased costs of access to primary energy resources and climatic constraints. However, it is an advantage for electricity, "energy carrier", since the entire range of primary resources (nuclear, renewable, fossil fuel) can be used to create an energy mix adapted to each country, for generating environmentally and climatically sustainable and affordable electricity.

In this context, technologies with low CO₂ emissions are preferred upstream, while the downstream energy demand must be controlled through energy-efficient usage.

These trends are gaining momentum due to the emergence or intensification of crises.

1 Source: EDF. Figures calculated on the basis of the consolidation accounting rules.

2 Source: Comparison based on data published by these ten groups.

3 A customer can have two customer accounts: one for electricity and one for gas.

4 Source: Report – Sustainable Energy for All, International Energy Agency (IEA).

5 Source: UN, World Urbanization Prospects, 2014.

The global economy has recovered a growth rate of around 3%. However, this figure is not uniform and the post-crisis phase has clearly resulted in dichotomy. On the one hand, countries that are experiencing growth or are on the path to recovery: United States, United Kingdom, China, South-East Asia; and on the other hand, countries that are stagnating at subdued growth levels: Japan, Continental Europe, excluding Germany; and finally, some emerging countries are marked by a sharp fall in growth, or are almost in recession: Russia, Latin America (Brazil, in particular).

In addition to this two-tiered world economy, there are geopolitical tensions, which intensified in 2014: the conflict in Ukraine and economic sanctions against Russia, difficulties in resolving the Iran issue, deteriorating or unstable situation in the Middle-East and in many African countries.

Paradoxically, this situation is accompanied by the fall in crude prices, which fell from US\$110/barrel to US\$50/barrel over the last few months of 2014. In the short-term, this phenomenon is not in favour of global mobilisation on the issue of global warming, while the Paris Climate Conference (COP 21) is planned for the end of 2015. In this respect, in the context of stagnating demand, subjecting the sector to testing times, Europe is working on increasing its targets for 2030: reducing CO₂ emissions by 40%, taking the share of renewable energy to 27% and reducing consumption by 27%. Energy transitions, taking place in different ways depending on the country, also constitute a factor in the transformation of business models.

6.1.2 Strategic vision

In view of all these changes and the on-going geopolitical developments, EDF – already ranking among the leading producers of electricity in the world – aims to become a reference in low-carbon electricity, which involves:

- seeking the best, technically, economically and environmentally viable generation mix in each country where it operates, in close collaboration with the various public authorities concerned and all the stakeholders; in France, the draft bill on energy transition for green growth, currently under review by Parliament is precisising the activities development scheme for the Group;
- thanks to its know-how in generation and supply, ensuring optimal service quality for customers. Specifically, being the leader in terms of nuclear safety, so as to pass on the benefits to all its existing and future facilities in France, Europe and the rest of the world;
- continuing maintenance and development of its networks, with new renewable energies integration, and supporting new interconnection capacities development with neighbouring countries;
- extending and multiplying the efficient uses of electricity. The need for energy efficiency, (demand side management), smart grid management systems (smart grids) and electric mobility are projects contributing to the concept of the Sustainable City;
- developing its activities to address local communities' needs in services relating to energy and further down the value chain;
- innovating across the value chain – generation, transmission, distribution, supply, services and trading - to prepare solutions for the future. The digital transition, affecting all the Group's businesses, is proving an opportunity in this momentum for innovation.

For a vital source of energy like electricity, all these tasks fall under a public service approach, which is the Group's DNA, adapted to each local context.

6.1.3 Group strategic areas

6.1.3.1 Strengthening the Group's competitive advantages on its existing basis

Industrial expertise: at the core of EDF's business

The Group has recognised industrial know-how in generation, transmission, distribution and downstream management (supply, energy efficiency and energy services) as an integrated player in the design, construction and operation of resources and is exemplary in the safety of industrial facilities, their performance and customer satisfaction.

In terms of generation, the Group intends to strengthen its skills in all low-carbon areas, nuclear and renewable energies, including hydropower, and to maintain them in thermal generation.

A safe nuclear power depends on the responsibility of an operator, who, like EDF, combines its operating, manufacturing and design skills, as well as being an independent and competent safety authority, while continuously striving to improve.

Following the Fukushima accident in 2011 and European stress tests, EDF increased again protection for its nuclear power plants against floods and earthquakes and has set up a rapid intervention force to handle extreme events, such as loss of the electric power supply and heat sinks (see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France")).

Today, when many countries rely on nuclear energy or turn to it for their requirements in terms of affordable and carbon-free energy, it is important to implement international discipline for a safer and increasingly demanding nuclear world under the leadership of the International Atomic Energy Agency (IAEA) and the World Association of Nuclear Operators (WANO).

EDF is a worldwide reference, able to offer its skills and to support operators or countries that wish to operate and develop safer nuclear power.

France: the cornerstone of the Group's industrial legitimacy throughout the world

In France, EDF will continue the actions carried since several years. The Group has fixed several priorities for its domestic market:

- improvement in operating performance relating to the generation fleet, networks and customer support;
- reinforcing industrial facilities through investments in low-carbon energies, including nuclear generation with the *Grand carénage* industrial programme and the EPR of Flamanville (see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France")) and renewable energies, especially its hydropower fleet and off-shore wind farms;
- building an innovative range of energy solutions, in order to ease for its industrial and commercial customers the regulated tariffs extinction at end 2015;
- integrating Dalkia into the Group in France to make it a major development driver;
- pursuing by ERDF of the deployment programme of the smart meters (Linky) after a successful and validated experimentation period (see section 6.2.2.2.5 ("Future challenges (replacement, development, smart meters)"));
- renewing skills, thanks to its capacity to help its collaborators grow, develop mobility and attract new talents.

United Kingdom: strengthening positions

EDF's aim is to widen its footprint in the United Kingdom, with deep involvement in the renewal of the country's generation fleet. The validation, in particular, of the main terms of the contract for difference mechanism and financing guarantee for the project (see section 6.3.1.4.3 ("Nuclear New Build business unit")) by the European Commission on 8 October 2014 marks a new and important step in the project for constructing two EPR units at Hinkley Point. However, the final investment decision is subject to certain conditions, notably, an agreement on the entire investment contract and finalisation of agreements with partner investors and on debt financing.

At the same time, the Group continues to extend the existing UK nuclear fleet's lifespan under maximum security conditions.

EDF Energy aims at developing its customer portfolio, individuals and professionals, by focussing on the quality of its commercial relationship and on the proposed offers (see section 6.3.1.4.1 ("Customer Business")).

Italy: a gas platform for the Group

The full control of Edison since 2012 has enabled the EDF group to diversify its generation mix and strengthen its presence in Italy, which enjoys an important geostrategic position for gas supplies.

In terms of gas, EDF can count on Edison's skills and infrastructure positions that complement those of the Group (in particular the Rovigo LNG terminal).

Poland: growth prospects

The aim of the Group is to grow in this country, characterised by growth prospects, both for economic activity and power consumption. After having consolidated EDF Polska on two of the Group core businesses – thermal power generation and renewables – the Group initiated in early 2015 a sales & marketing and energy services strategy for B2B customers.

Belgium: strategic ambitions in energy services

Through its subsidiary EDF Luminus, the Group is focusing in Belgium on the quality of its customer service and on the delivery of energy services. Moreover, the entity plays an active role in the supply security of the country and in the development of renewable energies generation fleet (hydropower and on-shore wind).

Other countries

Active in Continental Europe, the Group aims at optimizing its assets portfolio and encouraging operational synergy.

It is also pursuing its activities in China, a strategic country in terms of strong increasing energy needs, where it participates with partners to the construction of two EPR tranches in Taishan, and to the construction of an ultra-supercritical coal-fired thermal plant (see section 6.3.3.1 ("EDF group's activities in China")).

6.1.3.2 Responding to its customers' needs worldwide

Furthermore, EDF aims to develop its international footprint and value the diversity of its expertise, by developing value-building projects through partnerships with local players.

In terms of production, the Group aims to maintain its position as the world's leading player in low-carbon energy:

- nuclear power, which provides competitive electricity without CO₂, has its rightful place in the global energy mix. Countries such as Russia, Brazil, India, China, South Africa and several countries of the European Union such as the United Kingdom, Poland or Finland have confirmed that nuclear power has come to assume a significant role in their electricity generation;
- new renewable energies, for which the Group has strong ambitions, not only in the growth of its portfolio but also in innovations, for example, in tidal turbines (see section 6.4.1.2.1 ("Description of new energies" – "Other technologies"));
- in hydropower, the Nam Theun 2 dam experiment in Laos is proof of EDF's skills. Other countries in Asia, Africa or South America are interested in the Group's expertise, particularly in controlling human and environmental impacts, and cooperating with international organisations;
- in thermal power plants, EDF intends to provide its most modern and environment-friendly technological expertise and know-how in terms of project management.

Furthermore, the Group wishes to value its experience in planning, designing or operating networks with countries that want to strengthen or modernise their infrastructure and move towards smarter grids. With respect to downstream activities, which include optimising, trading and supply offers adapted to customers, EDF intends to develop the value of the customer portfolio and extend its expertise beyond France. EDF is committed to meet its customers' needs through excellent relationships and, furthermore, help them in their energy-efficiency measures and investments. EDF also proposes suitable solutions for customers in energy poverty.

Finally, for EDF, gas is an important element of its energy business, which particularly enables it to feed the Group's combined-cycle gas turbines, or enhance the offers to end-customers. Investment in the methane terminal in Dunkirk and the exclusive control takeover of Edison in 2012 are the core of this approach (see sections 6.4.2.2.2 ("Infrastructure"), 6.3.3.1.3 ("Russia") and 6.3.2 ("Italy")).

6.1.3.3 Controlling the future by combining the unique expertise of EDF and anticipating long-term needs

EDF wishes to increase its efforts in innovation and R&D to prepare for the future in a context where the world is facing major risks in terms of global warming, supply safety and the continuous increase in the global demand for electricity. Thus, 2000 engineers and technicians are mobilised to develop the Group's anticipation capacity in all its businesses: safety and performance of generation facilities and networks, use efficiency (see section 11.2 ("R&D priorities")).

The Group mainly focusses on:

- low CO₂ emission generation means. For example, in addition to nuclear and hydraulic power, technologies such as new generation photovoltaic electricity, solar concentration, off-shore wind farms or tidal turbines constitute future potential, linked to the development of power storage;

- CO₂ capture and storage, an essential issue for the sustainable use of coal (as fuel) in the world;
- investments related to the lifespan of materials, particularly the replacement of some large equipment in order to improve operating performance and the level of safety. An important R&D topic consists in the study of the ageing of materials, a key area for the functional lifespan of power plants;
- networks, where major changes are taking place, particularly through the development of smart electric systems. In France, the Linky smart meter is now in its deployment phase, and the services that EDF will offer to its customers directly downstream of the meter (allowing for instance an easier consumption control) are, for the Group, opportunities to prove its skills and make concrete its innovative capacity;
- R&D efforts in the fields of sales & marketing, through local energy solutions. Research carried out by EDF also sets out to support the development of low-carbon buildings at reasonable prices, smart buildings and efficient use of electricity for transport, comfort or industry. Thus, these opportunities will enable EDF to play an active role, thanks to smart electricity systems, in the transition towards a low-carbon society, built, in particular, around sustainable cities (see section 17.2.2.9.1 ("Sustainable cities"));
- attraction of new talents and further increase of training efforts in order to succeed in the mission that the Group has set for itself (see section 17.3.1.2 ("Enhanced occupational and skill forecasting")).

The Group launched in January 2015 the "Cap 2030" programme, which aims at defining the Group's strategic guidelines on this timeline, and at building a commercial, industrial and social federating project dedicated to the Group's customers and to global efficiency. These guidelines will be shared in the entire business and with all partners all over 2015. Cap 2030 should enable to face the strong evolution of the energy sector, and to reinforce the Group's profile as an involved player in the fight against climate change. It can rely on the competitive advantage of its assets base and on the involvement of the Group's employees.

6.1.4 Investment policy

6.1.4.1 Investments in 2014

The Group continued its gross operating investments programme in the amount of €13.6 billion in 2014 (excluding the Linky project of smart meters), versus €13.0 billion in 2013; in 2014, net investments¹ amounted to €12.0 billion, compared to €11.8 billion in 2013. These figures were dedicated to regulated (26%) and non-regulated activities (74%). In the non-regulated field, net investments were distributed between the development of new capacities (new nuclear power plants, combined-cycle gas turbines), which represented €3.1 billion (26% of the total), and maintenance investments, which amounted to €5.8 billion (48% of the total), of which €3.8 billion concerned nuclear maintenance in France. Net investments in France were stable (-0.5%) at €8.7 billion, reflecting the Group's committed continuous investment efforts in the last few years in industrial facilities in France, slightly offset by the impact of the commissioning of new means of generation in island activities. €1.2 billion were also invested in other activities (EDF Énergies Nouvelles, Dunkirk LNG and Dalkia), mostly located in France. Net investments continued in the United Kingdom, amounting to almost €1.5 billion, particularly in nuclear activities. In the rest of the world, net investments reached €0.6 billion.

6.1.4.2 Investments over 2015-2018

For the 2015-2018 period, the Group will deliver large industrial projects, some of which are already in a much advanced stage, such as the methane terminal in Dunkirk or the EPR of Flamanville 3. The Group also plans to continue investments in the distribution network in France, and in renewable energy in accordance with its integrated electricity producers strategy. Thus, the Group plans to reach a net investment peak in 2015, revised at €13.0 billion, which will then reduce gradually in keeping with the assets commissioning, to attain a maximum of €11.0 billion in 2018. Any new development project will have to be exclusively financed through the sale of non-strategic assets, in line with the Cap 2030 project.

6.2 Presentation of the EDF group's business in France

6.2.1 Deregulated activities in France

EDF's deregulated activities in France (activities open to competition) include electricity generation and the sale of electricity and natural gas. EDF is implementing an integrated model for the joint operational management of its portfolio of assets upstream (generation and procurement of energy and fuels) and downstream (wholesale and retail) to guarantee supply of energy to its customers through the best possible management of operational market risks and with a view to maximising gross margin.

6.2.1.1 Electricity generation

EDF groups together its main electricity generation activities in continental France within its Generation and Engineering Division, which has all of the skills and performance levers necessary to operate the largest European electricity generation fleet and to manage its development and continuity.

As at 31 December 2014, the Generation and Engineering Division had 41,545 employees². It is organised around three business segments: nuclear, hydropower and thermal generation. In addition, through its engineering, it provides technical and industrial skills to the entire Group in these three fields (see section 6.3 ("Presentation of EDF group's international business")).

1. Excluding Linky and strategic operations.

2. An increase of 1,277 employees compared to 2013.

6.2.1.1.1 General presentation of EDF's generation fleet

6.2.1.1.1.1 Composition and specifications of the installed fleet

With a total installed generation capacity of 96.8GW in continental France¹ at 31 December 2014, EDF has the largest generation fleet in Europe, accounting for nearly 10% of the total installed capacity of the main countries of Europe (the 35 member areas of ENTSO-E – the European Network Transmission System Operators for Electricity – that includes Germany, Italy and Spain²).

In 2014 in France, EDF's generation fleet produced 460.4TWh excluding pumped storage hydropower, and 468.3TWh including pumped storage hydropower.

At 31 December 2014, the capacity of EDF's generation fleet in continental France was composed of:

- 58 nuclear units based on pressurised water reactors (PWR) (a unit is defined as a generation unit including a reactor, steam generators, a turbine, a generator, the related equipment and the buildings that

house them). These units have electrical power capacities varying from 900MW to 1,450MW and are spread out over 19 sites, with an average age of 29 years;

- 32 functioning thermal units, with those in service having an average age of approximately 26 years; in addition, nine units under guaranteed multi-year shutdown³;
- 436 hydropower plants, with an average age of 70 years⁴.

There were also:

- the wind power generation capacities of EDF Énergies Nouvelles in France (see section 6.4.1.2.2 ("EDF Énergies Nouvelles")) and the incineration plants of the TIRU group in France (see section 6.4.1.3 ("Energy services"));
- 83 hydropower plants falling within the scope of operation of the Generation and Engineering Division, though held by Group subsidiaries: SHEMA (100%), FHYM (69.5%), CERGA (50/50 owned with the German electricity company EnBW). These plants represent a total of approximately 121MW of installed capacity in 2014 and approximately 575GWh of energy production⁵.

6.2.1.1.1.2 Evolution of the installed capacity and generation over the last three years

The table below shows the evolution of the fleet's installed capacity in continental France over the last three years:

	At 31 December 2014		At 31 December 2013		At 31 December 2012	
	In MW	%	In MW	%	In MW	%
Installed capacity ⁽¹⁾						
Nuclear	63,130	65	63,130	65	63,130	65
Hydropower ⁽²⁾	19,947	21	20,026	20	20,010	20
Thermal ⁽³⁾	13,695	14	15,028	15	14,734	15
TOTAL⁽⁴⁾	96,772	100	98,184	100	97,874	100

(1) Expressed in MW of maximum capacity attached to the network.

(2) Excluding Corsica and overseas departments, 440MW in 2014.

(3) Excluding Corsica and overseas departments, 1,013MW in 2014 and including 2,490MW for units under guaranteed multi-year shutdown.

(4) Not including wind generation capacities of 12MW.

The table below shows the change in the output of EDF installed capacity in continental France over the last three years:

	At 31 December 2014		At 31 December 2013		At 31 December 2012	
	In TWh	%	In TWh	%	In TWh	%
Output						
Nuclear	415.9	90.4	403.7	87.4	404.9	89.1
Hydropower ⁽¹⁾⁽²⁾	37.5	8.1	42.6	9.2	34.5	7.6
Thermal ⁽³⁾	6.9	1.5	15.6	3.4	14.9	3.3
TOTAL⁽⁴⁾	460.4	100	461.9	100	454.3	100

(1) Excluding Corsica and overseas departments, 1.3TWh in 2014.

(2) Net pumped storage power generation: the electricity consumption needed for the operation of pumped storage power plants (STEP) amounted to 7.9TWh in 2014, resulting in hydropower generation (including pumped storage consumption) of 45.4TWh, and including generation from the tidal power plant on the Rance river (518GWh).

(3) Excluding Corsica and overseas departments, 2.4TWh in 2014.

(4) These values correspond to the sum of the specific values, rounded to one decimal place.

1. For Corsica and the French overseas department, see section 6.2.2.3 ("Island Energy Systems").

2. Calculation based on the ENTSO-E statistics for the year 2013, as the statistics for the year are only available on 30 April of the following year.

3. Power generation facilities placed in "guaranteed multi-year shutdown" are awaiting a decision for reactivation or withdrawal from operation.

4. Arithmetic mean.

5. Generation and capacity are indicated in proportion to participation.

6.2.1.1.2 Strengths of the generation fleet

With a total installed capacity of 96.8GW as at 31 December 2014, in continental France EDF has the largest fleet of generation facilities in Europe. This fleet has significant assets:

- a competitive generation mix with low variable generation costs¹ and limited exposure to hydrocarbon and carbon market fluctuations due to nuclear and hydropower facilities;
- a variety of means of generation, which enable adequate coverage of EDF's downstream portfolio needs (end users, sales to alternative suppliers, sales on the wholesale markets, etc.). Use of the fleet's various components is managed by giving priority, at any given time, to the generation type offering the lowest variable costs: run-of-river hydropower plants are used for base generation; nuclear plants, because of their low variable generation costs, are used for base and mid-merit generation; adjustable hydropower generation (coming from dams) and thermal plants are used for mid-merit and peak generation;
- a significant standardised fleet of nuclear facilities, for which EDF provides full control over their entire life cycle. Moreover, EDF is working towards extending the operating life of its power plants and improving their technical performance;
- a fleet generating at over 95% without CO₂ emissions due to the predominance of nuclear and hydropower generation facilities, in an increasingly restrictive environmental regulatory context;
- a geographical position at the junction of electricity exchanges between the continental platform and the electric peninsulas (Italy, Spain and the United Kingdom).

6.2.1.1.3 Nuclear generation

The electricity generated by EDF from its fleet of nuclear power plants represents, as at 31 December 2014, 90.4% of its total electricity generation excluding pumped storage hydropower. The specifications of this fleet are given below.

6.2.1.1.3.1 EDF's nuclear fleet

EDF's PWR model is divided into three series of available electrical power:

- a 900MW series consisting of 34 units of approximately 900MW (for a total power capacity of 30,770MW) with an average age of 33 years;
- a 1,300MW series consisting of 20 units of approximately 1,300MW (for a total power capacity of 26,370MW) with an average age of 26 years;
- the N4 series, which is the most recent with an average age of 14 years, consisting of four units of approximately 1,450MW (for a total power capacity of 5,990MW);

for a total of 58 units in operation with an average age of 29 years, spread over 19 sites owned by EDF, and constituting a total installed capacity of 63,130MW as at 31 December 2014.

¹. Variable generation costs are all costs that vary directly with the amount of energy generated. Variable costs for electricity generation are mainly fuel costs.

The commissioning and most recent ten-year inspection dates for these units as of end-2014 are as follows:

Units	Year of industrial commissioning	Most recent ten-year inspection	Next ten-year inspection	Units	Year of industrial commissioning	Most recent ten-year inspection	Next ten-year inspection
Fessenheim 1	1978	2009	VD4	Gravelines 6	1985	2007	VD3 *
Fessenheim 2	1978	2011	VD4	Cruas 3	1984	2014	VD4 *
Bugey 2	1979	2010	VD4	Cruas 4	1985	2006	VD3
Bugey 3	1979	2013	VD4 *	Chinon B3	1987	2009	VD3
Bugey 4	1979	2011	VD4	Chinon B4	1988	2010	VD3
Bugey 5	1980	2011	VD4 *	Paluel 1	1985	2006	VD3
Dampierre 1	1980	2011	VD4 *	Paluel 2	1985	2005	VD3
Gravelines 1	1980	2011	VD4 *	Paluel 3	1986	2007	VD3
Gravelines 2	1980	2013	VD4 *	Paluel 4	1986	2008	VD3 *
Tricastin 1	1980	2009	VD4	Saint-Alban 1	1986	2007	VD3 *
Tricastin 2	1980	2011	VD4 *	Flamanville 1	1986	2008	VD3 *
Dampierre 2	1981	2012	VD4 *	Saint-Alban 2	1987	2008	VD3 *
Dampierre 3	1981	2013	VD4 *	Flamanville 2	1987	2008	VD3 *
Dampierre 4	1981	2014	VD4 *	Cattenom 1	1987	2006	VD3
Tricastin 3	1981	2012	VD4 *	Cattenom 2	1988	2008	VD3 *
Tricastin 4	1981	2014	VD4 *	Nogent 1	1988	2009	VD3 *
Gravelines 3	1981	2012	VD4 *	Belleville 1	1988	2010	VD3 *
Gravelines 4	1981	2014	VD4 *	Belleville 2	1989	2009	VD3 *
Blayais 1	1981	2012	VD4 *	Nogent 2	1989	2010	VD3 *
Blayais 2	1983	2013	VD4 *	Penly 1	1990	2011	VD3 *
Blayais 3	1983	2004	VD3	Cattenom 3	1991	2011	VD3 *
Blayais 4	1983	2005	VD3	Golfech 1	1991	2012	VD3 *
Saint-Laurent 1	1983	2005	VD3	Cattenom 4	1992	2013	VD3
Saint-Laurent 2	1983	2013	VD4 *	Penly 2	1992	2014	VD3 *
Chinon B1	1984	2013	VD4 *	Golfech 2	1994	2014	VD3 *
Cruas 1	1984	2005	VD3	Chooz B1	2000	2010	VD2
Chinon B2	1984	2006	VD3	Chooz B2	2000	2009	VD2
Cruas 2	1984	2007	VD3 *	Civaux 1	2002	2011	VD2
Gravelines 5	1985	2006	VD3	Civaux 2	2002	2012	VD2

* Pending confirmation by the ASN (the French Nuclear Safety Authority) of the reactor's suitability to continue operations (the ASN is responsible for authorising the restart of the reactor, after each shutdown, and for issuing, where applicable, technical recommendations determining the conditions for the continuing operation for another ten-year period).

The first unit of the 900MW series was commissioned for industrial use in Fessenheim in 1978. The most recent unit was commissioned for industrial use in Civaux in 2002. With an average age of approximately 29 years for an estimated technical operating life of over 40 years (benchmark time for accounting purposes and the initial nuclear unit design), the EDF's nuclear fleet is in the average of the fleets installed worldwide.

First-generation design EDF plants have been gradually shut down and are currently being decommissioned (see section 6.2.1.1.3.6 ("Decommissioning of nuclear power plants")).

Generation allocation contracts

EDF has developed industrial cooperation with European operators in the nuclear industry, in the form of generation allocation contracts backed by units of the EDF French nuclear fleet.

In its fleet, EDF has ten generating units participating in the contracts (up to 1.5GW) with the following European energy companies:

- Fessenheim 1-2: EnBW (17.5%) and the Swiss electricity group CNP (15%);
- Cattenom 1-2: EnBW (5%);
- Bugey 2-3: Électricité de Laufenbourg¹ (17.5%);
- Tricastin 1 to 4: Electrabel² (12.5%);
- Chooz B1-B2: EDF Luminus, EDF subsidiary in Belgium (3.3%).

The purpose of these generation allocation contracts is, for each unit concerned, to make available to each partner the proportion of energy generated actually due to them – in return for payment of their share of the construction costs, annual operating costs (including upstream and downstream fuel costs), local taxes and taxes specific to nuclear energy,

1. Axpo Group.

2. GDF Suez Group.

and the costs relating to decommissioning. In these transactions, the partners have shared with EDF the industrial risks in the development of the fleet (three series heads are concerned) and assume the risks on performance linked to the current operation of the power plants. On the other hand, they have no operational role.

Furthermore, EDF signed a second type of generation allocation contract (totalling approximately 2GW) that enables its partners to receive a share of the electricity generated from a given power plant fleet based on the average actual performance of that fleet. These contracts mainly concern the following power plants:

- Chooz B1-B2 (N4 initial series unit): Electrabel (21.7%);
- Cattenom 3-4: Électricité de Laufenbourg (7.8%) and the Swiss electricity group CNP (21.8%).

6.2.1.1.3.2 Operation and technical performance of the nuclear fleet

Nuclear power is a means of generation whose variable cost, mainly fuel costs, is low since it represents less than 30% of operating costs¹. The main competitive levers of the nuclear fleet in its operating phase are thus the amount of generated energy and the optimisation of fixed operating and maintenance costs. The levers relating to the fuel cycle are further discussed in section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues").

Operation methods of the nuclear fleet

Generation cycle and planned outages

To reconcile the challenges linked to the strong variations in seasonal consumption in France, due to its strong temperature sensitivity, the availability of maintenance resources and the efficient use of reactor fuel, EDF has now adopted generation cycles of 12 and 18 months for its fleet. At the end of 2014, this breakdown was as follows:

- 28 units of the 900MW series have an operating cycle of approximately 12 months;
- 6 units of the 900MW series, 20 units of the 1,300MW series and 4 units of the N4 (1,450MW) series have an operating cycle of approximately 18 months.

At the end of these operating cycles, shutdown periods are programmed in order to replace a fraction of the fuel loaded in the core and perform maintenance work.

Two types of planned outages are alternated at the end of each generation cycle:

- an ordinary shutdown for refuelling (*Arrêt pour simple rechargement*, or ASR), during which unloading spent fuel and reloading new fuel is the main operation performed; although light maintenance or periodic testing may also take place during this type of outage that lasts² approximately 35 days;
- a partial inspection (PI) for refuelling and maintenance, for which the standard period² lasts approximately 70 days.

Every ten years, the power plant is shut down for a standard period² of approximately 110 days in order to carry out a ten-year inspection. This length of time varies according to the works and maintenance programme, as well as the series concerned. The programme for a ten-year inspection includes the following:

- unloading of spent fuel and reloading of fresh fuel, as at each outage;

- hydropower tests of the primary circuit, a test of the vault, and inspection work of the reactor's pressure vessel;
- modification work, associated with ten-year safety re-evaluations;
- other specific maintenance operations, in particular renovation or replacement of major components.

At the end of the ten-year inspection, the ASN decides whether to authorise the restart of the reactor and then issues technical prescriptions setting the conditions for continuing operation for another ten-year period.

Operation of EDF's nuclear fleet

Nuclear generation resources, owing to their low variable cost are first used for base-load generation, immediately after run-of-river hydropower and other unavoidable renewable energies, as well as the energy purchased under buying obligations from decentralised energy producers. Variations in the energy consumption of EDF's final customers over one year (summer-winter, day-night) and the currently restricted fluidity of wholesale markets due to limited interconnections on the borders lead nuclear energy to be used also for mid-merit generation. High variations in seasonal consumption in France and its major variation during winter months (a drop in temperature of 1°C in winter can bring a rise in electricity consumption in France that can reach 2,400MW³) require that nuclear fleet outages be concentrated between April and October. The 2003 heat wave highlighted the consequences of very strong warming of rivers, especially on the conditions for operating "riverside" units. The scheduling of unit outages was therefore reviewed to reduce the number of outages of "riverside" units in July and August to encourage these units to continue operating as much as possible since cooling capacities are less dependent on weather conditions.

Generation and technical performance

The nuclear fleet produced 415.9TWh in 2014, up 12.2TWh compared to that of 2013.

Nuclear generation expressed in annual energy corresponds to a load factor rate referred to as "Kp" for the French nuclear fleet (defined as the ratio of energy generated to the maximum theoretical energy, or the energy generated if the installed capacity were operated year-round). This rate is obtained by multiplying two coefficients ($Kp = Kd \times Ku$):

- the availability factor, "Kd" (the available energy⁴ as a per cent of the theoretical maximum energy, or the energy generated if the installed capacity were operated year-round);
- a utilisation factor, "Ku" (energy generated compared to energy available). The Ku factor reflects environmental and social constraints, supply of system services and optimisation implemented by EDF (fuel and modulation).

In 2014 the Kp factor was 75.2%, up compared to 73.0% in 2013. This results from a Kd of 80.9%, up by 2.9 points over 2013, and a Ku of 93.0%, down by 0.6 points compared to that of 2013.

The year 2014 is characterised by:

- improved performance in terms of unplanned outages (a rate of 2.4% in 2014 compared to 2.6% in 2013), due to the proactive maintenance strategy in place since 2007 for renovation and replacement of major components;

1. Operating costs refers to costs with cash disbursements (excluding depreciation and amortisation and asset impairment) and are defined as follows: fuel costs (including downstream expenses in the fuel cycle), operating expenses (purchases and external services, employee expenses) and maintenance costs (expenses and investments). They do not include investments related to construction, decommissioning expenses, or depreciation/amortisation and provisions.

2. Standard durations are adapted to the volume of routine maintenance required.

3. Source: RTE.

4. Available energy is equal to the maximum theoretical energy less losses for technical reasons inherent to power plants, such as planned outages, unplanned outages due to failure or safety requirements, and performance of regulatory tests.

- managed outage periods, with average planned outages times cut in half. This is the result of the procedures for managing planned outages implemented in 2013 and strengthened in 2014 aiming to stabilise the volume of regular maintenance during outages, improve the quality of preparation of maintenance work and strengthen the control of restart operations.

However, as the fleet has entered a significant maintenance programme scheduled for the next ten years, with a substantial volume of work resulting in extended outage times, the challenge in the coming years will be to industrially control the programme and its impact on the duration of outages. Moreover, in view of the strong seasonal demand for electricity in France (see "Operation of EDF's nuclear fleet" above) and of the state of development of renewable energies, the challenges have moved. Today, EDF's foremost objective is to have a maximum generation capacity in winter, including sustained availability of the nuclear fleet greater than 90% during this important period of the year. In winter 2014-2015¹, this reached 93.4%.

Investment programme for the nuclear fleet in France

The 22 January 2015, EDF's Board of Directors approved in principle the major overhaul programme (so-called "*Grand carénage*") aimed at refurbishing the French nuclear fleet, enhancing reactor safety, and, if conditions allow, extending their operating lives. This investment programme is estimated to reach a maximum of €₂₀₁₃55 billion by 2025 for the 58 reactors currently operating. This indicative figure will be confirmed later and gradually after the optimising of solutions for rolling out the programme, additional review work, and taking into account the multi-year energy plans ("*Programmations Pluriannuelles de l'Énergie*" or "*PPE*", and strategic plan) provided for under the draft bill on energy transition for green growth currently under review by Parliament (see section 6.5.8.2 ("*Future regulations at national level*").

This industrial programme will be gradually implemented, in compliance with objectives of the draft bill on energy transition for green growth, multi-year energy plans, the opinions and orders of the French Nuclear Security Authority (ASN), as well as the procedures for authorisation for reactors to run for more than 40 years (see section 6.2.1.1.3.5 ("*Preparing for the future of the nuclear fleet in France*").

EDF will thus continue a large volume of work.

In particular, from now to the end of 2015, EDF aims to sustain and develop its technical and industrial assets by both technical, organisational and human actions. Programmes for renovation or replacement of major components of power stations such as alternators, transformers, or steam generators will continue. At the end of 2014:

- the alternator stators were renovated on 39 units, for a total of 49 units to renovate;
- the programme for preventive replacement of the poles in the main transformers is ongoing. At the end of 2014, 61 main transformer poles out of 174 were replaced, i.e. approximately 35% of the programme;
- between 1990 and the end of 2014, steam generators were replaced in 26 units, of which 1 in 2014. In addition, the replacement of the three steam generators in Blayais 3 is in progress, at the time of the third ten-year visit of the unit. This has been delayed in the expectation that Areva, supplier of this equipment, will provide proof of meeting all requirements required by the Decree of 12 December 2005 on equipment under nuclear pressure (the "ESPN" Decree), in view of its assembly and commissioning.

The third ten-year visits of the 900MW units are thus the opportunity to commit to large component renewal.

Concerning the organisational aspects of routine maintenance, EDF continues to deploy the AP 913 procedure² aiming for reliability and the preparation of health reports of materials in order to reduce unplanned outages.

Strengthening the operational management of power generation and planned outages also continues, through the systematic implementation, for each outage, of an Operational Centre for Continuous Management of Units Outages and by rolling out a new Information System. The ultimate goal is to reduce the average time of outage extensions by continued management of the outage's critical activities and a reactive response to technical alerts. At the end of 2014, the programme already showed results since the average time of extension of planned outages has been halved compared to 2013.

The industrial project for the nuclear fleet will continue beyond 2015 on the occasion of the third and fourth series of ten-year inspections of 1,300MW units, the fourth series of ten-year inspections of 900MW units and the second and third series of ten-year inspections of N4 units. This project will provide the opportunity to incorporate additional safety improvements identified following the Fukushima accident as well as modifications allowing the operation of facilities to be extended significantly beyond 40 years (see section 6.2.1.1.3.5 ("*Preparing for the future of the nuclear fleet in France*").

See also sections 9.2.2.6.1.6 and 9.2.2.6.1.7 regarding reports respectively from French Court of Auditors on the cost of nuclear electricity generation and from French Parliamentary commission on the costs of nuclear power.

6.2.1.1.3.3 Environment, safety, radiation protection

Environmental protection

EDF bases its environmental procedure on an ISO 14001-certified management system (see section 17.2.2.1.1 ("*Environmental management system (SME)*"). Started in 2002 at a number of sites, ISO 14001 certification was broadened to include all nuclear production units in 2004. Following 2005, 2008 and 2011 renewals, ISO 14001 certification was once again renewed in 2014 for all nuclear production units.

In this respect, EDF is making great efforts to reduce the incidence of liquid and gas emissions into the environment by its nuclear power plants. From 1990 to 2002, while already reaching levels much lower than the regulatory limits, EDF reduced its radioactive liquid emissions by a factor of 30 (excluding tritium and carbon-14). Since then, liquid emissions have again been halved, and now stand at a very low level.

In terms of the radioactive waste management plan, Very Low-Level Waste (VLLW) has been removed to the Morvilliers disposal facility in the Aube since 2004. Concerning Low- and Intermediate-Level operating Waste (LILW), EDF is continuing to take steps to limit its intermediate storage on all nuclear sites and relies on the Centraco factory (SOCODEI, a subsidiary of the EDF group). The incineration chain operated normally in 2014. The melting oven is yet to restart in 2015, which will allow the factory to return to fully nominal operation.

For a description of radioactive waste processing downstream of the fuel cycle as well as decommissioning, see sections 6.2.1.1.3.4 ("*The nuclear fuel cycle and related issues*") and 6.2.1.1.3.6 ("*Decommissioning of nuclear power plants*").

Under the authority of the ASN, a national network measuring environmental radioactivity has been established, with the aims of synthesising the results of environmental radioactivity measurements and ensuring the quality of these measurements. The regulatory measurements of environmental radioactivity around nuclear power plants have been available to the public since January 2010 on the website www.mesure-radioactivite.fr.

1. Period from 1 December 2014 to 14 February 2015.

2. See glossary.

An ever-present nuclear safety procedure

EDF, in its capacity as a nuclear operator, takes responsibility for nuclear safety and reaffirms nuclear safety as its absolute priority in a rapidly-changing context (market competition, environmental issues, etc.).

The implementation of the French nuclear power programme led EDF to establish a safety procedure that:

- takes into account, from the design stage, the risks that might arise during the operation of the power plants, whether relating to the actual operation of the facilities or to internal or external attacks;
- is based both on the application of strict rules of operation, and on the cautious and inquiring attitude of the technical teams by means of the establishment of a true safety culture;
- is based on the cumulative experience of a standardised fleet of 58 reactors (i.e., more than 2,000 reactor-years of operation (the arithmetic sum of years of operation of EDF's PWR power plants));
- incorporates a continuous improvement approach that is notably embodied by the ongoing efforts to decrease the number of Automatic Reactor Trips (ART);
- benefits from integrated nuclear engineering and R&D within the Group in order to anticipate the correction of failures, maintain the facilities in good working order, develop materials/equipment on an ongoing basis, reassess safety margins and monitor technology advances, as well as the implementation of more effective new technologies and the management of sites being decommissioned;
- relies strongly on the development of skills; with this objective in mind, each nuclear generation site is equipped with a simulator used for training to cope with any type of situation.

Nuclear safety is subject to numerous controls, both internal and external. The external control of the safety of nuclear facilities in France is carried out by the ASN.

At the national level, there are two types of audits:

- regulatory inspections carried out on sites by the ASN, randomly or on a scheduled basis (421 inspections in 2014 over all EDF nuclear facilities);
- a safety re-examination process conducted on a ten-year basis has also been in place since 1989 and formalised in the TSN Law of 2006. It aims to improve the compliance of operating nuclear plants with safety standards, and to reassess these standards based on feedback and new knowledge. These safety standards reassessed in this way are then set until the next re-examination (unless there is a major event that needs to be taken into consideration immediately). The objectives are established by the ASN which monitors compliance; EDF proposes solutions to meet them and implements them after obtaining the approval of the ASN (see section 6.2.1.1.3.1 ("EDF's nuclear fleet")). The ten-year safety review is an important step in extending the operating life of power plants (see sections 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France") and 6.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities")).

At the international level, regular inspections are held making it possible to share the experience gained worldwide:

- the OSART (Operational Safety Review Team) of the IAEA (International Atomic Energy Agency) performs reviews at the request of the French government with the objective of formulating recommendations and promoting good working practices; in particular, the first Corporate OSART of EDF was held in 2014 and concluded that EDF is fully compliant with the standards defined by the IAEA;
- the international "peer review" inspections carried out by the WANO (World Association of Nuclear Operators) are organised at the request

of EDF to assess safety performance compared to best international working practices.

EDF has also implemented internal control procedures. For example, every three to four years, EDF performs overall safety assessments for each nuclear power plant, which take place over a three-week period and involve approximately 30 inspectors. In addition, the General Inspector for nuclear safety and radiation protection, reporting to and appointed by EDF's Chairman and CEO, performs annual audits to issue an opinion on the overall safety of the nuclear fleet and suggests improvement actions to the company's management.

Efforts by EDF, notably to improve human performance, have resulted in a reduction over the last few years of the annual average number of Automatic Reactor Trips (ART¹). 40 ARTs occurred in 2010 and this number declined to 31 in 2014.

EDF is subject to the Law of 13 June, 2006 on nuclear transparency and safety (see section 6.5 ("Legislative and regulatory environment")). This law guarantees access, to all individuals, to information concerning nuclear impacts on health and the environment and formalises transparency on nuclear safety.

Warning system

In the event of an accident, a crisis plan is in place to limit impacts on the environment and people, and to ensure the safety of the facility. This crisis system is based on two closely coordinated plans, designed for both local and national use. These are:

- the Internal Emergency Plan (*plan d'urgence interne*, or PUI), prepared by EDF; and
- the Special Intervention Plan (*plan particulier d'intervention*, or PPI), prepared by French prefectures in collaboration with the French government and EDF.

In order to provide greater effectiveness and thus improved protection of populations, these plans take into account the risk of malicious acts.

The relevance of the system for warning, informing and protecting people is regularly assessed through accident simulation exercises, which make it possible not only to ensure the correct operation of the crisis plan, but also to improve upon it, in particular, by clarifying roles and validating all of the required physical and human resources. Each year, approximately 100 exercises are organised for the entire French nuclear fleet, i.e., approximately one drill every three days. Approximately ten exercises are on a national level, under the management of the ASN and involve EDF and the public authorities, in particular the prefectures. In 2014, 11 national-scale exercises were organised.

After its initial analyses following the Fukushima accident in March 2011, EDF supplemented its crisis management organisation with a national team capable of quickly delivering material and human assistance to a site in great difficulty. This system, called the Nuclear Rapid Action Force (FARN), has had many simulation exercises from regional bases located at Civaux, Paluel, Dampierre and Bugey. Since the end of 2012, it is possible to deploy the FARN on a unit of any site having an emergency. It is now fully operational and able to intervene simultaneously on four units at the same site and by the end of 2015 on six units.

The FARN's missions are as follows:

- to act within 24 hours to support or take over from teams that have taken emergency actions on the site in question, on which access infrastructures may be partially destroyed;
- to act autonomously for several days (involving logistical capabilities for support particularly in terms of feeding and sleeping) on a partially destroyed site (non-seismic tertiary buildings, for instance), in which the

1. Automatic and instantaneous shutdown of the plant by starting up protective measures to ensure its safety.

environment may be radioactive or even affected by chemical pollution on some sites;

- to deploy heavy protection or intervention equipment within a time frame of a few days;
- to ensure a continuous connection with the company's Executive Management, the site's management and teams and the local authorities so as to be in a position to manage and coordinate actions;
- to prepare for long-term actions, beyond the first few days of autonomy, in the event of a long-term crisis.

The FARN is intended to support the crisis planning already in place should an accident situation arise.

Significant events regarding safety (ESS)

The International Nuclear Event Scale (INES) classifies events on a scale from 1 to 7, with 7 being the most serious. Incidents of no consequence for nuclear safety are classified as "deviations" or "level 0 events".

Since the establishment of a scale of this kind in France in 1987, no level 3 event (serious incident – very low external emission, and exposure of the public representing a fraction of regulatory limits) or above has occurred in the French nuclear fleet.

From 2002 to 2013, for its entire fleet, EDF recorded a yearly total of at most one level 2 event (incident with a significant failure in safety regulations). In 2014, there was no significant safety level 2 event. In continuity with the results obtained in 2013, in 2014 the results continued to improve with an average of 1.14 level 1 events per reactor (i.e. 66 events) compared to 1.19 a year earlier. The average number of unclassified events (level 0) is 9.66 per reactor (or 560 events), compared to 10.36 in 2013.

Radiation protection

The mobilisation of players on the ground has enabled continuous improvement of performance of the protection of employees against the effects of ionising radiation. Thus, the average annual collective dose of all workers, both employees of EDF and outside companies intervening in power plants, has been halved in less than ten years. In 2014, the average individual dose was 0.72 man-Sievert per reactor (or a collective annual dose of 41.6 man-Sieverts in 2014). The collective dosimetry in 2014 is down compared to 2013 (45.9 man-Sieverts). EDF is proactively continuing with the ALARA approach (As Low As Reasonably Achievable) to manage collective dosimetry in view of the volume of work generated by the industrial project for the operational fleet in the coming years

EDF is committed to continuing to lower exposure to radiation below the regulatory limit of 20mSv over 12 rolling months for the whole body.

Accordingly, throughout 2014 and over 12 rolling months, none of the participants, neither EDF employees or contractors, was exposed to an individual dose of higher than 16mSv and only 5 persons were exposed to over 14mSv (compared to 8 in 2013).

In the coming years, given the levels already achieved, efforts will have to be focused on power plants with the poorest dosimetric results, in particular by cleaning their circuits.

6.2.1.1.3.4 The nuclear fuel cycle and related issues

The average annual reference volume for nuclear fuel used by reactors in the EDF fleet in France is approximately 1,200 tonnes (tonnes of heavy metal: natural enriched uranium, enriched reprocessed uranium, plutonium), of which approximately 1,050 tonnes corresponds to ENU fuel (enriched natural uranium), 100 tonnes to MOX fuel (fuel produced from reprocessed plutonium) and 50 tonnes to ERU fuel (enriched reprocessed uranium).

The nuclear fuel cycle encompasses all industrial operations in France and abroad involved in the supply of fuel for energy generation in reactors, as well as removal and processing of the fuel. The cycle can be broken down into three stages:

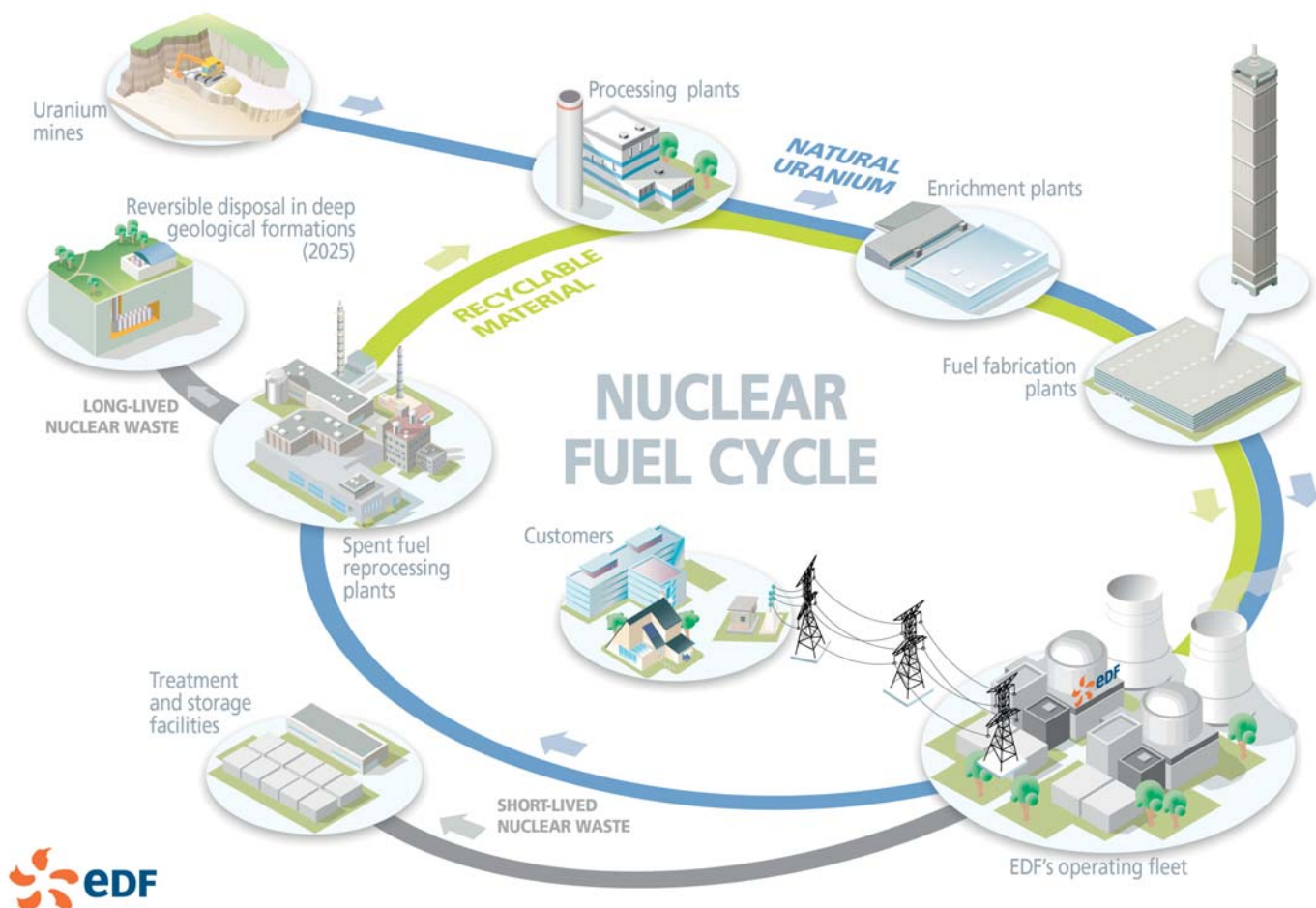
- front-end (upstream): the purchase of concentrates from uranium ore, fluorination (or conversion), enrichment and production of fuel;
- the core cycle, corresponding to the use of fuel in the reactor: receipt, loading, operation and unloading; the fuel stays four to five years in the reactor;
- back-end (downstream), for the reactor fleet in France: interim pool storage, reprocessing of spent fuel, conditioning of radioactive waste and recycling of reusable materials, the intermediate storage of treated waste prior to storage, as required by the French Law of 28 June 2006 on the sustainable management of radioactive materials and waste.

EDF coordinates all the operations in the fuel cycle. Generally speaking, upstream and downstream operations are carried out by subcontractors and/or suppliers, generally on the basis of multi-year contracts. EDF acquires most of the raw materials as uranium concentrates (U_3O_8). Transformation into more processed products is carried out by industrial operators through service contracts (fluorination, enrichment and manufacture), and provides core cycle operations. EDF is the owner in most cases and is responsible for the fuel and materials it uses throughout all different stages of the cycle.

Front-end (upstream)

As part of the Group's integration, supplies of uranium and related services (conversion, enrichment) are pooled for EDF and its subsidiary EDF Energy.

The diagram below shows the different stages of the nuclear fuel cycle in France:



To ensure the continuity and security of the supply of its reactors in France and the United Kingdom, EDF retains overall control of all operations at each stage of the cycle, and manages a portfolio of contracts with a long-term perspective.

By stockpiling fuel at different stages of the front-end stage of the fuel cycle (natural uranium, fluorinated enriched or unenriched uranium, and warehousing of new fuel assemblies), EDF seeks to avoid resorting to the short-term market in the event of production uncertainties in mines or plants in the cycle. These inventories provide supply and price guarantees on commodity markets and upstream services that may experience significant variations.

Natural uranium supply

Most of EDF's uranium supplies are guaranteed by signing long-term contracts for periods of 7 to 20 years or by reciprocal commitments that will ultimately be confirmed by final contracts (options guaranteeing access to volumes subject to price negotiations, for the end of the coverage period). The primary objective of this policy is to guarantee the long-term security of EDF's supplies and contribute to partial hedging against price risk.

For its natural uranium needs, EDF has implemented a policy of diversification of its sources with respect to the origins and suppliers. This policy helps to strengthen the supplies coming from high-potential areas, such as Australia, Canada and Kazakhstan.

The AREVA Group is an important supplier (see section 4.3 ("Dependency factors")). EDF and AREVA agreed in February 2012 to the principles of a uranium supply partnership that contributes to securing EDF's supply in the long-term. In this context, EDF and AREVA signed two contracts in 2012 to ensure the supply of approximately 30,000 tonnes of uranium from 2014 to 2035.

Indexation formulas for portfolio contracts of natural uranium supply include fixed prices (basic prices whether inflated or not) and variable prices (indexed according to market price indexes) and are sometimes limited by floor and ceiling prices. Consequently, the effects of upward variations in market prices of natural uranium on supply costs are limited and smoothed out while enabling to benefit from potential price decreases.

Fluorination (or conversion)

EDF's needs are covered by the Comurhex plant of the AREVA Group, as well as by other international producers, such as Cameco in Canada and the United Kingdom, Converdyn in the United States and Tenex in Russia.

Contracts signed by EDF in 2013 have strengthened coverage of EDF's long-term needs for conversion services.

Enriching natural uranium into uranium 235

To secure its supply of enrichment services under competitive conditions, EDF's needs have been significantly covered by enrichers such as Urenco (United Kingdom, Germany, the Netherlands, United States) and Tenex (Russia).

In accordance with a long-term contract concluded between AREVA and EDF in 2008, the delivery of enrichment services to EDF by the Georges-Besse 2 plant (the new AREVA facility using ultra-centrifugation technology, replacing the old Eurodif gas-diffusion facility) began in 2013. Gradually, a significant portion of the enrichment services supplied by EDF will come from this new plant.

As a result, the service coverage of enrichment needs for EDF's fleet in France and the United Kingdom, for both existing and future reactors, has thus been strengthened until the post-2020 period primarily through fixed-price contracts, decreasing on a constant currency basis.

Enriched reprocessed uranium (ERU)

Since the 1990s, reprocessing makes it possible to recycle within the reactors themselves uranium from processing spent fuel, which represents approximately 95% of the spent fuel mass.

This method was suspended in 2013, on account of the absence of economic justification due to much greater offer of natural uranium than demand and in the expectation of the availability of a new industrial scheme. EDF is currently examining the conditions for restarting this process by 2020.

Reprocessed uranium that is not currently in use is stored in a stable form to be used at a later stage.

Fuel assembly manufacturing

Contracts with the fuel assembly manufacturers AREVA NP and Westinghouse were renewed in 2014 to secure provisions at least until 2020.

Most of EDF's needs are covered by the contract signed with AREVA NP.

Managing fuel in the reactor core

EDF has implemented a strategy aimed at gradually increasing the performance of nuclear fuel for its different series, which has increased fuel energy efficiency and optimised operating cycles in order to increase the availability of the nuclear power plants while ensuring shutdown criteria that are consistent with the seasonal variation of demand. Consequently, EDF chose production cycles of 12 to 18 months for its fleet (see section 6.2.1.1.3.2 ("Operation and technical performance of the nuclear fleet")).

Back-end (downstream) in France

EDF is responsible for what happens to its spent fuel and how it is processed and for the related waste, without any possibility of transfer of responsibility or limitation in time. AREVA is responsible for processing and ANDRA is responsible for long-term management operations for the storage of ultimate waste, in accordance with the Law of 28 June 2006 on sustainable management of radioactive materials and waste.

EDF's current strategy for the nuclear fuel cycle, in agreement with the French government, is to process spent fuel and recycle the plutonium separated in this process in the form of MOX fuel. The quantities handled are determined by the amount of recycled plutonium in reactors allowed to load MOX fuel.

The recycling capacity of nuclear units in the French fleet has allowed the processing of approximately 1,000 tonnes of spent fuel per year.

Processing of spent fuel from EDF's nuclear power stations

Spent fuel awaiting processing is temporarily stored underwater in cooling pools, first in pools at the plants and subsequently in those of AREVA's reprocessing plant at La Hague. The storage conditions are recognised as being safe over periods spanning several decades. Approximately ten years after the spent UO_2 fuel has been unloaded from the reactor, it is processed to separate the recyclable products from waste. The waste is subsequently conditioned and temporarily stored at the La Hague site in specific premises.

The relationship between EDF and AREVA concerning the transport, processing and recycling of spent fuel was formalised for the 2008-2040 period by a framework agreement signed on 19 December 2008. A first contractual implementation of this framework agreement led to the signing on 12 July 2010 of a processing-recycling agreement and its application agreement covering the 2008-2012 period as well as the protocol for waste recovery and conditioning and the permanent shutdown and decommissioning of the plant at La Hague ("RCD-MAD/DEM" protocol).

Processing-recycling conditions for the period 2013-2020 are covered by the base terms signed by EDF and AREVA in June 2014 and will be finalised in the 2013-2020 implementation contract that should be signed in the first half of 2015.

The "processing-recycling" agreements cover:

- the transport of spent nuclear fuel from EDF's power plants to the La Hague reprocessing plant for intermediate storage;
- the separation of the recyclable fuel materials (uranium and plutonium) from High-Level Waste, and their conditioning;
- the conditioning of radioactive waste extracted from spent fuel;
- the intermediate storage of the conditioned waste pending removal to a storage centre;
- recycling of plutonium in the form of MOX fuel;
- the oxidation and intermediate storage of reprocessed uranium (see "Enriched reprocessed uranium (ERU)" above).

The implementation agreements set the prices and quantities of services delegated to AREVA by EDF. The base terms signed in 2014 provide for an increase in the annual quantities of processed spent fuel and MOX fuel to approximately 1,100 tonnes and 123 tonnes, respectively.

The RCD-MAD/DEM protocol defines EDF's contribution to the costs of decommissioning the La Hague facilities, for which it sets the full and final amount to be paid to AREVA by EDF. The final payment was made in 2011 and EDF is free from any obligation for payment in respect of its obligation to finance the decommissioning of former facilities at La Hague (owned by Areva).

Storing conditioned ultimate waste

Radioactive waste, depending on its nature, level of radioactivity and the lifespan of its radionuclide components, has been classified into different categories: from High-Level Waste (HLW), to Very Low-Level Waste (VLLW) passing by Low-Level Waste (LLW) and Intermediate-Level Waste (ILW). It is called Long-Lived (LL) when it remains active for more than 30 years and Short-Lived (SL) otherwise.

Long-Lived High-Level Waste (HLW-LL)

The processing of spent fuel enables the vitrification of HLW-LL, which provides very high-quality conditioning with a reduced volume. The waste is then temporarily stored at La Hague in specific facilities. All of the Long-Lived High-Level Waste produced in this way, corresponding to the operation of the early natural uranium gas graphite plants (NUGG) and to 40 years of operation of the current PWR facilities, will represent a volume of approximately 6,700 cubic metres.

On the basis of works and research carried out pursuant to the Law of 30 December 1991, the Law of 28 June 2006 defines a long-term management programme for Long-Lived High-Level Waste, retaining geological disposal as the standard solution in its national plan for radioactive materials and waste management: "[...] Following intermediate storage, ultimate radioactive waste which, for reasons of nuclear safety or radiation protection, cannot be stored at surface level or at a shallow depth, is to be stored in deep geological repositories." The law specifies in particular that "in order to ensure [...] the management of Long-Lived High- or Intermediate-Level Radioactive Waste, exploration and studies relating to such waste shall be pursued [...] in particular the reversible storage in deep geological formations [...] to choose a site and create a storage centre, so that the application for approval [...] can be examined in 2015 and, subject to this approval, the centre can begin to operate in 2025" (for more questions about the Law of 28 June 2006, see section 6.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities")). This schedule was confirmed by the Nuclear Policy Council on 28 September 2012. ANDRA thus took the matter before the French Commission for Public Consultations on 9 October 2012 to organise a public debate on this project, which took place in 2013.

The report and conclusions of this public debate were published on 12 February 2014. ANDRA issued a statement on how to proceed to take account of the expectations expressed in the public debate on 6 May 2014. It decided to add a pilot industrial phase when the facility starts up in order to test under real conditions all of the storage functions (technical measures and steps taken to manage operating risks, ability to remove stored waste packages, methods and sensors allowing the monitoring of storage, techniques for sealing waste receiving "cells" and galleries).

When the geological storage project enters the industrial phase, it will have to address new challenges in order to produce a facility that is technically, industrially and economically optimised and managed, compliant with the safety requirements published by the ASN, and executed consistently from design to completion. To meet this challenge, the best design principles should be decided now for the project to go forward and the best organisation determined to ensure the success of the industrial design and construction phases.

In 2011 ANDRA and waste producers set up a partnership aiming to facilitate completion of the geological storage project by utilising all the skills of the French nuclear industry. This partnership will carry out joint studies on targeted issues and organise an interface between the ANDRA project team and nuclear operators to help them make well-informed, relevant contributions to the governance of the project. In 2012 and 2013 ANDRA carried out preliminary studies considering, in particular, the design options proposed by the producers. It is studying optimisation measures identified during an analysis of the value, jointly with the producers in order to include them in executing the project. It has begun work to evaluate storage costs, taking into account the optimisations that it added to date in its basic technical choices, as well as the recommendations of the ASN, the National Evaluation Committee (CNE) and the outcome of the public debate. After consulting the waste producers and the ASN, France's Minister for Energy is due to decide on the value of these costs and make a public announcement.

Long-Lived Intermediate-Level Waste (ILW-LL)

The structures of the assemblies (shells and nozzles, clad pieces, etc.) separated during the processing of spent fuel, constitute ILW-LL, which is less active than HLW-LL. They are currently compacted and conditioned in stainless steel containers. The total volume of ILW-LL, including the waste resulting from the operation of the NUGG fleet and that resulting from 40 years of operating the current PWR fleet, will be approximately 37,000 cubic metres. Unlike HLW-LL, it does not generate heat and thus is suitable for faster storage than HLW-LL because it does not require a long intermediate storage period for cooling before final storage.

As with HLW-LL, ILW-LL is temporarily stored in dedicated facilities in La Hague pending decisions on the storage of nuclear waste in deep geological layers, which will be made under the Law of 28 June 2006.

Long-Lived Low-Level Waste (LLW-LL)

Long-Lived Low-Level Waste (LLW-LL) belonging to EDF comes from the decommissioning of the old NUGG reactors (graphite, processing waste – see section 6.2.1.1.3.6 ("Decommissioning of nuclear power plants")). Given its lifespan, this waste cannot be stored in existing surface facilities (see below), but due to its lower level of activity than that of Long-Lived High- and Intermediate-Level Waste, the Law of 28 June 2006 provides for special subsurface storage. Within the scope of the 2010-2012 National Plan for the Sustainable Management of Radioactive Materials and Waste (PNGMDR), and in partnership with ANDRA, nuclear operators studied alternative management scenarios that integrate graphite processing and intermediate storage solutions. Having failed to identify sites during an initial search in 2008, ANDRA resumed its search in 2013 and will present the results to the public authorities before year-end 2015.

Short-Lived Low- and Intermediate-Level Waste (LILW-SL) and Very-Low-Level Waste (VLLW)

Short-Lived Low-Level Waste (LLW-SL) comes from nuclear facilities (gloves, filters, resins, etc.). It is stored on the surface at the Soulaïnes storage centre, managed by ANDRA, which is designed for Low- and Intermediate-Level Waste.

Very-Low-Level waste is waste in which the radioactivity is very close to natural radioactivity. It mainly originates from the decommissioning of nuclear facilities, primarily from rubble (concrete, scrap, lagging, piping, etc.). This waste is stored on the surface at the Morvilliers storage centre managed by ANDRA.

In order to minimise volumes, some waste is treated beforehand by melting or incineration at the Centraco plant owned by SOCODEI, a subsidiary of EDF. Following a complete shutdown of the Centraco plant following an accident that occurred in 2011 in the plant's metallic waste melting oven, in June 2012 the ASN authorised SOCODEI to restart the incinerator at the plant, which enabled it to resume the processing of waste temporarily stored on site at nuclear plants (see section 6.2.1.1.3.3. ("Environment, safety, radiation protection")). In 2015 Socodei is undertaking the actions necessary to restart the waste melting facilities.

Consideration of future charges relating to the management of spent fuel and long-term management of radioactive waste

Each year, EDF makes provisions for the downstream side of the nuclear fuel cycle in France (see note 29 to the consolidated financial statements for the year ended 31 December 2014) that cover the management of spent fuel (including fuel in the reactor but not yet irradiated) and the long-term management of radioactive waste.

To assess the future management costs of Long-Lived Intermediate- and High-Level Waste (long-lived ILW-HLW) resulting from the processing of spent fuel, EDF assumed the use of deep geological repositories, pursuant to the Law of 28 June 2006, that established the use of this kind of storage as a standard solution.

For Long-Lived Low-Level Waste (LLW-LL) from the decommissioning of shutdown NUGG power plants, EDF establishes provisions using the forecast waste production schedules and cost assumptions on the means of storage defined by ANDRA.

The cost of removing and storing Short-Lived Waste (LILW and VLLW) is determined on the basis of contracts entered into with ANDRA and the various transporters for the operation of existing storage centres. The costs of removal and storage of waste from the decommissioning of power plants are provisioned, with the expenditures relating to operating waste being included in annual expenses (see note 29.1.2 to the consolidated financial statements for fiscal year ended 31 December 2014).

EDF's provisions as at 31 December 2014 were established in accordance with the Law of 28 June 2006, codified in Articles L. 542-1 and following in the French Environmental Code and implementation texts published in 2007. In compliance with that law, the Minister of Energy will approve and publish a new evaluation of the cost of storage on the basis of figures proposed by the ANDRA and after collecting the opinion of the nuclear operators and the ASN.

6.2.1.1.3.5 Preparing for the future of the nuclear fleet in France

EDF believes that nuclear power constitutes a sustainable and economically efficient response to future energy needs: it allows relative energy independence due to considerable uranium reserves worldwide, that are more than adequate to meet global demand forecasts up to 2040 (IEA, *World Energy Outlook 2014*); in addition, nuclear energy does not emit CO₂, an essential asset in the context of climate change.

The development of fourth-generation nuclear reactors (see section 11.2.1 ("Consolidating and developing competitive carbon-free generation mixes")) will enable the level of consumption of natural uranium to be reduced significantly and the level of these energy reserves to be increased to several thousand years.

In addition, the Nuclear Policy Council meeting on 28 September 2012 reaffirmed France's confidence in the French nuclear industry and technology and the continuation of the Flamanville EPR project.

EDF's industrial goal for the preparation for the future of the nuclear fleet rests on the following strategic areas:

- the implementation of technical conditions for the extension of the operational lifespan of nuclear power plants beyond 40 years;
- continued safety improvements, primarily by integrating lessons learned from the Fukushima accident in Japan;
- implementation of a preventive policy with respect to ageing or obsolete equipment;
- the building of a first EPR unit in Flamanville;
- optimising the EPR by capitalising on Group feedback and the development of new models of third-generation reactors (1,000MW and 1,500MW).

Extension of the functional lifespan of operating units well beyond 40 years

Additional Safety Assessments (ASA) following the Fukushima accident

On 15 September 2011, EDF submitted 19 Additional Safety Assessment reports to the ASN, one for each of its nuclear sites, encompassing all its existing reactors and all those under construction. The Additional Safety Assessments were produced at the request of the ASN and the European Council, following the Fukushima accident in Japan.

These assessments consisted of re-examining the defences of existing power plants and those under construction, in light of the events in Japan, taking into account issues set out in the specifications drafted by the safety authorities as a direct response to feedback following the accident. Thus, the safety margins were reassessed against the risks of earthquakes and flooding, when dealing with situations of simultaneous loss of the cooling source and power supplies and the consequences of severe accidents. These assessments also led to inquire whether certain changes to the scenarios planned beyond situations used for the sizing of the protection systems, would lead to a worsening of the consequences in terms of safety ("cliff effects") and finally to deterministically consider the extreme situations that substantially exceed those used in the design of nuclear installations and

subsequent safety reviews. The safety of EDF's nuclear fleet is based on the principle of continuous improvement: existing and new facilities continuously benefit from feedback from all power plants, and lessons are learnt from accidents that may occur in other parts of the world.

Finally, the ASAs also re-examined the rules applied in outsourcing.

These analyses confirmed first and foremost the adequate level of security throughout the EDF nuclear power fleet, particularly because of the periodic safety reviews carried out in France since the end of the 1980s and codified by the law on nuclear transparency and safety (the "TSN Law") in June 2006, and codified later in the French Environmental Code. EDF also proposed additional measures to the ASN that would strengthen the consideration of situations that exceed those considered for sizing safety systems, to contribute to further improving the current safety level of power plants.

In its opinion to the government published on 3 January 2012, the ASN states, on the basis of the analyses of its technical support, that *"after the additional safety assessments on priority nuclear facilities, the ASN considers that the facilities examined show an adequate level of safety, and that it will not thus request the immediate shutdown of any of them"*. At the same time, the ASN considers that *"continuing to operate these facilities requires increasing their robustness, as soon as possible, to an extent beyond existing safety margins, to handle extreme situations"*.

The ASN also acknowledged the "hard core" concept and the FARN system (see section 6.2.1.1.3.3 ("Environment, safety, radiation protection")). The "hard core" will be made up of the plant's structures, systems and components that can withstand situations studied in connection with ASAs (attacks above the levels considered in the safety standards and translating into loss of cooling functions or long-term electricity sources affecting several facilities on the same site). On 26 June 2012, the ASN made 19 decisions requiring EDF to follow over 600 technical requirements, which reflect regulatory requirements in the post-Fukushima action plan defined after further safety evaluations. These technical rules require that all nuclear sites must have an organisation and local crisis centres resistant to the occurrence of a large-scale event affecting several facilities. For EDF power plants, the prescribed "hard core" must in particular have "bunkerised" electrical resources in each unit, which must be installed before 2018. In the meantime, a temporary back-up diesel generator was installed on each of the 58 units in the first half of 2013. The decisions published in June 2012 also confirmed the implementation of the FARN (see section 6.2.1.1.3.3 ("Environment, safety, radiation protection")). The complete definition of the "hard core" was covered in technical rules issued by the ASN in January 2014. The work undertaken in the wake of the Fukushima accident will last until 2030 and EDF will continue to call on all its own expertise, as well as on the resources of the industrial sector to study and achieve all of these improvements to meet the recommendations of the ASN.

Operating life of EDF's PWR fleet

The provisions of the French Environmental Code, reflecting the 2006 TSN Law, do not set a limit on operating life, but require a safety review of the facilities every ten years in light of best international practices ("safety standards").

As part of the studies related to the third ten-year inspections of the 900MW series, in early July 2009 the ASN publicly stated that it had not identified a generic problem that called into question EDF's ability to control the safety of its 900MW reactors for up to 40 years.

The ASN's general opinion is supplemented by a decision on each reactor. In compliance with the laws applicable as of 31 December 2014, following the ten-year inspection of each reactor of the 900MW series, the ASN will issue an authorisation for restart. Six months after restarting a reactor following its ten-year inspection, the operator will submit a safety review to the ASN, that the safety authority will use to decide whether or not to give approval for continuing use of the reactor for another ten years,

conditioned if necessary by additional technical prescriptions that must be implemented by the operator.

The Tricastin 1 unit is the first to have undergone the entire process required to continue operations for up to 40 years. This has been substantiated by a positive opinion, delivered by the ASN on 4 November 2010, on the unit's suitability to continue operating for an additional ten years following its third ten-year inspection. In compliance with the technical instructions issued on that occasion by the ASN, EDF will complete the work undertaken to reinforce the Donzère Mondragon hydropower plants by the end of 2014 and thus provide appropriate protection for the nuclear power plant against the risk of flooding in the event of a maximum thousand-year flood.

The Fessenheim 1 unit is the second to have reached the end of this process: it completed its third ten-year inspection in March 2010, after which the ASN gave a positive opinion on 4 July 2011 on the unit's suitability to continue operating for an additional ten years; that opinion was given on condition that the base of the reactor be reinforced before mid-2013 and that technical safety provisions be implemented to sustainably remove residual power, in the event of loss of the cooling source. The second Fessenheim unit also completed its third ten-year inspection in March 2012, after which the reactor was authorised to restart. For these two units, as for the others, EDF is committed to performing additional work in accordance with the conditions specified by the ASN; in fact, this work was fully completed for the first unit in 2013 (concerning the decisions on the Fessenheim plant, see section 6.5.8.2 ("Future regulations at national level")).

In total, at end-2014, 23 of the 34 900MW units passed their third ten-year inspection and one is in progress (Blayais 3). Six of these (Fessenheim 1 & 2, Bugey 2 & 4, Tricastin 1 and Dampierre 1) have completed the process of exchanging information with the ASN (the ASN's opinion and technical rules have been received). For all reactors, EDF has or will carry out the work required by the ASN pursuant to these prescriptions.

EDF's industrial strategy is to operate the fleet well beyond 40 years in the best conditions of safety and performance particularly in view of the significant investment made in the third ten-year inspections and other improvements following Fukushima. This target is consistent with trends observed around the world for reactors using similar technologies. To this end, EDF has implemented industrial and R&D action plans. Actions have been launched to renew the major components that can be renewed (see section 6.2.1.1.3.2 ("Operation and technical performance of the nuclear fleet")), and solutions are being studied to demonstrate the capacity of non-replaceable equipment such as the confinement vaults and reactor vessels, to ensure their operation up to 60 years.

Concerning safety improvements to carry out to extend the operating life of units beyond 40 years, following an initial meeting with the ASN in September 2010 to present the main strategies, EDF submitted an informational file to the ASN in 2011. The ASN had this file examined by the Radiation Protection and Nuclear Safety Institute (IRSN) and by the permanent "Reactors" group composed of experts it had hired, on 18 and 19 January 2012. The permanent group approved the proposals and recommended that they be completed and in certain cases strengthened.

The ASN's requirements, formulated at the conclusion of the permanent group, were received at the end June 2013. In October 2013, EDF submitted to the ASN an initial draft of a file setting out its strategies to improve safety at the 900MW units in preparation for their fourth ten-year inspection, thus commencing the regulatory safety inspection process.

A second version of this file was subsequently forwarded in February 2014. The ASN stated that it will issue an initial position in 2015 on the major strategic decisions of the safety review relating to the fourth series of ten-year inspections of the 900MW reactors and a final position in 2018-2019 on the "generic" phase of this review, and the final authorisation for use beyond 40 years will be made on a reactor by reactor basis.

Respecting the absolute priority of safety and as part of the multi-year energy programme (see section 6.2.1.1.3.2 ("Operation of the nuclear fleet and technical performances")), an extension to the operating lifespan

of the current nuclear fleet would enable better use of the industrial asset base it represents, the deferral of financial flows associated with decisions for investment in these new plants beyond 2025 and the extension of the time period for the commissioning of new plants, which is beneficial from an industrial point of view.

Progress report on the Flamanville EPR (European Pressurized water Reactor) project

Architect-assembler engineering

To complete the Flamanville 3 EPR project, EDF is performing the architect-assembler role itself; this matches the position adopted by EDF in the development, renovation and decommissioning of its power generation assets and is based on its internal engineering capabilities. This role allows direct control of the design and operation of its power plants, the organisation of development projects, the schedule and costs of construction, its relations with the ASN and the direct integration of operating feedback.

Project launch phase

In October 2004, EDF's Board of Directors decided to undertake the process of building an EPR nuclear generation unit in France located in Flamanville that was consistent with the programme law that set energy policy guidelines (the so-called "POPE Law").

A public debate was organised by the French Commission for Public Consultations (CNDP) concerning the construction of an EPR reactor initial series unit. The authorisation decree creating the Flamanville 3 nuclear power plant was issued on 11 April 2007. On 28 September 2012, the Nuclear Policy Council reaffirmed the continuation of the EPR project in Flamanville.

Studies

Completion studies are ongoing to produce the working documents and ensure the smooth running of the construction on site.

Interaction with the ASN (Nuclear Safety Authority)

In October 2010, EDF submitted to the ASN a first working version of the Flamanville 3 commissioning file to allow them to begin studying it ahead of completion. The supporting documents for the application for commissioning were sent to the ASN in October 2014. The application itself should be officially submitted to the ASN in the first six months of 2015 and at the latest one year prior to loading fuel in the reactor. The ASN also believes that the changes made by EDF to the EPR control systems architecture are satisfactory with regard to the request made in October 2009 for supporting documents and review of alternative design features.

Supply and work contracts

In 2014, work continued to secure the construction budget and contracts were signed with the main suppliers for the remaining work required up to the commissioning stage. Nearly 70% of the construction budget is represented by the six main contracts (boiler, civil engineering, control systems, piping, offshore works and discharge tunnel, generator-condenser-water station). The main contracts, with the exception of the boiler contract signed with AREVA, were awarded following international calls for tender.

Equipment manufacturing

The manufacture of the equipment required for construction is now well advanced. The first major components were delivered on site in 2010, while major components for the turbine section were delivered in 2011, and most of the equipment for the nuclear section was available in 2014, except for a certain number of valves and security-classified equipment to meet regulations of nuclear equipment under pressure (ESPN) whose acceptance criteria are under discussion by the manufacturer and the ASN.

The reactor vessel was delivered on site in October 2013 and installed in the reactor building in January 2014. The first steam generator reactor was introduced in early September 2014.

Work on site

The construction of the EPR reactor Flamanville 3 has been in progress since late 2007. Several important steps of its construction were completed in 2014 which mark a progressive transition of the project toward the testing phases:

- after the reactor vessel was brought in January 2014, welding of the primary circuit began and the first steam generator was brought in;
- completion of concreting for the internal dome of the reactor building;
- the command room of the EPR was commissioned, the first in service for an EPR reactor;
- first system tests of the pumping station (in particular filtration) and in the machine room (including the lubrication system of the turbine shaft column);
- installation of the unit's command-control system on site, for overall system tests;
- water immersion and test of the pools in the nuclear island, in particular in the fuel building;
- the primary diesel motors were brought in and assembly began, as well for the first final emergency diesel motor;
- first liquid tests of the RRI cooling circuit in the nuclear island;
- first concrete poured for the local crisis centre of the Flamanville site (units 1-2-3), French first-in-series for this type of building following post-Fukushima recommendations that will be built at each French nuclear generation site.

At the end of 2014, electromechanical assemblies have significantly progressed and the test phase was launched on site, for the conventional island and for the nuclear island.

Commissioning schedule and budget

In December 2012, EDF announced an increase in the Flamanville 3 project construction costs, with the total cost reaching €₂₀₁₂ 8.5 billion. In addition to the "first-in-series" effect (Flamanville 3 is the first nuclear power plant to be built in France for 15 years), certain factors have put additional pressure on its cost. Thus, this revaluation takes into account additional expenses related to industrial hazards, notably replacing maintenance crane consoles for the reactor building and its impact on managing the work schedule. EDF also included additional engineering studies, the integration of new regulatory requirements, including the decree on equipment under nuclear pressure and lessons learned from Fukushima.

The preparatory work carried out as part of the late November 2014 project review with all suppliers exposed delays in the work schedule, postponing the startup of the facility from 2016 to 2017.

This revised schedule resulted from difficulties AREVA encountered concerning:

- the delivery of equipment such as the lid and the internal components of the vessel;
- the implementation of regulations governing equipments under nuclear pressure (ESPN Decree of 12 December 2005) for which Flamanville 3 is first-in-series, in particular on an assembly batch completed by AREVA and its subcontractors. The procedures for demonstrating compliance with the requirements of the decree in fact had not been defined at the time it was applied.

AREVA also reported to EDF on the analyses in progress for expert evaluation on the pressuriser valves and the metallurgical assessments of the materials of the vessel, head and bottom, these tests being mandatory for the vessel

qualification. With regard to the latter issue, additional tests will be performed from April 2015, following approval by the ASN on the tests conditions (see section 12.1 ("Subsequent events"))).

Result of the Additional Safety Assessment for the EPR

An Additional Safety Assessment was also carried out on the EPR under construction, acknowledging that this reactor draws its robustness from its initial design. Additional measures to be implemented are compatible with the schedule.

Regarding the EPR, the analysis by the ASN's permanent groups in November 2011 showed that the design of the power plant currently under construction in Flamanville already affords increased protection in terms of serious accidents of the type seen at Fukushima. In this context, the permanent groups consider that EDF must identify, among the planned equipment, the equipment intended for the "hard core" relating to preventing and limiting the consequences of a serious accident. This analysis was confirmed by the ASN report on the additional safety assessments.

6.2.1.1.3.6 Decommissioning of nuclear power plants

EDF takes full regulatory, financial and technical responsibility for the decommissioning of its nuclear power plants. For EDF, the challenges are to demonstrate, through the decommissioning process, its control of the entire life cycle of the means of nuclear power generation.

The decommissioning of nuclear power plants has three levels, according to a classification defined by the International Atomic Energy Agency (IAEA) in 1980:

- level 1: shutdown of the power plant, fuel unloading, draining of circuits (99.9% of the radioactivity is eliminated), followed by final shutdown: dismantling of final decommissioned non-nuclear facilities, access limited to facilities being monitored;
- level 2: dismantling of non-nuclear buildings and nuclear buildings excluding the reactor building, conditioning and removal of waste to storage facilities, isolation and containment and monitoring of the part of the facility surrounding the reactor;
- level 3: full dismantling and removal of the reactor building, materials and equipment that are still radioactive; monitoring is no longer necessary. After these operations, the site can be used for industrial purposes once again.

In general, the operations leading to levels 1 and 2 are conducted consecutively over a period of approximately five to ten years following final shutdown of the reactor. The time needed for the operations leading to level 3 is evaluated at approximately 10 to 15 years. Furthermore, conventional buildings can be kept and used during decommissioning.

The reference scenario adopted by EDF since 2001 is for decommissioning without a waiting period, consistent with French regulations, which provide for decommissioning "*in as short a time as possible between the final shutdown of the facility and its dismantling*" (see Decree of 7 February 2012 laying down general rules for basic nuclear facilities).

The regulatory process for decommissioning is governed by the TSN Law and its implementing Decree no. 2007-1557 of 2 November 2007 (see section 6.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities")). It is characterised, for a given site, by:

- a single decree allowing for decommissioning following agreement from the ASN;
- key meetings to be held with the ASN, included in a safety reference system relative to final shutdown and dismantling;
- an internal authorisation procedure for the operator, independent of the operational staff and audited by the ASN, allowing work to be started within the authorised safety reference limits;

- preliminary phases prior to obtaining the decree, during which:
 - at least three years before the final shutdown, the operator must provide a set of documents to its supervisory authorities and the ASN (Article 37 of Application Decree no. 2007-1557) outlining the decommissioning procedures (Article 40 of Application Decree no. 2007-1557);
 - consultations and public inquiries must be organised (Article 38 of Application Decree no. 2007-1557).

The law on the transition to green growth, being reviewed in Parliament, requires a revision of the legal framework and aims to distinguish final shutdown from dismantling (see section 6.5.8.2 ("Future regulations at national level")).

Decommissioning of first-generation power plants that have been shut down

Concerning power plants that have been shut down (a pressurised water reactor (PWR), Chooz A; a heavy water reactor (HWR), Brennilis; a fast-neutron reactor (FNR), Creys-Malville; and six graphite-gas-moderated reactors (NUGG) in Bugey, Saint-Laurent and Chinon), EDF has chosen to fully decommission them as soon as possible, as allowed by the start of LLW-LL storage by the ANDRA set for 2025. The sites remain the property of EDF, and they will remain under its responsibility and monitoring.

Given its role as responsible owner, EDF will act as the contracting authority for the decommissioning.

The decommissioning of EDF's nine first-generation units in final shutdown will produce approximately one million tonnes of primary waste materials, of which 80% is standard waste material and none is High-Level Waste. The remaining 20% comprises Very-Low to Intermediate-Level Waste including about 2% Long-Lived Waste requiring the availability of a storage facility for ILW-LL (Cigéo deep geological storage plan) and long-lived LLW-LL.

Existing means for removal of short-lived VLLW and LILW removal will be supplemented by:

- the project to build a packaging and intermediate storage facility for radioactive waste (*Installation de conditionnement et d'entreposage des déchets activés*, or ICEDA), under construction at the Bugey site. The public inquiry, held in June and July 2006, led to a favourable opinion and a Decree dated 23 April 2010 authorised EDF to build the facility. However, at the same time, appeals against the decree and the construction have been lodged. The Administrative Court of Lyon annulled the construction permit for the ICEDA in December 2011 on the ground that it did not comply with local planning rules in the town where it was to be built, a decision that was confirmed in an appeal before the Administrative Court of Lyon. That decision was quashed by the Council of State (*Conseil d'État*) on 24 March 2014. In December 2014, the Administrative Court of Appeal of Lyon annulled the December 2011 ruling of the Administrative Court of Lyon, thus restoring the validity of the initial building permit. EDF immediately remobilised the companies in charge of the facility. Work will begin again in April 2015. The objective has been set for mid-2017 for the arrival of the first active wastes for the tests;
- the LLW-LL storage centre provided for by the law of 28 June 2006 concerning the long-term sustainable management of radioactive materials and waste. As an initial search for sites by the ANDRA in 2008 was unsuccessful, after submitting a report to the French government at the end of 2012, the ANDRA resumed the search in 2013 and must present its results to the authorities before the end of 2015 (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues")).

The decommissioning process for the Chooz A and Creys-Malville plants continues. Chooz A is a pressurised water reactor using a technology similar to the 58 units in operation, but of an older design. The reactor location in a rocky cave in a hillside means that access conditions and entry and exit of materials are more difficult than those of the rest of the existing PWR fleet.

Regarding Brennilis, pursuant to a 2008 agreement¹ with the CEA, EDF has become fully responsible for its decommissioning. EDF submitted a new application file to the ASN for authorisation to decommission the Brennilis plant in late July 2008. This submission followed the decision of the Council of State on 6 June 2007 to annul the decree authorising EDF to carry out the full decommissioning of the reactor. The reason for the annulment was the failure to make available to the public, prior to the publication of the decree, an impact study on the decommissioning of the plant. Following this decision, EDF took steps in 2007 to guarantee that security measures would be implemented during interruption of the decommissioning work. The public inquiry was held from 27 October to 11 December 2009. On 15 March 2010, the inquiry gave an unfavourable opinion on the project that was, however, accompanied by a recommendation to carry out certain works. A decree published in the *Journal officiel* of 28 July 2011 allowed to resume and finalise the partial decommissioning of the power plant. The decommissioning work included in the scope of the decree is in progress. However, the final and complete dismantling work should be allowed by an additional decree, that EDF applied for on 29 December 2011, thus respecting the deadlines required by the partial decree. In accordance with the opinion that the ASN had expressed, the Mission for Nuclear Security and Radiation Protection notified EDF in December 2012 that the request for authorisation for full decommissioning of Brennilis cannot be pursued in its current state due to the cancellation of the ICEDA building permit (see section 20.5.1 ("Legal proceedings concerning EDF")). The decision of the Administrative Court of Appeal in Lyon of 4 December 2014, by restoring the validity of the ICEDA building permit, led EDF to relaunch the study of a file on the complete dismantling of Brennilis, taking into consideration any new regulations arising since the creation of the previous file, in particular the application of the INB réglementation.

As for the six NUGG reactors, EDF's decommissioning programme involves directly removing graphite from its LLW-LL storage centre. The decommissioning schedule has been adapted from the schedule of availability of the storage centre by the ANDRA.

Decommissioning costs

EDF nuclear power plants

Since the beginning of operations at its power plants, EDF has made provisions to cover decommissioning operations, engineering, monitoring and maintenance of facilities, and site security (see section 20.1 ("Historical financial information"), note 29.1.3 to the consolidated financial statements for the year ended 31 December 2014). The amounts provisioned correspond to EDF's estimate for decommissioning costs incurred in order to reach level 3. Since the end of 2007, in accordance with the provisions of the Law of 28 June 2006 and its implementing legislation, the part corresponding to the long-term management of radioactive waste from decommissioning has been grouped with all provisions of nuclear waste. Therefore, the amounts provisioned for decommissioning only concern strictly industrial operations.

Regarding the first generation plants that were shut down, their technologies are very different from each other (NUGG, HWR, PWR and FNR). Decommissioning costs were assessed based on estimates made in 2008 and reviewed in 2012 taking into account accumulated industry experience, regulatory and technical issues encountered and the development of technical and regulatory assumptions. Unlike the PWR facilities that are in operation, first-generation reactors at shutdown are very different from each other and the estimated decommissioning costs have been established reactor by reactor. The financing for this decommissioning work is provisioned in the EDF financial statements and the corresponding provision was re-estimated in 2014 (see section 20.1 ("Historical financial information"), note 29.1.3 to the consolidated financial statements for the year ended 31 December 2014).

1. With this agreement, the CEA has become fully responsible for the decommissioning of Phénix.

Concerning the standardised PWR reactors in operation, since 2014 provisions are based on the EDF "Dampierre" study conducted on the base of a standard site of four 900MW units. This study covered decommissioning operations, excluding management of waste from decommissioning (see notes 29.1.3 and 29.1.5 to the consolidated financial statements for the year ended 31 December 2014).

The detailed decommissioning cost estimate prepared in 1999 using the representative example of the Dampierre site was updated by EDF in 2009 to take into account the feedback of the decommissioning operations carried out by EDF on its first-generation plants and level 3 decommissioning operations (full dismantling and removal of the reactor building, materials and equipment that is still radioactive) carried out by other operators, mainly US operators. When this update took place, an analytical approach verified that the decommissioning costs per installed kilowatt for the four 900MW units at the Dampierre site could indeed be extended to the entire PWR fleet and the provisions made for the decommissioning of the 58 operational units did not need to be reviewed.

As part of the update of this Dampierre study in 2009, EDF commissioned a study from the La Guardia firm based specifically on the Maine Yankee reactor in the United States. The results showed first that the estimates made by La Guardia and by EDF were very similar, and second that any inter-comparison exercise requires in-depth checking of the scope and assumptions considered. In particular, it is advisable to take into account the specific requirements laid down in each country, the level of standardisation and homogeneity of the fleet, the subsidiary, the number of units per site, any industrial re-use of the site, and so on. EDF, as the sole owner, operator, architect-assembler, benefits from the knowledge of its plants and from the expertise of an engineering company that specialises in this area.

Furthermore, an international comparison conducted by the OECD in late 2003 showed that EDF's estimates are consistent with the estimates made by other countries. With the exception of a few specific cases (Sweden, Japan), the costs advanced by each party are actually fairly similar, with France at 10% to 15% below the average, mainly explained by the series effect that can be reasonably expected from the decommissioning of the PWR fleet.

Finally, as reported by the French Court of Auditors in its May 2014 report on the "cost of nuclear electricity generation", international comparisons are delicate not only due to applicable regulations but also due to the scopes considered in estimates of costs of decommissioning that vary significantly from one country to another.

Audits on the tools for evaluating the end-of-cycle obligations concerning EDF, AREVA and the CEA will take place under the aegis of the DGEC from 2014. These audits are stipulated by the Law of 28 June 2006 on the sustainable management of radioactive materials and waste and the Decree of 23 February 2007 on secure financing of nuclear expenses. The conclusions of this audit that concern EDF will be available in mid-2015.

Third-party facilities: La Hague (AREVA) and Phénix (CEA)

As the responsibility for the decommissioning of facilities is incumbent on their operator, EDF wished to free itself financially from these operations.

As such, the agreements signed with AREVA in July 2010 and the CEA in late 2008 clarified the financial responsibilities of the parties. Following a cash payment, EDF was released from any obligation for the decommissioning of the Phénix power plant, which has been shut down, and the La Hague power plant.

6.2.1.1.3.7 Assets available to cover long-term nuclear commitments (outside the operating cycle)

Dedicated assets have been gradually accumulated since 1999 to cover long-term nuclear commitments. The Law of 28 June 2006 and its implementing laws defined provisions that are not associated with the operating cycle and must therefore be covered by dedicated assets (see section 20.1 ("Historical financial information"), note 47.5 to the consolidated financial statements for the year ended 31 December 2014).

For EDF, these provisions relate to:

- the decommissioning of nuclear power plants (€13.9 billion as at 31 December 2014);
- the long-term management of radioactive waste (€7.7 billion as at 31 December 2014);
- the part of the provision for the last cores of nuclear plants relating to future long-term management costs for radioactive waste (€476 million at 31 December 2014).

The provision for management of used fuel and the share of the provision for last cores relating to the cost of non-irradiated fuel are part of the operating cycle and are therefore excluded from the asset base for coverage.

The EDF Invest division, created in July 2013, is in charge of managing the portfolio of unlisted investments within the dedicated EDF assets. The assets managed by EDF Invest include unlisted securities linked to investments in infrastructure, real estate and investment funds. At 31 December 2014, the assets managed by EDF Invest represented a value of €3,264 million, including: 50% of the Group's share in RTE, the investment in the company Transport et Infrastructures Gaz France (TIGF), which is developing a natural gas transport and storage service and, since October 2014, the investment in Porterbrook Rail Finance Limited, a British company for leasing railway rolling stock.

The Law of 28 June 2006 had set a deadline of five years so that the portfolio value of the dedicated assets is at least equal to the value of provisions, i.e., no later than June 2011. The NOME Law of 7 December 2010 granted operators an exemption extension of five years for complete coverage of liabilities by assets.

At 31 December 2014, the dedicated assets represented a realisable value of €23.0 billion, compared to €22.0 billion in provisions (see section 20.1 ("Historical financial information"), note 47.5 to the consolidated financial statements for the year ended 31 December 2014).

6.2.1.1.4 Hydropower generation

In 2014, the electricity generated by EDF from its fleet of hydropower plants represented 8.1% of its total electricity generation, net of pumped storage consumption.

6.2.1.1.4.1 EDF's hydropower generation fleet

EDF's hydropower fleet in continental France comprises 436 plants:

- approximately 11% of these plants have a unit capacity above 100MW. They account for 58% of total generation;
- around 50% of these plants have a unit capacity under 12MW. They represent less than 8% of total generation.

The average age of the fleet is 70 years¹.

1. Arithmetic mean.

The table below summarises the maximum power of the hydropower plants, as well as their output net of pumping operations and their consumption by pumping operations for the last three years, according to whether their capacity is under or above 12MW.

	31/12/2014	31/12/2013	31/12/2012
Hydropower plants with capacity lower than or equal to 12MW			
Maximum capacity (MW)	997.5	997.0	996.2
Net pumping output (TWh)	2.8	3.2	2.6
Consumption by pumping operations (GWh)	40.0	47.1	40.3
Output including pumping (TWh)	2.9	3.2	2.6
Hydropower plants with capacity greater than 12MW			
Maximum capacity (MW)	18,949.2	19,029.4	19,013.3
Net pumping output (TWh)	34.7	39.4	32.0
Consumption by pumping operations (TWh)	7.8	7.0	6.7
Output including pumping (TWh)	42.5	46.4	38.6
TOTAL MAXIMUM CAPACITY (GW)	19.9	20.0	20.0
TOTAL NET PUMPING OUTPUT ⁽¹⁾ (TWh)	37.5	42.6	34.5
TOTAL OUTPUT INCLUDING PUMPING ⁽²⁾ (TWh)	45.4	49.6	41.2

(1) These values correspond to the sum of the specific values, rounded to one decimal place.

(2) Including generation from the tidal power plant on the river Rance (518GWh) in 2014.

Within mainland France, EDF's hydropower plants are mainly located in mountainous areas in the Pyrenees, the Alps, the Massif Central and the Jura, as well as on the Rhine. In all, they represent an installed capacity of approximately 20GW (excluding French overseas departments and Corsica), or 20% of EDF's fleet, for an annual generation capability (i.e., based on average hydraulicity, see glossary) of approximately 43.5TWh, which makes France the second-largest generator of renewable electricity in the European Union.

The various hydropower facilities are designed to optimise the use of water resources in the valleys where they are situated. Given the size and variety of its fleet, EDF has facilities able to respond to all types of desired uses, from base to peak generation, and which also offer levers for optimisation due to their flexibility: run-of-river plants, like the ones on the Rhine, which have no

storage capacity and generate electricity depending on the available water flow; plants with pondage, thus accessing average-sized reservoirs (smaller than lakes) for occasional use during the week or during the day, to cover peaks in demand; lake plants (seasonal reservoirs) located in mountainous areas (Alps, Massif Central and Pyrenees); pumped-storage plants (commonly known in France as STEPs, from their French acronym), which pump water from a lower reservoir to an upper reservoir during periods of low demand when electricity is also lower in cost, in order to build up reserves used to generate energy at peak times (by releasing the stored water through turbines from the upper reservoir to the lower reservoir); and a tidal power plant on the river Rance which, using the up and down movement of the tides, provides a very regular supply of electricity.

Category	Capacity	Average generation capability over 50 years
Run-of-river	3.6GW	17.1TWh
Lake-supplied	8.8GW	15.8TWh
Pondage	3.1GW	8.8TWh
Tidal	240MW	0.5TWh

EDF's pumped-storage hydropower plants in mainland France represent a capacity of 4.2GW for power production of 5.5TWh in 2014. The generation capability of these plants tied to natural water supply from upstream reservoirs is 1.1TWh on average.

6.2.1.1.4.2 Hydropower safety

Hydropower safety comprises all the measures taken when designing and operating hydropower plants to reduce risks and hazards to people and property associated with water and the presence or operation of facilities. Hydropower safety is a constant concern of the highest priority for plant operators (see section 4.2.2.2 ("Management of hydropower safety risk")). It involves three main activities:

- the management of operational risks, including those associated with flow or level fluctuations in downstream waterways;
- the management of facilities during periods of exceptionally high water levels, in order to ensure safety at the facilities and for the surrounding communities;

- measures to address the major risk associated with dam or reservoir failures, through the regular monitoring and maintenance of facilities under the supervision of public authorities, mainly the French regional environment, land use and housing authorities (*Directions Régionales de l'Environnement, de l'Aménagement et du Logement*, or DREAL). Among the largest dams, 68 are subject to a specific administrative procedure (*plan particulier d'intervention*, or PPI) implemented by the relevant prefectural authority.

EDF performs regular monitoring and maintenance of its dams, in particular by means of continuous structural health assessments. Real-time analysis and readings for each site of multiple parameters (settlement, pressure and outflow measures combined with the visual inspection of concrete and the verification of mechanical parts, etc.) enable EDF to prepare periodic reports on the condition of its dams. Thanks to installed sensors, EDF's teams in Grenoble and Toulouse can analyse the largest or least accessible dams remotely and, if necessary, in real time.

In addition, a comprehensive verification of each of the 150 largest dams is carried out every ten years, as well as a drain down or a structure inspection using underwater equipment. These operations are carried out under the supervision of public authorities (the DREAL office at the regional level as well as the *Service technique de l'énergie électrique des grands barrages et de l'hydraulique*, or STEEGBH, the central French government agency specifically responsible for large dams and hydropower facilities). In 2014, EDF carried out 12 complete technical examinations at these sites.

At an organisational level, the hydropower safety inspector, who answers directly to EDF's Chairman and CEO, drafts an annual report for the latter's attention, which is also made available to all hydropower safety partners. The aim of this report, which is based on the analyses, inspections and assessments carried out during the year by the hydropower safety inspector, is to provide an opinion on the level of hydropower safety of the Group's facilities and to note issues to be considered and areas where progress is needed, so as to ensure continuous improvement and consolidation. This report is published on the Group's website. Hydropower safety is an absolute priority for hydropower generation, and has been the catalyst for substantial and ongoing re-examination of operating practices and policies for a number of years. It is a determining factor influencing decisions relating to the maintenance of EDF's assets.

The measures are regularly assessed by French monitoring bodies (DREAL at the regional level and centrally by two administrative agencies under the aegis of the Ministry of Ecology, Sustainable Development and Energy, the Directorate General for Energy and Climate, or DGEC, and the Directorate General for Risk Prevention, or DGPR, supported by the *Bureau d'études techniques et de contrôle des grands barrages*, or BETCGB, the research and monitoring unit for large dams), according to the procedures set out by Decree no. 2007-1735 of 11 December 2007 on the safety of hydropower structures. This decree classifies hydropower structures (dams, embankments, canals, etc.) by type and sets the obligations of the owner, operator or concession holder, as regards their operation, safety and surveillance.

6.2.1.1.4.3 Performance of the hydropower generation fleet

A highly automated fleet

In order to take advantage of the flexibility of its hydropower generation facilities, for some years now EDF has been initiating ambitious programmes involving automation, remote control of hydropower plants and centralised management of the valleys. Currently, the largest plants in EDF's hydropower fleet, representing just over 15GW, i.e., around 75% of its installed hydropower capacity, are remote-controlled from four control centres able to make adjustments to the plants' operating programmes at any time in order to respond to the needs of the electrical system and to economic opportunities arising on the electricity market.

Technical performance of the fleet and hydropower conditions 2014

Hydropower generation may witness substantial variations from one year to the next, depending on climatic fluctuations in water resources. Hydrological conditions in 2014 were near normal levels, whereas the previous year was particularly favourable.

Hydropower electricity generation before the deduction of the power needed to operate pumped-storage plants was 45.4TWh in mainland France and 37.5TWh net of consumption by pumped storage.

The overall availability of the hydropower fleet, i.e., the percentage of time over the year during which the power plants are available at full capacity, was 79.4% in 2014, remaining stable compared with 2013. In 2014, 16.4% of the unavailability of EDF's hydropower fleet was due to asset maintenance work (scheduled unavailability) mainly as part of the "SuPerHydro" renovation programme (see below), while 4.2% of unavailability was due to work delays and breakdowns (unplanned unavailability). The demand response

rate, i.e., the rate of success in responding to start-up orders received by the power plants, has been over 99% for several years.

Since 2006, EDF has carried out a technical update and improved maintenance programme of the sites to maintain a high level of hydropower safety and preserve the technical performance of its fleet in the long term. The total budget to renovate the facilities was reassessed in 2011 to take into account the breadth of work, and now stands at around €900 million for the 2007–2015 period, of which €800 million is dedicated to the safety of facilities. This renovation programme for hydropower facilities, known in French as *Sûreté et performance de l'hydraulique* (Hydropower Safety and Performance), or "SuPerHydro", will, while the work is ongoing, entail longer programmed outages (resulting in a drop in overall availability of a few percentage points) than those recorded in recent years. The programme had an implementation rate of 91% at 31 December 2014 and had no effect either on the unplanned unavailability of the hydropower fleet's generation capability or on the rate of response to demand, which remained at a good level. Upon completing this programme at the end of 2015, EDF will continue with these investments to offset the natural ageing of its fleet and maintain the fleet's performance and safety.

In 2011, EDF began another ambitious modernisation project to improve the industrial performance of its hydropower fleet, for an overall amount of €₂₀₁₀840 million by 2021. This project, known as "RenouvEau", aims to modernise the maintenance and operation of the hydropower fleet, specifically via the renovation of electrical facilities, control monitoring and computerised management, maintenance and operating tools. It makes it possible, thanks to modernised and standardised maintenance and operating practices (e-operating, e-monitoring, computer-aided maintenance management, etc.) to improve the operating performance of the hydropower fleet, in particular its generation capability, its availability and its contribution to system services. After testing on several sites in 2011 and 2012, the various components of this project moved on to the industrial phase in 2013 and the full roll-out began in 2014. Specifically, at the end of 2014, the five e-operating centres, offering a unique tool for remote monitoring, had all entered into service. All of the plant groups will be linked to these centres by 2020.

6.2.1.1.4.4 Hydropower generation issues

The hydropower segment is currently working to address the following issues: implementation of the draft bill on energy transition for green growth, managing access to water, and development.

Concessions renewal

Hydropower generation facilities are operated through concessions granted by decree for facilities exceeding 100MW, by prefectural order for facilities whose capacity is between 4.5MW and 100MW, and under prefectural authorisation for facilities whose capacity is less than 4.5MW.

EDF currently holds the majority of the hydropower concessions in France.

Concessions have an initial term of 75 years, pursuant to the French law of 16 October 1919 relating to hydropower use, and are in general renewed for terms of 30 to 50 years. The renewal of these concessions provides an opportunity to update the specifications in order to incorporate new requirements for water resource management and to take into account the provisions set forth in the latest specifications annexed to Decree no. 99-872 dated 11 October 1999, as amended by Decree no. 2008-1009 dated 26 September 2008. This latest decree sets the rules and procedures for hydropower concession applications in a competitive market. It sets three selection criteria for future concession holders: (i) guaranteed energy efficiency of hydroelectric operations; (ii) application of guidelines for the balanced management of water resources; (iii) ensuring the best possible economic and financial conditions for the licensing authority. The new procedure to appoint operators will now in theory be for a duration of 5 years, compared with 11 years previously¹.

1. These durations cover the full length of the open competition procedure to grant concessions, from the call for tender to the selection of the winning bidder.

The French Finance Act for 2006, as amended on 30 December 2006, provides for the introduction of a fee proportional to revenues generated from sales of electricity *"upon the renewal of hydropower concessions"*. The Grenelle II law of 12 July 2010 stipulates that this fee shall not exceed a limit set on a case-by-case basis by the licensing authority in the context of the concession procedure.

Under current regulations, the former concession holder does not receive any compensation if an expiring concession is not renewed after this procedure. Upon expiration of the concession, all of the state-owned installations (from the dam to the turbine) must be in "good working condition and maintenance". The amended Finance Act for 2006 provides for the reimbursement of unamortised expenses related to modernisation works or to works that permit the expansion of generation capability, provided that these works were carried out during the second half of the concession.

However, if a concession is terminated early by the French government, the operator receives compensation. This compensation from the government is intended to offset the shortfall for the outgoing operator due to the early termination of the operation of the concession, as provided by the concession specifications.

In this context, the government decided to organise the management of concessions approaching expiry.

On 22 April 2010, the government announced the renewal by way of calls for tender of ten concessions with a total capacity of 5,300MW, representing about 20% of the French hydropower fleet's total capacity. The government wanted to proceed with the early termination of 13 concessions, including 12 held by EDF, in order to create groupings by valley.

Between 2015 and 2025, concessions corresponding to a further 1,000MW will expire.

The draft bill on energy transition for green growth, currently under review by Parliament, has rounded out the existing competitive bid procedure, giving the French state the option of:

- grouping concessions forming a "chain of hydraulically linked facilities" and, for grouped concessions, determining the concession end date, based on a "barycentric" formula;
- setting up semi-public hydroelectric companies made up of private operators and a public partner (government, local authorities, etc.), each holding at least 34% of the share capital;
- extending certain concessions in exchange for investments on the part of the operators in connection with the energy transition.

The French parliament continues to work on this new law.

In this context, for some years EDF has prepared itself to submit its best offer for each concession, combining improved energy efficiency, attention to aquatic environments, compensation of the government and municipalities through fees and regional development, while ensuring the safety and security of operations. In pursuing these efforts, EDF draws on the full breadth of its expertise in operations and engineering as well as in the field of environmental protection.

Managing access to water

Water reservoirs held by EDF's 239 large dams in France enable the storage of 7.5 billion cubic metres of water, corresponding to 75% of national surface storage reserves.

The Group's hydropower facilities have positive effects on both economic development and the environment, and EDF applies a proactive management policy in relation to water resources, in liaison with various water stakeholders. EDF has entered into agreements with local elected officials, farmers, fishermen, managers of tourist sites and manufacturers.

EDF gives preference to consultation with local users. This process aims first at measuring the real effects of hydropower operations on the environment and on other uses, before attempting to minimise these effects when technically possible and financially reasonable.

As a result, 700 million cubic metres of water can be released each year from the dams as required, for uses other than electricity generation (drinking water supplies, to supplement periods of low flow, irrigation, production of artificial snow, water sports, etc.).

The Law of 30 December 2006 on water and aquatic environments contains provisions relating to the management of water resources (in particular, the benefits of reserved flows¹ and the flexibility of hydropower plant operations). EDF estimates that these provisions will have limited medium-term consequences for its hydropower activities (see section 6.5 ("Legislative and regulatory environment")).

Generally speaking, since the start-up of the first generation facilities, EDF has endeavoured to better understand the impact of its generation activities on the environment, especially in terms of biodiversity (see section 17.2.2.10 ("Preserving of biodiversity")). In 2011, this desire became reality with the signing of a partnership with Onema, the French national agency for water and aquatic environments, for the protection and restoration of these environments. This framework agreement lasting four years covers several issues associated with managing water resources, managing aquatic species and river dynamics as well as socio-economic aspects. An annex to the agreement relating to research and development calls for studies on the response of aquatic ecosystems to the presence of hydropower facilities and the operating methods used.

The project for the reconfiguration of the Poutès dam on the river Allier, approved by the French government on 6 October 2011, is also part of this strategy. The result of dialogue with elected representatives as well as local and national organisations, under the aegis of the public authorities, the new design for this dam will combine environmental performance and electricity generation from renewable energy sources. This innovative project, developed by EDF's hydraulic engineering division (CIH), will see the dam reduced from 17 to 4 metres in height to facilitate the passage of migratory fish, with only a 10% impact on the dam's maximum output and generation capability. Detailed studies are currently being conducted by the CIH. EDF's R&D teams have built a small-scale model of the future facility in a 250 square metres pond in order to optimise their design work.

Development

Currently, 95% of France's hydropower potential is being used. EDF is nevertheless continuing the development of its hydropower activities, through the study and realisation of new projects.

- In Alsace, EDF has been involved in a hydropower generation development plan since 2008 for a total capacity of 130MW and for an amount of €225 million:
 - in 2008, EDF commissioned the Brisach hydropower micro-plant, with capacity of 2.7MW. At the inauguration of this plant, EDF announced its development plan in Alsace;
 - in 2009, EDF participated in the commissioning of the Kehl micro-plant on the German side of the Rhine, with a capacity of 1.4MW. A similar project is in progress close to the Kembs dam, for a capacity of 8MW and a generation capability of 28GWh, with commissioning planned for 2016;
 - EDF is studying the reinforcement of the Gamsheim hydropower plant with the installation of an additional 28MW turbine-generator set. A similar operation took place on the Iffezheim dam with the installation of an additional 38MW turbine-generator set on the German side of the Rhine, and commissioning took place in spring 2013;

1. Minimum flow maintained downstream of dams to protect aquatic life.

- in the Vosges mountains, engineering studies are underway at the former pumped-storage hydropower plant on Lac Noir to refine the scope for the development of a modern plant with a capacity of around 55MW;
 - measures for the preservation of water resources and biodiversity will be implemented, notably with the realisation of fish passages at Strasbourg, using turbine discharge for attraction flow¹, and Kembs.
 - EDF is planning to operate a turbine demonstration farm on the Paimpol-Bréhat site in the Côtes-d'Armor department of Brittany. The aim is to test the principle of power generation from tidal currents under real conditions (see section 6.4.1.2.1 ("Description of new energies")). The development of the first tidal turbine has continued, with nearly 1,700 hours of sea tests in winter 2013/2014. EDF, along with its industrial partners DCNS and OpenHydro, considers that the level of maturity reached is sufficient to proceed with the next stage of the project, involving in particular the construction of two new 500kW marine turbines to be commissioned before the end of 2015. EDF's tidal current demonstrator at Paimpol-Bréhat is the most advanced project of its kind in France today.
 - Generation from reserved flows will continue to be developed. The purpose is to equip a certain number of dams in order to process the reserved flow through the turbines and recover a portion of the associated energy. In 2014, three reserved-flow turbine sets were installed. Units were commissioned during the year at the Beaumont-Moneteux dam on the river Isère and the Notre-Dame-de-Commiers dam on the river Drac. The reserved-flow turbine set at La Prêtière on the river Doubs has been in semi-industrial operation since the end of 2014. Generation by these three sets will begin in 2015, with respective capacities of 1,570kW, 1,250kW and 235kW, representing annual production of 12.4GWh, 10.0GWh and 1.3GWh. Projects are under consideration or in progress for total capacity of some 13MW and generation capability of about 75GWh, with expected commissioning dates ranging from 2015 to 2020. Among the projects under development, the most significant is the one at Kembs on the Rhine. With a maximum output of 8MW and a generation capability of 28GWh, this facility is expected to be commissioned in 2016.
- In addition, EDF's objective is to use all available opportunities for expansion, and in particular to:
- develop "small-scale" hydropower plants (with capacity under 12MW): the construction of the Le Rondeau power plant, at Échirolles in the Isère department, began in 2013 and was completed in 2014. With a 2.2MW capacity, it will generate about 14GWh annually beginning in 2015. SHEMA, a wholly owned subsidiary of the EDF group via Edev, and its subsidiaries, specialise in managing and operating small-scale hydropower construction projects and to this end have a fleet of 81 power plants. One of the aims of these subsidiaries is to develop small-scale hydropower by:
 - optimising and increasing the generation capability of the existing fleet (renovation of 16 plants in the Mayenne department, renovation programme for plants in the Var, Lot and Dordogne departments),
 - acquiring existing small-scale hydropower facilities in France,
 - building new small-scale hydropower facilities (Palisse plant under construction in the Cantal department for 2.6MW and other projects under consideration),
 - forging partnerships for project development including, for example, the signing in association with Vinci, of a public-private partnership contract with Voies Navigables de France to replace 29 dams on the river Aisne and the river Meuse and modernise two others on the Meuse. The 30-year contract covers the financing, design, construction and then operation, upkeep and major maintenance and renovation of the 31 dams. Plans are underway to equip several dams with micro-power plants, with total capacity of 8,300kW by 2020;
 - optimise the potential of energy transfer by pumped-storage hydropower plants in France (STEPs): as part of a European Commission project, EDF has begun a project to transform one of the turbine-generator sets at the Le Cheylas STEP so that it can work at variable speed;
 - look into the possibilities for "surplus generation" (for instance, by increasing the capacity of existing hydropower plants) specifically detailed in the law of 13 July 2005 (the "POPE" law) setting out guidelines for energy policy (see section 6.5.3.2 ("French legislation: Energy Code")) to contribute to the development of means to respond to peak demand. Following the decree of 31 May 2011, EDF is adapting existing sets at La Bathie plant in the Savoie department to increase by 45MW the capacity available on the network. Similarly, a decree of 18 December 2011 authorises EDF to increase by about 55MW the capacity of the Serre-Ponçon concession. Finally, following the decree of 17 June 2013, EDF began installing a new turbine-generator set at La Coche STEP also in Savoie. This Pelton set, with a 240MW capacity, will be the most powerful example of this technology in France. It will increase the capacity of the existing facility by 20% and will generate approximately an additional 100GWh every year. Other projects based on the provisions of the POPE law are also being studied;
 - take the opportunity during facility upgrades to increase their capacities. Accordingly, in 2010 EDF took the opportunity during a major renovation of the Revin STEP to improve the facility's performance (increase of about 20% in energy generated for a STEP with a maximum capacity of 808MW);
 - adapt existing facilities (modernisation, optimising generation, etc.) as part of concession renewals. Accordingly, in the context of renewing the middle Romanche concession and in line with decrees published on 31 December 2010, EDF has begun work to replace six small existing plants with the construction of a new subterranean plant (Romanche-Gavet plant) with a capacity of 93MW and generation capability of 560GWh, or 155GWh more than existing plants.
- EDF has also strengthened the range of initiatives pursued by its entities in support of regional and local development. This approach is reflected in the establishment of the "One River, One Territory" development programme, which had opened three agencies in the south west of France by the end of 2013: in Rodez (for the Lot, Tarn and Truyère valleys), in Tulle (for the Dordogne valley) and in Foix (for the valleys of the Pyrenees). In 2014, this programme continued its national roll-out with the opening of three new agencies, for the Savoie, Sud-Isère-Drôme and Durance-Méditerranée regions and a desk for the valleys of the Pyrenees in Tarbes, resulting in a total of six agencies in France.
- "One River, One Territory" has forged new relationships with these regions and their communities, which gave rise to several events in 2014 organised by the programme's agencies (woodworking innovation workshops to spur the creation of new business opportunities and a series of workshops on manufacturing know-how). In 2014, ten applications were examined to aid in the emergence of innovative projects with a positive impact on the labour market in the valleys where the Group's hydropower facilities are located by way of skills-based sponsorship or financial assistance through the "One River, One Territory" investment fund.

6.2.1.1.5 Thermal generation

EDF's electricity production from its thermal power plants in mainland France represented approximately 1.5% of its total electricity production in 2014. This fleet, which has an average age of 26 years, had a total installed functioning capacity of 11,205MW (for a total installed capacity of 13,695MW).

1. Water flow rate to attract fish to passage structures.

Thermal generation methods have a number of advantages: they are very responsive and flexible (quick to start up and power can be modulated), they can be stopped for extended periods (set aside) or they can go back into operation at short notice, they have relatively low investment costs and short construction times.

Furthermore, the most modern thermal plants meet the environmental requirements of the latest directives in force.

Thermal generation methods are one of the essential components of the energy mix to ensure the balance of production and consumption in real time and to accommodate fluctuations in electricity consumption. Together with some hydropower facilities (lakes, pumped storage plants), thermal generation methods are used to meet mid-merit and peak demand electricity requirements. For this reason, they play an important role in adjusting EDF's generation capacities in response to changes in its customers' consumption (or demand).

6.2.1.1.5.1 EDF's fleet of thermal generation facilities

At 31 December 2014, the thermal generation facilities operated by EDF are of different types, both in terms of fuel and power¹:

Fuel	Unit capacity (MW)	Number of units in operation at 31/12/2014	Total capacity (MW)	Year commissioned	Energy produced over the past 3 years (TWh)		
					At 31/12/2014	At 31/12/2013	At 31/12/2012
Coal	250	5	1,235	from 1966 to 1971	5.8	14.0	12.7
	580	3	1,740	in 1983 and 1984			
Fuel oil	535	1	535	in 1975	0.1	0.2	0.8
	585	3	1,755	from 1968 to 1974			
	685	4	2,740	in 1976 and 1977	0.1	0.1	0.2
	85	4	340	in 1980 and 1981			
	203	1	203	in 1992			
	134	1	134	in 1996			
	125–129	2	254	in 1997 and 2007			
Fuel oil and dual-fuel combustion turbines	185	2	370	in 2010	1.1	1.3	1.2
	179–182	3	542	in 2008 and 2009			
Combined-cycle gas turbines	427	1	427	in 2011	1.1	1.3	1.2
	465	2	930	in 2012 and 2013			

The installed capacity of the thermal fleet in operation in mainland France stands at 11,205MW, including the Blénod combined cycle gas plant commissioned in 2011 and the two combined cycles in Martigues, which were commissioned in 2012 and 2013. These are EDF's first combined cycle gas plants in France and they complement the investments made in combustion turbines, highly responsive facilities able to serve extreme peak loads² that were commissioned in Vitry-sur-Seine (Arrighi), Vaires-sur-Marne and Montereau. Furthermore, the two Montereau combustion turbines can operate using natural gas or domestic fuel oil, further improving their flexibility.

With a thermal reserve generation capacity of 2,490MW at the end of 2014, the total installed capacity of the EDF thermal generation fleet in continental France amounts to 13,695MW.

6.2.1.1.5.2 Issues relating to thermal generation

Updating of the most recent coal-fired generating units to meet mid-merit load capacity demand

For mid-merit load capacity, maintaining the most recent (i.e., the most efficient) coal-fired units is the best solution to ensure availability of competitive capacities.

In particular, the most recent 600MW coal-fired units benefit from the lowest fuel generation costs of all of the thermal generation facilities (better efficiency, seaside units, and large capacity sites). Their power, along with the flexibility of their generation, are essential advantages. They are

equipped with flue gas desulphurisation and denitrification systems (90% reduction in sulphur dioxide emissions and 80% reduction in nitrogen oxide emissions). These processes mean that the units comply with environmental restrictions applicable since 2008, as well as meeting tighter regulations to be implemented from 2015. A renovation programme for these coal-fired units is currently in progress, with the aim of improving their reliability and extending their operating life by 2035.

However, due to environmental regulation constraints, EDF plans to close its nine 250MW coal units. Two of these units (Blénod 3 and 4) were shut down in 2014, bringing the number of closed units to four, as two others had already been shut down in 2013. For the five remaining units, maintenance programmes have been drawn up taking their forthcoming shutdowns into account.

Strengthening of the combustion turbine fleet and renovation of the fuel oil fleet to contribute to meeting peak needs

Since 2007, EDF has commissioned 1,060MW in extreme peak capacity via combustion turbines on its sites in Vitry-sur-Seine (Arrighi), Vaires-sur-Marne and Montereau. These highly responsive facilities are mobilised during periods of high electricity consumption.

Furthermore, EDF decided to equip two oil-fired units with low NO_x burners, to enable them to operate until 2023, thus complying with the environmental regulations applicable from 2016.

1. This table takes into account the shutdown of the three oil-fired units in Martigues (see section 6.2.1.1.5.2 ("Issues relating to thermal generation")).

2. "Extreme peak" designates plants running fewer than 200 hours per year.

Modernisation of the thermal generation fleet with combined cycles

After the commissioning in 2011 of a first combined cycle gas power plant (CCGT) in France on the Blénod site, and that of the first combined cycle in Martigues in 2012, EDF commissioned a second combined cycle gas plant in 2013 in Martigues. The combined cycle plants in Martigues are the result of the repowering of former oil-fired units, a part of whose facilities, such as the steam turbine, the condenser, and the water treatment facilities, were reused. The repowering of a unit of this capacity is a first in Europe. The installed capacity of the Martigues site is 930MW and the output is over 50% higher than the output from traditional thermal units. These renovation and modernisation projects focusing on the thermal generation fleet will enable EDF to reduce atmospheric emissions of CO₂, nitrogen oxides and sulphur oxides. Moreover, the oil-fired units now use fuel with an ultra-low sulphur content (less than 0.55% sulphur).

Apart from the completion of the Martigues repowering project, in December 2011, EDF decided to commit to the joint development with General Electric of a next-generation combined cycle gas plant based on GE's FlexEfficiency 50 technology. This joint development will provide an opportunity to operate a combined cycle plant with innovative characteristics in terms of capacity, with 575MW achievable in less than 30 minutes, and output (61% versus an average output for a standard CCGT plant of between 57% and 58%), while providing good environmental performance, with CO₂ emissions on average 10% less than those for a standard CCGT plant. Work at the Bouchain site in northern France began in April 2013. From 2016, the prototype will be tested for two years and then transferred to EDF, provided that the tests are conclusive.

In the area of carbon dioxide capture and storage (CCS) technology, the EDF group is participating in post-combustion and oxy-combustion capture projects with industrial partners as well as in studies concerning the transport and storage of CO₂. A CO₂ capture demonstrator was commissioned in 2013 at the Le Havre site (see section 11.2.1 ("Consolidating and developing competitive carbon-free generation mixes")). This project, with 25% of its financing provided through the Research Demonstrator Fund coordinated by ADEME, was carried out in partnership with Alstom. This demonstrator enabled tests to be performed on the impact of post-combustion amine-based capture (a chemical process that consists of trapping CO₂ using an ammonia-based compound) of CO₂ found in flue gas coming from the combustion of coal, accompanied by the evaluation of the new technology's impact in an industrial setting and the analysis of its flexibility during operation. This experiment resulted in the capture of nearly 2,000 tonnes of CO₂, thus confirming the industrial feasibility of this technology. The demonstrator has now been disabled.

Evolution of the environmental regulatory framework

Today, EDF's thermal power plants are operated within the context of regulations that apply to installations classified for environmental protection purposes (*Installations classées pour la protection de l'environnement*, or ICPE), as well as regulations relating to greenhouse gas emissions and a specific regulation for air quality (see section 6.5.6.1 ("Basic regulations applicable to the environment, health, hygiene and safety")).

Total CO₂ emissions of the EDF fleet in continental France came to 6.2 million tonnes¹ in 2014.

Thanks to the shutdown of the oldest thermal power plants, the updating of the most recent plants, the implementation of pollution-reducing procedures and the use of low sulphur fuel, EDF has set targets to reduce its emissions of CO₂ (measured in tonnes) by 30% between 1990 and 2020 and to reduce its emissions of SO_x, NO_x and dust by at least 50% between 2005 and 2020 (see section 6.5 ("Legislative and regulatory environment")). At the end of 2014, all of these targets had been met, with the exception of the reduction in SO_x emissions, which have decreased by nearly 40% since 2005. This target remains unchanged.

Generation and technical performance

Thermal production accounted for 6.9TWh in 2014. It represents about 1.5% of EDF's generation in mainland France.

The reliability of all components of the thermal generation fleet was confirmed in 2014 and is in line with European standards. The response rate achieved by combustion turbines and oil-fired units to requests from optimisation services were very good in 2014. Minimising unplanned outages is the essential aim for facilities such as thermal plants, used for mid-merit and peak generation. The priority for these means of generation required on a variable basis all year round is to ensure system security by ensuring maximum reliability and availability. In 2014, coal units supplied 5.8TWh, CCGT plants supplied 1.1TWh, oil-fired units supplied 71GWh and combustion turbines supplied 48GWh.

The Martigues site was hit by a fire on 5 February 2015. Since then, both CCGT (units 5 and 6) are shut down. This fire caused damage to the steam turbine of unit 6, and collateral damage to unit 5 and to a common area. Thanks to the prompt reaction of the team onsite enabled to limit the impact and nobody was injured. Actions to secure the site, cleanup, expert assessment and analysis are ongoing. Unit 5 should return at the latest in June 2015, and unit 6 by winter 2015-2016. Rehabilitation costs for EDF should be limited, fire being covered by insurance.

Decommissioning of the existing fleet

EDF has planned all of the decommissioning operations for its existing thermal generation facilities. The provisions for these operations have been made in an amount that corresponds to the cost of decommissioning all of the units being operated and the clean-up of the sites (see section 20.1 ("Historical financial information"), note 30 to the consolidated financial statements for the year ended 31 December 2014).

In 2014, EDF continued the decommissioning work on sites that have been permanently shut down.

6.2.1.2 Sales and marketing

6.2.1.2.1 Presentation of the market in France

6.2.1.2.1.1 Demand

Domestic consumption in France (including Corsica) for the 2014 fiscal year stood at 465.3TWh², a drop of 6% in comparison with the 2013 fiscal year. After adjustment for the weather factor, it was stable.

Domestic gas consumption amounted to 390TWh³ in 2014, or a drop of 16.5% in comparison with 2013. After adjustment for the impact of climate, domestic consumption of gas was down 5.4%.

6.2.1.2.1.2 Competition

Since 1 July 2007, the French market has been fully open for electricity and gas sales: all customers are free to choose their energy providers. They may opt at any time, and without advance notice, for an offer at market price from the supplier of their choice.

Among the electricity suppliers on the French market, the main competitors of EDF are GDF Suez, E.ON (SNET), Enel and Direct Énergie.

The main competitor, GDF Suez, which has more than 11 million gas and electricity customers in mainland France, is also the leading supplier of gas⁴. The other major gas suppliers on the corporate and local authority customer segment are Tégaz, Eni, Gaz Natural, Gazprom, E.ON (SNET) and Antargaz. In the residential customer segment, the principle suppliers are Direct Énergie and Eni.

1. Within the scope of EDF (including SEI and excluding PEI), total emissions amounted to 8.0 million tonnes in 2014.

2. Source: 2014 Electricity report published by RTE.

3. Source: GRT gaz, 2014 report of consumption.

4. Source: gdfsuez.com internet site, presentation press kit of the Énergie Europe branch.

As of 31 December 2014, according to the CRE, the electricity market shares in terms of sites of alternative suppliers, i.e. excluding historical suppliers, were 9.6% in the residential market, and 8.8% in the non-residential market, and a gas market share, in number of sites, of 16.7% in the residential market, and 30.6% in the non-residential market.

The NOME Law of 7 December 2010, implemented since 1 July 2011, establishes certain rules for the supply of electricity and gas, the main provisions of which, codified today in the Energy Code, are the following:

- regulated electricity and gas tariffs are now covered by provisions described in section 6.2.1.2.1.3 ("Regulated tariff sales contracts") below;
- regulated access to historic nuclear power (ARENH) was put into place to the benefit of EDF's competing electricity suppliers; this system allows competitors to supply their end customers located in mainland France through EDF after the signing of a framework agreement. The ARENH allocation mechanism is described in section 6.2.1.3.5 ("Regulated access to historic nuclear power (*Accès Régulé à l'Énergie Nucléaire Historique* or ARENH)").

About forty electricity suppliers signed a framework agreement with EDF, a number which is stable in comparison with 2013. The half-yearly volumes made available slightly increased by around 35TWh. This increase corresponds to the ARENH volumes made available for the losses of network operators since 1 January 2014 (see section 6.2.1.3.5 ("Regulated access to historic nuclear power (*Accès Régulé à l'Énergie Nucléaire Historique* or ARENH)").

In order to supply their customers, EDF's competing electricity suppliers had access in 2014:

- to their own generation capacities;
- to 71.3TWh in 2014 connected to ARENH;
- to 3.0TWh¹ made available in 2014 by the EDF group through the intermediary of capacity auctions (Virtual Power Plants, or VPP) described in section 6.2.1.3.3 ("Capacity auctions");
- to imports;
- to the wholesale electricity market.

6.2.1.2.1.3 Regulated sales tariff contracts

Access to regulated electricity and natural gas tariffs

The principles defining the right to the tariffs result from the NOME Law, and appear in Articles L. 337-7 to L. 337-9 and L. 445-4 of the French Energy Code.

Since the NOME Law entered into force, the situation for electricity, by category of customer, is as follows:

- domestic and non-domestic final consumers who have subscribed power for their site(s) not exceeding 36kVA: these customers benefit, upon their request, from regulated sales tariffs. They can switch back and forth between regulated tariffs and market offers, without a legal time limit;
- non-domestic final consumers who have subscribed power for their site(s) greater than or equal to 36kVA: only customers benefiting from the regulated sales tariff on the date of promulgation of the NOME Law and sites created after that date may continue to benefit until 31 December 2015. They can switch back and forth between regulated

tariffs and market offers, subject to a one-year commitment each time. After 1 January 2016, these same customers will no longer benefit from the regulated sales tariffs for consumption by these sites;

- domestic and non-domestic final consumers for their site(s) located in areas not connected to the continental metropolitan network: these customers receive regulated sales tariffs upon request.

Only EDF and the Local Distribution Companies (*Entreprises Locales de Distribution*, or LDCs) supply electricity at the regulated sales tariffs.

Law no. 2014-344 concerning consumption, enacted on 17 March 2014, modified the principles defining the right to regulated sales tariffs for natural gas. The situation for gas, by customers category, is from now on as follows:

- domestic and non-domestic final customers consuming less than 30,000kWh per year of natural gas: these customers receive regulated sales tariffs for natural gas upon request. They can thus shuffle between regulated and market tariffs without a legal time limit;
- domestic and non-domestic final customers consuming more than 30,000kWh per year of natural gas: these customers can no longer claim the benefit of regulated tariffs once they have opted for market offers, and will not be anymore eligible for these tariffs on the following dates²:
 - 18 June 2014 for non-domestic customers connected to the transmission network,
 - 31 December 2014 for non-domestic customers who consume more than 200,000kWh per year,
 - 31 December 2015 at the latest for non-domestic customers who consume more than 30,000kWh per year.

Only GDF Suez and the LDCs supply natural gas at the regulated sales tariffs.

The tariff structure and the principle of the integrated electricity tariff

The tariff structure includes a range of regulated tariffs applicable to electricity sales. Three tariffs exist for the provision of electricity to sites in mainland France:

- the Blue Tariff: a tariff which is available to end consumers connected at low voltage for a maximum subscribed power of less than or equal to 36kVA;
- the Yellow Tariff: a tariff which is available to end consumers connected at low voltage for a maximum subscribed power which is strictly greater than 36kVA;
- the Green Tariff: for the supply of sites connected at high voltage (voltage connection greater than 1kV).

Changes in these tariffs are fixed by order of the French Economy and Energy Ministers, after advisory opinions of the Greater Council of Energy (*Conseil Supérieur de l'Énergie*) and the CRE. Starting from 7 December 2015, these changes will be set upon the substantiated proposal of the CRE, and shall be deemed approved in the absence of any objection from the Minister of Economy and/or the Minister of Energy, within a three-month time period following receipt of the CRE's decision.

These regulated tariffs are provided by the traditional suppliers (EDF and the LDCs). They include a fee for making the load available and a variable amount

1. Value corresponding to the sum of the specific values, rounded to one decimal place.

2. Two exceptions are provided for:

a) a single owner of a primarily residential building consuming less than 150,000kWh per year, or the co-owners' association of such building, may benefit from regulated tariffs for the consumption sites which are still the subject of such tariffs;

b) the LDCs which are still the subject of regulated tariffs, and whose consumption is below 100,000MWh per year, may continue to benefit from such tariffs, up until 31 December 2015.

proportional to consumption, with prices that may be adjusted depending on the time of day or season. The range of tariffs has been designed to take into account changes in customers' consumption with various options (peak hours/off-peak hours for residential customers, for example).

The tariff is known as "integrated" because it covers all of the following elements:

- the "supply" portion (about 60% of the tariff cost, excluding taxes, in the case of residential customers on the Blue Tariff), including the "energy" portion, corresponding to the addition of the ARENH cost and the supplemental supply cost, which includes the guarantee of capacity, the costs for customer management and supply, as well as normal remuneration for the supplying operation;
- the "network" portion (approximately 40% of the tariff cost, excluding taxes, in the case of residential customers on the Blue Tariff), including the cost of using the public transmission network operated by RTE and of public distribution networks operated by the distribution networks operator, also called the "delivery" portion.

The Decree of 28 October 2014 modifying the Decree of 12 August 2009 states indeed, that for each tariff category, "the level of regulated sales tariffs for electricity is determined, subject to taking into account the costs of the supply activity of the electricity by *Électricité de France* and the local distribution companies at the regulated tariffs, by the addition of the cost of regulated access to historical nuclear electricity, a cost of supply for the complementary purchases on wholesale markets for power, including the guarantee of capacity, the costs for the delivery of the electricity, and the commercial costs, as well as a normal return for the supplying activity". This construction of tariffs by costs stacking came into force on 1 November 2014.

Moreover, as part of its public service missions, EDF has been offering, since 1 January 2005, the basic necessity tariff (*tarif de première nécessité*, or TPN) of electricity according to the modalities set by Decree no. 2004-325 of 8 April 2004. That decree was modified by a decree of 6 March 2012 with a view to enabling the automatic allotment of the tariff to all customers fulfilling the granting conditions. Law no. 2013-312 (the "Brottes Law") which was promulgated on 15 April 2013 amended the conditions of eligibility for the basic necessity tariff to allow a greater number of consumers to benefit from it. It also provides that all electricity suppliers should propose this basic necessity tariff. The draft bill on energy transition for green growth, currently under review by Parliament, provides for the substitution, not later than 31 December 2016, of the TPN with an energy cheque, intended to allow customers whose reference tax income is below a ceiling, to pay a part of their energy invoices or expenses aimed at improving the energy efficiency of their housing (see section 6.5.8.2 ("Future regulations at national level")).

Lastly, Article 7 of Law no. 2003-8 of 3 January 2003, codified in Article L. 445-5 of the French Energy Code, supplemented by Decree no. 2008-778 of 13 August 2008, put into place a special solidarity tariff for gas, carried by all the suppliers, and financed by a contribution which will be passed on to all of the end customers.

Customers benefiting from regulated tariffs receive a single electricity bill for supply, delivery and associated taxes. Figuring therein is the share of the cost of utilisation of the networks, calculated on the Tariffs for Using Public Electricity Transmission and Distribution Networks (*Réseaux Publics de transport et de distribution d'Électricité*, or TURPE), set upon the proposal of the CRE (see section 6.2.2.4 ("Tariffs for Using the Public Electricity Transmission and Distribution Networks (TURPE)")). The separation of generation-sales and marketing activities from those of transmission-distribution is thus highlighted. The following taxes and contributions appear on the electricity bill:

- value-added tax (VAT);
- Contribution to Public Electricity Service (*Contribution aux Charges de Service Public de l'Électricité*, or CSPE) (see section 6.5.3.2 ("French legislation: Energy Code")); the latter was set on 1 July 2012 at €10.50/MWh, at €13.50/MWh on 1 January 2013, at €16.50/MWh on 1 January 2014, and finally, at €19.50/MWh on 1 January 2015. Since 1 January 2015, the CSPE has had a ceiling of €627,783 per consumption site and per year, and the total amount due for such contribution by any

industrial company consuming more than 7GWh of electricity per year has moreover a ceiling of 0.5% of its added value;

- local tax on the End Consumption of Electricity (*Consommation Finale d'Électricité*, or TCFE), collected and paid back by EDF to the local governments;
- the CTA levy (*Contribution Tarifaire d'Acheminement*), which contributes to covering a portion of the fees for the pension system (see section 17.3.3.2 ("Social welfare policy")).

Following an appeal brought by the *Association Nationale des Opérateurs Détaillants en Énergie* (National Association of Retail Energy Operators, or ANODE), the Council of State, on the date of 11 April 2014, cancelled the 2012 tariff decision for regulated tariffs over the period running from 23 July 2012 to 31 July 2013, and a new order dated 28 July 2014 was published in the *Journal officiel* on 31 July 2014. This order readjusted the grid of the Blue Tariff customers by 5%. The impact on the EDF group's sales was estimated and booked for €921 million in 2014. In December 2014, EDF implemented the invoicing for such amounts, through invoices sent according to the usual invoicing schedule of the customers concerned (or in March 2015 for residential customers on the Blue Tariff).

At 1 November 2014, the increase, excluding taxes, of the regulated sales tariffs was on average 2.5% for the residential Blue Tariffs, 2.5% for the Yellow Tariffs, and 3.7% for the Green Tariffs, with an average drop of 0.7% with respect to the professional Blue Tariffs, pursuant to the order of 30 October 2014. This change was not identical within each tariff colour; it was modulated by option in order to better cover the costs of each one of them, in accordance with the opinion of the CRE of 30 October 2014.

Moreover, another order of 30 October 2014, which came into force on 1 November, relating to the tariffs for the sale of electricity to the LDCs, introduced an increase in those tariffs of 3.1%, starting from 1 November 2014.

6.2.1.2.1.4 Market-rate contract

In France, since 1 July 2007, all customers are free to leave the regulated sales tariffs at any time and without advance notice, for an offer proposed by EDF or by any other supplier (customers whose subscribed power is greater than 36kVA who have exercised their eligibility after 7 December 2010, and having chosen to return to the regulated tariffs, must, however, stay with their current tariffs for a one-year minimum (see section 6.2.1.2.1.3 ("Regulated sales tariff contracts"))).

With the exception of customers connected to the transmission network, who must sign separate supply and delivery contracts, all other customers may enter into a single contract with the supplier of their choice for their electricity supply and delivery. Their electricity bill includes the price for the electricity supply price, the transmission and distribution network access tariff (TURPE), the government mandated charges (VAT, CSPE, TCFE and CTA) mentioned in section 6.2.1.2.1.3 ("Regulated sales tariff contracts") above.

6.2.1.2.2 The Customer Division

EDF's sales and marketing activities in France are managed by the Customer Division.

6.2.1.2.2.1 Presentation and supply strategy

EDF markets energy and services to nearly 27.2 million customers accounts (excluding overseas and Corsica), or more than 33 million sites. The offers are developed and implemented in compliance with the market risk policy of the Group.

On the electricity market, EDF's sales in 2014 were 353.8TWh, which represents a market share of 78.8%. In 2013, sales were 380.6TWh and market share 79.7%.

EDF provides gas supply to all types of customers.

In 2014, EDF marketed 19.6TWh of gas, which represented a market share of 4.7%, to more than 1.1 million customers. At the end of the 2014 year,

EDF was supplying gas to more than one million residential customers (in comparison with less than 900,000 at end-2013).

To supply its customers with gas, EDF has access to the gas market (on the north and south transfer points) and to petroleum products through its subsidiary EDF Trading; EDF also owns medium/long-term assets (molecules and logistics). The Customer Division establishes its sourcing strategy in accordance with the challenges and risks specific to each customer segment.

EDF seeks to strengthen the value of its portfolio by maintaining its attractiveness to customers by the excellence of customer relations, and by presenting offers adapted to their needs. With this goal in mind, EDF is implementing a supply and customer-relations strategy which relies upon several channels while reinforcing its operational performance.

EDF's electricity supply offers integrate the concept of energy efficiency, by providing an incentive to manage demand and smooth out peak consumption. This range of offers will be progressively extended according to the deployment of smart meters (see section 6.2.2.2.5 ("Future challenges (replacement, development, smart meters)")).

In addition to electricity supply and gas offers, the Group assists its customers in all market segments, in their actions and their investments in energy efficiency and decentralised production. Since 2013, the EDF group has been grouping all the activities of energy services to corporate customers and to local governments, in France and in Europe, within an Energy Services Division (see section 6.4.1.3 ("Energy Services")). The EDF group is presenting energy efficient offers to its customers in order to make it possible for them to better control their energy expenditures, or offers to put them in contact with qualified partners.

This procedure meets the objectives of the Law for the Scheduling and Orientation of Energy Policy of 13 July 2005, and to the Grenelle 2 Law of 12 July 2010 (see section 6.5.6.1 ("Basic regulations applicable to the environment, health, hygiene and safety")), as well as to the governmental objectives of thermal renovation of housing, what enables EDF to obtain energy savings certificates (*Certificats d'Economies d'Énergie*, or CEEs) in exchange for actions realised with all of its customers. In this framework, EDF contributes to the development of high-performance electricity solutions (heat pumps in well-isolated buildings, electric vehicles, etc.). EDF is the leading producer of CEE in France (see section 4.1.2 ("Risks associated to the Group's activities")). Put into place in 2006, the CEE mechanism changed on 1 January 2015, particularly in order to contribute to the achievement of the objectives set by the directive of 25 October 2012 pertaining to energy efficiency: the national obligation for the third period (2015-2017) is set at 700TWhc, doubled in relation to the second period. The CEE system is one of the mechanisms which should contribute, in addition to financial incentives (tax credits, zero-rate regulated eco-loans (*prêt réglementé à taux zéro*, or Eco-PTZ, etc.) to the achievement of the objective of the energy renovation of 500,000 residences per year, starting from 2017, set by the draft bill on energy transition for green growth currently under review by Parliament.

Moreover, EDF is positioning itself as a major player in energy transition by its visible and sustainable territorial action. EDF is readying itself for the deployment of smart meters, and is making a commitment in the promotion of future intelligent electrical systems. In fact, EDF is experimenting service offers while participating in the design and exploitation of projects such as the Smart Electric Lyon demonstrator, which consists of testing, alongside the principal stakeholders, outfitters, telecommunications operators, industrials and academics, innovative electrical solutions for 25,000 consumers (individuals, businesses and communities) in the Grand Lyon region, in order to assist them in becoming familiar with and understanding their energy expenditure, and to assist in reducing their consumption.

The EDF group wants to be the reference partner for local actors in energy transition. It supports them in their energy efficiency projects for the generation of local renewable energy and the development of green districts. The EDF group is particularly involved in the development of electric

mobility. Present throughout the territory, it maintains strong links with the French population and the industrial network, as well as with all of the local authorities. This presence makes it possible to give substance to the values of the Group concerning energy efficiency: proximity to customers, continuity of service, professionalism and solidarity.

Finally, the Group acts to ensure that energy billing does not become an aggravating factor in insecurity. For close to 30 years, EDF has been at the heart of combating and preventing energy poverty, in three dimensions: payment assistance, household support and prevention. In addition to the implementation of social energy tariffs and related protections, EDF assists customers in difficulty and contributes to the Housing Solidarity Fund (FSL) and the "Live Better" program. EDF's approach is complemented by targeted partnerships with public authorities and players in the associative sphere, working to combat energy insecurity.

6.2.1.2.2.2 Activity by customer category

A. Residential customers

At the end of December 2014, EDF had close to 27.5 million residential electricity delivery points, and more than one million in gas. For fiscal year 2014, the volume of its sales rose to 128.4TWh of electricity and 9.3TWh of natural gas.

EDF is striving to sustainably develop the confidence of its customers, by accompanying them in order to make energy savings.

EDF is emphasising a dialogue of confidence with its customers after implementing the nine "EDF & Me Commitments", involving proximity, personalisation, and proactivity:

- "1. proposing offers suited to customer needs;
2. invoicing fairly;
3. offering flexible and personalised payment methods;
4. offering the simplicity of the Internet and the attentiveness of our advisors;
5. contacting them when it is useful for them;
6. assisting them in finding concrete solutions for saving energy;
7. reimbursing as soon as possible;
8. responding immediately in the event of a claim, or informing them of the processing time;
9. assisting them in times of difficulty."

Over 90% of customers state that they are satisfied after the processing of their request by EDF in 2014¹.

EDF offers a modern "multichannel" relationship, in order to adapt to the change in their customers' behaviour, which is more and more demanding and mobile: use of the Internet (fixed and mobile sites, Smartphone applications) and development of various customer methods of contact (web callback, telephone chat, videoconferencing etc.).

Energy supply

EDF has been supplying electricity principally at the regulated sales tariff to residential customers, but has also offered natural gas and electricity at market prices since 2007.

For its supply activity on the residential customer market (close to 30 million incoming calls, close to 100 million invoices per year, approximately 9 million secure customer spaces on the Internet), EDF offers a customer relations strategy based upon several channels: Customer Service Centres (CRC), offering service from 8:00 a.m. to 9:00 p.m., six days a week, an automated vocal portal, a shopping network, an Internet site, and Smartphone applications, with secure access to contract management.

1. Source: BSC barometer of satisfaction.

Services for residential customers

A large range of offers and services is proposed to residential customers:

- services dedicated to energy savings: advice concerning different heating systems or insulation solutions, personalised accompaniment on renovation work projects, applications for a quote from EDF's Partenaires Bleu Ciel, and access to financing solutions from EDF's financial partner (Domofinance) for home renovation projects. All of these services are made available on the Internet, with the possibility of dialogue with the EDF experts or other web users within the framework of a forum dedicated to energy savings in the home;
- other services: paperless management methods for accounts (electronic invoice, monthly payment of exact rather than estimated usage (*Relevé confiance*), online agency, etc.), access to insurance services (energy bill invoice – *assurance facture énergie*, or AFE) and assistance with electrical and plumbing troubleshooting (*assistance au dépannage électrique et plomberie*, or ADE and ADEP), and monitoring of consumption (*Suivi conso*).

Earning of energy savings certificates (CEE)

With respect to residential customers, CEEs are earned from the thermal renovation of the home, based on high-performance materials and a partner-oriented policy, enabling construction and renovation professionals to benefit from the designation of EDF "Bleu Ciel" Partner, subject to compliance with EDF's technical reference system. Use of such designation is protected by a trademark license which precisely defines the terms thereof and sets the amount of the royalty paid by the partner to EDF. This network of partners makes it possible for customers wishing to renovate their housing to have access to qualified professionals for energy efficiency.

EDF also contributes to training actions and the promotion of energy savings, such as:

- training in energy savings for building professionals (*Formation aux économies d'énergie des acteurs du bâtiment*, or FEEBAT): this plan was designed with professional building organisations and the *Agence de l'environnement et de la maîtrise de l'énergie* (Agency for the Environment and Control of Energy, or ADEME) in order to develop the ability of businesses to respond to the thermal renovation market. Since 2008, it has made it possible to train over 133,000 professionals, thanks to EDF's financing in the framework of the plan for energy savings certificates. The plan has been opened to equipment distributors and to primary contractors;
- the recasting of the "Grenelle environment" rules (*règles de l'art "Grenelle environnement"*, or RAGE): this programme, launched at the initiative of the Minister of Ecology, Energy, Sustainable Development and the Sea, in November 2007, with professional building organisations, is intended to technically accompany businesses in taking into account the environmental challenges of Grenelle. Updated once again and integrated into training guidelines, in particular FEEBAT, these new rules make it possible to improve the quality of the implementation of the renovations.

For information relating to the regulatory framework concerning the CEEs, see section 6.5.6.1 ("Basic regulations applicable to the environment, health, hygiene and safety").

Solidarity policy

Solidarity is a core value of EDF, which has been pursuing a policy dedicated to economically disadvantaged customers for close to 30 years. EDF supports its disadvantaged customers in three ways:

- payment assistance, which includes the establishment of social energy tariffs;
- household support, through which EDF mobilises its employees throughout the country so that they can provide flexible solutions that meet the needs of customers in difficulty;
- prevention, which covers the fields of research into energy insecurity, the teaching of good energy management practices and access by vulnerable population groups to energy-efficient solutions.

With respect to payment assistance, EDF implements the CSPE finance plan, instituted to benefit persons in difficulty and in vulnerable situations. Low-income customers can access subsidised energy prices for electricity and natural gas, as well as the reimbursement of the expenses for initial set-up of the services. From March 2012, the basic necessity tariff (TPN) and the special solidarity tariff (TSS) have been granted automatically to all entitled beneficiaries identified as customers of energy suppliers. EDF has worked actively towards this and has helped increasing the number of beneficiaries of such aids, by reaching close to 2.33 million TPN beneficiaries and 130,000 TSS beneficiaries (including Corsica and overseas departments) at end-2014. This increase is also due to the raising of the TPN eligibility threshold (addition of a criterion based upon the reference tax income of the household, and extension to subsidised social housing).

In 2014, EDF contributed €23.3 million to the Housing Solidarity Fund (FSL), which helps to write off unpaid bills for customers in financial difficulty. It helped nearly 200,000 households.

Over and above its legal obligations, EDF promotes its offer of "energy guidance" offer bringing together services and advice about tariffs, usage, energy management and customised payment terms. In 2014, over 500,000 people benefited from this.

In order to be closer to vulnerable populations, EDF also relies on 180 local reception centres, in addition to its store network. The numerous partnerships developed by EDF with specialised nonprofit organisations in social mediation, such as the Multiservice Mediation Information Centres (*Points d'information médiation multiservices*, or PIMMS), the National Housing Information Agency (*Agence nationale d'information sur le logement*, or ANIL), a partner since October 2011, and other local structures, make such places informational and mediation relays, recognised as facilitating the utilisation of public utilities.

EDF also accompanies actions for raising awareness of energy control, in particular with Community Centres for Social Action (*centres communaux d'action sociale*), SOS Familles/Emmaüs France, the Secours catholique and the Secours populaire (Catholic and Popular Assistance), the Red Cross, the Unis-cités nonprofit organisation, in the framework of the "Mediaterrés" programme, and Crédit Agricole (*Points Passerelles* – assisting low-income households). In 2014, EDF entered into two new partnerships, with the *Fédération des PACT*, on the one hand, and with the *régies de quartiers* on the other hand.

EDF also financially and technically supports actions for assistance in home renovation through numerous partnerships with social-housing lessors, or with the Fondation Abbé Pierre through the programme "Toits d'Abord" (*roofs first of all*).

EDF is pursuing its commitment with the National Agency for Habitat Improvement (ANAH) in the framework of the "Better Living" programme. The agreement, signed in 2011 under the aegis of the government in response to the Grenelle 2 Law, and renewed in 2014, had made it possible over the 2011-2013 period to put into motion the renovation of over 50,000 homes occupied by owners in a precarious energy situation, for a contribution by EDF in the amount of €29 million. In 2014, the results of the programme were in keeping with a growing dynamic, with approximately 50,000 renovations over the year (in comparison, 31,000 renovations had been implemented in 2013). The renewal of the agreement for the 2014-2017 period, on a basis of 50,000 homes in 2014, then 45,000 homes each year in 2015, 2016 and 2017, involved a higher financial contribution by EDF, of €32 million in 2014 then €29 million per year over the following three years. EDF also contributes to identifying households eligible for the plan, and contributes its expertise in actions for energy control (increasing awareness and training).

In exchange for these commitments, EDF receives energy savings certificates (see section 6.5.6.1 ("Basic regulations applicable to the environment, health, hygiene and safety")).

EDF also makes available to persons in precarious energy situations effective equipment (for example: 8,500 "Control of Energy Demand" (MDE) kits distributed in 2014) through local structures and provides advice to individuals on the usage of the equipment (eco-friendliness advice).

B. Corporate and business customers

EDF has close to 1.7 million corporate and industrial and commercial customers. For the 2014 fiscal year, electricity sales were 179.5TWh at the regulated sales tariff and at market prices, and sales of natural gas were 9.5TWh.

This market groups together all of the businesses, regardless of their size, including professionals. In May 2013, the new EDF Entreprises brand was launched for all of its customers, with a promise "Committed to your competitiveness". It relies on a relational proximity, made possible by a territorial organisation and expertise at the service of the customers.

In order to fulfil this promise, EDF Entreprises accompanies businesses and professionals in order to assist them in reducing their energy bill. This action is in keeping with the environmental dimension of the sustainable development strategy of the EDF group, and has as an objective to contribute to the performance of the French electricity system, in avoiding investments in order to cover spikes in electricity.

More particularly, EDF accompanies electricity-intensive customers. The year 2014 was marked by two major actions in this area:

- after having taken over the French aluminium production site of Saint-Jean-de-Maurienne from the Rio Tinto Alcan company at the end of 2013, the consortium, formed by the German industrial TRIMET and EDF, began its recovery. Results are in line with the forecasts, and the two shareholders decided to invest in the development of the company. Thus, on 6 September 2014, the "F series" line of aluminium production, halted in 2009, was placed back into service. The forecast consumption of electricity of the site will transition from 1.6TWh to 2.1TWh, and will become one of the biggest electricity consumers in France. EDF owns 35% of the new company;
- moreover, in the current context of the electricity market, and taking into account the financial difficulties encountered by the Exeltium electro-intensive industrial consortium, on 27 October 2014, Exeltium and EDF signed an amendment to the industrial partnership contract in order to redraft this contract, thus giving competitiveness back to the electro-intensive businesses implied, in the short and long term, while maintaining the overall economic balance of the contract.

These types of partnerships illustrate the role of EDF, as a citizen business, oriented towards sustainable development in its social dimension, and committed to economic performance.

The range of offers

The EDF range of offers is adapted to customers' expectations and respective profiles, specifically with electricity supply offers providing competitive solutions that comply with the new market rules as defined by the NOME Law, and offers for the supply of gas.

EDF also enhanced its range of services intended for all its customers, whether small companies or large industrial customers. These services are designed to:

- assist industrial and commercial customers by guaranteeing them 24 h / 24 and 7 days / 7 troubleshooting within two hours for all the breakdowns on their electrical installations;
- facilitate the start of company operations through offers that help the customer to benefit from expert advice to adjust the power of its electrical supply contract to its energy needs during the first year of activity;
- simplify contract management and optimise energy expenditure: with the help of a multi-site bill, paperless billing, consumption monitoring, customised alerts, a wide range of payment options, etc.;
- advise the customer on the reduction of energy expenses by analyzing its key uses, such as the production of cold, heat, compressed air and motorisation. This "Demand-Side Energy" advice helps to identify the

major solutions for reduction of energy consumption. EDF can commit in the long term to identifying avenues for actions relating to energy savings and define a plan for implementing them (Energies Productivity Plan);

- optimise energy efficiency projects and assist in their implementation, fund implementation of more efficient equipment or better-performing energy solutions in three areas: building insulation, the installation of equipment that is energy-efficient or powered by renewable energy and the improvement of industrial processes, by relying on energy savings certificates;
- raise awareness of company employees through educational tools such as the energy clock, which displays site consumption in real time, or through awareness sessions for employees at which eco-gesture kits are handed out to each participant. For customers deeply involved in steps to optimise energy that wish to share energy consumption reduction plans with other companies, EDF leads regional networks that bring together about ten companies that discuss energy choices for a period of three years;
- offer an energy-management system to customers. This approach gives the customer an overall view of energy expenditures, in order to enable them to have good control over them. It can be a plus in seeking the obtaining of ISO 50001 certification by EDF's customers;
- offer services which respond to customer expectations: audits, engineering and detailed studies, equipment delivered and installed, operating and maintenance services for new equipment installed, financing options, options for telemonitoring of energy performance, etc.

In order to reinforce its expertise and to better respond to the investment projects of its customers, EDF has surrounded itself with partners: more than 450 businesses committed to energy efficiency and the reduction of CO₂ emissions in order to:

- guide customers in "low carbon" strategies: enhance commitments to renewable energies, diagnostics, carbon reduction and compensation, monitoring and development of savings made;
- promote energy consumption telemonitoring solutions, such as the service "Load curve telemonitoring" which allows thousands of customers to graphically visualise their electricity consumption load curves on the Internet.

Lastly, EDF is pursuing its research work in new fields of innovation, such as that of smart grids, on equipment allowing long-distance shedding of electrical usage, and contributing to research in order to smooth out electricity consumption at peak hours.

In order to always be as close as possible to the various expectations of its customers, EDF has put into place offers dedicated to large customers, in particular with:

- offers for the tailor-made supply of electricity and gas;
- offers developing the shedding capacities of its customers: depending on certain conditions, customers who are capable of shedding according to specified powers can receive financial compensation (fixed bonus and for each shedding according to energy not consumed during the peak period);
- assistance on a European scale through the entities of the Group. EDF has a "Large Companies and Large Accounts" commercial network dedicated to the management of large companies operating on a European scale, and having a centralised purchasing structure;
- support in the control of their energy consumption and their CO₂ emissions by the implementation of energy productivity plans (PPE). These contracts rely on the expertise of EDF Entreprises in terms of eco-efficient solutions on processes and utilities, propose actions to be implemented,

and guarantee associated savings. These actions lead to investments of energy savings which benefit from the CEE plan;

- trading of CO₂ for businesses subject to the national quota allocation plan (PNAQ) (see section 6.5.6.1 ("Basic regulations applicable to the environment, health, hygiene and safety"))).

Beyond the provision of electricity and services, EDF markets a complete range of offers of natural gas for its customers. It offers them a single contact person and simplified management of electricity and gas contracts. EDF has reorganised its natural gas sourcing and development operations offers, in order to gain in responsiveness and to thus offer to its customers solutions which are rapidly adjusted according to their expectations and market opportunities. The natural gas offer is also enriched with management and advisory services (Internet monitoring, annual balance sheet of consumption, energy savings diagnostics, etc.).

Relational strategy

EDF is founded on a relational strategy to be as close as possible to customers, their problems, and their expectations. Its employees, spread out in eight Regional Commercial Divisions and one National Large Accounts Division, put EDF's expertise at the service of the support and treatment of customer needs on a daily basis.

Efficiency and proximity being at the core of the customer relationship, EDF's employees rely on solutions that suit the customers, according to their profiles and consumption habits, and the goal of which is to encourage dialogue and making it easier to access information. Thus, in addition to the traditional channels of communication, EDF has in particular developed:

- a website specifically dedicated to businesses. On the site they can perform standard operations, find a simplified presentation of offers, read the energy magazine or access a Frequently Asked Questions page classified by theme;
- the energy monitoring organisation, which was set up in 2009 with the aim of offering customers a place to talk about corporate behaviour in an ever-changing energy context and to offer issues to reflect on in terms of the adjustments required to cope with the new challenges of energy.

Customer satisfaction

EDF Enterprises has been engaged since 2011 in a programme aimed at improving the satisfaction of its customers. In 2013, the nine projects constituting this programme were transformed into perennial structures in each of the nine commercial entities carrying them. A regular sharing of best local practices is organised nationally.

The programme contributes to mobilising the EDF teams around customer satisfaction, and makes possible:

- better consideration of expectations of industrial and commercial customers;
- the development of a customer-oriented culture;
- mobilisation of managers and business lines;
- emulation, discussions and sharing between regions.

Customer satisfaction in the corporate and professional market was stable in 2014, with 77% of customers very satisfied or satisfied. The objective is to maintain this level in 2015.

C. Local authorities, low-income housing agencies, Local Distribution Companies (LDCs) and public service providers

Law no. 2009-967 of 3 August 2009 regarding implementation of the Grenelle environmental action plan gives local authorities a major new role in local energy policies. In this context, EDF has been active in offering customised solutions for each authority and public institution with decentralised decision-making powers (hospitals, universities and major

graduate schools, CROUS student service centres, chambers of commerce and industry, ports and airports).

EDF is active in five areas for these customers:

- the supply of electricity and gas at market price, responding to their energy problems (proposal of offers and solutions adapted to the needs described in calls for tender);
- the signing of concession contracts for the "supply" portion in relation with ERDF for the "delivery" portion;
- the supply of electricity at the regulated sales tariff;
- accompaniment in their different projects (local climate plans, eco-districts, sustainable cities, etc.);
- development of sustainable mobility offers with local authorities.

EDF manages over 56,000 customers in this market this way:

- local governments (communities, public institutions of intercommunity cooperation (EPCI): urban communities, municipal associations and neighbourhood associations, intercommunal associations, regional and general councils, and the establishments which they manage, such as high schools and middle schools, public retirement homes, etc.);
- public services: hospitals, universities and major graduate schools, CROUS student service centres, chambers of commerce and industry, ports and airports;
- social-housing lessors from management entities of private housing (Social Housing Company - ESH) or public housing (Office Public HLM, or OPH);
- 156 LDCs in the metropolitan territory.

These customers all together represent approximately 1.2 million electricity sites, 277,000 of which are for social-housing lessors, for an annual consumption of 29.6TWh and close to 6,000 natural gas sites for an annual consumption of 0.9TWh. In addition to that are the 16.3TWh of electricity sold to the LDCs in 2014.

In 2014, the commercial satisfaction of these customers was 82%, and the overall satisfaction was 91%. The quality of the relations with a dedicated contact person, guidance, responses to claims, and actions in matters of poverty are well received. 93% of customers have confidence in EDF Collectivités.

Controlling energy

Agreements are signed with local authorities, pertaining to control of their energy consumption. Certain communities are in effect self-endowed with competence in the area of energy, and arrange specific actions in their region in matters concerning Control of Energy Demand (MDE) and renewable energies.

A "Load Amount" device for social-housing lessors aims to improve the energy efficiency of social housing, and make it possible for EDF to issue energy savings certificates. In 2014, over 168,000 social housing units were helped, 156,000 of which were for renovation work.

Strategies consist of heavily involving all of the occupants of a location in a concrete initiative for the control of energy. The range includes "Raising awareness about energy saving" kits for the occupants of public locations (communities, social-housing lessors, schools) and is supported by eco-friendly training workshops (eco-friendliness kit). These strategies include the "energy clock" developed by EDF's R&D. This innovative device for the monitoring in real time of a building's consumption is accompanied by a process for raising the awareness of the site occupants.

Offers and solutions

EDF has enriched its range of electricity offers with fixed-price offers and offers with prices indexed to ARENH, targeted in accordance with the

activity sector completing the "Balance" electricity offer produced from renewable sources of energy.

EDF also offers:

- management services adapted to community customers and social-housing lessors, in particular the monitoring of expenses and consumption by Internet, Di@lège, electronic invoice, personalised grouping of invoices, or the sending of invoicing data in electronic format;
- high-performing energy efficiency offers to communities and to social-housing lessors to classify then prioritise actions for energy savings and CO₂ reduction to carry out on their properties, thanks to a proven multicriteria approach (energy and environmental criteria, technical opportunities, etc.); control of energy demand and renewable energy expert advice making it possible, thanks to in-depth energy diagnostics, to construct a personalised energy programme, upstream of a development project. EDF evaluates local energy solutions which are the best adapted to the social, economic and environmental specificities of the new district.

6.2.1.2.2.3 For sustainable cities and regions

The energy development of cities and regions is today naturally associated with sustainable development objectives: environmental impact, local economic activity and poverty constitute major preoccupations of local governments.

To accompany this transformation of communities and key players in the cities, the EDF group, in relying upon its expertise, its field experience, and its specialised subsidiaries, is developing economically pertinent energy solutions, carbon-free, reproducible, and adaptable to the specificities of each region or urban project, by developing renewal energies.

Accordingly, EDF, its subsidiaries and its partners offer in particular:

- advice at various territory sizes (buildings, district, metropolis, region) in order to identify the potentials of renewable energies in a region and to compare the possible energy solutions;
- innovative energy networks with, for example, thermal energy networks by heat pump;
- renovations of public buildings as well as individual homes;
- the promotion of soft mobility solutions¹ as well as the putting into place and exploitation of electric mobility (recharging infrastructure, electric-vehicle sharing solutions, the "last mile", etc.);
- innovative local energy generation solutions (photovoltaic, biogas, biomass, etc.) according to the potential and nature of each project;
- educational activities for saving energy on a daily basis as well as energy management services based on measurement and analysis of consumption and the actions needed involving all stakeholders.

All of these components (upstream advice, implementation and operation) constitute the foundation of an approach for sustainable cities and territories, in both new neighbourhoods and existing urban areas.

Through balancing a pragmatic approach based on operational projects in response to the needs of communities and stakeholders in the city and on innovations in research and development, EDF is a unifying benchmark reference for sustainable cities and territories.

Over 300 projects for the development of sustainable cities and regions are now underway in France, from the reflection phase up to the first delivered projects.

6.2.1.2.2.4 Public electricity distribution concessions

Public electricity distribution concessions cover two distinct missions:

- the development and the operation of public distribution networks under ERDF's responsibility (see section 6.2.2.2.2 ("Distribution activities"));

- the supply of electricity at the regulated tariffs connected to the public distribution networks throughout the territory of the concession, under the responsibility of EDF for mainland France, excluding the LDCs. This mission consists of supplying electricity to all of the customers at the Blue, Yellow and Green Tariffs connected to the public distribution networks, in compliance with the commitments of the concession specifications (subscription terms, payment and delivery terms, contractualisation, etc.).

Each concession contract is co-signed by EDF, ERDF and the licensing authority, and concerns a municipality or of a grouping of municipalities. The public distribution of electricity is taking place in the framework of 665 concession contracts, 45 of which are within a single department.

About fifty concessions will expire by 2015. Discussions engaged with the cities of Niort, Orléans, Nice, Lyon, Melun and the department of Seine-et-Marne have culminated in the signature of amendments for extension. An organisation has been put into place, particularly in order to renew the concession contracts, mobilise both national and regional competences, draw up each year the concession activity reports (CRAC) and respond to inspection requests from the granting authorities.

For the supply part of the contract, the period ahead will be particularly marked by the multiplication of the inspections performed by the granting authorities with respect to EDF (40 in 2010, 100 in 2012, 220 in 2014) and concerning new fields, such as claims and solidarity (TPNs, disconnections for unpaid bills).

6.2.1.3 Upstream/downstream optimisation – trading

6.2.1.3.1 Role and missions of the Upstream/Downstream Optimisation & Trading Division

The Upstream/Downstream Optimisation & Trading Division (*Direction Optimisation Amont/Aval & Trading*, or DOAAT) has as its principal missions to ensure, for electricity, a balance between EDF's upstream resources and downstream outlets in France, as well as to maximise the gross margin of the upstream/downstream integrated whole:

- resources: generation fleet, long-term electricity supply contracts, purchases in wholesale markets, purchase obligations to decentralised producers, contractual load shedding capacities;
- outlets: long-term supply contracts, sales to end clients, sales in wholesale markets, sales to competing suppliers in France (including VPP and ARENH).

Optimisation consists of effecting economic short- and medium-term arbitrage operations between the different available resources in order to satisfy EDF's supply commitments to its clients, while controlling risks connected to variations in generation, consumption, or the market, and their financial consequences.

DOAAT's objective is to secure and to maximise the electricity gross margin of the "generation-supply" set, by exploiting as best as possible the flexibilities of the upstream or downstream assets, and by continuously seeking the best buying or selling opportunities in the wholesale markets.

DOAAT manages the supply of fossil fuels – gas, coal, and fuel oil – of EDF's power stations.

On longer-term horizons, DOAAT anticipates and proposes changes in structure to the upstream and downstream asset portfolios, according to the outlook of change in the markets and in corporate strategy in France.

For transactions in the wholesale markets, DOAAT relies exclusively on EDF Trading, a wholly-owned subsidiary of EDF (see section 6.4.1.1.2 ("EDF Trading")).

1. By foot and bicycle.

6.2.1.3.2 Activities for optimisation of the upstream/downstream balance

DOAAT has responsibility for management of the physical risks weighing on the upstream/downstream electricity portfolios of EDF, and their financial consequences.

It maximises the electricity gross margin of the "generation-supply" (G+S) set by activating the available flexibility levers of the upstream, downstream, and wholesale generation portfolios, and in proposing changes in value and structure of such portfolios, between different time frames.

In the medium- and long-term, the role of DOAAT is to construct an optimised and balanced vision of EDF's G+S portfolio, in determining financial trajectories and the scenario of acceptable physical and financial risks. The principal levers of the portfolio are: (i) seeking new modalities of maintenance or exploitation, aimed at improving the availability or the flexibility of generation means, and adaptation of the composition of the generating facilities (DOAAT provides services in this regard in support to EDF's Engineering Production Division); (ii) market-share strategies by segment, changes in tariff structures, calibration of the sheddings, and seeking new commercial offerings (DOAAT provides services in this regard in support to EDF's Commerce Division); (iii) adaption of existing long-term contracts, and seeking suitable new structured contracts; (iv) participation in the development of the generation investment programme in France, and in particular, renewal of generating assets, in parallel with the foreseeable changes in the long term of downstream markets.

Management of electricity supply/demand can also be broken down into shorter time frames (from one month to three years in advance), within the framework set by the policies of extreme risk (volume risks) and of price risks, developed pursuant to the directives of the Group Risk Control Division, and validated by the Executive Committee of the Company. From the physical aspect, the principal risks weighing on the volumes of energy are variations in temperature, hydraulicity, availability of the generation fleet, and market shares. Thus, for example, a drop in temperature of 1°C in winter brings about an increase in the consumption of electricity in France in the region of 2,400MW¹, and the amplitude of hydraulic generation between two extreme years may reach 20 or so terawatt-hours. DOAAT also manages the exposure of EDF's upstream/downstream portfolio to price variations in the energy wholesale markets (electricity, gas, coal, petroleum products) and in the CO₂ emissions licensing market.

In order to address the "volume risk", DOAAT ensures that it has, in all time frames, sufficient physical power margins in order to enable it to meet its commitments in nearly all situations. DOAAT possesses a set of leverage actions: scheduling of maintenance operations of generation means (in particular nuclear) management of inventory (fossil fuels, hydraulic reserves, and client shedding capacities), purchases and sales in wholesale markets. DOAAT manages "price risk" through the intermediary of EDF Trading (see section 6.4.1.1.2 ("EDF Trading")), EDF Trading being in charge of market access on behalf of DOAAT. The purchases and sales realised by EDF Trading on behalf of DOAAT are realised within the framework of the "price risk" policy.

With respect to RTE, DOAAT bears the burden of being the "balance responsible entity" on EDF's perimeter in metropolitan France, and EDF is committed to financially compensating RTE in the case of a deviation onto its balance group. The optimisation consists of communicating to RTE on the day before, an offer schedule that is balanced with the demand for the day after, which makes it possible to minimise the supply cost of EDF's contractual commitments. In order to guarantee balance in the EDF balance group, DOAAT can make use of the flexibility of the client portfolio (notably by means of shedding) or of generation assets (assets which can be mobilised in a few hours, such as the thermal power plant, or even in a few minutes, such as the combustion turbines or hydroelectric plants) according to their economic value, and by hedging calls upon such levers with opportunities for spot buying or selling of electricity in the markets carried out by EDF Trading. The flexibility of the client and generation portfolio also makes arbitrage operations possible during the course of the day.

In addition, DOAAT analyses and evaluates the impact on the physical and financial balance of the G+S portfolio of regulatory and institutional changes, such as the mechanism for allocation of capacities to the borders, or the reinforcement of environmental requirements.

6.2.1.3.3 Capacity auctions

Capacity auctions (Virtual Power Plants or VPPs) result from a commitment made by EDF to the European Commission at the start of 2001, when EDF International was acquiring a participating interest in EnBW, to make a portion of its generation capacities available to the market. This commitment terminated on 30 November 2011 following the consent of the European Commission within the framework of the buyback of the participating interest held by EDF International in EnBW by the Land of Baden-Württemberg in 2010.

The end of the commitments did not, however, challenge the rights acquired during auctions. Thus, EDF will continue to deliver to the various counterparties the volumes purchased up until mid-2015, the date upon which the delivery commitments for longer contracts will be extinguished. The volumes made available by EDF decrease progressively: deliveries were down by 5.4TWh in 2014 in comparison with 2013, and the power made available represents 150MW over the first quarter of 2015, and 10MW over the second, before being definitively extinguished.

6.2.1.3.4 Long-term electricity purchase and sales contracts

EDF maintains commercial relations through numerous energy purchase or sales contracts, with European operators such as GDF Suez, Enel, EnBW, Axpo and Alpiq.

These contracts are of many types, and confer:

- rights to the energy produced by facilities, primarily nuclear, in which the counterparties hold a participating interest over the duration of the exploitation of the facility (see section 6.2.1.1.3.1 ("EDF's nuclear fleet" – "Generation allocation contracts"));
- drawing rights for totally or partially guaranteed electrical power, for a duration generally comprised between 15 and 25 years.

The portfolio of contracts is representative of the structure of EDF's generation fleet, principally consisting of nuclear means (EDF sells base-load energy and buys mid-merit load and peak energy).

In 2014, the volumes sold and purchased respectively represented 36.7TWh and 2.0TWh.

6.2.1.3.5 Regulated access to historic nuclear power (Accès Régulé à l'Énergie Nucléaire Historique, or ARENH)

Since 1 July 2011, ARENH, instituted by the NOME law, was put into place for the benefit of EDF's competing suppliers. This mechanism makes it possible for the competitors to supply themselves from EDF, after signing a framework agreement, for the supply of their end clients situated in metropolitan France or of network administrators for their losses.

The principle of the ARENH allocation mechanism is the following: at semi-annual intervals ("windows"), EDF's competitors may send to CRE an ARENH request for the 12 coming months, based on their forecast delivered volumes.

In the ARENH mechanism, the products delivered are defined by a quantity (in megawatts) and a profile. Consumers are divided into two categories: (i) major consumers and buyers for losses and (ii) small consumers. The first open up a right to their suppliers for which the power is constant (base), and the second to a product whose power is modulated at half-hourly intervals. The second profile is constructed in order to reflect the modulation of the generation of the French nuclear plant and progressively converges towards the first, in order to arrive, starting from 1 January 2016, at a single profile.

1. Source: RTE.

CRE determines the rights to ARENH of each supplier from its forecast consumption relative to its client portfolio and according to the modalities of allocation set by decree. It notifies to each supplier concerned the volume from which it will benefit, and to EDF, the aggregate volume. In total, the sum of the volumes delivered cannot exceed 100TWh for deliveries to end clients; the losses of the network operators have been benefiting progressively from rights to ARENH since 1 January 2014, beyond this ceiling. The rights to ARENH were established by the authorities in taking into account the share of historic nuclear generation in end consumption in France, and therefore do not cover the totality of the supply to consumers. The possibility is foreseen for a revision of the loop coefficients (which guarantee the coherence of the ARENH volumes with the share of nuclear generation in French national consumption) before the start of a delivery year, particularly in the case of a decision of a competent authority having as its consequence to earmark the annual production of power stations.

At the end of each year, CRE regulates the rights of each supplier to ARENH based upon the recorded consumption of its clients, in order to guarantee the useful effect of the mechanism on the development of competition to the benefit of the final clients. A price supplement is then invoiced to each supplier for whom the rights recorded prove to be less than the rights allocated on the basis of their forecast.

In implementation of Article L. 337-16 of the Energy Code, the ARENH price is, for a transitional period which initially was supposed to end on 7 December 2013, set by order of the Ministers in charge of the Economy and of Energy, after the opinion of the CRE providing supporting information. At the end of the transitional period, the ARENH price was to be fixed by ministerial order taken upon the proposal of CRE, pursuant to the methods for the identification and accounting entry of the costs defined by decree in the Council of State. This decree has not, however, been adopted as of the date of publication of the present Registration Document. A draft decree was reviewed in the Higher Energy Council (*Conseil Supérieur de l'Énergie*, or CSE) on 19 June 2014, and was the subject of an opinion of CRE dated 24 July 2014, of the Competition Authority (*Autorité de la concurrence*) on 20 October 2014, and of the Council of State (non-public opinion). In addition, a joint press release from the Ministry of the Economy, Industry, and Digital Technology and of the Ministry of Ecology, Sustainable Development and Energy of 4 November 2014 indicated that the draft decree had been transmitted at the beginning of July to the European Commission, for prior approval. While awaiting the decision of the European Commission and the publication of the decree, the government decided to maintain the ARENH price at its current level of €42/MWh, and to postpone its reexamination to 1 July 2015. During his hearing before the

National Assembly on 15 October 2014, the President of CRE, Philippe de Ladoucette, estimated the necessary change in the ARENH price in 2015 to be approximately +€2/MWh.

The ARENH price is moreover taken into account in the establishment of the regulated sale tariff for individuals (see section 6.2.1.2.1.3 ("Regulated tariff sales contracts")). Thus, for all of EDF's sales, the following are the controlling factors: the regulated tariffs, the offers in the retail market, and the wholesale sales to competing suppliers.

The volumes delivered in 2014 by EDF in implementation of this mechanism were 71.3TWh (as compared with 64.4TWh in 2013), 11.9TWh of which was for losses. The delivery perimeter of ARENH changed as from 1 January 2014: the losses of the network managers opened up the right from that point on to ARENH, as was provided for by the NOME law. At constant scope, ARENH delivery thus realised a drawback of 8% in 2014, mainly due to a drop in market price.

6.2.2 Regulated activities in France

6.2.2.1 Transmission – Réseau de Transport d'Électricité (RTE)

Created on 1 July 2000 and a subsidiary since 1 September 2005, RTE (the Electricity Transport Network) is the operator of the French electricity transmission network, which it owns, operates, maintains and develops. With over 100,000 kilometres of high and extra high voltage circuits and 46 cross-border lines, this is Europe's largest network. Its geographical location places RTE at the core of the European electricity market. RTE guarantees the correct operation and safety of the electricity system. It provides free and fair access to all the network users.

In 2010, EDF allocated 50% of RTE's shares to its asset portfolio dedicated to financing the dismantling of nuclear plants. Following this operation, RTE continues to be wholly owned by EDF, but due to RTE's specific conditions of governance (see section 6.2.2.1.1 ("Organisation of RTE") below), RTE was not fully consolidated by EDF, but was consolidated using the equity method from 31 December 2010.

In 2014, the RTE group achieved a net income of €379 million (see section 20.1 ("Historical financial information"), note 23 of the notes to the consolidated financial statements as at 31 December 2014 ("Investment in associates and joint ventures")).

The table below provides a simplified report of energy flows on the RTE network over the last three years:

(in TWh)	2014 ⁽¹⁾	2013	2012
Injections			
Generation	540.6	550.9	541.6
Withdrawals			
Energy withdrawn for pumping	7.9	7.1	6.7
Deliveries (including losses)	465.3	495.0	489.5
EXPORT BALANCE OF PHYSICAL EXCHANGES⁽²⁾	67.3	48.8	45.3

(1) Provisional data (the final data on electricity generation for 2014 will be available on RTE's website in July 2015: www.rte-france.com).

(2) Including water rights and exchanges via distribution network.

RTE pays special attention to supporting the development of renewable sources of energy in France under the best conditions. The development of the transmission network and interconnections is an essential element to ensure the development of renewable energies, mainly wind energy, and their integration into the power system.

The international association GO 15 (Grid Operators), which brings together the 17 principal electricity network operators, held its general meeting in Canton, in China, on 27 and 28 October 2014. On 29 October, GO 15

organised a symposium to celebrate the tenth anniversary of its foundation. In fact, the organisation was created in 2004 with three members: PJM (USA), Tepco (Japan) and RTE, which is thus one of its founding members. The Canton meeting measured the headway made by GO 15 and its growing reputation, as it has 17 members at present, and was recently joined by the GCCIA, the organisation of Gulf countries. Under these conditions, GO 15 now has a broader and recognised representation, which singularly increases its audience on the global energy arena.

On 27 October 2014, RTE and the Chinese network operator CSG renewed their agreement of cooperation on sharing the operation and technical maintenance of the networks, safety of power supply, integration of new technologies, accommodation of renewable energies and corporate strategy.

2014 energy balance¹

In 2014, the gross electricity consumption dropped by 6% compared to 2013. It settled at 465.3TWh i.e. the lowest level observed since 2002. This drop can be mainly explained by meteorological conditions, since, according to Météo France, 2014 was the hottest year since the start of the xxth century. With temperatures higher by 0.5°C than the reference temperature and very rarely less than 5°C in the winter months, there were moderate electric heating requirements.

In the absence of a very cold period, the peak electric consumed settled at 82.5GW on 9 December 2014. One has to go back to the year 2004 to observe similarly low peak consumption. However, the sensitivity of consumption to temperature remains at around 2,400MW/°C in winter.

Excluding meteorological effects, consumption has stabilised due to the economic crisis and also due to energy-efficient measures. Thus, after adjusting for the impact of the weather, it has been noted that the annual electricity consumption in France dropped by 0.4% in 2014. This confirms the dip observed over the last four years in Europe, where electricity consumption has been stagnating, or even declining.

After three consecutive years of decline, the consumption of the big industries sector has stabilised at 67.4TWh. However, the various sub-sectors display contrasting dynamics.

The drop observed in overall French consumption is in practice due to the fall in the electricity consumption of consumers connected to the distribution network. After several years of growth, followed by the stabilisation observed last year, for the first time, 2014 recorded a fall of around 0.5% compared to 2013, excluding the impact of the weather. This development reflects sluggish economic activity, which tends to mitigate the consumption of small and medium sized companies and professionals, and also that of households. The measures taken to encourage energy-efficiency of equipment and buildings and the fall in the market share of electric heating in the new building following the application of the 2012 thermal regulations have also played their part.

Installations of wind farms and photovoltaic plants are on the rise

Development of the generation fleet is characterised by an ever growing renewable energy sector. After the slowdown observed during the last few years, there has been an improvement in the development of wind and photovoltaic energy with the installation of an additional capacity around 1,900MW in 2014 (against 1,340 in 2013) increasing France's installed capacities to more than 9,100MW for wind energy and around 5,300MW for photovoltaic energy. At the same time, thermal power plants with a generation capacity of 1,300MW were shut-down. There was no development in regards to the rest of the fleet.

In 2014, the electric energy generated using renewable energies other than hydropower (27.9TWh) exceeded the energy generated by the thermal fleet. More than half of this power is generated using wind energy and the rest is divided between photovoltaic energy and biomass. The maximum wind power of a little over 7,000MW and a load factor of 80% was generated on 27 December 2014. The maximum photovoltaic power of 3,700MW and a load factor of 80% was generated on 17 May 2014. Such levels had never been attained before. To this were added rather high hydraulicity levels in 2014: with 68.2TWh, the hydropower generation levels were the second highest in 10 years after the 2013 levels, which had been exceptional. Under these conditions, the generation of energy from all renewable sources made it possible to meet almost 20% of the French electricity demand.

On the other hand, this context of moderate consumption and increase in power from renewable sources is difficult for the thermal power sector. Thus, the generation of these power plants fell by 40% in 2014. The coal-fired energy sector was the most affected with a drop in production of 58%, against 28% for natural gas. The economic conditions continue to be a concern for combined-cycle gas turbines in France. Like in 2013, several units were shut down during the summer.

Factors like low consumption, the development of renewable energies and the decline in the use of coal have contributed to the reduction of carbon emissions (see section 17.2.2.3 (« Climate change »)).

The moderate level of domestic consumption and the relatively low prices in the French market resulted in rising exports. France's export balance stood at 65.1TWh in 2014 (against 47.2TWh in 2013), i.e. the highest level since 2002. The sum of imports and exports attained 119.8TWh, i.e. 7.4% more than in 2013. France's annual imports stood at about thirty hours, with not a single day constituting net imports in terms of energy. Analysis of border-wise exchanges highlights the growing impact of the change in the European energy mix with increasing integration of renewable energies. The variability in wind energy over the season and weeks and the variations in the daily cycle of photovoltaic generation resulted in a growing fluctuation in electricity exchange between European countries.

Interconnection capacities increasingly requested

Overall, if France has continued to be an importer with respect to Germany, the exchanges were balanced out in 2014, with an import balance of 5.9TWh against almost 10TWh in 2013, due to the relatively competitive French prices. This declining balance does not result in a reduction of exchange volumes, but creates a balance between imports and exports, with increasingly marked fluctuations. Moreover, the interconnections between France and Germany are saturated, one way or another, for almost half the time.

There has been a sharp increase in the exchanges with Belgium, due to the unavailability of almost half of the Belgian nuclear fleet in 2014, with a 28% rise in France's balance of exports to Belgium at 16.5TWh. The capacity of exchanges from France to Belgium is saturated most of the time.

The balance of exports towards other bordering countries is on the rise. Vis-à-vis Spain, France exports energy two-thirds of the time and imports only when the Spanish renewable energy generation is high, with prices then falling below the French prices. The availability of the France-England interconnection was good in 2014. It is used to export more than 99% of the hours of the year and is saturated 90% of the time. The situation continued to be highly export-oriented vis-à-vis Italy. The capacity of exports to Italy has increased by 400MW since October 2014 due to the reinforcement of the Trans-Alpine networks.

6.2.2.1.1 Organisation of RTE

In accordance with its articles of association, approved by Decree no. 2005-1069 dated 30 August 2005, RTE is a public limited company (*société anonyme*) with a Executive Board and Supervisory Board.

RTE's Supervisory Board is comprised of twelve members divided into three colleges, of which four are employee representatives, four government representatives and four members who are appointed by EDF during the Ordinary General Meeting.

RTE's Executive Board is made up of three members, who perform their work under the supervision of the Supervisory Board, within the limits fixed by the French Energy Code and RTE's articles of association. After the consent of the Energy Minister, the Supervisory Board appoints the Chairman of the Executive Board and upon the latter's proposal, it appoints the other members of the Executive Board.

1. Source: RTE, Electric Power in France in 2014.

6.2.2.1.2 RTE's activities

In France, RTE manages the Public Transmission Network (PTN) in accordance with Law no. 2004-803 dated 9 August 2004, and carries out its missions under the conditions set out by PTN concession model specifications. These specifications were approved by Decree no. 2006-1731 dated 23 December 2006. An amendment was signed on 30 October 2008, which will expire on 31 December 2051.

In accordance with Directive no. 2009/72/EC, transposed to Articles L. 111-3 to L. 111-6 of the French Energy Code, the transmission network operator must be certified according to a process associating the Commission for Energy Regulation and the European Commission, which aims to ensure that the entity concerned fulfils the conditions of independence set out by this text. RTE obtained the CRE certification on 26 January 2012, with publication in the *Journal officiel* on 12 February 2012.

Thus RTE manages the transmission infrastructure on French territory: it operates and maintains the public transmission network and is responsible for its development, while minimising costs for the community and ensuring the safety of the system and the safety of equipment and people.

RTE guarantees access to the transmission network: it concludes contracts with users of the transmission network, based on the tariffs for access to the networks and in compliance with the rules on non-discrimination.

RTE also manages energy flows: it ensures the demand/supply balance and makes adjustments, manages power flow and rights of access to international interconnections in collaboration with the neighbouring network operators. It mobilises reserves and compensates losses, makes the necessary accounting adjustments and resolves discrepancies.

RTE has to face various challenges in its mission as operator of the power transmission network: integration of the European market, extensive restructuring of the generation fleet, societal changes reinforcing the constraints of integrating new infrastructure of general interest and maintenance of its industrial facilities for meeting the requirements of customers and the community. To meet the requirements, RTE, with the consent of the CRE, marked a new stage in terms of investments: investments were increased to more than €1 billion annually between 2009 and 2013, and more than €1.3 billion were invested in 2014. To finance its investments, RTE has its own resources, consisting mainly of the tariff paid by the network users. This tariff is established in a non-discriminatory manner in order to cover all of RTE's costs, provided that these costs correspond to costs for an efficient transmission manager, and fair return on the capital invested across all the investment programmes approved by the CRE (see section 6.2.2.4 ("Tariffs for Using the Public Electricity Transmission and Distribution Networks (TURPE)") below).

6.2.2.1.2.1 Management of the transmission infrastructure

Maintenance

RTE manages the assets of the transmission network through daily maintenance, emergency repairs and replacement of structures that are at the end of their useful life or are damaged.

Following the storms of 1999, RTE implemented a mechanical safety programme. This project, carried out with several external service providers, is aimed at protecting it against major climatic events by increasing the mechanical resistance of aerial lines so that they can resist strong winds blowing at a speed of 150km/h and at transforming or installing approximately 16,400 anti-cascading pylons to prevent the "house of cards" effect, if the wind speeds were greater. This programme is aimed at ensuring power supply to all the sub-stations within five days at the most after a major weather event.

At the end of 2014, the deployment of anti-cascading pylons was about to be finalised (progress rate greater than 97%). These special pylons have an even higher mechanical resistance and are installed on very high voltage lines (225,000 and 400,000 volts), at a distance of three to five kilometres. In 1999, falling trees were the cause of damage to the pylons in 50% of the cases. Thus, RTE carried out work for widening forest corridors. This work is about to be finalised (progress rate of slightly higher than 98%).

Overall, from now until the end of the programme in 2017, RTE should have dedicated a total of €2.4 billion on making its network mechanically secure at an average expense of around €160 million a year. This programme concerns 45,000 kilometres of aerial lines of the RTE network.

The legitimacy and results of the measures taken under RTE's programme for making the network mechanically secure were demonstrated during the heavy snowfall in December 2010, and during the Klaus storm in 2009, Xynthia in 2010 and Joachim in 2011, which were stronger in some places than the storm of 1999, but caused less damage.

By 2017, the work for securing the mechanical network will make it possible to ensure that each delivery point of RTE customers will be connected to the network with at least one line capable of resisting winds as strong as those of 1999, in accordance with the new stricter mechanical resistance standards.

2014 confirms the good results obtained in the last few years in terms of the quality of electricity transmission. Equivalent outage times for RTE customers is thus equal to 2 minutes and 46 seconds, excluding exceptional events. This result is lower than the average for the last ten years.

Development and realisation of new investment in the transmission network

Furthermore, RTE continues to develop and renew the network. The projects studied and implemented fall within the dynamics of the growing need to meet the challenges of energy transition. Each year, RTE draws up a multi-year investment programme submitted to the Energy Regulation Commission. In 2014, RTE's total investments amounted to €1,374 million, including €1,243 million for network facilities. The main projects contributing to RTE's 2014 investment programme were based on continuing the construction of direct current lines that aim to strengthen the interconnection between France and Spain through the East of the Pyrenees (2,000MW line, inaugurated on 20 February 2015), securing the 400kV Montélimar-Lyon line, or securing power supply to the regions (PACA, Vendée). Furthermore, almost 35% of investments in network structures involved restoration aiming at maintaining service quality.

For 2015, RTE's investment programme approved by the CRE amounts to €1,497 million and mainly concerns the construction of the direct current link between France and Italy passing through the Fréjus safety tunnel, reconstruction of the 400kV Charleville-Reims line, and commissioning of the France-Spain interconnection passing through the East of the Pyrenees. In the regional networks, in addition to continued investments for network restoration, work was also carried out for restructuring the 225kV Haute Durance network, and on the Deux Loires Project. As is the case every year, investments for developing and updating the IT systems are also added, mainly considering the changes in outlook related to energy transition and the European integration of markets.

RTE's investments are made in a context of growing needs for meeting the challenges of maintaining the power supply security level, acceptance of new generation means (including intermittent renewable sources of energy), integration of European electricity markets and gradual increase in the need to renew infrastructures.

In 2014, the Regulated Assets Base (RAB) increased by €683 million, up from €12,143 million as at 1 January 2014 to €12,826 million as at 1 January 2015¹. For the record, the RAB is remunerated by the tariff at the Weighted Average Cost of Capital (WACC) of 7.25% before taxes. It represents RTE's industrial assets, after deduction of investment subsidies, and is calculated excluding property, plant and equipment in progress (which until the end of 2012 were remunerated at 4.8% by the TURPE 3 tariff, and are at 4.6% for the period from 2013-2016 in accordance with the CRE's pricing decision dated 3 April 2013 published in the *Journal officiel* dated 30 June 2013).

6.2.2.1.2.2 Management of energy flows

Cost allocation

The cost corresponding to the adjustments made by RTE and due to the negative differences between the projected flows and those already realised is passed on to the "Balance responsible entities" (producers, traders, suppliers, etc.) in proportion to their difference. In the case of a positive difference, RTE compensates the balance responsible entities financially.

Interconnections

RTE manages access to international interconnections in collaboration with the neighbouring European transmission network operators.

The European electricity transmission networks are interconnected, thus ensuring the transfer of energy from one country to another. These interconnections are used to ensure the operational safety of the electricity transmission networks (for example, to compensate for the sudden failure of electricity generation or transmission equipment in France by calling upon neighbouring producers and transmitters and vice versa) and develop the European Electricity market, by allowing an electricity supplier to sell its energy to a customer located in another country of the European Union. Furthermore, these interconnections allow better pooling of the means of generation at the European level by playing on the time differences of peak loads on either side of the borders.

France-Spain interconnection

INELFE (Electric interconnection between France-Spain) is a Franco-Spanish company created in October 2008 to execute the entire project of interconnection between France and Spain, from the feasibility studies through the completion of the actual construction work. It ensures consistency in the technical and environmental choices made by France and Spain for this project. The company, equally owned by RTE and its Spanish counterpart REE (Red Eléctrica de España), relies on the structures and experts of these two companies for the study and construction of the connection. In October 2009, the Ministry of Ecology, Energy, Sustainable Development and the Sea validated the proposed route (least impact zone). According to the order dated 22 April 2011, the underground direct current connection of Baixas – Santa Llogaia was declared to be public utility for the French part of the France-Spain project. The DPUs (Declaration of Public Utility) for the "Baixas sub-station" and "utility tunnel" were also signed by the prefect of the Pyrénées-Orientales (Eastern Pyrenees) on 4 May 2011. The commissioning is scheduled for 2015. For this purpose, an agreement, signed between BEI, INELFE, REE and RTE on Thursday 6 October 2011, provides for the participation of the European Investment Bank (EIB) in the financing of the France-Spain underground interconnection line through a loan of €350 million granted to the two network managers, REE and RTE. This financing contributes towards half of the total project budget of €700 million.

Furthermore, financing of the interconnection enjoys a €225 million subsidy granted by the European Union in accordance with the EEPF programme (European Energy Program for Recovery). The first objective of this new interconnection is to double the electricity exchange capacity between the Iberian Peninsula and the rest of Europe, from 1,400MW to 2,800MW.

Network coordination in Europe

In December 2008, RTE and Elia² created a common company named Coreso, which aims to coordinate the operation of electricity networks comprising France and Belgium. The creation of Coreso fulfils the need of reinforcing the operational coordination between transmission network operators (TNO) expressed both by the European Commission and by the players of the electricity market. Coreso must allow better integration of the original renewable energy generation at the regional level and guarantee secure management of rising cross-border flows.

National Grid, the British network operator, became a Coreso shareholder in May 2009. Then Terna and 50 Hertz, transmission network operators for Italy and the northern and eastern zones of Germany, joined Coreso on 26 November 2010. Integration of these two TNO allows the technical coordination centre to expand its scope of monitoring European networks significantly. This expansion is in line with RTE's desire to help in asserting the "common interest" of the European Electricity Networks and make its cooperation with other TNOs a strong area of its performance, in the dynamics of the industrial project. Now, Coreso is the subject of growing recognition as a stakeholder in the European Coordination Processes.

Market coupling

Since the exchange capacities at the borders is limited, rules have been defined at the European level by EC Regulation no. 714/2009 to deal with the network congestion problems through the allocation of interconnection capacities (see section 6.5 ("Legislative and regulatory environment")). In practice, two methods allow compliance with this rule:

- allocating interconnection capacities through explicit auctions: putting up the programme exchange rights for sale;
- allocating through implicit auctions: priority of access to the interconnections is given to the least expensive energy blocks.

In the latter case, market coupling is implemented. Market coupling is based on the working of electricity markets and resorts to consolidating the order books (purchase/sale) of two neighbouring markets, and sending a single common price to the two markets, within the limits of import and export exchange capacities.

Coupling of the three electricity markets - France – Belgium – Netherlands, called "Tri Lateral Market Coupling", started in November 2006. It was the first experience in Europe (excluding Nordpool), and today, its success has been confirmed. Since 2007, Belgian, French, German, Luxembourg and Dutch electricity markets and electricity transmission network operators have achieved significant progress in coupling the electricity markets of the "North-Western European" region (Central and Western Europe, or CWE) and in establishing better coordination for supply security. In October 2008, seven TNOs (RTE, Elia, TenneT, Cegedel Net, EnBW, E.ON Netz and RWE TSO) created a common company called Capacity Allocation Service Company (CASC-CWE), aimed at offering users a "single window" for energy transmission capacities auction allocation at the borders of the countries of the CWE zone, which includes France, Benelux and Germany. After more than three years of work, RTE and its CWE region partners, the network operators and markets, successfully launched the coupling of the markets in the France-Germany-Benelux region on 9 November 2010. Coupling of markets in the region allows simultaneous optimisation of the cross-border interconnection of generation capacities across all countries of the region. The absence of congestion in these interconnections must lead to a single price in all these countries.

Moreover, since its launch, a single price was fixed in the region for the entire day, witnessing gains associated with the use of network structures made possible by market coupling.

1. Amounts still to be confirmed by CRE, calculated on the basis of what has been realised.

2. Elia is the Belgian high voltage electricity transmission network operator (30,000 to 380,000 volts).

This coupling is an important step towards the creation of a Single European Energy market. On 4 February 2014, 13 transmission network operators, including RTE, launched the coupling of the wholesale energy markets of North-Western Europe, which includes, apart from France, the Scandinavian countries, Great Britain, Germany and the Benelux. This is a decisive step for building the internal electricity market. This coupling was extended to the Iberian peninsula on 13 May 2014.

6.2.2.1.2.3 RTE's international activities

RTE International, a subsidiary of RTE created in September 2006, is RTE's interface for all engineering and consultancy services outside France, in response either to invitations to call for tenders or individual solicitations.

RTE pursues a strategy of development and geographical diversification of its international services.

6.2.2.1.3 Institutional and legislative news

Directive no. 2009/72/EC dated 13 July 2009 confirmed the principle laid down by Directive no. 2003/54/EC according to which an electricity transmission network must be managed by a distinct legal person that is separate from those exercising generation or supply activities, while substantially reinforcing the obligations of independence of the transmission network operator.

In accordance with the transposition of this directive, France has selected the model called "independent transmission network operator". This model allows maintenance of an integrated group, but at the cost of high restrictions in terms of relations between RTE and the vertically integrated entity (VIE), which includes entities of the Group in charge of generation and supply activities.

These constraints, fixed by Directive no. 2009/72/EC, were transposed under internal law and coded under Articles L. 111-9 *et seq.* of the French Energy Code. They mainly include conditions for the directors of RTE to perform duties within the VIE¹.

In 2014, the electricity volumes that circulated in the ERDF network were:

(In TWh)	2014	2013
Injections by RTE	328.0	358.0
Injections by decentralised producers	33.8	31.7
TOTAL INJECTIONS	361.8	389.7
Deliveries	339.3	364.5
Losses	22.5	25.2
TOTAL WITHDRAWALS	361.8	389.7

Injections and withdrawals: ERDF delivers electricity to (metering) stations at network customer facilities, where the withdrawals are made. A number of operators inject electricity into the distribution network. They are principally RTE, on the one hand, which is in charge of managing the transmission network in France (see section 6.2.2.1 ("Transmission – Réseau de Transport d'Électricité (RTE)")) – corresponding injections are made at the level of source substations spread across the network – and, on the other, electricity generation facilities the size of which allow direct injections into the distribution network. At all times, these injections must compensate customer withdrawals and network losses, otherwise the quality of the product delivered will suffer (quality of the wave, voltage, or even the continuity of supply).

Concerning relations with other VIE entities, Article L. 111-18 of the French Energy Code implements the principle of banning the services of these entities in favour of RTE, except for those necessary for the security and safety of the transmission network. Image confusion is also prohibited, as RTE must, in particular, own its trade name.

Following application of Article L. 321-6 of the French Energy Code, RTE drafts a ten-year network development plan each year, which lists the main infrastructure that must be constructed or significantly changed in ten years, investments already decided and new investments that must be made within three years. This plan is sent to the CRE, which checks whether it covers all the requirements. Every four years, it is submitted to the Energy Minister for approval. Furthermore, for the application of this ten-year plan, the Chairman of RTE's Executive Board submits the electricity transmission public network investment programme, consistent with RTE's medium-term financial planning, to the CRE every year for approval.

Finally, by virtue of Articles L. 111-34 *et seq.* of the French Energy Code, RTE appoints a compliance manager, who is in charge of ensuring compliance with the principle of independence, and particularly ensuring proper execution of the ten-year network development plan.

6.2.2.2 Distribution – Électricité Réseau Distribution France (ERDF)

ERDF's main objective is to operate and develop the public electricity distribution network, guaranteeing its security and safety, and overseeing the balance of electricity flows at all times. ERDF, a wholly owned EDF subsidiary in charge of the distribution business, has been operational since 1 January 2008. It services around 95% of the continental metropolitan population. The remaining 5% are provided by Local Distribution Companies (LDCs).

In 2014, ERDF provided electricity to over 35 million customers (delivery points) in continental France through a network of about 1.3 million kilometres.

At 31 December 2014, ERDF employed 38,859 people.

Losses: electrical losses are inherent to the distribution network and mainly result from physical effects (the "Iron" and "Joule" effects) which are directly dependent on the amount of electricity delivered. ERDF must compensate these losses to complete the amount of energy delivered to the final customers. In 2014, losses amounted to 22.5TWh, i.e. a rate of 6.2% of electricity injected into the network. The cost borne by ERDF to offset losses in 2014 was €1,178 million. To compensate these losses, ERDF buys the corresponding electricity from the wholesale market, either through organised market platforms, or through calls for tender open to around 20 qualified suppliers. Since 2014, and increasingly, ERDF benefits from ARENH deliveries for its electricity purchases to offset losses, up to around 35% of the total volume.

1. The compensation of directors and employees, in particular, should be on the basis of RTE-specific indicators. They cannot hold any interest or receive any financial benefits from companies constituting the VIE, except for employees' rights held on bonus share plans, or profit-sharing plans as at 1 June 2011.

Technical specifications: the distribution network ERDF is the concession holder of (see section 6.2.2.2.2 ("Distribution activities")) is, at 31 December 2014, made up of around:

- 623,000 kilometres of A-type high-voltage (HVA) lines of 20,000 volts;
- 706,000 kilometres of low-voltage (LV) lines of 400 volts;
- 2,247 HVB/HVA source substations;
- 769,000 HVA/LV transformer substations.

6.2.2.2.1 Organisation of ERDF

Distribution activities on French soil are, pursuant to the legal framework, almost exclusively conducted by ERDF, a French public limited company (*société anonyme*) with an Executive Board and a Supervisory Board responsible for the management of the public electricity distribution network.

Pursuant to Directive no. 2003/54/EC, the principles of which are applied in Directive no. 2009/72/EC of 13 July 2009, when the manager of the public distribution network is part of a vertically integrated company, its organisation and decision-making must be legally independent from other activities not related to distribution. Within this framework, the principle retained by EDF and Gaz de France, today GDF Suez, is that of the subsidiarisation of their network operators. Their two subsidiaries, ERDF and Gaz réseau Distribution France (GrDF), share a common service in accordance with the legal framework (see section 6.2.2.2.4 ("Service shared by ERDF and GrDF")).

Pursuant to the Law of 9 August 2004, the business of public electricity distribution network operator was turned into a subsidiary in 2007.

The ERDF Supervisory Board is made up of 15 members, eight of whom are appointed by the Ordinary General Meeting, five of whom are employee representatives elected in accordance with the provisions of Law no. 83-675 of 26 July 1983 on the democratisation of the public sector, and two of whom are State representatives. The ERDF Executive Board is made up of five members who perform their work under the supervision of the Supervisory Board.

In application of the option provided for in Order no. 2014-948 of 20 August 2014 (Article 15) and pursuant to Decree no. 2015-38 of 19 January 2015, the State appointed, through a decision of 4 February 2015, a Government commissioner to attend the sessions of the ERDF Supervisory Board.

ERDF missions in France

ERDF, pursuant to the conditions set by law and the concession contracts signed with each of the public electricity distribution contracting authorities (see section 6.2.2.2.2 ("Distribution activities")) below), performs its missions as the public distribution network operator in continental metropolitan France. These missions are:

- define and implement operational, investment and development policies in relation to the electricity distribution network;

ERDF investments changed as follows:

	2014	2013	2012
Gross investments (in millions of euros)			
Connections and reinforcement	1,501	1,526	1,468
Regulatory, safety and transmission channel obligations	397	417	399
Network modernisation	979	935	908
Work instruments and operational resources	330	300	294
Total ERDF investments	3,208	3,177	3,069
Work allowances by third parties and local authorities ⁽¹⁾	833	803	878
TOTAL NETWORK INVESTMENTS	4,041	3,980	3,947

(1) After deducting PCT¹ and Article 8².

1. PCT (Portion Covered by the Tariff): portion paid to project manager contractors from the contributions to the delivery tariff for financing a connection.

2. Article 8 of Annex 1 of the concession specifications relating to the integration of works into the environment (for example the works to bury lines).

- provide connection and access for users to these networks under objective, transparent and non-discriminatory conditions, as well as inter-connection with other networks;
- provide users with the information needed to access the network efficiently (information protected by regulations or law excepted);
- oversee relations with the energy regulation authorities (Ministry of Energy, the Energy Regulation Commission (CRE – *Commission de Régulation de l'Énergie*), public distribution contracting authorities) in line with its activities;
- oversee relations with local authorities;
- negotiate, conclude and manage concession contracts;
- operate, service and repair the electricity distribution networks;
- design and build infrastructure, as well as manage work on the networks;
- carry out metering activities for users connected to the networks, particularly as regards supply, installation, meter inspection, maintenance and renewal of metering devices, as well as managing data activities and any other missions relating to its work as a whole;
- provide services for the LDCs, distributors and organising authorities mentioned respectively in sections III and IV of Article L. 2224-31 of the French Local Authorities Code.

6.2.2.2.2 Distribution activities

ERDF's business is based on a number of activities: manage, in its capacity as the concession holder, the assets under concession; run and maintain the network in such a way as to ensure the continuity of supply; carry out work on the network (in particular, network connection, reinforcement and renewal work); provide access to the network to all users in the framework of contractual provisions in force; and manage the meter fleet, as well as obtaining, processing and transmitting data on network user consumption.

Change in investments

In 2014, ERDF invested €3.2 billion, €1.5 billion of which were mainly devoted to connections for new customers and producers, as well as to the reinforcement of the network. In addition, the contracting authorities invested €833 million in 2014. In all, a little over €4 billion were invested on the distribution networks in 2014 in continental France.

The supplementary resources thus committed are devoted to the quality of service provision, to securing the networks, to safety, and to the preservation of the environment, areas where the identified expectations of customers, local authorities and contracting authorities are particularly high.

The increase in investments allows ERDF to carry out asset renewal programmes, and in particular:

- a "climate contingencies" action plan foreseen in the Public Service Contract (see section 6.5.2 ("Public service in France")) and based on a complete diagnosis of the potential weaknesses of the network vis-à-vis climatic phenomena. This plan was complemented by a works programme devoted to "life extension" of the overhead HVA network, worth €50 million, and by remotely controlled equipment that makes it possible to rapidly resupply customers in the event of a failure;

- a plan to renew the underground HVA and LV networks of large cities has also been rolled out: 953 kilometre of underground HVA networks were thus renewed in 2014;
- a programme to modernise source substations (digital remote control, replacement of switchgear, etc.) and secure these works, in particular in densely populated urban areas.

To complement these investments, ERDF continues to increase the budgets for the preventative maintenance of networks, in particular for work relating to downsizing.

(in millions of euros)

	2014	2013	2012
Preventative maintenance budget	334	273	264

Departmental conferences

Every year, investment programmes are broken down by region when departmental conferences, planned and presided over by the prefect, take place. The objective of these departmental conferences is to reinforce dialogue among project managers who invest in the public distribution network in order to attain greater levels of efficiency in investment expenditure relating to the security and quality of electrical supply.

Coordinated Network Development and Modernisation Programmes (PCDMR)

The protocol signed in 2013 by ERDF and the national federation of contracting authorities (FNCCR – *Fédération nationale des collectivités concédantes et régies*) foresaw the concerted implementation, with contracting authorities, of coordinated network development and modernisation programmes (PCDMR) under development across the main departmental concessions. The aim of these programmes is to focus on improved quality of service through an increased security and reliability of the network, while defining investment priorities.

The Public Service Contract and environmental and aesthetic concerns

In order to meet the objectives of the Public Service Contract as well as environmental and aesthetic objectives, ERDF committed to burying 90% of new A-type high-voltage (HVA) lines and to using a "discreet technique" (twisted cable on building façades) for two-thirds of new low-voltage (LV) lines. ERDF does not intend to bury the entire network. Like an overhead network, an underground network remains subject to power outage risks: it can suffer from external assaults (heat waves, flooding, works, etc.) and the time needed to locate an incident and resupply customers is generally longer than in the case of an overhead network.

In 2014, ERDF built over 98.6% of new underground medium-voltage lines and over 81.4% of new underground or discreet low-voltage lines. It thus went beyond its commitment to the State regarding the reduction of the visual impact of networks installed under its supervision. Moreover, in the framework of its "climate contingencies" plan, ERDF installed more than 4,465 kilometres of overhead HVA lines in 2014.

Quality of service

Quality of service is one of ERDF's main objectives. In 2014, the average outage time excluding transmission incidents and excluding exceptional incidents was 63.8 minutes. The quality of service provided is also reflected by maintaining steady voltage levels, kept as close as possible to the level set by regulations, and by minimising the number of outages.

Decree no. 2007-1826 of 24 December 2007 sets the service quality thresholds to be respected by distribution network operators. This Decree sets out to establish a long term guarantee of a minimum level of quality for users who, for structural reasons, are in a significantly less favourable electrical supply position as compared to the large majority of French users. It is a logical complement to the provisions retained by the regulator in the framework of the Tariffs for Using the Public Electricity Transmission and Distribution Networks, encouraging network operators to maintain and regularly improve the average standard of quality. As regards the quality of voltage, in 2014 over 99% of customers were considered as "well supplied" in terms of the regulations in force.

To respond to large scale incidents, ERDF relies on a Rapid Intervention Force (FIRE) which allows it to mobilise, at any time, in an affected region, the teams and resources from other regions in order to restore customers' electricity as rapidly as possible. The FIRE response was notably used during the storms of February 2014 (Pétra, Qumaira, Ruth and Ulla).

As regards insurance cover for the protection of the overhead distribution network against the effects of large scale storms, see section 4.2.3.5.3 ("Storm cover").

Development of renewable energies

Across the scope of ERDF activities, the number of connections of photovoltaic electricity generation facilities increased once again: at the end of 2014, 4,590MW from photovoltaic facilities were connected (compared with 3,731MW at the end of 2013), which represented around 321,047 facilities (294,490 were connected in 2013). The development of wind power generation connected to the public distribution network also continued, and more than 8,232MW were connected at the end of 2014.

At the end of 2014, ERDF's total photovoltaic and wind power generation connection stood at around 12.8GW, respectively made up of 4.6GW from photovoltaic plants and 8.2GW from wind power generation. To the power thus generated are added other sources of power generation, in particular "historical" hydropower plants (1.4GW) and cogeneration (1.7GW). In all, at the end of 2014, ERDF had connected a generation fleet of around 17.6GW.

Electricity market

The French electricity sales market has been open to competition for all customers since 1 July 2007.

27 electricity suppliers operate on the French market. They have signed a contract with ERDF establishing the terms and conditions for the supplier and the distributor in the event that a customer subscribes to a single contract covering the supply and delivery of electricity.

Concessions

At 31 December 2014, ERDF and EDF were co-concession holders of 593 concessions contracts, covering around 95% of the population.

In France, public electricity distribution is operated under a concession plan that derogates from common law on local public service concessions. Pursuant to the provisions of the law, contracting authorities own the distribution networks, which are return property¹. The concession contracts are generally concluded for a period of 20 to 30 years.

The development and the operation of public distribution networks (streamlined service for the country by the public distribution networks; connection and access, under non-discriminatory conditions, to the public distribution networks) are entrusted, pursuant to the French Energy Code (Article L. 121-4), to ERDF, to EDF in areas not inter-connected to continental metropolitan France, and to LDCs in the areas where they are exclusive service providers.

Pursuant to Article L. 334-3 of the French Energy Code, ongoing concession contracts are considered as jointly signed by the contracting authority (local authority or public cooperation institution), by EDF (or territorially competent LDC) for the regulated tariff supply portion, and by ERDF (or territorially competent LDC) for the distribution network portion. When concession contracts are renewed or amended, they are co-signed according to these terms.

See also section 6.5.8.1 ("Future regulations at Community level" – "Regulations on concessions").

Economy of concession contracts

A model concession contract and model concession specifications were adopted (with adjustments according to whether the contract was signed with an urban municipality or a syndicate of municipalities) in June 1992 following negotiations between EDF and the national federation of contracting authorities (FNCCR – *Fédération nationale des collectivités concédantes et régies*), and was validated by representatives from the public sector (see section 6.5.5 ("Public electricity distribution concessions")). It was updated in July 2007.

The main provisions of the concession specifications relate to the following points:

- the object and extent of the concession: the contracting authority guarantees that the concession holder has an exclusive right to operate on a given territory, carrying out the public service missions of developing and operating the public electricity distribution network and of supplying services at the rates set in the regulated sales tariffs. The concession holder is responsible for running the service and operates it at its risk and peril. It receives payment from users at a tariff compensating for obligations imposed;
- the payment by the concession holder of concession fees to the contractor;
- the concession holder's obligation to apply industrial amortisations and depreciations and to establish renewal provisions taking into consideration the cost of replacing installations that need to be renewed;
- the rights and obligations of the parties in the event that the concession is not renewed (or is terminated early), where maintaining the service would be of no interest in view of permanent economic or technical circumstances or of scientific advances;
- the evaluation of the due accomplishment of the public service missions set by the contracting authority in the specifications of the concession: this evaluation is conducted by an agent appointed by the contracting authority and distinct from the public distribution network operator.

Moreover, in the framework of the implementation of the laws on Solidarity and Urban Renewal (SRU – *Solidarité et renouvellement urbain*) and Urbanism and Habitat (UH), ERDF and the FNCCR renewed, on 18 July 2012, the so-called "PCT" protocol agreement, which organises the payment to contracting authorities of contributions to the delivery tariff for financing a connection, when said authorities undertake the management of the corresponding work.

The management of work on the networks (the project manager is in charge of the organisation, implementation and funding of work) is shared, according to the terms and conditions set by each one in the specifications; as a general rule:

- as regards connections (extension of the network and creation of connections) and changes to installations (reinforcement of the network made necessary by increasing demand for electricity or by an improvement of the quality of service), ERDF and the contracting authority share the management of the project according to the type of connection (in other words, in view of the nature of the petitioner: consumer or producer) from the moment the municipality in question falls within the rural electrification plan (in other words, those which entitle the project manager contracting authority to grants from the CAS-FACE state fund (*Compte d'affectation spéciale du Fonds d'amortissement des charges d'électrification*)). In municipalities falling under the urban plan, ERDF is generally responsible for managing projects;
- as regards network maintenance and renewal (maintenance, downsizing, identical renewal, displacement and compliance upgrades), ERDF is the project manager;
- as regards integrating existing works into the environment (burying, aesthetic improvement), the contracting authority is the project manager.

Main fees and contributions

The contracts foresee the payment of fees by the concession holder to the contracting authority.

In return for the financing borne by the contracting authority in relation to installations for which it is the project manager and which are integrated into the concession, or of said authority's participation in the works for which the concession holder is the project manager, or of any expenses incurred by the contracting authority for public services falling within the concession, ERDF pays the contracting authority a fee that can be broken down into an R1 "operational" fee and an R2 "investment" fee.

As the network operator, ERDF must pay fees for the occupation of the public sphere by way of the installations making up the network. Pursuant to a Decree of 26 March 2002, there is a ceiling on fees paid to local authorities determined according to the size of their population. They are paid to the public owners of the area (municipality, group of local authorities or departments).

ERDF, like the LDCs, pays a contribution to CAS-FACE based on the number of kilowatt-hours delivered. CAS-FACE redistributes the funds collected to the contracting authorities to finance their electrification expenses on territories falling under the rural plan.

Equally, ERDF, like the LDCs, participates in the Electricity Equalisation Fund (FPE – *Fonds de péréquation de l'électricité*) which shares equalisation expenses related to the obligation to provide the same delivery tariff to all customers across the country among the distribution network managers.

6.2.2.2.3 Institutional and legislative news

2014 was marked by the bill on energy transition for green growth under review by the Parliament (see section 6.5.8.2 ("Future regulations at national level")).

1. Return property is that which is essential to carrying out the licensed service. Such property is deemed as belonging to the contracting local authority from the start. The concession contract foresees their mandatory restitution to the contracting local authority at the end of the concession.

New provisions could have a significant impact on ERDF's business, notably as regards the following points:

- a renewed governance of electricity distribution, notably with a stronger integration of the contracting authorities and the local authorities;
- a method of establishing TURPE rates that is better adapted to investment needs: by taking a normal compensation for the distribution network manager into account;
- customisation of the networks to new electricity usages (for example: integration of renewable energies, development of electric mobility);
- support provided to the development of smart grids and steering of local flexibility;
- the increased role of the local communities in energy management.

Pursuant to Law no. 2014-58 of 27 January 2014 on the modernisation of regional public action and the consolidation of metropolitan areas (MAPTAM – *modernisation de l'action publique territoriale et d'affirmation des métropoles*), competence for electricity distribution is transferred to metropolitan areas, with the exception of the Greater Paris region, and to urban communities. However, through a representation-substitution mechanism, metropolitan and urban communities exercise their competence through the local electricity union from the moment the union is not entirely included in the scope of a given metropolitan area or urban community.

ERDF was also heard in the framework of the Commission of Inquiry of the National Assembly on electricity tariffs. TURPE consolidation and evolution, the need for investment and reinforced coordination with project manager contracting authorities were at the heart of discussions with parliamentarians.

6.2.2.2.4 Service shared by ERDF and GrDF

The service shared by ERDF and GrDF, defined by Article L. 111-71 of the French Energy Code, sets out, in the electricity and gas distribution sector, to build installations, manage works projects, operate and provide maintenance for the networks, and conduct metering operations. It does not have the status of a legal entity.

ERDF and GrDF are related through a convention that sets out their relations in the framework of this common service, the scope of said service and the sharing of costs resulting from it. Concluded for an open-ended period, it can be revoked at any time, provided a prior notice of 18 months is given, during which the parties commit to renegotiating.

In November 2011, ERDF and GrDF signed a protocol agreement describing each distributor's role in the target vision of a common service organisation. The opening of markets and the differentiation of processes led to changes and specialisation of the organisation of certain activities. To date, ERDF has favoured organisation through the regional directorates integrating all its operational missions to the local fabric. A more detailed fabric is reserved for local activities. Certain activities, such as metering and logistical activities, are carried out in common in view of the resulting efficiency gains generated.

6.2.2.2.5 Future challenges (replacement, development, smart meters)

Smart grids and smart meters

ERDF, guarantor of the electricity distribution public service, invests at all times to develop, modernise and secure the electrical network. The adaptation of the electricity grid to the new needs of society is a major strategic challenge. To achieve this, ERDF is developing the Linky system, based on a new generation of meters, called "smart meters". This system is the first stage of the smart grids. After a successful pilot phase, which was validated by the public authorities, almost 300,000 Linky meters are in operation in Lyon and Touraine.

After the Prime Minister announced on 9 July 2013 that ERDF was deploying a first tranche of 3 million Linky meters from then until the end of 2016, a call for tenders led by ERDF led to the selection of six companies which will make these first 3 million meters in France. The installation of the meters will begin in December 2015.

The remaining 32 million meters will be installed from now until 2021. They will be rolled out simultaneously in all the regions. In all, the investment is estimated at €5 billion (current euro value) and will be financed by the EDF group. The cost will be neutral for customers, the gains made through Linky (less travel expenses and reduced losses) offsetting over time the extra cost of the investment needed.

By way of a decision of 17 July 2014, the CRE set the incentive regulatory framework applicable to the "Linky" programme over the course of its implementation, i.e. around 20 years (capped mechanism of incentive/penalty premiums related to ERDF performance in terms of controlling costs, meeting deadlines and quality of service standards, ad hoc facility to hedge capital expenditure, etc.)

The communicative Linky system, where the meter plays a key role, will provide consumers with:

- invoicing based on actual measurements of indexed consumption;
- an increased number of remote interventions in under 24 hours not requiring the presence of the customer (measurements, changes in power, installation, etc.);
- reduced intervention times in the event of an incident;
- a facilitated integration of new usages (electric vehicles, etc.) and of distributed renewable energies;
- a secured Internet access to information making it possible to understand consumption;
- control of home appliances to reduce consumption;
- a simple tool to help develop of disruption.

Linky is a connected device that makes ERDF one of the European leaders in new electricity distribution technologies.

Foster energy transition

Concurrently, ERDF is conducting large scale testing of a number of solutions to provide a deeply modernised network to consumers and companies. This research and development work covers the operation of low- and medium-voltage networks, the integration of renewable energies and electric vehicles, storage management, voltage stability, etc. ERDF is steering and/or supporting around 15 demonstrators in France and Europe with a diverse set of partners - industrialists, SMEs, start-ups and universities. The challenge for the distributor is to support energy transition while developing the networks at the lowest cost for society. Thanks to new technologies, a more detailed and responsive oversight is possible, based on a better understanding of consumption, generation and the state of the network. This "intelligence" makes it possible to avoid over-investment by adjusting it to consumption peaks, while guaranteeing the reliability of the network, pursuant to ERDF's double public service objective of performance and security.

Since the end of 2011, ERDF has coordinated the "GRID4EU" programme. This programme brings together a consortium of six European distributors (ERDF, Enel, Iberdrola, CEZ, Vattenfall and RWE); it contributes to exploring the potential of smart grids in the fields of renewable energy integration, electric vehicle development, network automation, energy storage, energy efficiency and disruption solutions.

6.2.2.3 Island Energy Systems

Island Energy Systems (IES) cover the electrical systems operated by EDF which are not inter-connected, or are marginally connected, to the mainland: mainly Corsica, the overseas departments (excluding Mayotte) and the overseas territories of Saint-Barthélemy, Saint-Martin and Saint-Pierre-et-Miquelon.

These regions as a whole correspond to the "zones which are not inter-connected to the continental metropolitan network" mentioned in Article L. 121-3 of the French Energy Code. They share the following characteristics:

- these regions benefit from tariff equalisation with continental metropolitan France;
- the small scale of their electrical system and the lack or insignificance of their inter-connection to the mainland network mean that generation costs relating to them are structurally much higher than in metropolitan areas, and consequently significantly higher than their contribution to the tariffs;

- the obligation to entrust transmission and distribution to a legal person other than the one in charge of generation and supply does not apply to them.

This situation notably implies that generation surcharges in the IES, which the legislator considers as a public service expense, are offset by the Contribution to the Public Electricity Service (see section 6.5.2 ("Public service in France")).

EDF's organisation in each of these regions is therefore based on maintaining an integrated structure, providing both most of the generation and the entire range of functions of supply and demand balance manager, of network manager (HVB, HVA and LV) and of supplier.

EDF is the main actor in these regions in terms of electricity generation.

The table below presents the main characteristics of the Island Energy Systems as at the end of December 2014.

	At 31 December 2014	
	Total	of which Corsica
Number of EDF employees ⁽¹⁾	3,373	751
Number of customers	1,102,767	246,126
Network length (in km)	35,415	11,329
Installed capacity of the EDF fleet (in MW)	2,172	577
of which hydropower fleet and other renewable energy sources	456	197
of which thermal fleet ⁽¹⁾	1,716	380
Electricity output (in GWh)		
EDF output ⁽¹⁾	5,597	1,264
of which hydropower output	1,340	444
Energy purchases from third parties	3,912	863
of which renewable energies, including bagasse	1,257	231
of which other energies	2,655	632
TOTAL ENERGY PRODUCED BY EDF AND PURCHASED FROM THIRD PARTIES	9,509	2,127

(1) Data including EDF Production Électrique Insulaire (PEI), a wholly owned subsidiary of the EDF group, which is in charge of renewing the thermal plants in Corsica and overseas. The 123MW increase in thermal installed capacity in 2014 compared with 2013 stems from the arrival of a combustion turbine in Guyana, and of PEI engines in Northern Corsica and Martinique (correlated to the end of IES operations) and, at the end of the year, in Guadeloupe, without the total decommissioning of IES engines on its territory ("heat reserve" period).

In view of the difference within these systems between the megawatt-hour generation costs and the sale price at the equalised tariff, EDF's sales activities look to implement, alone or in partnership with ADEME and local institutions, energy efficiency actions.

Over recent years, these regions were marked by a significant increase in consumption (considerable demographic growth, "catch-up" as regards the lag in household appliances). However, this growth in demand is slowing, as a result of the economic crisis and of the numerous actions carried out in respect of energy efficiency. The growth in consumption and the renewal of the generation fleet should be covered by the creation of new means of generation, as decided by the Minister of Ecology, Sustainable Development and Energy in the framework of the Multi-year Electricity Generation Investment Programme (PPI – *programmation pluriannuelle des investissements*), either by way of a call for tenders, or by authorising projects developed by the operators. The incentive for operators – including EDF – to invest in IES generation activities was reinforced by a decision of the Deputy Minister of Industry of 23 March 2006, setting at 11% the rate of nominal remuneration before tax for fixed assets in generation investments made in Corsica, the overseas departments and territories and Mayotte.

At the end of 2012, a change to the French Energy Code regarding compensation for energy efficiency actions, electricity storage costs and electricity imports from neighbouring countries was made by an amendment presented in the framework of the review of the third corrective Financing Law for 2012 (Article 60), which was passed on 29 December 2012. This compensation cannot be granted beyond the ceiling of 80% of the generation surcharges that these actions contribute to avoiding. The application of these new provisions was confirmed by a Council of State Decree published in the *Journal officiel* on 3 August 2014.

Changes and outlook

Investments to modernise and reinforce the electricity generation fleet with guaranteed capacity

The Multi-year Electricity Generation Investment Programme (PPI) for electricity generation sets the objectives of implementing electricity generation at guaranteed capacity for Corsica and the overseas departments at 1,166MW by 2020. The 2009 PPI foresaw the renewal of almost all the existing diesel plants.

For a number of years, the EDF group has therefore pursued the project to renew its main plants at end of life. The building sites of four diesel plants were set up for a total capacity of close to 740MW: Port-Est in Réunion, Bellefontaine B in Martinique, Pointe-Jarry in Guadeloupe and Lucciana B in Northern Corsica. These new generation resources will allow the Group to deliver better industrial and environmental results and contribute to satisfying a part of the emerging electricity demands in these regions.

The Port-Est plant in Réunion, made up of 12 distinct engines, was commissioned between end-2012 and October 2013. The Northern Corsica (Lucciana) and Martinique (Bellefontaine) plants were commissioned in 2014. The Guadeloupe (Jarry) plant is currently being activated (seven engines out of 12 commissioned in 2014). They are all equipped with innovative and high-performance technologies from the industrial and environmental point of view. They notably have new generation diesel engines, which make it possible to save 15% of their fuel consumption, and are equipped with catalytic devices that filter exhaust gas. The EDF group invested around €2 billion in these new electricity generating resources. The plants were built and are being operated by the EDF subsidiary PEI (Production Électrique Insulaire). The engines were supplied by the European manufacturer MAN, associated with the French manufacturers Eiffage and Clemessy, which ran the site in collaboration with over 150 companies, most of which were local. These plants guarantee the continuity of electrical supply for the islands and secure their energy transition, before the arrival at maturity of the new technological segments (sea energies, storage, etc.) and the evolution of consumption patterns towards greater energy efficiency, in a context where renewable energies (hydropower, biomass, photovoltaic and wind power) currently represent an average of 30% of the electricity mix in the "zones which are not inter-connected".

The renewal of the Saint-Pierre-et-Miquelon plant, for a 21MW capacity, is currently underway, and the extension of the Saint-Barthélemy plant (two new 16MW engines) has been operational since the start of 2014.

EDF invested €282 million in Island Energy Systems electricity generation in 2014 and plans to invest €200 million in 2015.

Investments in electricity networks

The continued growth in consumption in these regions despite the energy efficiency actions undertaken, as well as the development of renewable energies, have led the EDF group to continue the reinforcement of the electricity networks. In Corsica as in the overseas departments with natural fleets, some of the new high-voltage connections will be built using underground or underwater techniques.

EDF invested €166 million in networks in 2014 and plans to invest a further €183 million in 2015.

A commitment to projects devoted to a better integration of renewable energies in the electricity generation mix and to optimising the management of electrical systems

The EDF group supports the emergence and development of electricity generation methods based on renewable energies adapted to Island Energy Systems. The methods favoured are those that provide abundant and guaranteed energy at competitive generation costs sustainable in the long term, in such a way as to position them as credible alternatives to thermal generation: biomass, marine and river energies, waste recovery, biogas. Studies are also underway on the use of LNG to substitute fuel oil.

EDF also contributes to making advances in technical capacities relating to the insertion of intermittent renewable energies into Island Energy Systems (elaboration of forecasting tools with other industry actors and universities, commissioning of a 1MW capacity battery in Réunion – first in Europe with this capacity –, coupling of photovoltaic generation and storage capacity)

and is committed to experimental projects on smart grids in partnership with other industry actors, research laboratories and the ADEME.

For all these projects, the EDF group mobilises its expertise in terms of research and development.

6.2.2.4 Tariffs for Using the Public Electricity Transmission and Distribution Networks (TURPE)

Tariff for using the public electricity distribution networks

Over 90% of ERDF sales are made up of revenues made from transmission. The tariff for using the public electricity network (TURPE), in terms of levels and structure, is set by the Energy Regulation Commission (CRE) in a transparent and non-discriminatory manner, in order to cover all the costs borne by the network operators.

By the CRE decision of 12 December 2013, published in the Journal officiel on 20 December 2013, the new TURPE 4 HVA-LV transmission tariffs came into force on 1 January 2014 for around four years. The transmission tariffs for the distribution network rose, on average, by +3.6% at 1 January 2014, and will then be adjusted automatically on 1 August each year over 2014-2017. The tariff can therefore increase or decrease.

The CRE renewed the "CRCP" mechanism (*Compte de régulation des charges et des produits* – account for regulating income and expense), established in the framework of TURPE 2, making it possible to measure and offset, for previously identified items considered difficult to forecast or control, the differences between results and the forecasts on which the tariffs are based. The CRCP clearance contributions to annual changes in the tariff structure, which are added to inflation, are limited to + or -2%.

Moreover, the regulator set out to reinforce the existing framework for multi-annual regulation, which prompted ERDF to improve its cost control and the quality of supply and of services rendered to users, and to remove the tariff barriers to R&D and innovation project implementation (smart grid demonstrators in particular).

The tariffs are mechanically adjusted at 1 August of year N pursuant to the following formula: $CPI+k$, where: CPI corresponds to changes in inflation (consumer price index excluding tobacco) and k, the value of which varies between -2 et +2%, takes account of the impact of certain differences between financial results and forecasts for year N-1 and of the results of the incentive regulation for year N-1.

The application of the mechanism in 2014 led to a 1.3% fall, as of 1 August 2014, in all the tariffs applicable to HVA or LV voltage, in respect of all the users of the distribution network. This downward adjustment of tariffs is explained by 0.7% inflation in 2013 and a k factor of -2%. The TURPE 3 *ter* tariff model, climate effects and the effects of operational performance, as well as the results of the 2013 incentive regulation led to an overpayment received by ERDF of €596 million. The outstanding balance before indexation at 1 August 2014, in view of the limitation of the k factor to -2%, will be taken into account during the indexation of August 2015, which will also integrate 2014 results.

Tariff for using the public electricity transmission network

Pursuant to Article L. 341-3 of the French Energy Code, the tariff for using the public electricity transmission network is set by way of a reasoned decision of the Energy Regulation Commission (CRE). The current tariff

for using the public transmission network (TURPE 4 HVA), set by the CRE decision of 3 April 2013, came into force on 1 August 2013.

RTE's tariff revenues thus fell by 1.3% at 1 August 2014. A change to this tariff based on the consumer price index will take place on 1 August 2015 and 2016.

Financial compensation from RTE's assets is obtained by multiplying the amount of the regulated assets base (RAB), estimated at €12,143 million as at 1 January 2014, by a fixed rate of compensation corresponding to a nominal rate before tax of 7.25% for the 2013-2016 tariff period.

Moreover, as for the distribution TURPE, the CRE renewed the "CRCP" mechanism relating to the transmission TURPE, with the same functioning and conditions (see above).

The fact that tariffs are maintained for a period of around four years gives RTE a clear outlook of changes in revenues. This period of time also makes it easier to make investments and conduct technical policies that allow RTE to control its costs and maintain a high level of quality in its service.

On this basis, in 2014, tariff revenues from the electricity transmission network were around €4.3 billion.

In order for the electricity transmission network manager to improve the technical-economic efficiency of its activities over the 2013-2016 tariff period, while complying with the public service missions entrusted to it, the CRE set the RTE a series of objectives in respect of controllable operating costs and improved the incentive mechanism relating to the continuity of electrical supply, the regulatory framework thereby aiming to eliminate any incentive that would result in a degradation in the quality of electrical supply. The regulator also introduced an incentive mechanism to encourage increased investment in inter-connection. Specific monitoring mechanisms were set up, notably as regards volume control relating to offsetting losses on the electricity transmission network, RTE's R&D expenses and investments that contribute to maintaining or increasing the inter-connection capacities between the French network and its neighbours.

As regards the transmission and distribution of natural gas (Law no. 2003-08 of 3 January 2003), see section 6.5.3.2 ("French legislation: Energy Code").

6.3 Presentation of the EDF group's international business

The EDF group is positioned as an energy leader, with a priority aim of investing for sustainable and profitable industrial growth, based on the development of skills and the promotion of its technical expertise.

The international activities of the EDF group articulate the Group's strategic directions in operational terms (see section 6.1 ("Strategy")).

The table below sets out the installed capacity and outputs of the EDF group's international operations at the end of 2014^{(1) (2)}:

	Installed capacity ^{(1) (2)}		Output ^{(1) (2)}	
	MW	%	GWh	%
Nuclear (excluding 100MW drawing rights on Chooz B)	9,783	32	61,759	45
Thermal	17,879	59	67,851	50
Hydropower	1,428	5	5,161	4
Other renewables	1,143	4	2,040	1
TOTAL	30,233	100	136,811	100

(1) Excludes international data for EDF Énergies Nouvelles, i.e. 4,191.5MW and 8,353GWh.

(2) Technical data calculated by applying the consolidation method and consolidation percentage of entities in the EDF group's consolidated financial statements.

6.3.1 United Kingdom

EDF group activity in the United Kingdom (UK) is led by EDF Energy focusing on energy supply and electricity generation. The Group is also active in oil and gas exploration production with EDF Production UK, a subsidiary of Edison in the North Sea (see section 6.4.2.2.3 ("Exploration and Production (E&P)")).

6.3.1.1 EDF Energy and the UK market

EDF Energy is one of the UK's largest energy companies, employing around 14,700 people at locations throughout the country. In 2014, it maintained its position as the largest generator of electricity (in TWh produced) and of low carbon electricity¹ in the UK. Based on the most recent data², EDF Energy also retained its position as the number one supplier of electricity to non-domestic customers (as measured in TWh sold³). The most recent

published market data (as of 31 October 2014) suggests that EDF Energy was the 4th largest residential supplier to domestic gas and electricity customers (measured by the number of accounts). Overall, EDF Energy is the leading electricity supplier in the UK (measured in TWh sold³).

EDF Energy's main competitors in the UK electricity generation and gas and electricity supply markets are: Centrica, E.ON UK, RWE npower, ScottishPower, Scottish and Southern Energy (SSE) and GDF Suez Energy International (the latter is not present in residential supply). Residential supply has also seen an increasing share of the market being captured by smaller suppliers. This has seen their market share increase to 9% by the end of October 2014.

EDF Energy is not involved in electricity transmission or distribution in the UK. The high-voltage electricity transmission network is owned by National Grid in England and Wales, and by SSE and ScottishPower in Scotland. The UK regional distribution networks are in turn operated by companies including

1. Source: Elexon Reporting.

2. Source: Cornwall Energy Associates Business Sector – Electricity as at 31 October 2014. Data excludes Northern Ireland.

3. According to the available data, excluding Northern Ireland.

UK Power Networks, Northern Powergrid, SSE, ScottishPower Energy Networks, Western Power Distribution and Electricity North West. The gas distribution network operators include National Grid, Scottish and Southern Gas Networks, Wales and West Utilities and Northern Gas Networks.

6.3.1.2 The strategy

EDF Energy operates in a complex market environment characterised by wholesale markets driven by global commodity prices, high levels of competition and, despite the liberalisation, Government interventions to deliver energy policy objectives of energy security, decarbonisation and affordability. Despite renewed economic growth, electricity demand is yet to return to growth. However, in the longer term, decarbonisation policies are expected to lead to decarbonisation of electricity generation, which will prompt fuel switching from gas and oil to low-carbon electricity particularly in the heat and transport sectors.

EDF Energy's strategy is focused on ensuring a sustainable long-term business, meeting customer needs in the transition to a lower-carbon economy. It seeks to create value through continued operational excellence: by ensuring safe and reliable generation to achieve maximum value from its existing nuclear, coal and gas assets; by focusing on cost efficiency in the customer business; by developing a portfolio of renewable projects; and by leading the revival of nuclear new build in the UK. EDF group plans to build a series of new nuclear units in the UK: a twin at Hinkley Point C (HPC) in Somerset, and further units at Sizewell in Suffolk (subject to ongoing studies). EDF reached an agreement in principle with the UK Government on a fair, balanced deal on the price to be paid for the output of HPC via a Contract for Difference (CfD) in October 2013 and agreed key terms of the government-backed guarantee for which HPC pre-qualified under the Government's Infrastructure Guarantee scheme. The main terms of the agreement were confirmed to be compatible with EU State Aid rules by the European Commission (the EC) on 8 October 2014. The CfD arrangements are designed to share potential future benefits with customers (see section 6.3.1.4.3 ("Nuclear New Build business unit")). A final investment decision on HPC remains to be made and is subject to agreement with the UK Government on a fully termed CfD and with Infrastructure UK (a unit within the Treasury) on debt funding, and to agreements with industrial partners for equity funding. In March 2015 notably, the signing of the industrial Cooperation Protocol with Chinese Joint Venture (CJV, between CGN and CNNC) has provided the basis for industrial cooperation in the UK between CJV and EDF. Also, the waste transfer contract arrangements must be approved by the EC and the Secretary of State as part of the Funded Decommissioning Programme.

Simultaneously, the Government's electricity market reform, incorporated in the Energy Act that received Royal Assent in December 2013, has progressed towards implementation. Secondary legislation on CfDs as well as a capacity market came into force on 1 August 2014, after the EC stated on 23 July 2014 that key elements of the reform are compatible with EU state aid rules, although appeals have been lodged by UK market operators against the decision before the European General Court. The first capacity auction took place in December 2014 for capacity agreements for delivery from October 2018 onwards. EDF Energy secured capacity agreements for 28 out of 29 of its existing generating units in the auction. The UK carbon

top-up tax (above the EU ETS carbon prices), in force since April 2013, was capped in the March 2014 budget at £18/t for the four years 2016/17 to 2019/20 (see section 6.3.1.4.5 ("United Kingdom Legal Environment")) and section 6.3.1.4.3 ("Nuclear New Build business unit")).

EDF Energy's existing nuclear power stations continue to provide the UK with safe and reliable low-carbon electricity. Output for 2014 met the performance objective of consistently achieving nuclear output above 55TWh, but was lower than the 2013 output which was the highest output achieved in eight years at 60.5TWh. The reduction was principally due to lower output at Heysham 1 and Hartlepool from the boiler spine issue (see section 6.3.1.4.2 ("Generation business unit")).

Lifetime extensions for plant, when safe and commercially viable, allow the UK to continue to benefit from nuclear energy until new low-carbon capacity can come online at scale, in addition to providing employment opportunities and allowing for the maintaining of skills in the UK nuclear industry. In January 2015, EDF Energy confirmed a ten year life extension for Dungeness B nuclear power station to 2028.

Other important strategic actions concerning the company's generation fleet include (i) optimising the lifetime value of coal generation capacity affected by the Large Combustion Plant Directive (LCPD), the Industrial Emissions Directive (IED) and the above-mentioned capacity market; (ii) maximising the output of existing nuclear plants; (iii) optimising the operations of the new West Burton B Combined Cycle Gas Turbine (CCGT) power station; (iv) continued delivery of renewable generation project; finalisation of the delivery of fast cycle gas storage caverns; and (v) consideration of options for new, flexible gas-fired generation.

In the customer businesses, EDF Energy's focus is on standing out as a fair energy supplier, while simultaneously improving its profitability. It has introduced customer commitments to deliver fair value, better service and simplicity to customers, and across the company, processes have been put in place to check that all activities pass the Trust Test implemented in 2012 that ensures the right things are done for customers. Profitability improvements are sought in particular through increased cost efficiency and efficient delivery of regulatory obligations such as smart metering and energy efficiency schemes - all supported by investment in people and information systems. Progress is being made towards being seen as different from other market competitors and this is supported by the Feel Better Energy brand strategy and the innovative, nuclear-backed Blue product (see section 6.3.1.4.1 ("Customer Business")).

After intense public and political focus on prices and profits in the sector, the regulator, Office of Gas and Electricity Markets (Ofgem) referred the market for the supply and acquisition of energy in Great Britain to an investigation by the Competition and Markets Authority (CMA) on 26 June 2014 (see section 6.3.1.4.5 ("United Kingdom Legal Environment")).

EDF Energy's future financial success will be highly dependent on the returns achieved by nuclear plants, which are driven largely by plant availability and, for existing capacity, the level of wholesale market power prices. EDF Energy is focused on improving the risk profile of the portfolio of its generation assets, thermal and nuclear, and participating in a fit-for-purpose regulatory and market framework.

In order for EDF Energy to realise its strategy, continuous focus on the company's "Zero harm" health and safety ambition as well as on developing and retaining high-performing people are essential. EDF Energy has continued to invest heavily in the training and development of its people across the business, including through its Campus project. To support its substantial investment plan in the UK, EDF Energy expects to recruit c.4,000 talented employees from 2013 to 2016, of which 1,075 were recruited in 2014. The total workforce of EDF Energy was about 14,700 employees at end 2014, decreasing of 3% compare to 2013 which reflects the efficiency cost challenge faced by the Company.

6.3.1.3 Operational results

In 2014, EDF Energy supplied 51.2TWh (versus 52.7TWh in 2013) of electricity and 27.8TWh (versus 31.5TWh in 2013) of gas to residential and industrial & commercial customers. At the end of 2014, EDF Energy had 5.9 million customer accounts (versus 6.0 million in 2013), mainly residential customers (5.6 million customer accounts), with c. 317,000 customers from small & medium-sized enterprises and major business.

At 31 December 2014, EDF Energy owns eight nuclear power stations, three thermal power stations, a Combined Heat and Power Scheme (CHP) and onshore and offshore renewable assets through EDF Energy Renewables, a joint venture with EDF Énergies Nouvelles, a wholly owned subsidiary of EDF group. These assets generated 81.3TWh¹ (85.4TWh in 2013) of electricity in the year, around one fifth of the UK's electricity.

In 2014, EDF Energy achieved a strong safety performance with a combined total recordable incident rate for employees and contractors of 0.95 incidents per million hours worked.

The survey conducted among employees in 2014 demonstrated their commitment, with a participation rate of over 83%. The results demonstrated the high levels of commitment (77%), involvement (78%) and loyalty towards EDF Energy (74%). These excellent results also illustrate the fact that 79% of employees are confident in the future success of EDF Energy, that 83% believe in the company's ambitions, that 80% would recommend it as a good employer and that 91% of employees go the extra mile in order to add to EDF Energy's success.

The following table shows EDF Energy's key figures for the financial year ended 31 December 2014.

	31/12/2014	31/12/2013
Electricity supplied ⁽¹⁾ (GWh)	51,247	52,746
Gas supplied (GWh)	27,803	31,468
Number of residential customer accounts (thousands)	5,592	5,710
Total capacity (MW)	14,374	14,224
Nuclear ⁽²⁾	8,883	8,748
Coal ⁽³⁾	3,987	3,987
Gas ⁽⁴⁾	1,333	1,333
Renewables ⁽⁵⁾	170.9	156
Total output (TWh)	81.0	85.4
Nuclear ⁽²⁾	56.3	60.5
Coal ⁽³⁾⁽⁴⁾	19.6	23.1
Gas ⁽⁴⁾⁽⁵⁾	4.7	1.33
Renewables ⁽⁶⁾	0.42	0.47
Number of employees ⁽⁷⁾	14,716	15,162
Total Recordable Incident Rate ⁽⁸⁾	0.95	0.84

(1) Power supplied to final consumer including previous year metering cut-offs.

(2) The figures shown represent 100% of nuclear capacity and generation output, shared 80%/20% by EDF Energy and Centrica.

(3) Net capacity represents transmission entry capacity and including Biomass.

(4) Outputs excluding network losses for coal and gas are respectively 19.8TWh and 4.8TWh.

(5) Gas output excluding West Burton B commissioning volume.

(6) When EDF Energy holds more than 50% of assets, the capacities shown are 100% of the installed capacity and generation output. Renewable output excluding Biomass.

(7) Includes staff on maternity leave.

(8) Total Recordable Incident Rate – Annual total combined number of Lost Time Incidents, fatalities, Restricted Work Injuries and Medical Treatment Injuries (excluding First Aid) / number of hours worked × 1,000,000. This covers all employees, agency and contractor staff. Excludes EDF Energy Renewables.

1. Output excluding West Burton B commissioning volumes.

6.3.1.4 Structure of EDF Energy

From 1 January 2014, EDF Energy reorganised its three main business units to: Customers, Generation and Nuclear New Build. The Customers business unit includes residential and business customers, energy services and smart metering. The Generation business unit includes nuclear, coal, gas and renewables generation. All legal entities remain the same. Nuclear New Build business unit covers ongoing nuclear units development, for both HPC and Sizewell.

Since 2009, Centrica plc ("Centrica") has held a 20% shareholding in Lake Acquisitions Limited, the company in which the nuclear generation assets sit (except New Nuclear).

6.3.1.4.1 Customer Business

The Customers business is responsible for the wholesale market optimisation of EDF Energy's generation and customer assets and supply of gas and electricity to residential and business customers across The United Kingdom.

EDF Energy sells energy to two major customer segments: residential customers, described as the Business to Customers segment (B2C); and business customers, described as the Business to Business segment (B2B) with the size of business customers ranging from large industrial businesses to small privately owned businesses. EDF Energy adopts different risk management strategies for B2C and B2B.

B2C

During the year, EDF Energy supplied 14.5TWh of electricity and supplied 27.7TWh of gas for the B2C segment. As at 31 December 2014, EDF Energy had 3.5 million electricity accounts and 2.1 million gas accounts on this segment.

Competition

Churn rates in the United Kingdom B2C market (the net result of customer losses and acquisitions) remained relatively high compared to other countries, even though there has been a downward trend from the peak of 2008. At the end of September 2014, 17.9 million (63%) of UK B2C electricity customers and 14 million (62%) of UK B2C gas customers were no longer with their original supplier at the time of market liberalisation.

During 2014, the B2C market has seen increased competition from smaller suppliers, driven by a significant cost advantage resulting from a steep fall in wholesale prices and the continuing exemptions from regulatory obligations for the smallest suppliers. Small suppliers have also benefited from an increasing amount of political and media attention. Their market share increased to 9% by the end of October 2014, EDF Energy's market share was 11%.

Regulatory Change

Ofgem's Standards of Conduct, backed by a licence condition, were introduced in August 2013. EDF Energy firmly supports Ofgem's intent, through the Standards of Conduct, to restore trust in the industry by compelling all suppliers to do the right thing for customers. In anticipation of all suppliers taking a similar approach to implementing the Standards of Conduct, EDF Energy has differentiated itself from its competitors through the use of "The Feel Better Test". This consists of five questions which employees consider when deciding on a course of action which impacts any customer. It builds on the requirements of the standards and is intended to reinforce EDF Energy's ambition of putting customers at the heart of

everything EDF Energy does. In September 2014 EDF Energy responded to an Ofgem request for information setting out what actions had been taken to implement the Standards and how EDF Energy was going over and above the requirements outlined in the regulations.

Ofgem's Retail Market Review (RMR) final proposals were published in August 2013. The regulations, which require suppliers to provide consumers with simpler choices and clearer information about prices and savings were introduced between the end of December 2013 (simpler choices) and end of March 2014 (clearer information). Ofgem has carried out a review of the customer information produced by suppliers in accordance with its RMR obligations during Q4 2014. The results are expected in 2015 to review the impact of the RMR on consumer engagement with the energy market.

Energy Company Obligation (ECO)

The Energy Company Obligation (ECO) is an energy efficiency programme which has been extended to be in place until 31 March 2017. ECO places legal obligations on larger energy suppliers to deliver energy efficiency measures to domestic energy users. It is also intended to provide additional support in the domestic sector, with a particular focus on vulnerable consumer groups and hard-to-treat homes. It operates alongside the Green Deal which is designed to help people make energy efficiency improvements to buildings by allowing them to pay the costs through their energy bills rather than upfront. The ECO cost is accounted for using as delivered methodology since 1 January 2013. This is a change from the way previous obligations have been accounted for, being on a straight-line basis over the life of the obligation.

Smart Metering

UK energy suppliers are mandated to deliver the Government's Smart Metering Programme which requires all reasonable steps to be taken to deploy smart electricity and gas meters to 100% of residential and small business customers by the end of 2020. The purpose of the deployment is to enable customers to reduce their usage, cut end-use carbon emissions and unlock supplier savings through more efficient billing and meter reading.

The programme will require EDF Energy's supply business to install an estimated 6.2 million meters, including communications hubs and in-home displays, to all of its domestic and small business customers. This means that at the peak of the mass roll-out, around 1.5 million smart meters are planned to be installed annually, a five-fold increase on the current planned volume of expired meter renewals each year.

This is the biggest programme in Customers over the next few years. EDF Energy aims to deliver its obligation effectively, and to maximize the enduring benefit in order to transform the customer relationship.

EDF Energy has already commenced smart meter installations through a series of trials and has placed focus on piloting business capabilities ahead of mass roll out.

However, the wider national Programme is not without its challenges; DECC (Department of Energy & Climate Change) have recently announced further delays to the delivery of the national infrastructure (the Data Communications Company) which is a fundamental enabler of mass roll out.

Variable Price tariffs

Whilst four of the six major suppliers introduced price increases in late 2013, EDF Energy delayed an increase until January 2014 and implemented a lower price increase than competitors as EDF Energy wanted to put pressure on the Government to amend the ECO scheme. This was successful and other suppliers made reductions following the Government's announcements.

Following reductions in wholesale gas markets into January 2015, all major suppliers announced reductions to standard variable gas prices (1.3% for EDF Energy). The reduction to prices means that E.ON and EDF Energy are the cheapest suppliers for standard variable tariffs (EDF Energy for paper billing and E.ON for paperless billing).

Fixed Price tariffs

Throughout 2014, EDF Energy expanded its portfolio of Blue tariffs. Its flagship Blue+Price Promise tariff continues to be backed by low carbon nuclear generation, offers customers an innovative price promise, and allows customers to switch tariff, or supplier without paying an exit fee. Price promise tariffs are backed by a commitment to notify customers if a competitor launches a product that is cheaper by more than £52 per year, i.e. £1 per week.

In addition EDF Energy continues to honour its Blue+Price Freeeze contracts, giving customers the opportunity to fix prices for 3 years or more; this product is no longer proposed for new contracts. A fixed price tariff for prepayment customers (Blue+Fixed Prepay) has also been launched, giving prepayment customers the opportunity to fix their prices at existing standard variable prices for 2 years.

EDF Energy currently has 2.5 million product accounts on a Blue product.

The falling wholesale market during 2014 has resulted in cheap offers being put into the market and whilst EDF Energy has at times been the cheapest major supplier, it is currently the 4th cheapest. EDF Energy's pricing remains under constant review in order to remain competitive.

Weather

The warmer than seasonal normal weather in the first four months and October through November 2014 reduced customers' consumption. For EDF Energy B2C, the total reduction from seasonal norm in 2014 was estimated to be 1.8TWh for gas and 160GWh for electricity.

B2C Customer Services

Following the recovery from the impact of unprecedented sales at the end of 2013 on Customer Services in the first quarter 2014, Customer Services provided a consistently improved level of service for the remainder of the year, with an average of over 55% of calls answered within 60 seconds from May onwards. Similarly, Customer Services have responded to 965,000 customer emails in 2014 with 56% being answered in 12 hours and 88% in 24 hours. The volume of Live Chats with customers has increased from 7,000 per week to 24,000. The percentage of digital transactions has increased from 55% to 59% of all customers transactions. These service levels are reflected in positive Net Promoter Scores for all of our contact channels.

B2B

In 2014 B2B retained its leadership position in volume, supplying a total of 36.7TWh of electricity; 1.8TWh to 184,101 B2B Small and Medium Enterprise (SME) accounts and 34.9TWh to 130,852 B2B Industrial and Commercial (I&C) accounts, reflecting an overall B2B market share of 19.4%. The business continues to be well established in the large, national and multi-site customer segments, and it successfully retained large customers such as Nestle and Nissan and acquired Airbus. This year, the B2B division signed innovative contracts with two water companies, providing them with access to long-term power (Severn Trent Water and South Staffordshire Water on a five year contract term).

Competition across I&C sectors remains fierce. This is demonstrated by the continued erosion of the combined market shares of large suppliers by smaller entrants and the increasing influence of third party intermediaries. This resulted in pressure on energy supply margins for business contracts.

This was partially offset by higher margins from other activities such as the provision of low carbon (levy exempt) energy and energy services.

B2B division has invested in a new integrated pricing, billing and metering system for the I&C business. All migrations have been successfully implemented with the last one in January 2015, and the project has finished within its authorised budget.

Optimisation

General principles

The policies surrounding EDF Energy's energy purchasing and risk management activities are carried out in accordance with EDF group's policies and ensure that EDF Energy's activities are optimised and its services delivered at a competitive price while limiting its gross margin volatility.

The Optimisation division's purpose is to manage the wholesale market risk of EDF Energy in one place within pre-defined risk limits and control framework. Optimisation compiles the positions and risks provided by the business divisions into a portfolio and manages price and volume risks exposures until delivery. The hedging strategy is designed to gradually reduce the impact of energy market risk over time, consistent with the guidelines of the EDF group Energy Market Risk Policy. Optimisation is also responsible for balancing portfolio positions and maximising value in the prompt market.

Optimisation provides a unique interface with the wholesale markets, via EDF Trading. Optimisation also provides modelling services to the whole of EDF Energy, as well as negotiating and managing asset backed commercial structures with third parties e.g. Nuclear Decommissioning Authority (NDA) and Centrica.

Electricity sales and procurement

The power generated by the Generation fleet (both nuclear and fossil assets) is sold via the Optimisation division within EDF Energy's Customers business in order to allow a single point of management of the EDF Energy wholesale market exposures. Since April 2010, 20% of the output from Nuclear Generation is separately sold to Centrica under the agreements made at the time of the Centrica transactions. The remaining 80% is sold to Optimisation under the same transfer price as used for the transaction with Centrica, based on published market prices, smoothed over forward electricity prices where liquidity allows.

Over and above its own generation, EDF Energy also sources electricity through export power supplied from power purchase agreements which are mainly with renewable and CHP generators. In 2014, EDF Energy acquired approximately 5TWh through this channel.

For delivery in 2014, EDF Energy's net position on the wholesale market was a sale of approximately 20.2TWh (including structured trades). In 2014, EDF Energy sold approximately 88.2TWh and bought 67.9TWh.

Gas, coal and carbon rights procurement

Coal and gas contracts (physical and financial) and CO₂ emissions rights are entered into by EDF Energy to hedge the fuel requirements of its power plants and gas consumers.

Purchases are based on coal and gas asset generation forecasts and target coal stock levels. In 2014 EDF Energy sourced circa 50% of its coal requirement from international suppliers through EDF Trading. EDF Energy has a need for gas to supply its residential gas and dual fuel customer portfolio and its West Burton B CCGT power station. The current approach followed by EDF Energy is to source all the required gas from the wholesale gas market via EDF Trading.

6.3.1.4.2 Generation business unit

Thermal energy generation and gas storage

As at 31 December 2014, EDF Energy's thermal energy generation business comprise the following:

Power plant	Location	Year commissioned	Number of units	Type of station	Capacity (MW)	Output (TWh) Year ended 31 December	
						2014	2013
Cottam	Nottinghamshire	1970	4	Coal-fired	2,000	9.8	11.3
West Burton A	Nottinghamshire	1970	4	Coal-fired and OCGT	1,987	10.0	11.8
West Burton B	Nottinghamshire	2013	3	CCGT	1,332	4.8	1.3

In the year ended 31 December 2014, Cottam and West Burton A coal-fired power plants generated 19.8TWh of electricity which represents a strong output record in a year of low dark spread conditions during summer, two major outages involving strategic investments and challenging availability performance. West Burton B CCGT generated 4.8TWh in its first full year of commercial operation, helped in part from improved market spark spreads mainly in the second half of the year. West Burton B CCGT was officially inaugurated in April 2014 and represents a key investment in EDF Energy's UK thermal asset portfolio.

EDF Energy also owns an 18.6% shareholding in Barking power station, located in the London area. In July 2014 the management of Barking power announced the closure of the station given the current adverse market conditions for gas-fired power generation, citing high gas prices relative to wholesale electricity prices combined with relatively low efficiency for an ageing station such as Barking. The management expects the full closure of the station to be completed within two years.

EDF Energy continues to explore and invest in various options to address the commercial, technical, environmental and regulatory challenges that EU legislation presents for existing coal power stations after 2016. The development of the strategy will take into account the outcome of the Capacity Auctions, its emission reduction trials and other related market developments, with a decision regarding which of the Industrial Emissions Directives routes it will take for both plants being made prior to 1 January 2016.

EDF Energy has developed and is in the process of delivering Hill Top Farm fast cycle gas storage facility in Cheshire. Three cavities have been completed and are ready for commercial operation, pending final commissioning of the associated gas plant by EDF Energy. The gas plant will carry out gas transportation between the National Transmission System and the operational cavities. Work is underway to prepare remaining cavities for commercial operation. At the start of April 2014, EDF Energy acquired from EDF Trading the Hole House Farm gas storage business.

Renewables

Through EDF Energy Renewables (EDF ER), a joint venture between EDF Energy and EDF Énergies Nouvelles (EDF ÉN), EDF Energy is developing its own onshore and offshore assets. In addition, EDF Energy has signed power purchase agreements with renewable generators and supports independent developers. This is to ensure a balanced approach for compliance with its Renewables Obligations (RO) and the provision of renewable electricity

to its customer base. The RO has been subject to various reforms and in April 2010 the end date was extended from the current end date of 2027 to 2037 for new projects.

EDF ER currently operates 28 wind farm sites with a total generation capacity of over 550MW. This includes EDF ER's first offshore wind farm, Teesside, which has an installed capacity of 62MW for 27 turbines and began commercial operation in July 2013, being officially inaugurated in April 2014. During the year, three new windfarms became operational: Roade, Burnfoot North and Barmoor with a total capacity of 23.2MW.

EDF Energy Renewables has a pipeline of projects which it is developing and constructing. This includes a 26MW windfarm at Burnhead Moss, Rhodders (12MW) and Park Spring (8.6MW), all three of which are onshore. They are all expected to begin operation during 2015 and 2016. In addition, during 2014, the development rights were also acquired for a demonstrator offshore windfarm project at Blyth.

In December 2014, EDF ER announced the completion of the sale of 80% of Glass Moor II, Rusholme and Green Rigg wind farms to China General Nuclear Power Corporation. As part of the sale, EDF ER will continue to provide asset management and operation and maintenance activities for the wind farms.

EDF ER also has joint ventures in the renewables field with:

- Eneco, a Dutch energy utility, to develop an offshore wind project to the west of the Isle of Wight, Navitus Bay. This is part of The Crown Estate Round 3 offshore wind programme and the proposed development could deliver up 970MW (reduced from approximately 1,100MW following consultation in the fourth quarter of 2013 for a boundary change to reduce visual impact). A Development Consent Order (DCO) planning application was submitted in April 2014 and public open hearings on the whole project began in October 2014. In addition, upon request of the Planning Inspectorate, Navitus Bay submitted a second "parallel" DCO planning application in November 2014 for a re-configured project with an installed capacity of 630MW;
- AMEC Foster Wheeler, a construction group, to develop a c.130MW wind farm near Stornoway on the Isle of Lewis in Scotland. The project was consented in September 2012 and is party to a grid connection agreement. The current focus of the project is the discharge of planning conditions and ensuring that there is sufficient certainty around the grid connection to allow a FID to be taken in 2016.

Nuclear Generation

EDF Energy owns and operates eight nuclear power stations ("Nuclear Generation Fleet") in the UK with a total capacity of 8.9GW. The Nuclear Generation business unit employs over 5,500 people.

Nuclear Generation fleet technology

Seven of the eight nuclear power stations are Advanced Gas-Cooled Reactor (AGR) power stations (Dungeness B, Hartlepool, Heysham 1, Heysham 2, Hinkley Point B, Hunterston B and Torness) and the eighth is a Pressurised Water Reactor (PWR) power station (Sizewell B). Each of the AGR power stations has two reactors and two turbines; the PWR has one reactor and two turbines.

An AGR differs in many respects from a PWR. Whereas the AGR design is unique to the UK, the PWR design is the most common reactor type in the world:

- an AGR has a graphite moderator which helps to control the reaction. The reactor is encased in a steel-lined pre-stressed concrete pressure vessel several metres thick which also acts as a biological shield. The steam generator in which water is heated is situated inside the pressure vessel. An AGR uses enriched uranium dioxide encased in a stainless steel pin for its fuel and CO₂ as its coolant;
- a PWR is contained inside a steel pressure vessel filled with pressurized water which acts as the moderator and coolant. The pressure vessel is located behind concrete biological shield walls within a steel-lined, reinforced concrete containment building. The fuel used is enriched uranium dioxide and is contained in zirconium alloy tubes.

Regulation

The operation of nuclear power stations is subject to extensive regulation in a number of areas, including nuclear safety and security (in particular, in relation to the construction, operation and decommissioning of nuclear installations and the protection of workers and the public against ionising radiations), electricity market and environmental regulation.

Safety

Nuclear safety is EDF Energy's overriding priority and there is no greater responsibility than to protect the public, the environment and employees. Having a strong safety culture embedded in the organisation is crucial to achieving these goals and EDF Energy continues to invest in the training and development of its staff.

The actual and potential significance of individual nuclear events is measured against the International Nuclear Event Scale (INES). These are categorised between Level 0, which has no nuclear safety significance and Level 7 which represents a major accident. During the year ended 31 December 2014, EDF Energy had 0 nuclear event rated higher than INES Level 1 events (i.e. "Anomaly"). 5 INES Level 1 events have been rated.

EDF Energy operates to strict procedures to minimise and control the radiation doses received by employees and contractors at all of EDF Energy's existing nuclear power stations. Any worker required to enter a radiological controlled area is issued with an electronic personal dosimeter, which measures radiation dose and warns the wearer if pre-determined dose levels are exceeded.

Radiation doses are measured in millisieverts (mSv), and the legal dose limit is 20mSv per year. In calendar year 2014, the average individual dose received by all workers on EDF Energy's existing nuclear sites was 0.093mSv. The highest individual dose received in 2014 was 6.9mSv.

After the events at Fukushima in 2011, the Office for Nuclear Regulation (ONR) carried out an independent review of UK nuclear power plants. This concluded that the *"UK nuclear facilities have no fundamental weaknesses"*. These findings were supported by EDF Energy's Japanese Earthquake Response (JER) Programme on completing an internal review and challenge across the entire fleet of nuclear power plants which showed *"there is no challenge to nuclear safety for within design basis events"*. Over four years after the events in Japan, EDF Energy has substantially completed its enhancements to the capability of its fleet of eight nuclear power plants to withstand and recover from an extreme natural event. The fully integrated solution has incorporated improvements to on-site resilience, including the installation of enhanced flood protection, seismic restraints and tie-ins for a wide range of new deployable Back Up Equipment. A Through Life Management Partner has been contracted to manage the maintenance and deployment of the new Back Up Equipment at three regional storage locations. In addition, at Sizewell B, a new Emergency Response Centre commenced service in 2014.

The operating lifetime of power plants

The potential lifetime of each of the power stations is determined primarily by the technical and economic practicability of supporting an agreed safety case for that power station in accordance with its nuclear site licence. Any decision by EDF Energy to extend the operating life of a power station beyond its current scheduled closure date is based, in large part, on a combination of economic factors and the engineering judgments reached in respect of technical and safety issues. Lifetime extensions will require the consent of the Nuclear Decommissioning Authority (NDA) if the extension will result in an increase in the Costs of Discharging Liabilities (as defined in the Nuclear Liabilities Funding Agreement).

The adequacy of the safety case for each power station is confirmed at each statutory outage for the following period by undertaking appropriate inspection, maintenance and testing of the plant and reviews of its operating performance. The results are reported to the ONR, which must give its formal consent under the nuclear site licence before the reactor concerned may be restarted. A reactor may only be operated following restart for the period determined by the safety case. This period is normally three years for AGR power stations and eighteen months for the PWR power station.

In addition, every ten years EDF Energy is required to undertake a Periodic Safety Review (PSR) for each power station. PSRs also require ONR acceptance in order to secure continued operation of a power station.

The current station lives (as formally declared by the company and approved by the NDA) and corresponding current scheduled closure dates of the power stations in the Nuclear Generation Fleet are set out in the following table:

Power Plant	Type of reactor	Start of Generation	Power Station Lifetime (Formally Declared)	Life Extensions (Already Formally Declared)	Associated Scheduled Closure Date	Scheduled Periodic Safety Reviews ⁽¹⁾
Hinkley Point B	AGR	Feb. 1976	47 years	22 years	2023	2017
Hunterston B	AGR	Feb. 1976	47 years	22 years	2023	2017
Dungeness B	AGR	Apr. 1983	45 years	20 years	2028	2018
Heysham 1	AGR	Jul. 1983	35 years	10 years	2019	2019
Hartlepool	AGR	Aug. 1983	35 years	10 years	2019	2019
Torness	AGR	May 1988	35 years	10 years	2023	2020
Heysham 2	AGR	Jul. 1988	35 years	10 years	2023	2020
Sizewell B	PWR	Feb. 1995	40 years	–	2035	2015

(1) ONR's response expected.

NB. The table refers only to extensions formally approved by the NDA and does not therefore include future expected life extensions as described below.

The lives of the AGR stations have already been extended by a range of 10 to 22 years compared to their original lives. These formal extensions were declared following completion of the necessary technical and economic evaluations and receipt of the relevant external consents.

In February 2012, EDF Energy announced that it would continue to seek life extensions for all its nuclear power stations where it is safe and commercially viable to do so. Based on a technical review of the potential life limiting plant areas, which was completed in 2011, and subject to the necessary formal reviews and approvals, EDF Energy announced that it expected in due course to achieve life extensions of an average of seven years across the AGR fleet relative to the scheduled closure dates assumed in January 2009. As a result of the recent announcement of Dungeness B life extension of ten years to 2028, this average expectation has increased to eight years across the AGR fleet, as previously noted in the 2013 accounts. EDF Energy typically seeks to make these formal extensions no later than three years before the current

formal closure date for each station. EDF Energy has already announced that having completed the necessary technical, safety and economic evaluations and having received the relevant external consents, the decision has been made to extend the lives of Hartlepool and Heysham 1 power stations by five years (to 2019) and Hinkley Point B and Hunterston B power stations by seven years (to 2023) and more recently Dungeness B by ten years (to 2028). These formally approved life extensions are consistent with the company's Lifetime Programme expectations and are included in the table above.

Achieving the expectation of an average of eight years life extension across the AGR fleet would mean all eight of EDF Energy's existing nuclear stations would be operational until at least 2023, with three of the seven AGR stations operating until nearer 2030 and Sizewell B, the company's Pressurised Water Reactor, being operational until 2055. The eight year average life extension expectation is relative to the scheduled closure dates at British Energy acquisition in January 2009.

Capacity and output

The table below shows the actual capacity and last two years' output of each of the nuclear power stations.

Power Plant	Capacity ⁽¹⁾ (MW)	Output ⁽²⁾ (TWh) Year ended 31 December	
		2014	2013
AGR Power Plants			
Dungeness B	1,040	4.4	4.8
Hartlepool	1,180	5.8	7.0
Heysham 1	1,155	3.9	6.9
Heysham 2	1,220	10.4	8.8
Hinkley Point B	945	7.8	7.5
Hunterston B	960	6.6	7.5
Torness	1,185	8.5	9.3
PWR power plant			
Sizewell B	1,198	8.8	8.7
TOTAL	8,883	56.3	60.5
LOAD FACTOR ⁽³⁾		72%	79%

(1) Capacities are stated net of all power consumed for the power stations' own use, including power imported from the Grid. Capacities are subject to review each year end. The capacities shown reflect the benchmark generation of units from 1 January 2014. In particular, Hinkley Point B and Hunterston B power stations have been adjusted to reflect planned operation at approximately 80% load, due to boiler temperature restrictions.

(2) Output in each year reflects any re-fuelling, planned and unplanned outages.

(3) Load factors are obtained by dividing the actual output by the output that would have been achieved had each power plant operated at its stated capacity appropriate for the period.

Operational review of the existing Nuclear Generation fleet

Output from the Nuclear Generation fleet for the year ended 31 December 2014, was 56.3TWh, which meets the performance objective of consistently achieving nuclear output above 55TWh, but which was 4.2TWh lower than nuclear output of 60.5TWh for the year ended 31 December 2013. The reduction principally reflects losses at Hartlepool and Heysham 1 from the boiler spine issue, see "Plant status" below.

During the year ended 31 December 2014, a programme of planned outages was carried out on the Nuclear Generation fleet. Statutory outages were completed on Dungeness B Reactor 21, Hartlepool Reactor 1, Hunterston B Reactor 4, Sizewell B and Torness Reactor 1. This programme of outages reflects the continued focus on investment to improve the long-term reliability and safe operation of the Nuclear Generation fleet by proactively targeting investment designed to deliver equipment reliability and to reduce the risks of future losses.

Plant status

Heysham 1 and Hartlepool

During the Heysham 1 Reactor 1 planned statutory outage in 2013, an unexpected result was found during routine ultrasonic inspection of a boiler spine (see Explanatory Note below). No similar results were seen on the other seven boiler spines subjected to equivalent inspections on Heysham 1 Reactor 1, or during subsequent equivalent inspections of the boiler spines on Heysham 1 Reactor 2 and at Hartlepool (the design of the boilers being unique to Hartlepool and Heysham 1). Heysham 1 Reactor 1 was returned to service early in 2014 on reduced load with the affected boiler quadrant isolated pending further investigations to confirm the source of the unexpected inspection result.

Subsequent more detailed inspections of the affected boiler spine during an outage on Heysham 1 Reactor 1 that commenced in July 2014 confirmed a crack on the boiler spine in the location indicated by the initial findings. As a result, a conservative decision was made to shut down Heysham 1 Reactor 2 and Hartlepool Reactors 1 and 2 that are of similar design to carry out further inspections. Other advanced gas-cooled reactors in the UK have a different and more conventional boiler design without a boiler spine and they are manufactured from different materials. Therefore there is no risk that they could suffer from the same issue.

These detailed inspections revealed no further spine defects and Heysham 1 Reactor 2 and Hartlepool Reactors 1 and 2 were returned to service during November 2014/January 2015 at reduced load to manage boiler temperatures in the affected area. Work continues to return all four reactors to full load.

Explanatory Note: Each reactor at Heysham 1 and Hartlepool has eight boiler units which remove heat from the reactor core and generate steam used to produce electricity in the power stations' turbines. These boiler units are arranged around their associated reactor in four quadrants with each quadrant containing two boiler units. Within each boiler unit are boiler tubes assembled in a coil formation around a central forged metal tube called a boiler spine. The boiler spines support the weight of the tubes around them.

Radioactive Waste Management

In the UK, radioactive waste is classified as:

- Low Level Waste (LLW): The upper bound of the LLW category is defined as: "radioactive waste having a radioactive content not exceeding 4 gigabecquerels per tonne (GBq/te) of alpha or 12 GBq/te of beta/gamma activity". A near surface disposal route exists for LLW – LLW Repository at Drigg West Cumbria;
- Intermediate Level Waste (ILW) is defined as radioactive waste exceeding the upper activity boundaries for Low Level Waste but which does not need heat to be taken into account in the design of disposal facilities. No disposal route is currently available for ILW in the UK;
- High Level Waste (HLW) is defined as radioactive waste in which the temperature may rise significantly as a result of the radioactivity, so that this factor has to be taken into account in the design of storage and disposal facilities;
- Higher Activity Waste (HAW) – This is effectively ILW and any LLW that are unsuitable for near-surface disposal.

EDF Energy Nuclear Generation's strategy for LLW and HAW reflects that the UK and Scottish Governments are focused on application of the waste hierarchy (reduce, reuse, recycle, recover). This represents a move away from the past focus solely on disposal and will help to make the best use of the UK's Low Level Waste Repository (LLWR) in Cumbria. Examples of this include use of the Metals Recycling Facility at Lilyhall (Cumbria) and increased use of incineration facilities for combustible wastes such as the recycling of LLW metals. Only a disposal route for LLW currently exists in the UK.

HAW is stored for the medium-term in safe, purpose built facilities at EDF Energy's stations while longer term national solutions are being established within England and Scotland.

Under historic contractual arrangements spent fuel from the AGRs is transported to Sellafield nuclear reprocessing site (owned by Nuclear Decommissioning Authority (NDA)) for reprocessing or long term storage. Heat generating HLW is generated at Sellafield from the reprocessing of spent AGR fuel. This is converted into glass blocks for safe, long term storage at Sellafield.

The policy position within the EU and UK is that spent fuel is not defined as waste whilst the option of reprocessing the fuel remains a possibility. Ultimately reprocessing is theoretically still an option until placement within a Geological Disposal Facility (GDF). Hence, spent fuel is not defined as waste until placed within the GDF.

At Sizewell B PWR station, the spent fuel is stored on site and EDF Energy is currently building a further spent fuel dry storage facility on the Sizewell B site to allow the station to continue to safely store all of the spent fuel that will be generated over Sizewell B's life. The approved strategy for Sizewell B fuel management consists of an Independent Spent Fuel Storage Installation (SFSI) Dry Store concept to store spent PWR fuel in metal casks supplied by Holtec, held on a concrete pad within a purpose built building. Following long-term surface storage the Sizewell B PWR spent fuel will be disposed to a future UK Geological Disposal Facility.

The nature of EDF Energy Nuclear Generation's business and its historic government link means that the strategy for spent fuel and the management of radioactive waste from EDF Energy Nuclear Generation's power stations is approved by the Nuclear Decommissioning Authority. However EDF Energy has policies to continually improve and minimize the spent fuel and waste arising through the company's wider safety, sustainability and environmental policies.

Costs relating to radioactive waste management and decommissioning – Restructuring agreements of British Energy Group

Restructuring Agreements were originally entered into on 14 January 2005 as part of the restructuring of the former British Energy Group of companies (hereafter referred to as "the EDF Energy Nuclear Generation Group") carried out from 2002 under the aegis of the UK Government in order to stabilise the financial situation of the EDF Energy Nuclear Generation Group.

By virtue of these restructuring agreements:

- the Nuclear Liabilities Fund (NLF), an independent trust set up by the UK Government as part of the restructuring, agreed (at the direction of the Secretary of State) to fund, to the extent of its assets: (i) qualifying uncontracted nuclear liabilities (including liabilities in connection with the management of spent fuel at the Sizewell B power station); and (ii) qualifying costs of decommissioning in relation to the existing nuclear power stations owned and operated by EDF Energy Nuclear Generation Group;
- the Secretary of State agreed to fund: (i) qualifying uncontracted nuclear liabilities (including liabilities in connection with the management of spent fuel at the Sizewell B power station) and qualifying costs of decommissioning, in each case in relation to the existing nuclear power stations owned and operated by EDF Energy Nuclear Generation Group, to the extent that they exceed the assets of NLF; and (ii) subject to a cap of £2,185 million (in December 2002 monetary values, adjusted accordingly), qualifying contracted liabilities for the EDF Energy Nuclear Generation Group's spent fuel (including in particular liabilities for management of AGR waste from spent fuel loaded prior to 15 January 2005); and
- EDF group is responsible for funding certain excluded or disqualified liabilities (mainly liabilities incurred in connection with an unsafe or careless operation of the power stations) and the potential associated obligations of its subsidiaries to the NLF and the Secretary of State are guaranteed by the principal members of the EDF Energy Nuclear Generation Group.

Certain companies in the EDF Energy Generation Group including EDF Energy Nuclear Generation Limited entered into a separate contract, now with the NDA for management of AGR spent fuel loaded from 15 January 2005 (termed "new fuel") and have no responsibility/liability for this fuel after it is received at Sellafield.

The Secretary of State and EDF agreed to limited amendments to the Restructuring Agreements, in connection with the acquisition of the EDF Energy Generation Group by Lake Acquisitions. The amendments, among other things and subject to limited exceptions, restrict the majority of rights and obligations imposed by the Restructuring Agreements only to EDF Energy Nuclear Generation Group and its subsidiaries and subsidiary undertakings and accordingly, do not extend similar rights and obligations to EDF group, or its other subsidiaries and subsidiary undertakings. The amendments do not impact on the contractual funding commitments of the Secretary of State or NLF to the EDF Energy Nuclear Generation Group.

Certain amendments have been made to the Restructuring Agreements, reflecting the EDF Energy Nuclear Generation Group access to an improved credit rating following the acquisition. In particular, EDF Energy Nuclear Generation Group is required to maintain a minimum cash reserve. The amendments reduced the minimum level to £290 million. The cash reserve may be further reduced to nil provided the EDF Energy Nuclear Generation Group achieves and maintains an investment grade rating or irrevocable Committed Facilities of the same amount are put in place between third party financial institutions or a member of the wider EDF group with an investment grade rating and a member of the EDF Energy Nuclear Generation Group.

6.3.1.4.3 Nuclear New Build business unit

Nuclear New Build business unit activity

EDF Energy aims to build four new EPR nuclear reactors in the UK: twin reactors at Hinkley Point and possibly a further twin at Sizewell. The plans are conditional on the necessary consents being received and a robust investment framework being in place.

Safety is a key focus of the EPR design and for the Nuclear New Build business unit. The same EPR technology is already being deployed at the new nuclear power station being constructed by EDF at Flamanville in France (see section 6.2.1.1.3.5 ("Preparing for the future of the nuclear fleet in France")) and at Taishan in China (as part of a joint venture). Using the same technology, adapted for UK requirements, will enable the efficiencies that come with standardisation of design in the construction and operation of a series of plants.

Hinkley Point C

Regulatory Framework: Planning, Consents and Licensing

Significant progress has been made on the required planning, consents and licences for Hinkley Point C (HPC) over the last three years. Key milestones include:

- **Planning Obligations (Section 106 Agreements), September 2012:** NNB Generation Company Ltd. (NNB) has entered into two legally binding Planning Obligations (Section 106 Agreements) in relation to the Hinkley Point C project with an overall commitment to deliver approximately £80 million for local communities to address construction and operational impacts of the future plant. In terms of the Site Preparation Works Planning, NNB has to date released approximately £20 million to support advance mitigation of construction impacts. In terms of the Development Consent Order Agreement, NNB has to date released £1.6 million to the local authorities. The funding paid to date has been paid to support various measures including community impact mitigation, the establishment of an accommodation fund, local authority resourcing, community safety initiatives, tourism, landscape/ecology, archaeology and economic development schemes and initiatives, while the rest has been invested in funding skills, training and education;
- **Nuclear Site Licence (NSL), November 2012:** Since the Office for Nuclear Regulation granted the NSL on 26 November 2012, NNB has continued to consolidate arrangements and capabilities supporting compliance with the NSL. Interfaces with the Regulators have continued the positive and strong relationship. In addition, development of the arrangements needed to maintain the NSL, including arrangements for commissioning and operation is continuing;

- **UK EPR Generic Design Assessment (GDA), December 2012:** On 13 December 2012, the Health & Safety Executive (HSE) issued a Design Acceptance Confirmation (DAC) and the Environment Agency (EA) issued a Statement of Design Acceptability (SODA) thereby signifying their acceptance that the UK EPR design is capable of meeting the licensing requirements for design, construction, operation and decommissioning of a nuclear power station in the UK. This marked the end of the GDA process that commenced in 2007;
- **three main environmental permits, March 2013:** Before a Radioactive Substances Regulation (RSR) permit is granted for any planned new nuclear power station, Article 37 of the Euratom Treaty requires the UK Government to make a submission to the European Commission enabling it to determine whether the plan is liable to result in radioactive contamination of another member state. In the case of HPC, following Article 37 submissions by the UK Government, the Commission provided its opinions in February and May 2012. Public consultation on the draft decisions ended in November 2012 and following this, the three operational permits were formally issued by the EA on 13 March 2013;
- **planning consent, March 2013:** On 19 March 2013 the Secretary of State for Energy and Climate Change granted a Development Consent Order (DCO) for the project, giving EDF Energy the planning permission to build a new nuclear power station at Hinkley Point C. The DCO for HPC is subject to a number of requirements that EDF Energy must comply with or provide further information on for the subsequent approval by the local planning authority (known as discharging). These DCO commitments are continuing to be discharged through activities such as ecology work, putting borehole monitoring in place and putting variable messaging signs in place on local roads.

Project update

NNB and the Department of Energy and Climate Change (DECC) are close to agreeing the full terms of the Contract for Difference (CfD) for HPC. The CfD will mean that from the plant's start-up date, if the reference price at which the generator sells electricity on the market is lower than the strike price set under the terms of the contract, the generator will receive payment compensation, of which maximum amount equals to the difference between the reference price and the strike price; otherwise, it's the generator which will be liable for a compensation.

On 8 October 2014, the European Commission approved the key terms of the CfD for HPC. The Commission's decision leaves the key elements of the agreements announced in October 2013 unchanged whilst it has reinforced measures designed to share future benefits with customers:

- the "strike price" for HPC remains set at £₂₀₁₂92.50/MWh or £₂₀₁₂89.50/MWh if the Sizewell C planned power station goes ahead. There will be a payment from Sizewell C to HPC equivalent to £3/MWh upon the final investment decision being taken with respect to Sizewell C reflecting the fact that the first of a kind costs of EPR reactors are shared across HPC and Sizewell C sites;
- the strike price is fully indexed to inflation through the Consumer Price Index;
- the mechanism will last for 35 years from the commissioning date;
- in certain cases, the strike price could be adjusted according to changes in law;

- if savings are achieved in the construction of the HPC project, these will be shared with customers through a lower strike price.

The full terms of the Contract for Difference need to be agreed with the UK Government before EDF can take the final investment decision for HPC.

Following the EC approval, EDF confirmed the full construction cost of the two nuclear power units at Hinkley Point, expected to be £₂₀₁₂16 billion. These include the construction costs and other investments, such as land purchases, achieving the different consents, construction of a spent fuel storage facility and preparing the 900 strong team which will run the station. The total cost estimate has been subject to a detailed cost verification process with the UK Government's Department for Energy and Climate Change as part of the process to agree the strike price for HPC.

Following agreement of the key commercial terms, the European Commission also approved the guarantee for the project's debt on 8 October 2014. The full terms of the debt guarantee are currently being finalised with the UK Government and these terms need to be agreed with the UK Government before EDF can take the final investment decision for HPC.

Regarding funding and partnership arrangements for the HPC project, discussions are still ongoing.

Funded Decommissioning Programme (FDP)

Operators of new nuclear power stations are required under the Energy Act 2008 to have a Funded Decommissioning Programme (FDP) in place and approved by the Secretary of State before nuclear safety related construction begins. The overall objective of the FDP is to ensure that operators make prudent provision for:

- the full costs of decommissioning their installations;
- their full share of the costs of safely and securely managing and disposing of their waste; and that in doing so the risk of recourse to public funds is remote.

A preliminary version of the FDP was formally submitted in draft form to DECC in March 2012. There have been a series of subsequent discussions with DECC and their advisers, including the independent Nuclear Liabilities Financing Assurance Board. EDF Energy and DECC have worked to an overall review and discussion programme and achieved agreement for the key commercial terms of a Funded Decommissioning Programme for Hinkley Point C. Final detailed discussions of the Funded Decommissioning Programme are scheduled to be completed in line with the CfD programme and prior to the HPC Final Investment Decision.

Final Investment Decision

A final investment decision on HPC will only be taken by the Group at the time when it has agreed the full terms of the CfD and the Infrastructure Guarantee with the UK Government and EDF group has finalised agreements with the investment partners. In addition, the waste transfer contract arrangements must be approved by the European Commission and by the Secretary of State as part of the FDP arrangements.

Main Construction Contracts

The contractor for the early enabling earthworks contract was appointed in 2012 and is currently completing the contractor design phase and has commenced mobilisation works for construction activities.

The preferred bidders have also been selected for the seven major construction contracts – Main Civil Works, Turbine/Generator, Marine Works, Mechanical Erection, Electrical Erection, Heating, Ventilating and Air Conditioning and combined Nuclear Steam Supply System and Instrumentation & Controls (I&C).

Contract documents are currently being finalised ready for signature in case of a positive final investment decision. A number of these selected contractors are being engaged on Early Contractor Involvement (ECI) activities, including inputting into the HPC Engineering and Pre-Construction Planning teams to help de-risk the project and better secure the construction schedule. Procurement also continues on other critical path contracts such as key installation and equipment supply contracts for the main site.

Land Deals

Land acquisition has mirrored the planning progress and reflects those sites applied for in the Planning Inspectorate (PINS) process.

In 2012, the land required at the main site for the terrestrial construction of HPC was secured with negotiations concluded with relevant parties to allow three 999-year leases of the HPC main site to be put in place when needed and one of these leases is now in place. A majority of the land needed to assemble the Associated Development sites required to support the construction process is now secured. A number of these were secured through Option Agreements therefore EDF Energy does not yet have possession of the land but has the right to acquire or lease it when the land is required by the project. Several of these options have been exercised in 2014 in order to facilitate access for early development. Through the consent of the Development Consent Order, EDF Energy also secured the powers of Compulsory Purchase, meaning it has statutory powers to acquire certain land identified in the planning application if any remaining land owners are not willing to sell, therefore giving confidence that the necessary land can be secured. Negotiation of contracts for certain Marine rights is nearing completion.

HPC Site Activities

The project team is continuing the pre-development site preparation and enabling works to prepare the construction site ahead of the main construction works that will follow the final investment decision. These include the construction of roundabouts and temporary construction roads to give access to the site for machinery needed for the main construction phase, enabling works for the earthworks, water management works as well as the first stages of office buildings and worker welfare facilities. The construction of the batching plant, for making concrete, is also underway.

The off-site road and local infrastructure improvements to support the construction phase (the Associated Developments) are progressing well; these include the construction of the Sandford roundabout (completed ahead of plan), the construction of the Cannington bypass and park and ride facilities.

In parallel with the on-site work, off-site work has continued on the detailed engineering design for the power station, with a key design milestone (Design Reference Configuration 1) achieved in March 2014.

Training has begun at the Bridgwater College Construction Skills Centre, giving local people the skills they need to work on the project. In addition, in July 2014, EDF Energy and the trade unions concluded negotiations on a comprehensive package of collective agreements for workers involved in building HPC. The agreements cover the entire HPC workforce and are not just for pay and productivity, but also industrial/employee relations,

recruitment, training, health and welfare, as well as skills development and workforce communications. The agreements set the project's policies and culture for effective collaboration between all parties involved, including EDF Energy management, contractors, unions and the entire workforce.

Sizewell C

The Sizewell C project development continues to make good progress. Initial plans and options for the project were formally consulted upon with the public and statutory bodies between November 2012 and February 2013. Since then outline design and environmental studies have continued. These are informed by an on-going series of workshops with the local authorities and environmental bodies. In addition, engagement continues with community organisations, the public and businesses. The next step will be to launch the second of three formal stages of consultation with local communities in 2015.

6.3.1.4.4 Commitments under European Commission Merger Regulation (ECMR)

EDF Energy has continued to comply with the commitment to sell minimum volumes of electricity on the UK wholesale market, ranging from 5 to 10TWh per year during the period from 2012 to 2015. This commitment was agreed with the EC at the time of the acquisition of British Energy under the ECMR. The delivery of these sales continues to be monitored by the EC.

All other commitments agreed at the time have been met.

6.3.1.4.5 United Kingdom Legal Environment

Competition and Markets Authority

The sectoral regulator, the Office of Gas and Electricity Markets (Ofgem), made a reference to the Competition and Markets Authority (CMA) for an investigation into the "supply and acquisition of energy in Great Britain" on 26 June 2014. The CMA is the UK's economy-wide competition and consumer authority. Its primary duty is "to promote competition for the benefit of consumers, both within and outside the UK" with the aim "to make markets work well for consumers, businesses and the economy". The CMA is conducting a comprehensive and independent examination of both wholesale and retail markets (covering supply to domestic and small business customers). It is assessing whether there are any features that prevent, restrict or distort competition and, if so, what actions might be required to remedy them.

EDF Energy welcomes the investigation as an opportunity to rebuild trust in the energy industry and is fully co-operating with the CMA investigation.

Following the publications on 24 July 2014 of its initial "Statement of Issues" setting out the CMA's initial theories of what might be adversely affecting competition and what might be the adverse outcomes, the CMA has recently published an updated issues statement on 18 February 2015. These documents set out the framework for the CMA's investigation under a number of "theories of harm". At this stage the views expressed by the CMA are preliminary and not findings or conclusions. However, it is notable that the Updated Issues Statement indicates that, considering the evidence received to date, the CMA's current view is that several of the initial theories of harm, including those relating to common ownership of generation and supply and to the operation of the wholesale market, are not giving rise to competition concerns.

The CMA is continuing to undertake detailed analysis and will hold hearings with relevant parties such as EDF Energy over the course of the investigation. As its thinking develops, it will issue further documents prior to the publication of provisional findings. If it were to find provisionally that there was an "adverse effect on competition", it would then start consultation on possible remedies.

The investigation is expected to last approximately 18 months. The CMA is required to publish its final report by the statutory deadline of 25 December 2015.

Electricity Market Reform (EMR)

The Energy Act, which received Royal Assent on 18 December 2013, establishes the legislative framework for delivering secure, affordable and low carbon energy by implementing the EMR proposals outlined in the Government's July 2011 White Paper. These include:

- Contracts for Difference (CfD) – long-term contracts between a CfD counter-party and eligible generators, funded by contributions from licensed electricity suppliers to provide stable and predictable incentives for companies to invest in low-carbon electricity generation;
- Investment contracts – long-term contracts broadly similar to CfDs which have been granted to enable early investment in advance of the CfD regime coming into force;
- Capacity Market – to ensure there is sufficient generating capacity to maintain security of electricity supply;
- Emissions Performance Standard (EPS) – to limit carbon dioxide emissions from new fossil fuel power stations.

The carbon price floor is also a key component of the Government's EMR package, and was introduced as part of the Finance Act 2011. The carbon price floor encourages the transition to a low carbon generation mix by promoting coal to gas switching and improving the competitiveness of low carbon generation. The "carbon price support rate" that underpins the carbon price floor was capped in the Budget 2014 on 19 March 2014 at £18/t for the four years 2016/17 to 2019/20.

The Government is also using powers in The Energy Act to introduce Off-taker of Last Resort arrangements whereby large suppliers are obliged to offer Power Purchase Agreements on standard terms to provide renewable CfD generators with a guaranteed, "backstop" route-to-market for the duration of their CfD.

The Energy Act provides the legal certainty required for robust and durable CfDs, with a single Government-owned counterparty, the Low Carbon Contracts Company, which will offer stability and value for customers, as well as long term assurance for investors.

The European Commission found on 23 July 2014 that the CfD arrangement scheme for renewables and the Capacity Market scheme are compatible with EU State aid rules. The key elements of secondary legislation required to implement both the CfD and the Capacity Market came into force on 1 August 2014.

The first Allocation Round under which developers will compete for CfDs to support renewable generation projects opened in October 2014 with contracts to be awarded to successful projects in 2015. The Low Carbon Contracts Company will make the first payments to holders of CfDs and Investment Contracts and will start to recover costs from suppliers during 2015.

The first capacity auction took place in December 2014 for capacity agreements for delivery from October 2018 onwards. The provisional auction results were announced on 19 December 2014 and formally confirmed on 2 January 2015. EDF Energy secured capacity agreements for 28 out of 29 of its existing generating units in the auction, representing 12.2GW of capacity at the auction clearing price of £₂₀₁₂19.40/kW.

6.3.2 Italy

6.3.2.1 EDF group's strategy in Italy

The Italian energy markets have a strong strategic interest for EDF due to of the magnitude of their importance in both the European electricity and gas markets and their connection to the French markets.

The current position and growth ambitions of Edison, of which EDF took exclusive control in May 2012, allow the Group to implement a balanced strategy in Italy, based on Edison's ambitions in terms of electricity generation fleet management and developing its customer portfolio and gas business.

The exclusive takeover of Edison provided EDF with a major player in the Italian electricity market and a real international gas platform. EDF intends to give Edison a new outlook, with:

- development in Exploration and Production (oil and gas), drawing on Edison's recognised expertise;
- development of gas infrastructures: participation in an LNG terminal (Rovigo) and gas import pipeline projects (IGI/ICB, Galsi), as a complement of the Group's other ongoing projects (in particular, the Dunkirk LNG terminal), with the aim of safeguarding, diversifying and integrating the development of EDF group's natural gas supply;
- international development, particularly in the Mediterranean basin (Balkans, Greece, Turkey, etc.) and the Caspian Sea region, through Edison's engineering skills in thermal and hydropower generation, and through the opportunity to integrate the electricity and gas segments in these geographical regions.

6.3.2.2 Presentation of the Group's business in Italy

As at 31 December 2014, the EDF group was mainly present in Italy through its 97.405%¹ shareholding in Edison, which is a major player in the Italian electricity and gas markets and a well-known Italian brand.

Edison was de-listed in 2012, but its savings shares remain listed on the Italian stock exchange.

In addition, as at 31 December 2014, the EDF group holds the following subsidiaries and shareholdings in Italy:

- EDF Fenice: the Group wholly owns EDF Fenice, a company specialised in environmental services and energy efficiency. EDF Fenice, whose registered office is in Turin, has an international presence with subsidiaries in Spain, Poland and Russia. Its main activities are the generation of electricity and/or heat (from gas, coal, hydropower, biomass and waste), the operation and maintenance of energy assets, the treatment of solid and liquid industrial waste and environmental engineering (see section 6.3.2.4 ("EDF Fenice"));
- EDF Énergies Nouvelles, which has one subsidiary located in Italy.

1. The remainder of the capital is distributed between savings shares, which do not confer any voting rights, and ordinary shares that are now delisted.

2014 installed capacity and output for Edison and EDF Fenice in Italy

Electricity

The table below sets out the installed capacity and output of Edison and EDF Fenice in Italy, in 2014:

2014 installed capacity (in MW)	Edison	EDF Fenice	Total	%
Thermal	5,316	397	5,713	74.4
Hydropower	1,358	1.5	1,359.5	17.7
Other renewables	608	–	608	7.9
TOTAL	7,282	398.5	7,680.5	100

2014 output (in GWh)	Edison	EDF Fenice	Total	%
Thermal	11,756	1,013	12,769	68.5
Hydropower	4,954	5	4,959	26.6
Other renewables	906	–	906	4.9
TOTAL	17,616	1,018	18,634	100

In 2014, the EDF group's net electricity output in Italy was 18.6TWh¹, which accounted for around 7% of net Italian electricity generation. Gas sales to end customers, wholesale markets and for thermal generation amounted

13.2Gm³ (15.7Gm³ in 2013). Edison imported 9.9Gm³ in 2014, i.e. 17.9% of total Italian gas import, which represents 90% of national demand.

Gas and hydrocarbons

Hydrocarbon output	2014	2013
Gas in Italy ⁽¹⁾ (in millions of cubic metres)	417	410
Gas abroad (in millions of cubic metres)	1,734	1,799
Petrol and condensate output in Italy (in thousands of barrels)	2,620	1,940
Petrol and condensate output abroad (in thousands of barrels)	1,541	1,640

(1) includes output from Croatia (Izabela gas field) imported into Italy since July 2014.

In Italy and abroad, the Group's gas output activities through Edison were slightly down compared to 2013, reaching 2.15Gm³ (-2.6% against the figure for 2013).

Oil and condensate output rose sharply in 2014 with 4.16 million barrels produced (+16% compared with 2013), of which 2.62 million were produced in Italy.

6.3.2.3 Edison

6.3.2.3.1 Electricity generation business

At 31 December 2014, the Edison Group's installed generation capacity in Italy was 7.3GW with net electricity output of 17.6TWh over the year, representing a decrease compared with 2013. This decline was mainly due to reduced thermoelectric generation as a result of lower demand in Italy and arbitration between own production and market purchases. Edison's generation fleet is currently made up of 47 hydropower plants, 19 thermal power plants, 35 wind farms, 9 photovoltaic power plants and one biomass plant. Combined-Cycle Gas Turbines (CCGT) account for 67% of electricity generation while hydropower accounts for 28% and combined wind and solar for 5%.

Edison operates hydropower facilities of approximately 1,358MW, which generated 4.95TWh in 2014 (+23% compared with 2013), due to exceptional rainfall levels.

With the aim of reorganising its renewable energy business in Italy while retaining a relevant position in this key sector, in 2014 Edison and EDF EN Italia carried out an innovative project in partnership with the Italian infrastructure fund F2i, to optimise use of the Group's assets by creating a company holding 594MW of renewable energy assets (486MW contributed by Edison and 108MW contributed by EDF EN Italia, i.e. respectively 82% and 18% of assets contribution). 70% of the equity of the newly created entity was transferred to the investor, F2i, but, in view of the governance arrangements in place, it will be fully consolidated within Edison. The renewable energy business in Italy will be reorganised according to expertise. Thus, Edison will benefit from 100% of the renewable energy produced by the new entity, that will benefit to the integrated management of its generation portfolio. An operating and maintenance company, managed by EDF EN Services, has also been set up to ensure the availability of the facilities and to develop new projects.

¹ Excluding EDF Énergies Nouvelles in Italy.

In addition, outside the Edison Group and the partnership with F2i, EDF Énergies Nouvelles has other operations in Italy (see sections 6.3.2.5 ("Activities of EDF Énergies Nouvelles in Italy") and section 6.4.1.2.2 ("EDF Énergies Nouvelles")).

Internationally, Edison has a well-established presence in Greece, where it is one of the largest electricity operators, operating through ElpEdison, a 50/50 joint venture with Hellenic Petroleum. ElpEdison owns two CCGT plants: one in Thessalonica (389MW) and another in Thisvi (410MW), built by Edison.

Finally, in Brazil, Ibiritermo, a 50%-owned subsidiary of Edison, operates a 226MW CCGT power plant.

6.3.2.3.2 Hydrocarbon sector business

With the takeover of Edison, the EDF group's strategy for the gas sector benefits from the experience developed over many years by Edison along the entire value chain, from exploration and production through to the direct sale of natural gas.

Edison's gas supply portfolio is mainly based on long-term contracts and, in 2014, it included approximately 9.9Gm³ of imports via gas pipelines and LNG on long-term contracts, with 0.42Gm³ of own production in Italy and 2.74Gm³ purchased on the market. Changes in inventory and network losses represent 0.17Gm³.

In 2014, Edison delivered 3.41Gm³ of gas to the industrial sector in Italy, 2.31Gm³ to the residential sector, 4.41Gm³ to the thermal power sector, including Edison's own internal needs, and 3.11Gm³ was distributed on the market.

Due to the difficult gas market situation, since 2010, Edison, like all other players in the sector, has asked suppliers to adjust their contractual terms, by reviewing long-term contracts in force.

On 29 August 2014, the Arbitration Institute of the Stockholm Chamber of Commerce rendered an arbitral award in Edison's favour, while accepting the request for a pricing review of the long-term contract signed with Promgas, an Italian subsidiary of the Russian group Gazprom.

An arbitration process is currently ongoing with ENI, relating to the gas coming from Libya.

In exploration and production (E&P), at 31 December 2014, Edison had 60 concessions and exploration permits in Italy and 67 abroad; it also had approximately 46.2 billion cubic metre equivalents of reserves. Abroad, Edison's most significant asset is the Abu Qir gas field in Egypt; in early 2009 Edison purchased the exploration, production and development rights for this field for an initial period of 20 years, extendable by a further 10 years.

Edison is pursuing its exploration activities in Italy and abroad, particularly in the United Kingdom and in Norway where it has been active since 2007. Edison currently holds licences in the North Sea, the Norwegian Sea and in the Barents Sea. As at 31 December 2014, the portfolio comprises 37 licences (10 were granted to Edison in 2014), including 7 as operator.

Gas infrastructures

Edison owns a 7.3% stake in Adriatic LNG Terminal, the company which manages the Rovigo off-shore regasification terminal (8Gm³/year). This terminal is powered with Qatari gas. The other shareholders are ExxonMobil Italiana Gas (70.7%) and Qatar Terminal Company Limited (22%). Under the terms of the contract signed with Ras Laffan Liquefied Natural Gas Company Limited II (RasGas II), Edison owns 80% of the terminal capacity, that is, 6.4Gm³/year.

Edison is involved in various gas import infrastructure projects (see section 6.4.2.2.2 ("Infrastructure")):

- Galsi, a gas pipeline planned to connect Algeria and Italy via Sardinia, in which Edison has a 20.8% shareholding;
- IGI Poseidon, 50%-owned by Edison, a company involved in the development of several projects that aim to connect Greece and Italy (IGI), Greece and Bulgaria (IGB, in 50/50 partnership with Bulgaria), as well as Greece and Cyprus (EastMed).

6.3.2.3.3 Sales and marketing structure

In 2014, Edison sold 96.2TWh of electricity in Italy (compared with 73.8TWh in 2013¹, i.e. +30% compared with 2013), of which 17.6TWh were generated and 78.6TWh were purchased on the markets. Sales to end customers amounted to 20.4TWh, up by 6.6% compared with 2013. At end-2014, Edison served around 671,500 electricity customers and around 553,200 gas customers, in both the business and residential segments.

In sales and marketing, Edison continues to significantly develop its electricity and gas sales to individuals and in the SME segment. The development of an end-customer portfolio is part of the Group's strategy to promote the upstream-downstream balance of its positions.

6.3.2.3.4 Regulated activities in Italy

Gas transport and storage

Edison wholly owns Edison Stoccaggio, a company dedicated to the regulated gas storage and transport businesses.

In Italy, Edison operates two storage sites in depleted gas reserves, Cellino (since 1984) and Collalto (since 1994), with a total volume of 700Mm³ (working gas).

In addition, since 2013, Edison has operated a third site, San Potito & Cotignola, presently in a build-up phase of its performance, and it is currently developing a storage project on the Palazzo Moroni site.

Finally, Infrastrutture Trasporto Gas SpA (ITG), wholly owned by Edison, owns and directly manages the Cavarzere-Minerbio gas pipeline, a functional link from the Rovigo terminal to the national network, with a transport capacity of over 9Gm³ per year.

Distribution

Gas distribution in Italy is regulated and supervised by the AEEG, the electricity and gas authority that establishes quality and safety parameters and network access rules.

Edison DG (Distribuzione Gas) is the company within the Edison Group dedicated to natural gas distribution. Every year, Edison DG distributes approximately 250Mm³ of natural gas to around 150,000 users in northern and central Italy.

6.3.2.4 EDF Fenice

In energy services, the Group operates in Italy, Spain, Poland and Russia through the Italian company EDF Fenice, which is fully held by EDF through an intermediate subsidiary.

EDF Fenice supplies energy efficiency solutions to EDF's industrial customers throughout Europe (see section 6.4.1.3.2 ("EDF Fenice")).

1. Revised 2013 data following application of IFRS 11 and differences in presentation of production sources and types of use in Edison's 2014 balance sheet.

6.3.2.5 Activities of EDF Énergies Nouvelles in Italy

Following the adoption of the new regulatory framework for renewable energy in Italy, EDF Énergies Nouvelles did not commission any additional capacity in 2014. During 2014, 20.2MW of photovoltaic power was transferred to the investment fund Terra Firma. Moreover, 108MW of wind

capacity were also transferred to E2i Energie Speciali, an asset holding company whose equity is held by the Italian investment fund F2i, Edison and EDF EN Italia. Thus, the capacities held by EDF EN Italia at 31 December 2014 totalled 440.4 gross wind power (or 246.6MW net power) and 79.3MW gross photovoltaic power (or 76.7MW net power) (see section 6.4.1.2.2 ("EDF Énergies Nouvelles")).

6.3.3 Other International¹

The table below sets out the installed capacities and outputs of the EDF group by segment at year-end 2014²:

	Installed capacity		Output	
	MW	%	GWh	%
Nuclear	900	11	5,484	15
Thermal	6,815	84	30,476	83
Hydropower	69	1	202	Less than 1
Other renewables ⁽¹⁾	364	4	644	2
TOTAL⁽²⁾	8,147	100	36,805	100

(1) Excluding EDF Énergies Nouvelles data from the "Other International" segment, i.e. 3,683MW and 7,494GWh.

(2) These values correspond to the sum of the exact values expressed to one decimal place after rounding.

6.3.3.1 Continental Europe

6.3.3.1.1 Central and Eastern Europe

The Group operates in two countries of Central and Eastern Europe (CEE): Poland (power generation, cogeneration and supply) and Hungary (cogeneration, distribution and supply).

The EDF group also operates in Poland through its subsidiary EDF Fenice (see section 6.4.1.3.2 ("EDF Fenice")), mainly in energy efficiency.

6.3.3.1.1.1 Poland

The Group operates in Poland mainly through EDF Polska SA, which it controls and which includes:

- the Rybnik generation plant, with an installed capacity of 1,775MWe;
- the Krakow cogeneration plant, which has an installed capacity of 460MWe and 957MWth;
- the Wybrzeże cogeneration plant (formerly EDF Wybrzeże SA), corresponding to the Gdansk and Gdynia units with a total installed capacity of 333MWe and 1,134MWth;
- the Warsaw branch, comprising the company headquarters and the Optimisation and Sales department which is in charge of the sale of the electricity produced by all EDF group plants in Poland to B2B customers and on the market;
- EDF Toruń, a subsidiary of EDF Polska, which holds the municipal district heating distribution network in the town of Toruń, in addition to a coal-fired heat generation facility with an installed capacity of 398MWth which powers the network. The replacement of the existing facility, whose life span cannot be extended, with a cogeneration facility with two 50MW combustion turbines, was approved on 23 December 2014 and should take place in winter 2017-2018.

EDF Paliwa Sp. z o.o., held by EDF Polska, oversees the supply of coal and biomass to all EDF group sites in Poland.

The Group also controls ZEW Kogeneracja SA, the cogeneration company of the city of Wrocław. It has an installed capacity of 366MWe and 1,094MWth and owns 98.4% of EC Zielona Góra SA, a heat and power generation company (whose installed capacity is 183MWe and 302MWth).

In the field of environmental protection, the Group decided to implement an investment plan, particularly concerning the construction of desulphurisation and denitrification facilities for its assets in Poland. The project was officially inaugurated on 19 November 2013 in Wrocław. It will enable the operation of the existing generation plants to continue until 2035 at least.

Towards the end of 2012, the EDF group suspended its plans to build a coal-fired, supercritical plant totalling 900MW in Poland. However, it decided to invest in the eight existing units of the Rybnik site to bring them in line with new environmental standards and to extend their operating life span under performant conditions until 2030.

Furthermore, the Group is present in Poland through its subsidiary EDF Énergies Nouvelles. EDF Énergies Nouvelles operates a wind farm in Linowo since end-2013, with an installed capacity of 48MW and which is currently building another 58MW wind farm in Rzepin. Other wind power projects are also under development.

In 2009, EDF and Polska Grupa Energetyczna (PGE, the leading Polish electricity group listed on the Warsaw stock exchange) signed an agreement to conduct pre-feasibility studies for the development and construction of nuclear reactors in Poland. In May 2013, these studies confirmed the interest in the inclusion of nuclear energy in Poland's energy mix. PGE therefore carried out consultations as a precursor to its future nuclear tendering process, focusing in particular on EDF and AREVA, who are now considering the possibility of putting forward an offer in accordance with the schedule and outcome of political and industrial decision-making in Poland. On 28 January 2014, the Polish government adopted a national nuclear programme, with a particular emphasis on the legal and technological framework for commissioning its first nuclear reactor.

1. Certain activities shown here, particularly those of EDF Trading and EDF Énergies Nouvelles, correspond to the "Other activities" segment, within the meaning of IFRS 8, but are presented here in a geographical context.

2. The figures presented reflect the consolidation method used for each entity.

Finally, in September 2014, the consortium AMEC UK Ltd. was selected by PGE as assistant to the Contracting Authority, to prepare and implement the future call for tenders for Poland's first nuclear plant.

6.3.3.1.1.2 Hungary

In Hungary, the Group operates in the heat and electricity generation through its subsidiary Budapesti Erőmű ZRt ("BE ZRt") and in the sale and distribution of electricity and gas through EDF Démász ZRt.

After entering a recession in 2012, the economic situation in Hungary has improved with the public deficit now under control and the growth driven by public investment, financed to a large degree by the European Union. In 2014, the State intervention in the economy intensified, particularly in the energy sector where the government announced its intention to renationalise the sector and operate it on a "not-for-profit" basis, to ease pressure on household spending.

BE ZRt

At 31 December 2014, the Group owned 95.6% of BE ZRt, an electricity and heat generation company. Based in Budapest and with a net installed capacity of 406MWe and 1,192MWth, BE ZRt supplies 58% of the district heating needs of the Hungarian capital and 3% of electricity demand across the country.

Until the end of 2008, almost all of BE ZRt's electricity output (1.7TWh/year) was sold to a single Hungarian purchaser, Magyar Villamos Művek ZRt (MVM), under three long-term power purchase agreements (PPAs). These contracts were cancelled by the Hungarian government with no compensation fees at the end of 2008, after the European Commission demanded their termination on the grounds that they constituted State aid contrary to competition law.

Nevertheless, from 1 January 2009, BE ZRt was still able to sell its electricity, partly through an eight-year commercial contract and partly through a regulated cogeneration support arrangement, which the Hungarian government terminated prematurely on 1 July 2011. In addition, the government decided in October 2011 that heat prices, which had up to then been driven by commercial contracts, would be fixed by decree, and introduced regulatory changes which drastically curtailed the profitability of cogeneration companies.

The forced and uncompensated termination of long-term power purchase agreements entailed significant financial loss for its shareholder, EDF International, which, on 12 May 2009, lodged international arbitration proceedings against the Hungarian State. In its statement of claim, EDF International contested the cancellation of PPAs without compensation and the introduction of the Heating Decree limiting the profits of BE ZRt. An arbitral award in EDF International's favour was rendered on 3 December 2014 (see section 20.5 ("Legal proceedings and arbitration")).

EDF Démász ZRt

EDF Démász ZRt is wholly owned by EDF and is mainly engaged in the distribution and sale of electricity.

With regard to its supply activity, EDF Démász ZRt supplies electricity to individuals, small businesses and public institutions in the south-eastern region of Hungary under the universal service concept (as defined by the Hungarian government decree pursuant to the Hungarian Electricity Act of 2007). Since 31 December 2009, the company has supplied electricity and, more recently, gas, throughout Hungary to customers who opted for the open market. EDF Démász ZRt has two trademarks in the Hungarian market: "EDF Démász" for residential customers and "EDF Energia" for business customers. In 2014, EDF Démász ZRt sold 3,180GWh to around 740,000 customers, including 1,610GWh on the open market.

Regarding its distribution business, EDF Démász Hálózati Elosztó Kft, a wholly owned subsidiary of EDF Démász ZRt, was set up on 1 January 2007, in response to the legal requirement that network activities be separated

from generation/supply activities. It owns the electricity network assets (about 32,200 kilometres of high-, medium- and low-voltage lines) and operates the regulated electricity distribution business in Hungary's south-eastern region (19.6% of the territory). In 2014, it distributed 4.2TWh to 773,300 delivery points.

In 2014, faced with a depressed economic environment following the introduction of particularly punishing pricing and tax measures (a network tax of €0.45/m in 2013, and 25% price cuts imposed by the legislator between 2013 and 2014), the company implemented cost cutting measures.

6.3.3.1.2 Benelux

The Benelux region features important interfaces with the Franco-German electricity marketplace and projects for new links with Germany and with Great Britain are also being examined. Benelux is also an important central point in the European gas market on account of its significant import and transit infrastructure, such as the Zeebrugge hub and the LNG terminal under construction in nearby Dunkirk.

The EDF group has two subsidiaries in Belgium: EDF Belgium (which directly holds 50% of the Tihange 1 nuclear power plant) and EDF Luminus (the number two player in the Belgian market, with a balanced upstream/downstream portfolio). EDF has been present in the Netherlands since 2009 with a combined-cycle gas plant.

6.3.3.1.2.1 EDF Belgium

As part of a long-term nuclear energy cooperation agreement with Electrabel, EDF holds 50% in undivided co-ownership of the Tihange 1 nuclear power plant, through its wholly owned Belgian subsidiary, EDF Belgium. The capacity attributed to EDF represents 481MW (or 2% of total Belgian generation capacity). Tihange 1 output, which is attributed to EDF Belgium is sold to EDF Luminus through a long-term contract expiring in 2015.

Belgium's 2003 nuclear phase-out legislation originally provided for the closure of Tihange 1 on 1 October 2015. Following the adoption of a Development Plan by the Belgian government on 4 July 2012, it was announced that the life span of Tihange 1 would be extended until 2025.

On 14 October 2013, the Belgian government approved a draft bill amending the law of 2003 on the nuclear phase-out schedule, in addition to a draft agreement between Electrabel, EDF and the Belgian government, defining the terms of the extension of Tihange 1 until 2025. The law was passed on 18 December 2013 and published in the Belgian Official Gazette (*le Moniteur belge*) on 24 December.

The extension of the life span of Tihange 1 requires significant investment, with EDF's share amounting to €300 million, spread over the period from 2011 to 2020. EDF Belgium's share of Tihange 1 output during the ten-year extension will also be sold to EDF Luminus through a long-term contract.

6.3.3.1.2.2 EDF Luminus

The EDF group holds 63.5% of EDF Luminus through its subsidiary EDF Belgium, with the remaining equity held by Belgian public shareholders (see below).

EDF Luminus is the second biggest player in the Belgian energy market. The business accounts for nearly 10% of the country's output capacity, with an installed capacity of 1,954MW at end-2014. EDF Luminus generated 4,272GWh of electricity (4,985GWh, including 100MW drawing rights on Chooz B) in the year ended 31 December 2014. At 31 December 2014, the company had around 951 employees.

EDF Luminus actively pursued its strategic goals, by reducing its costs, optimising its thermal power generation fleet, continuing to develop its wind power capacity and by promoting the development of its energy services, particularly by acquiring a 50% shareholding in Rami Services, a nationwide network of installers, enabling EDF Luminus to roll out services for its B2C customers, as well as the launch of heating maintenance and repair services.

The shareholders' agreement signed on 16 April 2010 sets out a liquidity undertaking for the shares held by EDF Luminus' minority shareholders which may, under certain conditions, become available to EDF, either through the sale of the minority shareholders' securities through a stock market flotation or through a Group buyback of their shares at a price based on variable components. The shareholders' agreement specifies that the liquidity undertaking may be brought into play during two liquidity windows, one in 2015 and the other in 2018. In this respect, and in accordance with the stages and time frames stipulated in the agreement, in 2014, the minority shareholders began the procedural phase prior to implementation of the liquidity clause, and notified during the first quarter 2015 their will to sell all their stakes in EDF Luminus. The project of a public offering should be submitted to the approval of EDF Luminus board in the coming months.

Sales and marketing

Under its "Luminus" brand, EDF Luminus supplies electricity and gas to approximately 1.74 million residential and business customers (delivery points) in Belgium.

Production

	Installed capacity		Output	
	MW	%	GWh	%
Nuclear (excluding 100MW drawing rights on Chooz B)	419	21	1,814	43
Thermal	1,286	66	1,982	46
Hydropower	69	4	202	5
Other renewables	180	9	274	6
TOTAL (EXCLUDING 100MW DRAWING RIGHTS ON CHOOZ B)	1,954	100	4,272	100

EDF Luminus owns 10.2% (419MW) of Belgium's Tihange 2 and 3 nuclear power plants (commissioned in 1983 and 1985 respectively) and the Doel 3 and 4 plants (commissioned in 1982 and 1985 respectively), which have a life span of 40 years. EDF Luminus also has 100MW drawing rights on the French Chooz B nuclear power plant, based on a band of guaranteed output according to the average availability of the French fleet.

In 2014, EDF Luminus saw its nuclear generation decline due to the unplanned closure of two nuclear units, Doel 3 and Tihange 2, following the detection of micro-defects in containment structures, and on account of temporary closure of the Doel 4 unit following sabotage actions. With regard to Doel 3 and Tihange 2, Electrabel will submit a dossier to the Federal Agency for Nuclear Control, which will make a decision on possible reopening of the power stations. With regard to Doel 4, the plant was reopened on 19 December following repair of the damaged turbine, apparently due to malicious acts, although no proof has been established in that regard to date.

The nuclear tax for all producers in 2014, based on 2013 nuclear energy output, amounted to €469.3 million (compared with €481 million in 2013). The amount paid in 2014 by the EDF group's two Belgian subsidiaries amounted to €62.6 million, compared with €59.4 million in 2013, reflecting the increased output attained in 2013 (in relation to that of 2012) from their holdings in Belgian nuclear power stations.

Moreover, EDF Luminus' generation fleet consists in power plants fired by natural gas, wind farms and a few run-of-river hydropower plants. In particular, three peak thermal power plants are operated in Monsin, Ham and Angleur.

EDF Luminus also operates four combined-cycle power plants in Angleur, Ringvaart, Seraing and Ham. In the latter, recoverable heat from the steam turbine is used for the district heating network in the town of Gand. In summer 2014, the Seraing power station was selected for Belgium's strategic reserve for a period of three years.

A tripartite agreement signed in 2012 between EDF Luminus, the province of Liège and the municipalities of Liège and Seraing, demonstrates their cooperation in electric mobility, energy efficiency, solidarity, training and R&D.

In July 2014, the EDF group and EDF Luminus signed a partnership agreement with the town of Genk concerning innovative, sustainable and federative projects. The aim of this partnership is twofold: firstly, to conduct a study to optimise public lighting in Genk and, secondly, to initiate a draft master plan for electric mobility in Limbourg.

In December 2014, a partnership agreement was signed with the town of Gand in relation to a district heating project.

EDF Luminus pursued its pricing and product strategy to better address customer expectations and to affirm its price positioning in relation to its competitors. EDF Luminus maintained a stable market share of around 20%, in difficult market conditions marked by a churn rate which remains relatively high.

EDF Luminus is active in the renewable energy sector with 7 hydropower plants and 19 onshore wind sites spread across Wallonia and Flanders. The company is one of the leaders in wind power in Belgium, with an installed capacity of 186MW at end-2014. In 2014, EDF Luminus built 18 wind turbines with a combined capacity of 41.4MW, and acquired a portfolio of 20.9MW of existing built capacity (10 wind turbines).

Energy services

In September 2014, EDF Luminus acquired a 50% shareholding in Rami Services. This partnership has resulted in the launch of "Luminus Home Solutions", with a service offering aimed at individual residential customers, namely: "Luminus Boiler Maintenance" (*Luminus Entretien Chaudière*) and the Smartphone-controlled "Netatmo" thermostat, designed and created by Philippe Starck.

6.3.3.1.2.3 Netherlands

Through a joint venture, Sloe Centrale BV, EDF and Delta own an 870MW natural gas power plant in south-west Netherlands, whose two 435MW units were both commissioned in 2009 and serviced in mid-2013. In 2014, the Sloe power station performed extremely well on account of favourable market conditions.

6.3.3.1.3 Russia

The EDF group operates in the energy services market in Russia through EDF Fenice and its Russian subsidiary, Fenice Rus, and also in the electricity transmission and distribution segments through EDF International Networks (formerly EDF Distribution International) and its Russian subsidiary, EDF Grids Vostok, both wholly owned by the Group.

Fenice Rus was created in November 2009 with the aim of supplying energy services, particularly in the field of energy efficiency, to industrial customers. The company operates with leading Russian partners and major French groups established in Russia. In 2013, the European Bank for Reconstruction and Development (EBRD) agreed to provide funding to Fenice Rus to develop new projects (see section 6.4.1.3.2 ("EDF Fenice")).

EDF Grids Vostok was created in January 2012 and handles operating activities for EDF International Networks in Russia. In 2013, EDF International Networks SAS and Rosseti (a Russian company created in 2013 to handle electricity transmission and distribution activities, formerly MRSK and FSK), signed a Memorandum of Understanding. The companies reached an agreement to study a joint network management opportunity in one of the Russian regions. In 2014, EDF International Networks and Rosseti signed an agreement to extend the scope of their cooperation.

On 29 December 2014, EDF sold its 15% shareholding in the South Stream gas pipeline project (South Stream Transport BV) to Gazprom. Following this agreement, EDF has recovered the full amount invested in the project to date, calculated in accordance with existing agreements.

6.3.3.1.4 Kazakhstan

On 5 December 2014, a framework agreement on cooperation was signed between EDF and Samruk-Energy, Kazakhstan's main electricity operator and a public company. Partners since 2012, having collaborated on distribution network optimisation for a subsidiary of Samruk-Energy, the companies signed this framework agreement to extend and expand the scope of their

cooperation in terms of energy efficiency, electricity generation, transmission and distribution, development of renewable energies, promotion of the sustainable city concept and training.

6.3.3.1.5 Switzerland

The EDF group is present in Switzerland through its investments in Alpiq Holdings SA (25%) and in hydropower generation facilities in Le Châtelot (50%) and Mauvoisin (10%).

Alpiq is a leading player in the European energy market. It was formed in 2009 by the merger of Atel and EOS, which contributed their industrial assets, and the contribution by EDF of its energy rights and its share of the capacity and loads of the Émosson dam in Switzerland. It is an electricity company of significant size at the heart of the European electricity market, active in the generation, sale, and trading of energy and in energy services. Alpiq accounts for over one third of the electricity supplied throughout Switzerland.

Based on Alpiq's published 2014 revenue (CHF8,058 million), the Alpiq group is Switzerland's leading electricity company (99.7TWh sold in 2014, mainly in wholesale markets and to key European customers in southern Europe and in Central and Eastern Europe). Alpiq also provides services to around 100,000 customers in north-west Switzerland. This activity is supported by significant generation and transmission assets in Switzerland and in other countries where Alpiq is developing its presence. In 2014, Alpiq had total installed capacity of 6,417MW and output of 16.3TWh (excluding long-term contracts), as shown in the table below:

	Installed capacity ⁽¹⁾		Output ⁽¹⁾	
	MW	%	GWh	%
Nuclear	795	12	6,238	38
Thermal	2,568	40	4,249	26
Hydropower	2,746	43	5,280	32
Other renewables ⁽²⁾	308	5	541	4
TOTAL ⁽³⁾	6,417	100	16,307	100

(1) Figures on 100% basis.

(2) Including small hydropower stations.

(3) These values correspond to the sum of the exact values expressed to one decimal place after rounding.

Alpiq's 2011 and 2012 results led the company to undertake a major restructuring programme which continued in 2014. Thus, in 2012, Alpiq sold its 20% stake in the Italian company Edipower and its German subsidiary in the energy transmission technology sector, EVT, and in 2013, it sold its shareholdings in Romande Énergie, Re Power and Società Elettrica Sopracenerina SA (SES), as well as a 15% interest in the pumped storage power plant project, Nant de Drance, in which it retains a 39% stake. Along with the transfer of its very high-voltage network in exchange for securities and receivables, these disposals earned Alpiq a combined sum of over CHF1.5 billion.

In addition, to reinforce its capital structure, Alpiq placed a hybrid bond for CHF650 million on the market in May 2013 and signed a hybrid loan of CHF366.5 million with its main Swiss shareholders.

Thus, the disposals combined with hybrid financing and operating cash flow enabled Alpiq to reduce its net debt, which fell from CHF4 billion in 2012 to CHF2 billion in 2013. Furthermore, due to optimisation of its financial commitments and early repayment of certain obligations, in 2014 Alpiq further reduced its net debt to CHF1.6 billion.

In the face of new market conditions and the transformation of the energy sector, Alpiq has pursued its strategic goals which involve developing its position in the distributed energy resources sector and in energy services. This is demonstrated, in particular, by its acquisition of Flexitricity, a Britain's leading network services management company and the development of a GridSense offering providing intelligent energy consumption management technology for buildings.

Following the disposals and the significant restructuring and cost-cutting programme, Alpiq managed to close the 2013 financial year with positive earnings of CHF18 million, despite further impairment losses amounting to CHF275 million. While market conditions remain difficult, Alpiq has continued with its restructuring and cost-cutting efforts and has sold its 49.9% stake in Swissgrid, in addition to part of its shareholder's loan for an amount expected to be in excess of CHF360 million. As with other Swiss energy companies, Alpiq has recorded additional impairment losses, particularly on Swiss hydropower, amounting to CHF1,047 million after taxes, resulting in a net negative result after exceptional effects of CHF902 million.

6.3.3.1.6 Austria

Austria is located at the centre of electricity and, especially, gas interconnections on the European network. It is strongly integrated in the German market and, in that respect, is of interest to foreign investors. Hydropower plants account for 70% of Austrian electricity generation capacity.

EDF International owns 25% of the holding company Energie Steiermark AG (Estag) (corresponding to a non-controlling interest with blocking power under Austrian law). The Austrian state of Styria owns the remaining Estag shares, and has entered into a shareholders' agreement with the EDF group, giving EDF greater powers than those afforded by its non-controlling interest with blocking power. Estag heads a group of Austrian companies operating in the fields of energy and associated services. Centred in Styria, the Estag group is also developing its business in other Austrian states and in some neighbouring countries.

In January 2013, Estag acquired Verbund's 34.57% shareholding in Stewea-Steg (SSG), one of the Estag group's main subsidiaries and the leading electricity distribution and supply company in the state of Styria. Following this acquisition, as a result of which Estag now directly or indirectly holds 100% of SSG's equity, in 2014 the Estag group was restructured so that it is now organised around the group's businesses and activities along the value chain, as opposed to the previous structure organised by type of energy.

6.3.3.1.7 Spain

At 31 December 2014, the EDF group held 31.48% of the equity of Elcogas. Elcogas operates an ICCG (Integrated Combined-Cycle Gasification) power station at Puertollano with a gross capacity of 320MW powered by the gasification of local coal and petroleum coke (petcoke). Besides natural gas, this facility allows the use of coal and petroleum coke, which produce atmospheric emissions that are far below European standards. At the present time, this facility is the largest solid fuel power station of its kind in the world. In 2014, Elcogas produced 892GWh¹, including 753GWh generated by ICCG. Since 2010, the Puertollano installation has included a pilot unit for CO₂ capture and for hydrogen production. This is the world's first industrial sized pilot project associated with an ICCG. With a capacity of 14MWth, the pilot unit can handle 2% of the syngas produced by the gasifier, capturing 4.17 tonnes of carbon dioxide and producing between 83 and 207.5 kilograms of hydrogen per hour. The process involves pre-combustion capture, upstream of the combustion turbine, based on chemical absorption using activated amines.

The Group is also present in the Spanish market through the local subsidiary of EDF Énergies Nouvelles (see section 6.4.1.2.2 ("EDF Énergies Nouvelles")) and that of EDF Fenice, namely, Fenice Instalaciones Iberica (see section 6.4.1.3.2 ("EDF Fenice")). EDF Trading operates in this market from its trading platform in London (see section 6.4.1.1.2 ("EDF Trading")).

6.3.3.2 North America

The EDF group operates throughout the North American continent, with a strong presence in the United States.

6.3.3.2.1 North American markets

6.3.3.2.1.1 United States of America

With a total electricity production of 4,089TWh in 2014², the USA is one of the world's largest electricity markets. In 2014, the US electricity generation mix was comprised of 39.6% coal, 27% natural gas, 19.2% nuclear, 12.9% renewable energy and 1.3% from other sources of energy. Relative fuel costs

and polar vortex during winter 2013/14 have favored coal-fired generation over natural gas, respectively +2.2% and -0.8% from last year. Non-hydro renewables generation surpassed conventional hydro generation on an annual basis for the first time in 2014.

In the first-half of 2014, utility-scale additions were 40% less than the capacity additions of 2013, from 7,249MW to 4,350MW. While natural gas additions were down by about a half, only 2,319MW in 2014, and any new coal power plant came online, solar additions were up by nearly 70%, and wind additions were up by 105%, to reach together 1,821MW of new capacity. Around 28% of new capacity came online in Florida, all of it was natural gas, followed by California with 1,100 MW of additions, of which about 77% was solar and 21% was wind.

Growth in electricity demand should slow as rising electricity demand is offset by energy-efficiency policy and related investments. By 2040, electricity demand will grow by 29% to reach 4,954TWh³. The future electricity needs will require the provision of additional capacity of 351GW between 2012 and 2040. Over the same period, the Energy Information Administration (EIA) is forecasting the removal of 97GW of capacity, mainly in coal. By 2040, natural gas is expected to account for 73% of capacity additions, compared with 24% for renewable energy, 3% for nuclear and 1% for coal.

EIA is forecasting that in 2040⁴, the generation mix will be composed by 35.2% of natural gas, 32% by coal, 16.3% of renewables and 15.5% of nuclear. EIA's projections of nuclear capacity and generation are influenced by assumptions about the potential for capacity updates, new licensing requirements, future operating costs, and outside influences such as natural gas prices and incentives for other generating technologies. Power prices remain relatively low due to low natural gas prices and low demand: by 2040, nominal average price will observe an annual growth of 2.3%.

Both on international and federal level, the battle against global warming is at the heart of the current Administration's policy. In June 2014, the Environmental Protection Agency ("EPA") proposed the "Clean Power Plan" establishing national carbon emission rate goals: by 2030 an approximate 30% reduction of power sector CO₂ emissions from 2005 levels. Four building blocks have been identified to achieve this goal: a unit-specific heat rate efficiency improvement of 6% on coal, a re-dispatch from coal-based to CCGT at 70% capacity factor, an expanded use of renewables and nuclear, and an expanded use of demand-side energy efficiency to idle by 1.5% per year electricity consumption. The final rule is expected for summer 2015, and implementation planning will then rely on States. While current fuel prices are not favorable for nuclear development, Clean Power Plan's goals rely on the availability over the long-term of the current nuclear fleet.

According to the EIA, the United States became the leading producer worldwide of oil ahead of Saudi Arabia in 2013 and of natural gas in 2014 ahead of Russia. The US is also set to become a net exporter of liquefied natural gas in 2016, and an overall net exporter of natural gas in 2018. After reaching its lowest level since 1999 in April 2012 at \$2.34/MMBtu, the price of Henry Hub natural gas rose to \$4.4/MMBtu in 2014 and is expected to reach \$7.65/MMBtu (nominal) in 2040, corresponding to an average annual growth rate of 2.15%.

1. Figures on 100% basis.

2. Energy Information Agency, Short-Term Energy Outlook, February 2015.

3. IHS Rivalry, North America Power Market Outlook, February 2015.

4. Energy Information Agency, Annual Energy Outlook, April 2014.

6.3.3.2.1.2 Canada

In 2014, power production in Canada stood at 592.3TWh, a decrease of 0.4% since last year. The generation mix in 2014 was composed by 57.5% of hydro, 16.2% of nuclear, 11.3% of coal, 8.9% of gas and 6.1% of other renewables¹. Electricity generation in Canada is more than 80% CO₂-free and Canada ranks 3rd in global hydroelectricity generation after China and Brazil.

Electricity networks in Canada and the US are highly integrated, enabling the US to benefit from the stability of the Canadian market.

On the other hand, the Canadian electricity market is structured by province and is relatively fragmented, due in particular to the decisive role of provincial policies in terms of carbon emissions and renewable sources of energy. For example, the provinces of Ontario and Quebec, which together account for over 55% of the Canadian market, do not have the same energy mix targets. In Ontario, the government is committed to ensure that more than 40% of the energy mix continues to come from nuclear energy. In Quebec, due to the new system of reliability standards regarding electricity transmission implemented in 2009 and the retirement² of the only nuclear power plant, Gentilly 2, in December 2012, the Régie de l'Énergie (the organization that regulates the energy sector) approved a large-scale investment plan to renovate the entire electricity grid³.

The share of nuclear energy in the Canadian energy mix currently stands at approximately 15%. The National Energy Board estimates that this share will fall to 12% of the energy mix in 2035⁴, due to the development of wind farms and gas-fired power plants. By 2040, the electricity demand will grow by 29% to reach 708TWh and the generation capacity will grow by 20%. Around 12.8GW of capacity will be retired, 6.7GW from the coal fleet and 3GW from the nuclear fleet (retirement of the Bruce Nuclear Power Plant scheduled in 2019). More than 47.9GW of new capacity will be added over the same period, including 12GW of combined-cycle power plants, close to 12GW of hydro and more than 12GW of wind onshore⁵.

Aware of the opportunity presented by growing demand in Asia-Pacific markets, Canada is determined to play a significant role in supplying global demand for gas and oil. To achieve this objective, Canada needs to secure its commercial relationships with its Asian partners and develop major international infrastructures to export hydrocarbons while attracting foreign investors into the energy industry. As the government has limited foreign shareholdings in Canadian oil sands since December 2012, foreign companies are now focusing on export opportunities via the Gulf of Mexico and the possible Keystone pipeline or via the export terminals on the Atlantic and Pacific coasts.

6.3.3.2.1.3 Mexico

In Mexico, the public electricity system had an installed capacity of 54.4GW in 2014, and gross output of 258.3TWh⁶. Most of Mexico's power generation comes from thermal power plants, which make up 78.3% of its energy mix. The rest of the generation mix is composed by 14.8% of hydro, 3.7% of nuclear and 3.1% of other renewables. While natural gas is playing an increasingly important role in the Mexican energy mix, Mexico remains a net importer of natural gas, particularly from the United States.

In August 2014, eight months after the Mexican parliament voted in a series of amendments to restructure the oil, gas and electricity sectors, the Mexican President signed a set of laws that will implement a framework for an open and competitive electrical power industry in Mexico. The three entities that will be most impacted by the reforms are the National Center for Energy Control (CENACE), the Energy Regulatory Commission (CRE) and the Federal Commission of Electricity (CFE). CRE's role will be similar to those of state public utility commissions in the U.S., authorized to certify new generation facilities. CENACE will be moved out from under CFE and provided an independent role to match electric energy supply and demand, as the US RTO/ISO. The CFE will have to become a "productive state enterprise", able to compete with private companies.

The high prices of electricity for business and industrial companies, together with the favourable conditions of bank loans, make wind energy competitive, without the need for subsidies. The federal government aims to increase the share of renewable energy in the energy mix to 7.5% by 2017.

6.3.3.2.2 The EDF group's activities in North America

The EDF group has more than 4.5GW of installed capacity in North America. It also manages, on behalf of third parties, around 28GW of installed capacity under operation and maintenance or optimisation services contracts.

EDF's activities in North America mainly include:

- investments in nuclear generation, by owning 49.99% of three nuclear power plants operated by Exelon, the largest nuclear operator in the U.S, with a total installed capacity of 3.9GW (i.e. 1.95GW consolidated by the EDF group);
- renewable energies, with a net capacity of 2.56GW in the US, mainly through EDF Renewable Energy, a wholly-owned American subsidiary of EDF Énergies Nouvelles. Equally, EDF Renewable Services (a wholly-owned subsidiary of EDF Renewable Energy) manages close to 9.4GW in North America through operation and maintenance (O&M) contracts on its own account or on behalf of third parties;
- trading and management of energy assets across the entire value chain in North American gas and electricity markets, through EDF Trading North America.

6.3.3.2.2.1 Existing Nuclear business unit: Constellation Energy Nuclear Group (CENG)

On 6 November 2009, the EDF group and CEG established Constellation Energy Nuclear Group. Since the merger between Exelon and CEG, EDF and Exelon have owned stakes of 49.99% and 50.01% respectively in CENG. In July 2013, EDF and Exelon agreed to transfer the operating licenses of CENG to Exelon. The transaction was closed on 1st April 2014. As CENG comes under Exelon management on July 14, 2014, CENG employees become employed by Exelon. Under the terms of this project of agreement, CENG has paid EDF US\$400 million in special dividends and EDF has a put option to sell its CENG shares to Exelon at fair market value between January 2016 and June 2022.

1. Canadian Electricity Association, Key Canadian Electricity Statistics, June 2014.

2. Hydro-Québec, Refurbishment project for the Gentilly 2 nuclear power plant – Appendices, October 2012.

3. Régie de l'Énergie, Québec Energy Tribunal, 2013.

4. Canadian Chamber of Commerce, Electricity In Canada: Smart Investment to Power Future Competitiveness, January 2013.

5. IHS Connect, North American Market Fundamentals, August 2014.

6. Subsecretaria de Electricidad website, Estadísticas del Sector Eléctrico, visited on November 19, 2014.

Organization and governance rules of CENG

CENG is governed by a Board of Directors of ten members, five of whom are appointed by the EDF group and the other five, including the Chairman, by Exelon.

After receipt of the approval of the US Nuclear Regulatory Commission (NRC), EDF has finalised on 1 April 2014 its transaction regarding CENG, on terms set forth in the agreement with Exelon dated 29 July 2013.

Under the terms of this agreement, Exelon, America's leading nuclear operator, has the operator license and ensures the operational management of the five nuclear reactors owned by CENG (spread across three sites in Maryland and New York State, representing a total output of 4.17GW).

CENG's nuclear activities (nuclear electricity generation and operation)

CENG's nuclear business is undertaken within a historically predictable regulatory environment, under the control of the US Nuclear Regulatory Commission (NRC).

Capacity

CENG owns and operates five nuclear reactors, spread across three operating sites. The power plants, which have a combined capacity of 4,167MW, are shown in the table below. The duration of licences for Units 1 and 2 of Calvert Cliffs, Unit 1 of Nine Mile Point and RE Ginna has been extended from 40 to 60 years.

Reactors	Location	Capacity (in MW)	% interest	Company-owned capacity (in MW)
Calvert Cliffs 1	Calvert County (Maryland)	863	100	863
Calvert Cliffs 2	Calvert County (Maryland)	850	100	850
Nine Mile Point 1	Scriba (New York)	630	100	630
Nine Mile Point 2 ⁽¹⁾	Scriba (New York)	1,242	82	1,019
R.E. Ginna	Ontario (New York)	582	100	582
TOTAL		4,167		3,944

(1) CENG owns 82% of this unit (i.e. 1,018.6MW of the unit's total capacity of 1,242.2MW). The 18% of Unit 2 of Nine Mile Point not owned by CENG belongs to the Long Island Power Authority ("LIPA"). LIPA receives 18% of the capacity and electricity generated by Nine Mile Point Unit 2, in consideration for payment to CENG of its share of the costs incurred by the unit, and is responsible for its 18% share of costs of dismantling the unit. CENG and LIPA are each required to provide specific funding for Nine Mile Point 2.

Output and technical performance

CENG's stations produced 32.5TWh of nuclear electricity as of 31 December 2014.

(In TWh)	Output		Load factor	
	2014	2013	2014	2013
Calvert Cliffs 1	6.9	7.8	88.4%	99.7%
Calvert Cliffs 2	7.4	6.4	98.0%	85.9%
Nine Mile Point 1	5.4	4.9	100.5%	90.0%
Nine Mile Point 2	8.0	9.0	87.2%	97.0%
RE Ginna	4.7	5.0	92.4%	98.9%
TOTAL ⁽¹⁾	32.5	33.1	N.A.	N.A.

(1) These values correspond to the sum of the exact values expressed to one decimal place after rounding.

Nuclear Safety

Nuclear safety is the overriding priority of CENG's nuclear power stations. CENG management has set permanent monitoring and management reviews to ensure high reliability and safety of the plants.

Nuclear fuel

Supply of nuclear fuel

The supply of fuel for nuclear power stations includes the purchase of uranium, the conversion of uranium concentrates to uranium hexafluoride, uranium hexafluoride enrichment and the manufacture and transportation of nuclear fuel assemblies, for both pressurised water reactor (PWR) and boiling water reactor (BWR).

Manufacture of nuclear fuel assemblies

CENG has concluded long-term contracts for the purchase, conversion and enrichment of nuclear fuel, as well as for the manufacturing of fuel

assemblies. These commitments should enable it to have sufficient quantities to meet its estimated needs for future years. The nuclear fuel markets are competitive markets and sometimes experience volatile prices, but the Group's management does not foresee any problems meeting its future supply needs.

Storage of spent nuclear fuel – Federal facilities

The Nuclear Waste Policy Act (NWPA) of 1982 requires the federal government, through the Department of Energy (DoE), to develop a repository for the disposal of spent nuclear fuel and high-level radioactive waste. In accordance with the NWPA and with the standard contracts agreed between CENG and the DoE, CENG was bound to pay the DoE one thousandth (0.001) of one dollar per kilowatt-hour of its net nuclear power output to pay the costs of highly-radioactive waste (the DoE tax). This expense was recorded as "DoE tax of nuclear waste repository". However, even though the NWPA and the contracts agreed between CENG and the DoE mention that the DoE should have taken charge of the highly-radioactive nuclear waste by 31 January 1998, at the latest, this deadline

was not respected. The DoE's delay has meant that CENG has had to take measures with additional costs to arrange and maintain the storage of spent fuel on site at its three nuclear sites. CENG has put intermediate spent fuel storage installations (ISFSI) at its sites, which will be maintained as needed. The NRC has issued a policy that allows storage of spent fuel on site until a final solution for permanent repository.

Storage of spent nuclear fuel – On-site facilities

The Calvert Cliffs nuclear power plant has been operating an independent spent fuel storage site on its own site since 1992. It has been granted a 40 years extension of operation in 2014 by NRC. The installation of two independent fuel storage units was completed in 2010 and 2012, at the Ginna and at Nine Mile Point sites respectively.

Cost of decommissioning nuclear facilities

CENG is obliged to decommission its nuclear power plants after these plants cease operation. In accordance with NRC Regulations and relevant state requirements, CENG has established reserves exclusively dedicated to cover the cost of plant decommissioning. CENG's Investment Committee decides on the general investment strategy of these reserves, including the allocation between the various asset classes. NRC controls the adequacy of nuclear decommissioning fund.

6.3.3.2.2.2 Nuclear development: Unistar Nuclear Energy (UNE)

On 27 February 2015, further to the request made by AREVA to the Nuclear Regulatory Commission (NRC) to suspend the review of the US EPR Design Certification, UNE requested that NRC suspends the review activities for the Calvert Cliffs Unit 3 Combined License Application (COLA). During the suspension period related to the review activities of COLA, the development of the Group's nuclear activity in the US is stopped.

6.3.3.2.2.3 EDF Trading in North America

EDF Trading operates in the North American markets for electricity (including financial transmission rights), gas, coal and environmental products. The entity is also involved in the optimisation of assets relating to electricity, gas and environmental products. EDF Trading is one of the largest providers of energy management services on the electricity and gas wholesale markets in North America (see section 6.4.1.1.2 ("EDF Trading")).

Electricity and gas businesses

In North America, EDF Trading is one of the main providers of energy management services to power generation companies in the US and Canada. Its services include fuel supply, market analysis, hedging operations and interface with independent system operators (ISO). EDF Trading North America handles 21GW of electricity generation (63 plants spread out across the US), which includes the nuclear assets of EDF Inc. and EDF Renewable Energy wind farms in Texas. Its broad range of services makes it a key player in the largest electricity hubs in North America. EDF Trading is one of the top five gas marketers in North America. It holds pipeline agreements throughout the USA, Canada and into Mexico and dispatches to market an average of 7.62 billion cubic feet per day. In 2014, the team added 950MW of generation across three facilities including its first energy management agreements in Florida, Alabama and Louisiana.

Gas generation business

EDF Trading Resources is a company dedicated to the acquisition and development of gas generation assets in the USA. The company acquired its first gas production assets in 2012 in East Texas and now has around 500 producing wells. In 2013, it formed a joint venture in the Marcellus region with Alpha Natural Resources and this project is continuing to develop its land acreage position. The project received its first drilling permit in 2014.

Environmental products business

EDF Trading's products include renewable energy certificates (RECs), biogas, carbon emissions and credits, and weather derivatives. EDFT works in partnership with renewable energy producers, helping them to monetize certificates generated by their green electricity production. In 2014, EDF Trading expanded its REC business in Quebec and continued to develop its climate derivatives products.

EDF Energy Services

EDF Energy Services is EDF Trading's dedicated business for large industrial players operating in the North American electricity, gas and environmental products markets. This business operates in 13 states and provinces in the US and Canada. Many of these large customers are European or also present in Europe, which allows EDF Trading to service them on the different markets they operate on. In 2014, the business expanded into new regions including Ohio and Pennsylvania and is now ranked no. 10 non-residential retail electric provider in North America.

Coal and freight business

EDF Trading has a fully integrated coal and freight business, with numerous supply sources across the globe. EDF Trading North America provides support to EDF Trading team based in London, managing the coal export activity on the North American market.

6.3.3.2.2.4 EDF Énergies Nouvelles in North America

EDF Énergies Nouvelles, through its subsidiaries EDF Renewable Energy, EDF Renewable Services, EDF EN Canada and EDF EN Mexico, continued its expansion in North America, commissioning 945.5MW of wind, solar photovoltaic and biogas capacity in 2014.

In parallel, EDF Énergies Nouvelles continued its dynamic asset optimization policy by divesting of in a portion of seven of its assets in the region, for an equivalent net capacity of 400MW.

EDF Renewable Services, a subsidiary of EDF Renewable Energy, manages wind and solar projects, both for the company's own accord and on behalf of third parties, with a total capacity of more than 9.3GW at 31 December 2014. EDF Renewable Services experienced a 27% growth rate across North America mostly due to robust business development activities in Canada in the solar photovoltaic sector growing the business here by 237MW (170%).

United States

The Group is present in the US through EDF Énergies Nouvelles' wholly owned subsidiary EDF Renewable Energy, an independent producer of renewable energy. As at 31 December 2014, EDF Renewable Energy had 2,229.9MW of gross installed wind, solar, biogas and biomass capacity (1,870.3 net) in the US. In 2014, EDF Renewable Energy commissioned the Spinning Spur 2 (161MW) and Hereford (200MW) Wind Projects in Texas; Lancaster Solar (5.9MWp) and Lepomis Solar (6.0MWp) in Massachusetts; and 1MW out of the 20MW Heartland Biogas Project was put into service.

Canada

In 2008, through the Saint-Laurent Énergies consortium, EDF Énergies Nouvelles won a call for tenders issued by Hydro-Québec for the building of five wind fleets with a total capacity of 954MW in Quebec. Three wind projects were put into service in 2012: Saint-Robert-Bellarmin (80MW), Massif du Sud (150MW) and Lac Alfred Phase I (150MW). The Lac Alfred Phase 2 wind fleet (150MW) was commissioned in 2013. The fourth project Rivière du Moulin (350MW), the largest of the implementation programme, which started its construction in 2014 and phase I (150MW) was commissioned in late November 2014. The fifth project, Mont Rothery (74MW) is also under construction. Two other projects, Granit and La Mitis, with a combined capacity of 50MW, drawn up following a call for tenders by Hydro-Québec won in December 2010, were also commissioned in 2014. EDF EN Canada, through a joint partnership with Enbridge, acquired Blackspring Ridge (300MW) in the province of Alberta in 2013 and met aggressive constructions schedule to commission the project in June 2014. EDF EN Canada has also the solar generation Arnprior Solar Project, with a generation capacity of 23.4MW located in the province of Ontario. Through the DSSA (Development and Sale of Structured Assets) program in Canada, investment partnerships have been forged to allow divestments in Quebec portfolio. End of 2014, the total installed capacity of the Group in Canada reached 487.8MW gross or 463.8MW net.

Mexico

In Mexico, a country with considerable wind development potential, EDF EN Mexico has commissioned the last phase of the EDP-Santo Domingo project (60MW out of 160MW), in the Oaxaca State. Santo Domingo and Bii Stinu are jointly owned (50/50) with the Japanese Mitsui & Co Group. As of end-2014, the Group has a total installed capacity in Mexico of 391.5MW gross (229.5MW net).

6.3.3.3 Asia-Pacific

The EDF group's activities in the Asia-Pacific area are focused on China and fast developing countries in South and South-East Asia.

Investment in the electricity generation sector in Asia, particularly in China, is a major industrial venture for the EDF group. In nuclear power, in addition to the project to build and operate two EPR reactors in Taishan, China, new projects in this region should provide the Group with access to technological innovation and enable it to develop its industrial expertise. EDF's objective is, thus, to maintain its competitive and technological advantages in the international arena so that it may promote the global nuclear programme, equip emerging countries and renew the French fleet.

6.3.3.3.1 EDF group's activities in China

The EDF group has been present in China for 30 years through its advisory services in nuclear, thermal and hydropower technologies. Today it is one of China's most significant foreign investors in power generation, with investments in coal-fired thermal facilities that have a total installed capacity of 6,980MW¹. With the Taishan project Phase I (two 1,750MW reactors), EDF became an investor in an electricity generation project involving an EPR nuclear power plant. EDF has also formed partnerships offering new investment opportunities in nuclear power, the most technologically advanced coal-fired thermal facilities, gas plants, hydropower, electricity distribution and energy efficiency.

Nuclear power generation activities

Daya Bay, Ling Ao and Taishan EPR phase 1 power plants

Having led the design, construction and commissioning in 1994 of Daya Bay (two 1,000MW nuclear reactors), and subsequently assisted the Chinese group, China General Nuclear Power Co. (CGN), with the construction of two units at the Ling Ao Phase I power plant (two 1,000MW reactors), commissioned in 2002 and 2003, respectively, EDF now provides operational support to the CGN group and, in particular, to Daya Bay Nuclear Operation and Management Co. Ltd. The performance achieved by these power plants since commissioning is one of the Group's main benchmarks in China.

EDF also provided assistance to a subsidiary of CGN, China Nuclear Power Engineering Company Ltd. (CNPEC) on the Ling Ao project, phase II which involved the building of two 1,000MW units on that site. The two Ling Ao Phase II units were commissioned in September 2010 and August 2011 respectively.

At 31 December 2014, EDF owned a 30% shareholding in Taishan Nuclear Power Joint Venture Company Limited (TNPJVC), which was set up to fund, build and operate two EPR nuclear reactors in Taishan, in the province of Guangdong. The company will have a 50-year life span, the maximum period currently authorised in China for a nuclear power joint venture. Through this transaction, the Group has become the first and currently the only non-Chinese investor in Chinese nuclear power generation.

By end-2014, the construction of buildings and the manufacture and supply of the main equipment items had been completed, for both units, and the electro-mechanical assemblies are proceeding at a steady pace. The project's success will rest on the complementary expertise of the EDF group and CGN.

Partnership agreements

The General Partnership Agreement (GPA) between EDF and CGN, signed in 2007, was complemented in 2014 by implementation of agreements related to engineering, R&D and plant operation. EDF has set up a facility in Shenzhen, with the aim of promoting the EDF model of an integrated architect-assembler operator, while acting as a flagship for French industry. Experts in this facility are working, in particular, to further promote French codes of practice and standards, and EDF's nuclear safety guidelines.

On 25 April 2013, in the presence of the President of the People's Republic of China and the President of France, EDF signed an agreement with CGN and AREVA, laying down the conditions for the launch of future reactors and setting out EDF's contribution to the operation and development of CGN's fleet. EDF also signed a partnership framework agreement, on 29 April 2010, with China National Nuclear Corporation (CNNC), which was extended in March 2014, aimed at developing their cooperation along deeper, global lines.

The partnerships with CGN and CNNC have allowed discussions to take place concerning their participation in the Hinkley Point C project (see section 6.3.1.4.3 ("Nuclear New Build business unit")): a protocol to encourage industrial cooperation between EDF, CGN and CNNC in the British nuclear market was signed on 26 March 2014, during the visit of the President of the People's Republic of China to France.

Coal-fired thermal power generation activities

EDF has been involved in coal-fired power generation in China since 3 September 1997, when the Laibin B power plant concession contract was signed and approved by the Guangxi government.

¹. Figures on 100% basis.

French Investment Guangxi Laibin Electric Power Company, Ltd. (Figlec).

At 31 December 2014, EDF owned 100% of French Investment Guangxi Laibin Electric Power Company, Ltd. (Figlec), the company that owns the Laibin B power plant (2 × 360MW of installed capacity), in the province of Guangxi, and 85% of Synergie, the company responsible for its operation and maintenance, with the remaining 15% held by local partners. Laibin B was commissioned in November 2000 as part of a Build, Operate and Transfer (BOT) project, and will be transferred contractually to the Guangxi government in September 2015.

Shandong Zhonghua Power Company Ltd. (SZPC)

At 31 December 2014, the EDF group held a 19.6% stake in SZPC, which owns three coal-fired power plants in Shandong province, with a total capacity of 3,060MW. The other shareholders are the Guodian group and the Hong Kong electricity utility CLP. These power plants were commissioned progressively between 1987 and 2004.

Datang Sanmenxia Power Generation Company Ltd. (DSPC)

At 31 December 2014, the EDF group held a 35% stake in DSPC, owner of the Sanmenxia 2 power plant in Henan province, which was commissioned in 2007, with an installed capacity of 2 × 600MW, using a technology known as "supercritical coal". This investment was made through a joint venture with a fixed life span, established by the Chinese authorities, running until 2039. The other shareholders are two Chinese companies including Datang, the majority shareholder in DSPC.

Fuzhou Power Generation Company (FPC)

At 31 December 2014, the EDF group held a 49% stake in FPC, a joint venture formed in 2014 by EDF and a subsidiary of the Datang group to build and operate an "ultra-supercritical" coal-fired power plant in Jiangxi province. Construction work began in 2014 and EDF teams have established a presence on site. The two 1,000MW units are scheduled for commissioning in 2016. Fuzhou will be the first "ultra-supercritical" power station operated by the EDF group.

China, which produces 75% of its electricity using coal-fired generation, is at the cutting edge of this technology which is essential to meet the country's energy needs while limiting its environmental impact through reduced pollutant emissions. As a result of this agreement, EDF has broad involvement in the industrial process of building and operating the future power station. The Group will be in a position to build on its thermal engineering and operation skills and to establish new industrial synergies with global leaders in the thermal power generation segment, such as Guangdong Engineering and Design Institute (GEDI), which is designing the power station, and Dongfang, the turbine supplier.

Hydropower generation activities

Present in this segment since 1985, EDF is a well-known player. The Group operated as consultant on several plants installed in China and is looking at investment opportunities or service offers that will respond to the needs on the Chinese side, where an ambitious hydropower programme is under development.

R&D activities

Three years after its creation, EDF's R&D centre in China is continuing to build up its network of scientific partners in that country, together with the R&D departments in France and the Group's other international R&D centres (see section 11.3 ("International and partnerships")). The centre's activities are focused on the generation of zero-carbon electricity, tomorrow's electricity network, sustainable cities and innovation. Digital simulation capacities are a major component in all of these fields.

Electricity distribution activities

Present in China since 2011, in 2014, EDF International Networks has signed technical support contracts in China concerning the planning and performance improvement of distribution networks in the Shanxi and Shaanxi provinces. EDF International Networks hopes to grow its business in China so that it may apply its expertise, methods and most effective tools to optimise network management and performance.

Prospects for development and new projects

The Group is studying opportunities to invest in new "supercritical" or "ultra-supercritical" coal-fired power plants with Chinese electricity operators.

In energy services, the contract signed in 2013 with Dongfeng Peugeot Citroën Automobile (DPCA) concerning energy efficiency for lighting, was extended in 2014. The Group also hopes to bring innovative solutions to industrial users and eco-districts by drawing on EDF's expertise in Europe, particularly in the fields of cogeneration, waste heat recovery and decentralised renewable energies (heat pumps, district solar, biomass and geothermal power).

6.3.3.3.2 EDF group's activities in South-East and South Asia

The EDF group's activities in South-East Asia and in South Asia are focused on the development of the electricity sector, particularly through involvement in projects for the design, construction and operation of new thermal and hydropower plants in countries offering opportunities to develop Independent Power Plants ("IPPs"), such as the Nam Theun 2 complex in Laos and the Phu My 2.2 combined-cycle gas plant in Vietnam.

6.3.3.3.2.1 Vietnam

At 31 December 2014, EDF owned 56.2% of Mekong Energy Company Ltd. (MECO), which owns the Phu My 2.2, combined-cycle gas power plant, with a capacity of 715MW, commissioned in 2005. This is the first IPP project financed exclusively by foreign investors in Vietnam. The other shareholders are the international subsidiaries of the Japanese companies Sumitomo Corporation (28.1%) and Tokyo Electric Power Company, Inc. (Tepco) (15.6%). The BOT (Build, Operate, Transfer) contract has a term of 20 years. In 2005, EDF provided "turnkey" delivery of the power plant, and operations are now managed by MECO.

6.3.3.3.2.2 Laos

At 31 December 2014, the EDF group held a 40% stake in Nam Theun 2 Power Company (NTPC), which owns the hydropower complex Nam Theun 2 with an installed capacity of 1,070MW, built by the EDF group under a "turnkey" contract, and commissioned in 2010. The other shareholders are a Thai company, EGCO (Electricity Generating Public Company Limited), which holds 35%, and a Lao State company, LHSE (Lao Holding State Enterprise), which holds 25%. NTPC operates the plant on a 25-year concession, under a concession contract concluded with the government of Laos. 95% of the electricity generated is sold to Thailand and 5% to Laos.

6.3.3.3.2.3 Hydropower and thermal power generation activities

The EDF group has expressed interest in participating in studies and the development of electricity generation projects in Nepal, Cambodia, Laos, Myanmar, Indonesia and the Philippines.

6.3.3.3.2.4 R&D activities

In June 2013, an agreement was signed with the Singapore Housing and Development Board (HDB), Singapore city's largest construction firm, with the aim of developing an innovative urban modelling scheme. Thereafter, in 2014, the EDF group opened a centre of excellence for sustainable cities in Asia: EDF Lab Singapore (see section 17.2.2.9.1 ("Sustainable cities")). The purpose of this R&D centre, dedicated to urban planning, is to reinforce existing cooperative relationships and initiate new relationships for cooperation with Singapore and with other cities in the region.

6.3.3.4 Latin America, Africa and the Middle East

In Latin America, the EDF group is present in the Brazilian market, which is considered a priority country for the Group's international development. The Group's ambitions extend to certain countries in the area where it anticipates opportunities for development, such as Chile, Colombia, Peru or Mexico.

In Africa and the Middle East, the Group intends to tailor its operations according to the specific features of each geographic region, to ensure that it has a presence in high-growth countries offering new markets. Additionally, it continues its work providing access to energy.

6.3.3.4.1 Latin America

6.3.3.4.1.1 Brazil

On 11 April 2014, the EDF group acquired Petrobras' 10% stake in EDF Norte Fluminense, the company which built and operates (since end-2004) the Norte Fluminense combined-cycle gas power station, which has an installed capacity of 0.87GW and is located in the Macaé region of Rio de Janeiro State. The Group now wholly owns EDF Norte Fluminense, which sells 725MW annually to the Light distribution company (under a 20-year Power Purchase Agreement (PPA)), corresponding to about 6.3TWh per year. The remaining balance is sold on the open electricity market. EDF Norte Fluminense sold 130GWh in 2014.

EDF Norte Fluminense has an additional solar power plant, intended for industrial consumption, comprising 1,764 photovoltaic modules which generated 423MWh in 2014, helping to reduce its CO₂ emissions by around 250 tonnes a year.

In addition, on 11 December 2014, through its subsidiary EDF Norte Fluminense, EDF acquired a 51% stake in Compagnie Énergétique de Sinop (CES), which is responsible for the construction and future operation of Sinop's hydropower facilities. With an installed capacity of 400MW, this power plant will be positioned upstream of a series of hydroelectrical installations on the Teles Pires river, in the north of Mato Grosso State in Brazil (close to the city of Sinop). The two other shareholders are Eletronorte (24.5%) and CHESF (24.5%), subsidiaries of the Eletrobras group. Construction of the dam began in spring 2014 and commissioning for commercial operations is scheduled for the second half of 2017. The project's environmental and social studies and the associated management plans were approved by the Brazilian government in March 2014. The main plans concern the compensation of residents in the area affected by the hydropower installation, the partial deforestation of the reservoir area prior to its impoundment in 2017 and the conservation of flora and fauna that may be affected by the installations. The project does not affect on any indigenous territory or protected area. With a 51% stake in the consortium, the EDF group has an industrial role in both the construction and the future operation of the dam.

Technical and economic pre-feasibility studies for the Sao Luiz do Tapajos project (forming part of the complex of five hydroelectric facilities on the river Tapajos, with a total capacity of 10,682MW), have been submitted to the Brazilian authorities by a study group led by Eletrobras including EDF and eight other partners. The work on the environmental and social studies, a major concern of the Group, has also been completed and a report (EIA/RIMA) has been submitted to the Brazilian authorities. The report is currently under review and its approval is a prerequisite for the submission of a bid.

Finally, on 28 November 2014, EDF and AREVA submitted a joint response to the Request for Information issued by Eletronuclear addressed to companies potentially interested in taking part in its future nuclear programme.

6.3.3.4.1.2 Chile

In 2013, EDF signed a Joint Development Agreement with the Chilean project developer Australis Power, with the aim of developing a project combining the construction and operation of a CCGT power plant consisting of two 600MW units and one floating storage regasification unit (FSRU).

On 5 February 2014, EDF created EDF Chile, a company set up to identify and develop new projects and to anchor EDF's presence in the Chilean energy market.

6.3.3.4.2 Africa

6.3.3.4.2.1 South Africa

EDF has had a presence in Johannesburg since 2007 when it responded to a nuclear tender; the bid process was subsequently postponed in 2008 in view of the global economic crisis. EDF's continued presence in South Africa is now focused on the relaunch of South Africa's nuclear programme. The country's energy master plan, promulgated in May 2011, anticipates the commissioning of 9.6GW of nuclear power capacity between now and 2030.

The South African government plans to double the country's installed power generation capacity (from 44 to 89GW) by 2030, and remains committed to the inclusion of nuclear power in its future energy mix. Consequently, between September and November 2014, South Africa signed a number of intergovernmental agreements with the various countries that have put forward nuclear proposals. In that respect, delegations from these countries, including France, were invited by the South African government to present their expertise across the entire nuclear cycle. These steps are prerequisites for the launch of a call for tenders.

In other segments, EDF Énergies Nouvelles gained a foothold in the South African wind power market in the second round of renewable energy tenders launched in August 2011. The company was selected for three projects by the South African energy department. Construction of these projects began at the end of 2013, and the first one should be commissioned in 2015 (see section 6.4.1.2 ("New energies")).

EDF is also present in South Africa through KES (Kukhanya Energy Services), established in 2002 (see section 6.3.3.4.4 ("Access to Energy Mission")).

EDF is also exploring other fields, such as developing its technical and strategic partnership with the South African electricity utility Eskom, for the generation, transmission and distribution of electricity.

Finally, an EDF expert is managing the engineering training institute EPPEI (Eskom Power Plant Engineering Institute), which Eskom has been developing since 2011 and which will specialise in electricity production and, ultimately, in electricity transmission and distribution.

6.3.3.4.2.2 Morocco

EDF and Morocco's national electricity and water office (ONEE) continued their cooperation, in accordance with the agreement signed in January 2012. The two operators aim to set up and develop a solid and lasting partnership in all areas of the value chain, particularly in hydropower, thermal power and renewable energies. Their partnership also encompasses upstream/downstream optimisation, training and regional cooperation.

In Morocco, the consortium led by EDF Énergies Nouvelles in partnership with the Japanese group Mitsui & Co., was selected in a call for tenders launched by ONEE for the 150MW Taza wind project. Located in the north of Morocco, this project will be equipped with 50 Alstom turbines, each with a unit capacity of 3MW (see section 6.4.1.2 ("New energies")).

6.3.3.4.2.3 Senegal

Facing a very serious crisis in its energy sector, the Senegalese government asked EDF for assistance in diagnosing the situation and defining an emergency plan to re-establish a long-term service quality.

Currently, EDF's efforts focus on renovating the generation fleet of Sénélec (the Senegalese National Power Company), which will help to limit the use of the least well-performing producers.

6.3.3.4.2.4 Cameroon

EDF is developing the Nachtigal project, which aims to reach a decision, by 2016, concerning investment in the construction of a dam and power plant with 420MW of capacity. The energy will be for sale in Cameroon's domestic market.

6.3.3.4.2.5 Republic of Congo

On 3 June 2013, EDF signed a three-year service agreement with the Congolese Ministry of the Economy and Finance to reduce the technical and commercial losses of the national electricity company, SNE.

6.3.3.4.2.6 Ivory Coast

EDF is developing a project for a biomass electricity power plant with two 23MW units, in partnership with SIFCA, the leading Ivorian agro-industrial group in West Africa. EDF intends to have a cross-functional industrial role in this project, assisted by various group entities: developer-investor, contractual partner for the construction and supply of equipment, operating under a power purchase agreement signed with the Ivory Coast government.

6.3.3.4.3 Middle East

The EDF group is present in the Middle East through its subsidiary, EDF Abu Dhabi, which provides engineering and consultancy services for transmission works, dispatching and network studies in the United Arab Emirates. In addition, in the summer of 2014, the Group's International Development department set up a "Middle East" regional department there, with the intention of developing the Group's activities in this geographic region, particularly with regard to major electricity power plant projects.

6.3.3.4.3.1 Saudi Arabia

EDF and AREVA opened a joint office in Riyadh in June 2012 with a view to working with the Saudi government, which is planning to develop an energy policy that focuses on replacing fossil fuels with nuclear power and renewable energy sources (solar power). Kacare (King Abdullah City for Atomic and Renewable Energy) is the entity in charge of developing this programme.

Together, the two companies are leading work to evaluate the local industrial fabric and the educational system, in order to prepare for the launch of a nuclear programme.

In June 2014, EDF signed a partnership agreement with the Saudi Electricity Company (SEC), which is the country's leading electricity sector operator. This agreement paves the way for broad cooperation between the two groups.

6.3.3.4.3.2 Israel

In Israel, where the Group has only recently started operations, EDF is supporting the development initiatives of its subsidiary, Edison, in the gas sector and hopes to develop other activities there in engineering, operation and maintenance, as part of electricity generation projects. EDF Énergies Nouvelles is also present in Israel (see section 6.4.1.2 ("New energies")).

6.3.3.4.4 Access to Energy Mission

Since 2001, the Group has been pursuing a programme to provide access to energy in developing countries. In rural areas often far from electricity networks, the programme operates by setting up decentralised energy service companies. In all of these operations, EDF acts in partnership with other international industrial players, such as Total, or local companies such as Calulo in South Africa, BPC (Botswana Power Corporation) in Botswana and Matforce in Senegal. The idea behind this approach is for local players to take over and ensure the long-term durability of these projects when EDF is ready to sell its interests, once it considers that the conditions for a profitable and sustainable operation have been met. Part of the initial investment is financed by international financial institutions, by grants and/or loans from donors or by States.

In South Africa, the company KES (Kukhanya Energy Services) is 50% owned by EDF and 15% owned by a local operator, Calulo, the remaining 35% being held by Total. Created in 2002, KES initially developed its business through photovoltaic kits in Kwazulu-Natal, then extended its activities in the Eastern Cape region. At the end of 2014, KES supplied solar electrical power and domestic gas to more than 160,000 users, representing an increase of around 30% between 2013 and 2014.

In Botswana, EDF has been chosen by BPC (Botswana Power Corporation), the national electricity operator, to assist as its strategic partner in the implementation of its decentralised rural electrification programme, essentially using photovoltaic systems over the entire area. EDF holds 45% of BPC Lesedi, a local subsidiary owned jointly with BPC. Interest in pursuing this programme is now open to question due to BPC's difficulties.

In Senegal, EDF has a 70% shareholding in ERA, alongside its local partner, Matforce. ERA operates the rural electrification concession for Kaffrine-Tambacounda-Kédougou, which became operational in 2014 following receipt, at end December 2013, of the first tranche of a French Development Agency grant, through ASER¹, with a target to supply 180,000 users within three to four years. It currently supplies around 5,000 people in test villages.

1. ASER: Senegalese Agency for Rural Electrification (Agence sénégalaise de l'électrification rurale).

6.4 Other activities and cross-divisional functions

6.4.1 Other activities

The table below lists the EDF group's installed capacity and outputs in the Other activities segment at 31 December 2014¹:

	Installed capacity		Output	
	MW	%	GWh	%
Thermal	1,755	25	2,074	16
Hydropower	74	1	118	1
Other renewables ⁽¹⁾	5,221	74	10,670	83
TOTAL	7,050	100	12,862	100

(1) Including the entire EDF Énergies Nouvelles group.

6.4.1.1 Optimisation and trading

6.4.1.1.1 Roles and missions of the Group Commerce Optimisation Trading division

To improve cooperation between the Group's various Commerce, Optimisation and Trading entities, the division, "Group Commerce Optimisation Trading" (DCOTG), was created in 2012. Its main missions are as follows:

- promote the sharing of best practices and feedback in Commerce, Optimisation and Trading activities;
- identify Group-level synergies and opportunities to create value through cooperation between these businesses;
- consolidate certain specific skills at a European level, particularly the analysis of European energy market fundamentals;
- coordinate sales business to the EDF group's major European customers.

While strengthening the integration of the various geographical entities in the businesses concerned, the EDF group ensures that all geographical entities operate autonomously and are accountable for their results.

In terms of electricity, each country entity is responsible for optimising its upstream-downstream portfolio. Cooperation between national optimisers and EDF Trading has been strengthened, in order to capitalise more on the expertise of EDF Trading. The Group's DCOTG Division is tasked with fostering integration, as well as identifying and encouraging optimisation best practice within geographical entities.

It also has analytical expertise: analysis of energy market fundamentals in Europe and worldwide (fuels), production of long-term scenarios for these fundamentals and characterisation of the risk profile of the Group's consolidated portfolio.

For Commerce, DCOTG produces a consolidated analysis of the supply strategies of the Group's main entities and the related financial aspects. In addition, while taking into account the specific local aspects of each market, DCOTG works with the relevant Group entities on cooperation projects addressing Group-wide issues or with a medium/long term perspective,

such as in commercial offers, IT systems, the digital transformation, energy efficiency services and smart grids.

6.4.1.1.2 EDF Trading

EDF Trading is the interface between the EDF group and the energy wholesale markets. It provides optimisation and risk management services. The company is active in the wholesale markets for electricity, natural gas, gas production, LNG, coal and freight and environmental products. It also handles dedicated retail operations for end users in North America (see section 6.3.3.2.2.3 ("EDF Trading in North America")). In 2014, EDF Trading traded around 3,098TWh of electricity (Europe and the US), 304 billion therms of natural gas, 666 million tonnes of coal and 655 million tonnes of CO₂ (in emission certificates). EDF Trading is one of the largest wholesale market traders in Europe for electricity, gas and coal. It is one of the main providers of energy management services for power generation companies in the US and the fifth largest marketer of gas in North America. In 2014, EDF Trading exited the oil trading and transportation business, which was regarded as being too far removed from its and the Group's core businesses. The trading activities of EDF Trading are integrated into DOAAT's optimisation strategy and other Group's entities.

EDF Trading has offices in Europe, Asia and North America. Its registered office is in London. The company has around 1,000 employees.

A wholly owned subsidiary of EDF, it is governed by the UK's financial market regulator, the Financial Conduct Authority.

6.4.1.1.2.1 European electricity

EDF Trading is a leading participant in the European electricity wholesale market. EDF Trading manages EDF's long-term electricity export contracts and has a major role in optimizing and hedging the production and sales portfolio of EDF in Europe. EDF Trading provides risk management services including short-term and long-term structured hedging instruments. In 2014, EDF Trading expanded its operations in central and southeast Europe. The company is now the market maker for EDF Energy and has signed an exclusive market access agreement with EDF Polska.

1. The figures presented reflect the consolidation method used for each entity.

6.4.1.1.2.2 European gas

EDF Trading is also a leading player in the European gas wholesale market. EDF Trading manages EDF's and other Group entities' gas assets including production, transmission, re-gasification, long-term supply and storage. This enables it to support the EDF group and third party customers with complete gas wholesale market solutions.

EDF Trading works with Group entities to optimise their short term assets. In 2014, EDF Trading entered the Spanish gas market. It also expanded its storage optimisation operations in France, Germany and the Netherlands, while becoming increasingly active in Eastern Europe.

6.4.1.1.2.3 Environmental products

EDF Trading is active across the carbon, biomass, green energy and weather derivatives markets. It is a prominent participant in the trading of CER (Certified Emission Reduction) and ERU (Emission Reduction Units) credits and manages a large portfolio of CDM (Clean Development Mechanism) projects. The company is also involved in trading a broad suite of environmental commodities, including renewable energy certificates (RECs), biogas, emissions in the RGGI (Regional Greenhouse Gas Initiative, a cap and trade program for greenhouse gas emissions from power plants) and Quebec and Californian carbon markets, and weather derivatives in the US. It is also a significant supplier of biomass in the United Kingdom and Poland. In 2014, EDF Trading extended its range of weather derivatives, offering climate change protection and climate risk management products on behalf of the EDF group and third parties.

6.4.1.1.2.4 Liquefied Natural Gas (LNG)

EDF Trading offers a complete range of LNG services including supply and delivery and nominations into the appropriate network. EDF Trading entered the LNG market in 2014 by signing a long-term supply contract with Enterprise Products Partners LP (a leading midstream energy services provider) for LNG exports from the US coast in the Gulf of Mexico. EDF Trading has also signed ten new framework and service agreements for LNG. It worked closely with EDF on commissioning and supplying the Dunkirk LNG regasification terminal, which is due to be commissioned by the end of 2015.

6.4.1.1.2.5 Coal and freight trading

EDF Trading operates a fully integrated coal and freight trading business, with numerous supply sources across the globe. In 2014, EDF Trading continued the development of its joint venture with EDF Paliwa (see section 6.3.3.1.1.1 ("Poland")) for the supply and optimisation of the coal and biomass needs of the Group's Polish power plants. It also continued developing the joint venture with Chubu in Singapore, which will allow EDF Trading to expand its coal distribution in Australia.

6.4.1.1.2.6 North America

See section 6.3.3.2.2.3 ("EDF Trading in North America").

6.4.1.2 New energies

Renewable energies¹, particularly the new branches (wind, solar, biomass, geothermal and marine energy) have seen robust growth, particularly in Asia (China), Europe and the United States.

Worldwide, the combined installed wind capacity totalled 370GW at the end of 2014, almost 66GW of which was in the US and around 134GW in Europe. In 2014, more than 51GW of wind energy was commissioned worldwide, including around 23GW in China².

As regards solar photovoltaic power, total global installed capacity stood at close to 190GWp at the end of 2014, of which nearly 50GWp was from new capacity built in 2014³. Today, it is largely wind, solar and biomass that are driving growth in renewable energy. Hydropower generation is nearing its maximum potential in many developed countries, although it retains significant development potential in other parts of the globe (of the 103GW of new renewable capacity development expected worldwide each year, around 28GW is hydropower capacity⁴).

The EDF group is among the world's top five companies for renewable energy, with installed capacity of over 28GW (mainly in hydropower). Its aim is to develop all forms of renewables, focusing primarily on wind and solar power. The EDF group's commitments in terms of developing renewable energy are described in section 17.1 ("Corporate responsibility commitments").

6.4.1.2.1 Description of new energies

Wind power

A wind turbine uses the action of the wind to drive rotor blades connected to an electrical generator. There are various categories:

- onshore wind power. This is a mature sector which is now close to competing with, if not matching, traditional sectors, particularly in parts of Brazil. It benefits from economic incentives in various countries, although an increasing number of projects are developed without a financial support mechanism (see section 6.5.3 ("Electricity market legislation")). For every 1MW of installed capacity, average annual electricity output can vary from 2 to 4GWh, depending on the quality of the site and the type of turbine. On average, each turbine has a rated capacity of 2MW, a figure which is increasing steadily.

In 2014, France was ranked fifth in Europe for installed capacity⁵ (behind Germany, Spain, the UK and Italy).

The division responsible for developing wind power within the EDF group is EDF Énergies Nouvelles, which relies on the internal expertise of its teams throughout the value chain, for the development and construction of projects and for power generation and facility maintenance. The subsidiaries EDF Luminus and Edison also have wind farms in service. The EDF group generated 9.8TWh of wind-based electricity in 2014;

1. Renewable, or "green" energies, are derived from natural resources that are replenished quickly enough to be considered non-depletable in human terms.

2. Source: Global Wind Statistics 2014.

3. Source: Bloomberg New Energy Finance, Generation capacity.

4. Source: International Energy Agency, World Energy Outlook 2014 – New Policies Scenario.

5. Source: International Energy Agency, Medium-Term Renewable Energy Market Report 2014.

- a less mature, high-growth sector, offshore wind power demands a higher initial investment and is more expensive to connect to the grid than onshore wind power. Offshore operation and maintenance is also more difficult, and operators have less experience in this than with onshore wind farms. The advantages of this segment are the higher rated capacity of each wind turbine (3 to 6MW) and increased productivity due to more reliable winds (every 1MW installed generates 3 to 4GWh). The sector is on a learning curve that will enable it to reduce the cost differential with onshore wind generation. The EDF group has decided to ramp up its investment in offshore wind generation, which offers interesting development prospects, at least in two of the Group's key countries: France and the United Kingdom. Europe intends to build nearly 44GW¹ of offshore wind capacity by 2020, of which nearly 13GW will be in the UK and 6GW in France. To reach this latter target, the French government has issued two calls for tenders since 2011. The consortium led by EDF Énergies Nouvelles won three out of the four sites allocated in the first call for tenders, i.e. almost 1.5GW (see section 6.4.1.2.2 ("EDF Énergies Nouvelles")).

Solar photovoltaic power

The operating principle of solar photovoltaic power is to convert sunlight directly into electricity. Each photovoltaic cell is an electronic component which, when exposed to light, generates electricity. The cells are grouped into modules or photovoltaic panels.

Two technologies dominate the market: crystalline silicon technology, which is the most common, and thin-film technology, newer and cheaper to make, but less efficient.

Photovoltaic solar power is used in two ways: it can either be connected to the grid, or it can generate electricity at isolated sites. Grid-connected photovoltaic systems have witnessed steady growth around the world in two markets: ground-based solar farms and residential rooftop installations.

EDF Énergies Nouvelles is responsible for implementing the Group's development strategy in solar energy. At 31 December 2014, the subsidiary had 727MWp gross capacity in service. It is positioned in both markets: ground-based solar farms and rooftop installations. EDF ENR PWT (Photowatt brand), a subsidiary since 2012, is present in the silicon-based module production segment.

With a reduction in government subsidies in several European countries and Asian competitors exerting downward pressure on prices, the solar power market has seen several European operators disappear in recent years.

In 2013, the pace of growth in France of the photovoltaic market had slowed from previous years, with only 0.6GW connected, compared with over 1GW connected in 2012². Growth seemed to recover in 2014, with 0.7GW connected in the first nine months of the year.

The cost of generating solar power has fallen considerably in recent years. Solar power is now a competitive energy in an increasing number of regions of the world (Chile or California, for example). However, there is still considerable room for improvement. Innovative, disruptive technology is essential if costs are to come down even further, particularly for regions that have less sunshine.

EDF R&D also conducts research on photovoltaic technology at its Chatou site, under the aegis of the French Institute for Photovoltaic Power Research and Development (IRDEP), established in partnership with CNRS (National Centre for Scientific Research) and ENSCP (Paris National School of Chemistry).

Biomass and biogas

Technologies based on biomass mainly consists of burning certain types of waste, particularly from the timber and farming industries, or exploiting woodfuel forests, to produce heat or electricity.

Biofuels can come from a wide range of sources. There are three different energy streams: combustion plants for plant matter (wood, agricultural waste) or animal matter; biogas production plants (gas produced from the fermentation of organic animal or plant matter); household waste incineration plants.

In biomass, EDF Énergies Nouvelles has a gross capacity of almost 62MW: 26MW at its plant in Lucena (Andalusia), processing waste from olive plantations through its Spanish subsidiary, and 35.6MW at a plant (Pinelands) belonging to its subsidiary in the US, EDF Renewable Energy, which processes wood residues.

In biogas, EDF Énergies Nouvelles had a gross capacity of more than 78MW at the end of 2014: 27.2MW gross in operation in Europe through its subsidiary Verdesis, and a 51MW gross plant (Beacon) belonging to its US subsidiary, EDF Renewable Energy. For strategic reasons, Verdesis was sold to Dalkia on 11 February 2015, due to their close business proximity.

In Poland, EDF operates several co-combustion facilities (incorporating biomass in fossil fuels) for a total capacity of 183MW.

Through its holdings, notably in the Dalkia Group (see section 6.4.1.3.1 ("Dalkia")), the EDF group owns shares in France and abroad in several dozen heating networks and small-scale, mainly wood-fired generating plants. EDF also has a controlling interest in the company TIRU, which designs, builds and operates energy-from-waste plants. Its facilities in France, the UK and Canada account for a total installed capacity of 101MW, or 58MWe considered as renewable energy (see section 6.4.1.3 ("Energy Services")).

Geothermal energy

The temperature of the rocks in the earth's crust increases with depth (3°C on average every 100 metres). In some parts of the globe, geothermal energy reaches the surface in the form of hot springs, water or steam. The hot water is used directly in the form of heat: central heating in homes or heating of greenhouses.

Steam extracted from the ground is also used to generate electricity: as in a classic thermal power station, it drives a turbine. It is also possible to use hot and dry rocks as a source of electricity production from steam. To develop this type of energy, EDF has joined forces with several partners (including Électricité de Strasbourg, EnBW and German energy companies) as part of a European consortium that develops and operates a prototype geothermal power plant in the hot, naturally fractured crystalline rock around Soultz in Alsace (see section 6.4.1.4 ("Électricité de Strasbourg")).

France also has high-temperature resources located in its overseas territories. The EDF group is present in this activity mainly through its minority stake in the company Géothermie Bouillante in Guadeloupe.

1. Source: European Environment Agency, *Renewable Energy Productions, as published in the National Renewable Energy Action Plans of the European Member States*, February 2011.

2. Source: French Commission on sustainable development (Commissariat général au développement durable), *Wind and solar energy scorecard for the first three months of 2013 and 2014*.

Other technologies

Renewable energies cover a wide range of sectors and technologies. To prepare for the future, EDF Énergies Nouvelles is responsible within the EDF group for identifying promising sectors and, with the support of the Group's R&D teams or industrial partners, contributes to the emergence of new technologies. Along with solar power (see above), marine energy is another area the Group is exploring in depth. This encompasses a range of technologies, whose technical validity must be tested and their potential assessed before they can be developed on an industrial scale, in the same way as wind and solar power.

Two major marine energy projects are currently in development:

- tidal turbines: underwater turbines harnessing the energy of tidal currents. EDF has built a prototype tidal current turbine farm on the Paimpol-Bréhat site in the Côtes-d'Armor department. The prototype was launched during the summer of 2012 and will soon enter a second test phase, when it will generate electricity for the first time. The aim of the project, which will ultimately include four turbines with a total capacity of 2MW, is to test the feasibility of producing energy from tidal currents in real conditions. EDF Énergies Nouvelles, in partnership with DNCS, Europe's leading manufacturer of naval vessels, is also examining the industrial applications needed to produce electricity from tidal current turbines, and is working on the "Normandie Hydro" project, a larger-capacity tidal energy farm of Raz Blanchard, at the tip of the Cotentin peninsula in Normandy;
- floating offshore wind turbines: EDF Énergies Nouvelles has chosen VertiWind technology designed by the start-up Nénuphar. Developed by leading industrial partners in the maritime and wind power segments, an onshore prototype is currently under construction. This could pave the way for the "Provence Grand Large" project, an offshore pilot project in the Provence-Alpes-Côte-d'Azur region. This project, led by EDF Énergies Nouvelles, has been chosen by the European Commission to receive significant funding.

6.4.1.2.2 EDF Énergies Nouvelles

The EDF group's involvement in renewable energies is undertaken mainly by EDF Énergies Nouvelles.

Shareholding structure of EDF Énergies Nouvelles

EDF owns 99.9% of the company's capital (the remaining 0.1% is owned by its employees¹).

Since EDF acquired it in 2000, EDF Énergies Nouvelles has changed dramatically, becoming one of the major players in electricity generation from renewables in the space of a few years, ranked alongside other leading players in the major regions in which it is based: North America and western and southern Europe.

EDF Énergies Nouvelles has thus become the EDF group's centre of expertise and development, particularly in the fields of wind and photovoltaic solar power. The financial results of the renewable energy subsidiaries are consolidated with those of EDF Énergies Nouvelles.

Activities of EDF Énergies Nouvelles

EDF Énergies Nouvelles generates electricity from renewable energy sources and is involved in every stage of the value chain. EDF Énergies Nouvelles operates upstream, in project development, as well as in the construction of power plants and their operation and maintenance. Each of these activities may be conducted on its own account or on behalf of third parties. As part of its project development activities, the Group is also involved in the Development and Sale of Structured Assets (an activity referred to as "DSSA"), which mainly consists of developing renewable energy projects for third parties.

With development focusing on wind and solar power (which represent around 96% of installed capacity), the EDF Énergies Nouvelles group is also present in other renewable energy segments: biogas, biomass and marine energy (representing a gross capacity of 236MW at the end of 2014). EDF Énergies Nouvelles is also present in the decentralised renewable energy sector (decentralised solar power).

Historically, EDF Énergies Nouvelles has developed in two geographical regions: western and southern Europe (mainly France, UK, Italy and Portugal) and North America (USA, Canada and Mexico).

Since 2012, the group has become established in new countries with significant potential for renewables development, such as South Africa, Morocco, Israel, Poland and India. This development is expected to continue in 2015 with new sites.

At 31 December 2014, EDF Énergies Nouvelles had a gross installed capacity of 7,516.7MW, a net installed capacity of 5,112MW and a gross capacity of 2,204MW under construction.

1. Following the alternative cash or exchange tender offer for EDF Energies Nouvelles shares realised by EDF in 2011, EDF implemented a mechanism designed to ensure the liquidity of bonus shares granted to EDF Énergies Nouvelles employees and executive officers prior to the tender offer. Pursuant to this mechanism, EDF will ultimately hold all the shares which are still held as of today by EDF Énergies Nouvelles employees and executive officers.

The following table sets out the capacities by segment and by country:

Installed capacity (in megawatts)	At 31 December 2014		At 31 December 2013	
	Gross ⁽¹⁾	Net ⁽²⁾	Gross ⁽¹⁾	Net ⁽²⁾
Wind power				
USA	1,983.1	1,695.0	1,662.3	1,546.7
France	952.2	665.8	773.9	522.3
Italy	440.4	246.6	548.4	354.6
Portugal	495.8	302.9	495.8	302.9
Greece	340.5	314.2	340.5	314.2
Canada	464.4	440.4	265.0	265.0
UK ⁽³⁾	542.9	184.7	494.2	239.1
Turkey	566.8	228.2	447.3	193.9
Mexico	391.5	229.5	331.5	199.5
Poland	48.0	48.0	48.0	48.0
Belgium ⁽⁴⁾	325.2	29.7	325.2	29.7
Germany	3.0	3.0	3.0	3.0
Total wind power ⁽⁵⁾	6,553.7	4,388.1	5,735.0	4,018.9
Solar power				
France	209.7	153.6	207.8	151.7
USA	160.3	88.7	148.4	148.4
Italy	79.3	76.7	99.5	95.5
Spain	57.4	46.9	57.4	46.9
Canada	23.4	23.4	23.4	23.4
Greece	12.1	12.1	12.1	12.1
Israel	68.5	48.8	14.5	9.9
India	30.0	7.8		
ENR (France)	86.4	57.8	82.4	54.3
Total solar power ⁽⁵⁾	727.0	515.7	645.5	542.3
Other segments				
Hydropower	77.2	74.4	80.2	77.4
Biogas	78.0	73.2	69.7	65.2
Biomass/Cogeneration	80.8	60.5	80.8	60.5
Total other segments ⁽⁵⁾	236.0	208.1	230.7	203.1
TOTAL ⁽⁵⁾	7,516.7	5,112.0	6,611.2	4,764.3

(1) Gross capacity: total capacity of the facilities in which EDF Énergies Nouvelles has a stake.

(2) Net capacity: capacity corresponding to EDF Énergies Nouvelles' stake.

(3) EDF Énergies Nouvelles owns 50% of EDF Energy Renewables (the other 50% is owned by EDF Energy). The net capacity shown of 184.7MW therefore includes only 50% of the wind capacity of EDF Energy Renewables.

(4) MW in offshore wind exclusively.

(5) Corresponds to the sum of the exact values rounded to one decimal place.

At 31 December 2014, EDF Énergies Nouvelles employed 3,009 people (including EDF Énergies Nouvelles Réparties).

Wind power

Onshore wind power

EDF Énergies Nouvelles actively pursued growth in onshore wind energy in 2014, increasing its wind generation capacity by 818.7MW gross, bringing its total operating capacity of onshore wind energy to 6,166.5MW gross at 31 December 2014.

Commissioning of onshore wind farms reached a figure of 1,152.2MW gross in 2014 (including wind farms developed for third parties).

In France, EDF Énergies Nouvelles has continued to expand its wind portfolio, which has an additional gross capacity of 178.3MW, mainly due to the commissioning of new wind farms.

EDF Énergies Nouvelles has commissioned the Cornilhac, Plaine de l'Orbieu and Vallée de l'Hérault wind farms (+34.7MW) in the south of France, and the Trécon wind farm (4MW) and all wind farms owned in partnership (50%) with the company DGE, a subsidiary of Mitsubishi Corporation (72MW

gross), in northern France. The expansion of the Le Mont des Quatre-Faux wind farm was also announced in partnership with the company Windvision.

In Europe, EDF Énergies Nouvelles has commissioned the Barmoor, Burnfoot North and Roade wind farms in the UK (23.3MW), as well as the entire Geycek wind farm (150MW) and part of the Soma 3 farm (56MW).

The Spinning Spur 2 (161MW) and Hereford (200MW) wind farms in the US, as well as the latest tranche of the EDP-Santo Domingo farm in Mexico (60MW out of a total of 160MW) have been commissioned.

In Canada, EDF Énergies Nouvelles continued its commissioning of wind farms: Rivière du Moulin (150MW) and La Mitis and Le Granit (50MW in total) in Quebec, and the Blackspring Ridge wind farm project (300MW) in the province of Alberta.

In addition, the company broke ground on numerous projects in 2014, mainly in the US: the Pilot Hill wind project (175MW), linked to a power sale agreement with Microsoft Corporation; the Slate Creek project (150MW), which has a power sale agreement with Great Plains Energy; the Spinning Spur 3 project (194MW); the Roosevelt project (300MW). Construction also began in South Africa (44MW), France (111.9MW), the UK (24.3MW) and Portugal (11.2MW).

In total, onshore wind farms under construction represented a gross capacity of 1,735MW at 31 December 2014.

As part of the DSSA activity, 680.8MW of onshore wind power was sold, mainly in North America (Canada and USA) and in the UK and Italy.

Offshore wind power

Offshore wind power will be a major growth driver over the next few years, particularly in France and the United Kingdom.

In France, for the three projects awarded in 2012 with a total capacity of 1,428MW, permits were applied for in October 2014, in accordance with the tender specifications.

In the United Kingdom, through the subsidiary EDF Energy Renewables (a 50-50 joint-venture with EDF Energy), the Navitus Bay offshore project continued its preliminary development phase in 2014. Development rights were also obtained for the Blyth offshore prototype wind farm in Northumberland. With a maximum of 15 turbines, it would allow new offshore technology to be tested in real conditions before being brought to market.

Photovoltaic solar power

EDF Énergies Nouvelles pursued growth in solar photovoltaics, its second area of growth. At 31 December 2014, gross installed solar capacity was 727MWp gross (515.7MWp net), an increase of 81.5MWp gross from 31 December 2013.

In 2014, seven solar power plants were commissioned in Israel with a total gross capacity of 54MWp, three solar plants in the United States (Lepomis, Lancaster and CID, for a total of 39MWp), and the first solar plant in India, Khilchipur (30MWp), in the state of Madhya Pradesh.

EDF Énergies Nouvelles also commissioned the Toucan solar project (5MWp) in Guyana, a groundbreaking new project combining a photovoltaic plant with energy storage. Batteries are used to adjust photovoltaic production up or down according to daily forecasts made by EDF EN for the transmission system operator. A total of 128.1MWp gross went into service in 2014.

New capacity is being built, both in core regions and at new sites with significant solar potential:

- in the US, with 57.6MWp under construction (Catalina Solar 2 and Cottonwood projects);
- in India (via Acme Solar, 26% owned by EDF Énergies Nouvelles), including five NSM projects (125MWp) in Rajasthan;
- in Israel, with 90MWp under construction (Zmorot and Ktora projects).

At 31 December 2014, EDF Énergies Nouvelles had a portfolio of solar projects under construction of 449.9MWp gross.

As part of its DSSA activity, 117.7MWp of photovoltaic solar power was sold in the United States and Italy.

A total of 128.1MWp gross went into service in 2014.

Operating & Maintenance

As an integrated operator, EDF Énergies Nouvelles operates and maintains most of its own facilities. This activity has grown significantly and is also carried out on behalf of third parties. Worldwide, the EDF Énergies Nouvelles Group operated 11,756MW at the end of December 2014, across eight countries, representing growth of around 30% compared with 2013. In addition, EDF Énergies Nouvelles is the leading operation-maintenance company in the US through its subsidiary EDF Renewable Energy (formerly enXco), where it manages almost 7.5GW.

The growth in this activity is driven by the commissioning of new wind farms and by taking over wind farms operated by turbine manufacturers reaching the end of their contract. The most important contracts are for 656MW in the United States, 588MW in Canada and 599MW in Italy.

EDF EN Services is a subsidiary of EDF Énergies Nouvelles responsible for operation and maintenance in Europe. In 2014 it launched in Italy, where it manages wind assets transferred to a new entity 70% owned by the infrastructure investment fund F2i and 30% by EDF Énergies Nouvelles and Edison.

Decentralised Energy

EDF Énergies Nouvelles Réparties (EDF ENR) is wholly owned by EDF Énergies Nouvelles. EDF ENR is now an integrated player in decentralised photovoltaic solar power generation, involved in the design, build, operation and maintenance of rooftop installations. EDF ENR Solaire, a wholly owned subsidiary, markets and installs photovoltaic solar power solutions in France, with more than 14,000 residential customers and over 700 projects delivered to business customers and local authorities.

EDF ENR also generates around 30MW of clean energy from more than 200 rooftop photovoltaic plants that it owns in mainland France.

Finally, EDF ENR is present in the upstream segment. The company owns 100% of EDF ENR PWT (Photowatt brand), which designs and manufactures photovoltaic panels. EDF ENR PWT operates in a difficult market characterised by structural overcapacity and very low module prices. Faced with this situation, a proactive action plan has been implemented to improve the product offering of EDF ENR PWT. Each stage of the fabrication process, from the purified silicon to the photovoltaic modules, takes place in France. This means the company can offer to PWT's customers 100% French-made modules with a low carbon footprint.

Support schemes and price setting for wind and solar power electricity

The table below summarises the various support schemes for wind and solar power in force at 31 December 2014 in each of the major countries where EDF Énergies Nouvelles and its subsidiaries are present:

Country	Support schemes for renewable energy (wind and solar)
Canada	Each province has its own rules and government-owned company with a monopoly over energy procurement (public utility). There is no exclusive or federal purchase programme, and no tax incentive. Alberta is the only province that has a free market in which electricity producers can sell on the network at the spot price. Long-term purchase agreements (20 years) with local service providers or through calls for tender (usually competitive).
USA	"Production Tax Credit" for wind farms and "Investment Tax Credit" for both solar and wind farms. The Tax Increase Prevention Act of 2014 postponed the expiration date of the tax credit for wind farms (Production Tax Credit) until 31 December 2014. Projects not already under construction before 1 January 2015 are not eligible for the tax credit. The tax credit for solar farms and wind farms, the "Investment Tax Credit", may benefit systems commissioned no later than 13 December 2016. Compulsory renewable energy quotas (Renewable Portfolio Standards) have been set in 29 states and the District of Columbia.
France	Purchase obligation (non-renewable 15-year wind contracts and 20-year solar contracts with EDF or a non-nationalised distributor at regulated prices). Calls for tender. Tax incentives greatly reduced since 2011.
Italy	For wind: feed-in tariff mechanism allocated based on reverse auctions during the first 20 years of operation (subject to certain annual commissioning quotas). For photovoltaics: There is no longer a support mechanism for new photovoltaic initiatives. A reduction in the tariffs applicable to existing facilities was passed in 2014.
Israel	To achieve its target of 10% renewable energy by 2020, the government decided to introduce MWp quotas for wind and solar projects. Each quota will be assigned its own buyback price. The buyback price will be the price set in the Power Purchase Agreements (PPA), negotiated with the national energy utility company. This price is fixed for 20 years.
UK	The Renewables Obligation Certificate came into effect in 2002 under the Utilities Act (2000). Additional tax on electricity consumption (Climate Change Levy).

The table below summarises the various pricing schemes for wind power electricity in force at 31 December 2014 for each of the major countries where the Group is present:

Country	Pricing schemes for wind power electricity
Canada	Prices set under "Power Purchase Agreements" (PPA) negotiated with the local public utilities of the provinces concerned, mainly through periodic tendering (usually competitive).
USA	Prices set under "Power Purchase Agreements" (PPA) negotiated with local energy utilities.
France	<ul style="list-style-type: none"> ■ Onshore wind: tariffs in force in mainland France and Corsica for onshore farms commissioned after 26 July 2006: 8.2 euro cents per kilowatt hour for the first ten years. For the next five years, tariffs between 8.2 euro cents and 2.8 euro cents per kilowatt hour, depending on the number of equivalent full power hours observed during the first ten years of operation. For the overseas departments, Saint-Pierre-et-Miquelon and Mayotte, a single tariff of 0.11 euro per kilowatt hour applies. These rates are reassessed on an annual basis and are partially indexed to inflation. ■ Offshore wind: calls for tender system.
Italy	Since 1 May 2013, new wind farms commissioned have benefited from a feed-in tariff allocated based on reverse auctions. The floor was set at €127/MWh for 2014 (with an annual commissioning quota of 500MW). Wind farms commissioned before 1 May 2013 are eligible for the previous "green certificates" system until the end of 2015, the price of the green certificate being calculated as follows: (€180/MWh – electricity price) × 78%. From 2016, this system will be replaced by a feed-in tariff calculated on the same basis until the end of the support period.
Mexico	Prices set under Self-Supply Agreements (SSA) negotiated with end-customers.

Country	Pricing schemes for wind power electricity			
UK	<p>Quota system for the contribution of renewable energy sources to the electricity supplied by utilities. Suppliers obtain Renewables Obligation Certificates (ROCs) either by generating electricity from renewable sources, or by purchasing it from renewable energy producers. Non-compliance with the renewable energy quota results in a penalty ("buy-out price"), which is then paid to energy suppliers in proportion to their renewable energy output ("buy-out fund"), representing additional remuneration.</p> <p>In terms of the Climate Change Levy, companies can qualify for an exemption by signing voluntary agreements or obtaining electricity from a renewable energy supplier. Based on the same principle as green certificates, renewable energy generators receive an exemption certificate for each megawatt-hour generated.</p> <p>Green certificates, the redistribution of income from fines and exemption certificates linked to the tax on electricity consumption increase the selling price of renewable energy for distributors. The electricity price for 2013/2014 is £94/MWh for onshore wind power and £145/MWh for offshore wind power. The UK is working on the introduction of a new system (FiT CfD, or Feed-in Tariffs with Contracts for Differences), which will apply to other forms of low-carbon electricity generation. The new contracts will be designed to give low-carbon electricity generators increased certainty over their long-term revenue (15 years). They will receive an additional payment when the electricity market price (reference price) is less than the agreed price, and will have to repay this when the market price exceeds this price. Generators will have to negotiate the sale of their electricity separately with a third party. The FiT CfD came onstream in 2014. However, until 2017, new generators will be able to choose between the current RO scheme and the new tariffs. Existing plants will continue to be subsidised under the RO scheme, due to be phased out by 2037. On 3 October 2014, strike prices for renewables were published (in £/MWh):</p>			
Technologies	Onshore wind power	Offshore wind power	Wind power on the Scottish islands	
2014/2015	95	155		–
2015/2016	95	155		–
2016/2017	95	150		–
2017/2018	90	140		115
2018/2019	90	140		115

The table below summarises the various pricing schemes for solar power electricity in force at 31 December 2014 for each of the major countries where the Group is present:

Country	Pricing schemes for solar power electricity
USA	Prices set under Power Purchase Agreements (PPA) negotiated or put out to tender by public utilities or other buyers. Feed-in tariffs set by some states (including California) for smaller farms and limited volumes. "Investment Tax Credit" (ITC) renewed until December 2016.
France	Significant changes since 2011. Calls for tender for ground-based and building-mounted solar installations with a capacity exceeding 100kWp. For projects with a capacity of less than 100kWp, quarterly tariff adjustment based on the number of projects completed in the previous quarter, with an annual target of 500MWp.
Italy	There is no longer a support mechanism for new initiatives. Furthermore, a reduction in tariffs for existing facilities was passed (Decree of 7 August 2014) and has been applicable since 1 January 2015. Generators of electricity from photovoltaic solar plants rated at more than 200kWp could choose between three options: <ul style="list-style-type: none"> ■ a 20% reduction offset by a four-year increase in the term of the PPA; ■ a modulated decrease of around 15% on average over the first five years, offset by an equivalent rise over the last five years of operation; ■ a fixed reduction in the PPA over the residual support period of: <ul style="list-style-type: none"> – 6% for an installed capacity of between 0.2MWp and 0.5MWp, – 7% for an installed capacity of between 0.5MWp and 0.9MWp, – 8% for an installed capacity above 0.9MWp.
Israel	The electricity buyback price will vary depending on the size of the solar project. For small installations (up to 50kWp), it is predetermined by the national regulator. Medium-sized (up to 12MWp) and large-scale (above 12MWp) projects are subject to a new tendering procedure for quota allocation. The calls for tender are due to be published shortly. It is likely that the least expensive bid will receive a government commitment to buy back 100% of the electricity generated. The buyback price will be assigned to the quota concerned. Indexing is not yet determined.

6.4.1.3 Energy services

In 2014, EDF consolidated its position in the energy services market with the acquisition of the activities of Dalkia in France and Citelum, becoming one of the market leaders for energy services in France and Europe.

The EDF group, mindful of the regulatory and environmental issues at stake, is keen to support the energy projects of the public and private sector in France and internationally, offering comprehensive solutions that include consulting, design, construction and operation and maintenance of facilities. The EDF group offers products that integrate performance commitments, financing solutions and energy management systems to improve monitoring of consumption and performance of facilities.

In France, the Group is a major player in the energy transition, providing support to local communities: identification and exploitation of local renewable energy potential, especially biomass, biogas and geothermal energy, building energy retrofit projects, development and management of heating and cooling networks, optimisation of public lighting systems, and development of electric mobility solutions.

The EDF group has built its energy services offering for corporate and local authorities (see sections 6.2.1.2.2.2 ("Activity by client category") and 6.2.1.2.2.3 ("For sustainable cities and regions")) around five key areas:

- major projects for large industrial sites;
- energy efficiency for public buildings and tertiary and industrial companies;
- local power generation and the associated heating and cooling networks;
- public lighting;
- electric mobility.

The EDF group implements energy solutions through its service subsidiaries:

- Dalkia (contribution of €1,323 million¹ to Group sales in 2014), the leading provider of energy services in France, which offers local solutions to reduce energy consumption and improve the performance of facilities in three main areas: heating and cooling networks, building energy services and industrial utilities (see section 6.4.1.3.1 ("Dalkia"));
- EDF Fenice (sales of €400 million in 2014), offering complete technical and financing solutions for the design, construction and operation of energy and industrial environmental facilities, in the form of medium- and long-term performance agreements (see section 6.4.1.3.2 ("EDF Fenice"));
- TIRU (sales of €230 million in 2014), which designs, builds and operates energy-from-waste plants (incineration, anaerobic digestion, production of solid recovered fuel, etc.) (see section 6.4.1.3.3 (TIRU));
- Citelum (€133 million² contribution to Group sales in 2014), which is active in the local utilities management market for urban lighting (street lighting, illuminations, etc.), transport management (signalling, traffic management, etc.), and security and communications systems connected to the lighting network (see section 6.4.1.3.4 ("Citelum"));
- other energy service subsidiaries active in specific areas, such as HTMS, Netseenergy, CHAM, Domofinance, Edelia and Sodetrel (see section 6.4.1.3.5 ("Other service subsidiaries of the EDF group")).

6.4.1.3.1 Dalkia

EDF owns 99.94% of the Dalkia's capital since 25 July 2014, which is a leading player in the European energy services market with a full range of services and an excellent sales network in France. In 2014, the Dalkia Group generated sales of €3,036 million³ from its consolidated companies, which include Dalkia France, Dalkia Investissement and Industelec.

6.4.1.3.1.1 Dalkia's business

Dalkia now operates in the face of three major challenges: global warming and the need to reduce greenhouse gas emissions, energy efficiency as a source of savings, and the territories transformation in an increasing urbanisation context and the resulting industrial development.

Dalkia's core business consists of optimising energy use at its customers' sites, offering solutions in favour of a rebalanced energy mix towards renewable energies and the control of consumption. Dalkia applies its know-how in energy and environmental efficiency through three activities: heating and cooling systems, industrial utilities and building energy services.

Dalkia provides energy-related services to public-sector and private-sector customers with whom it forms long-term partnerships. Management agreements for district heating or cooling networks are long-term agreements, potentially for up to 30 years. Operating agreements for heating and multi-technical facilities for public-sector and private-sector customers can cover a period of up to 16 years. Contracts for services to industrial customers tend to be shorter (between six and seven years, on average).

Dalkia provides energy solutions that cover the entire processing cycle, from the initial purchase of energy (gas, biomass, biogas, heating, oil and coal), to the construction of new facilities or the upgrading of existing facilities and the sale of the electricity generated.

Dalkia has thus developed expertise in energy trading in deregulated markets on behalf of its customers, and is also active in carbon markets and in energy saving certificates.

On behalf of its customers, Dalkia employs solutions integrating renewable or alternative energies such as geothermal energy, biomass, heat produced from the incineration of household waste, heat recovered during industrial processes, and even cogeneration. Wherever possible, energy sources are combined to take advantage of their complementarity. In biomass, Dalkia has recorded exponential growth of its business based on a range of innovative solutions.

Dalkia's business can be influenced by several key factors, chiefly regulatory, economic or technical in origin:

- public policy support for the energy transition (energy efficiency, renewable energy development, etc.) and the reduction of pollutant emissions; regulatory and contractual mechanisms that to a greater or lesser extent encourage the development of value-added energy services (such as energy performance contracts);
- evolution of the energy market, particularly in terms of electricity prices and heating tariffs, affordability and fuel prices (as well as CO₂ quotas);
- the dynamics of urbanisation and annual climate variations, which could affect sales of heating and cooling services;
- the economic environment and its influence on the level of activity of Dalkia's industrial customers.

1. Contribution to 2014 sales since Dalkia entered the EDF group scope of consolidation on 25 July 2014. Dalkia's sales for FY 2014 of €3,036 million.

2. Contribution to 2014 sales since Citelum entered the EDF group scope of consolidation on 25 July 2014. Citelum's sales for FY 2014 of €250 million.

3. €1,323 million contribution to Group sales in 2014.

Heating and cooling networks

The increase in district networks is a growth engine and a major factor in the Dalkia Group's development.

Dalkia is one of Europe's leading operators in the management of district heating and cooling networks. In France, Dalkia operates 328 district and local heating and cooling networks. These networks provide heating, hot water and air conditioning to a wide range of public and private buildings (schools, medical facilities, offices and apartment buildings). Production facilities often generate electricity sold to operators or on the market.

Industrial utilities

Dalkia is active in the industrial utilities business for 2,000 French industrial sites. The challenge is to improve environmental performance (particularly by controlling CO₂ emissions and the valuation of energy recovery), cost competitiveness and security of supply.

Dalkia's strategy rests on its ability to deploy a broad and consistent range of services, including:

- optimisation of industrial utilities: steam, electricity, compressed air;
- optimisation of process-related energy use (adjusting usage to requirements and identification of sources of unavoidable energy and recoverable co-products);
- optimisation of industrial building usage;
- reduction in greenhouse gas emissions.

Building energy services

Building energy services consist of the operation of heating, hot water and air conditioning systems to maintain comfortable living standards and working conditions. They also seek to improve the operation of existing systems in a bid to maximise their effectiveness. Dalkia provides integrated energy services ranging from the design, construction and upgrading of facilities, to energy supply and management and maintenance of facilities, for tertiary, industrial, public-sector and private-sector customers.

Dalkia offers its customers an extensive portfolio of technical services and implements a wide range of solutions to meet customer expectations in terms of lowering energy consumption and CO₂ emissions. These reduction are likely to revolutionise the energy services market in future years, through the development of solutions based on a commitment to results.

Dalkia operates 84,600 energy facilities in France.

6.4.1.3.1.2 Key achievements for Dalkia in 2014

On 4 November 2014, Dalkia and Olympique Lyonnais announced the signing of a 20-year contract for the technical operation, maintenance and "major infrastructure replacement" of the future "Grand Stade" stadium. Dalkia's contribution will take place in two stages: pre-operational phase during construction of the new stadium, and an operational and maintenance phase following delivery of the infrastructure.

On 12 December, Dalkia commenced drilling operations for the geothermal heating network in Bagneux. This will include two wells drilled to a depth of 1,800 metres to extract hot water from the aquifer, which in 2016 will provide around half of the town with clean, local renewable energy.

On 17 December, Dalkia sold its entire stake in Citelum to EDEV.

On 19 December, the wood-fired heating plant for the Greater Dijon district heating network (90MW) was inaugurated. The facility will primarily use three 30MW biomass boilers and will consume 50,000 tonnes of wood energy per year, mostly sourced from the local region. The first 7 kilometres of pipes were laid during work on the tram line construction. The heating network will at the end cover a distance of 30 kilometres.

In biogas, Verdesis was acquired from EDF Énergies Nouvelles on 11 February 2015 by Dalkia, due to their close business proximity. Verdesis has a gross capacity of 27.2MW in operation in Europe.

Finally, on 22 December 2014, Dalkia signed an agreement to buy Cesbron and three of its subsidiaries for €20.6 million. These entities generate sales in the region of around €100 million. The deal was finalized on 18 March 2015; after antitrust authority granted approval on 12 February 2015. Cesbron is an innovative company, expert in industrial and commercial refrigeration and in climatic engineering; it will enlarge Dalkia's offering.

6.4.1.3.1.3 EDF Optimal Solutions (EDF OS)

A wholly owned subsidiary of Dalkia since 17 February 2015, EDF Optimal Solutions works with Dalkia to provide French companies and local authorities with financing solutions and performance commitments, as well as the design, implementation, operation and maintenance of solutions that reduce energy costs and CO₂ emissions. EDF Optimal Solutions operates in four key areas:

- high- and low-temperature district heating networks and eco-districts using renewable energy sources (biomass, geothermal, waste water, etc.);
- energy generation and recovery (renewable heating and electricity generation, boiler construction and refurbishment, industrial process heat recovery, power grid construction and replacement);
- building energy performance (energy retrofits, energy-efficient pool construction and retrofits, sustainable energy performance contracts, etc.);
- complete multi-technical energy efficiency solutions (for example industrial utilities, environmental engineering, electrical engineering).

In 2014, its contribution to Group sales amounted €82 million.

6.4.1.3.1.4 Termination of the partnership with Veolia Environnement

Relations between EDF and Veolia Environnement within the Dalkia group were governed by a set of agreements signed on 4 December 2000.

Following their announcement in late October 2013 that they were engaged in advanced discussions to finalise an agreement regarding their joint subsidiary Dalkia, EDF and Veolia Environnement dissolved their partnership with an agreement signed on 25 March 2014. The deal was finalised on 25 July 2014, following approval from the relevant antitrust authorities. EDF has since taken over all of the Dalkia group's activities in France (including those of Citelum, in France and abroad), while Dalkia's international operations were taken over by Veolia Environnement.

The operation also put an end to the dispute between EDF and Veolia Environnement before the Commercial Court of Paris since October 2012.

6.4.1.3.2 EDF Fenice

EDF Fenice, an international group based in Italy, was set up by the Fiat group before being taken over by EDF in 2001. EDF Fenice is currently active in Italy, Spain, Poland and Russia.

EDF Fenice operates in the field of industrial energy and environmental efficiency. It designs, builds and manages either directly or on behalf of its customers assets such as combined generation plants, electricity substations, thermal power plants for industrial use or heating, cold generation power plants, compressed air generation units, fluid distribution systems (electricity, gas, hot air, refrigerated air, compressed air, industrial gas and water) and industrial water treatment plants. EDF Fenice develops efficiency projects in the form of industrial partnerships or performance contracts with customers. These are complemented by a wide range of energy and environmental consulting services, waste treatment services, monitoring, analysis and environmental rehabilitation. If need be, EDF Fenice supplements its services with energy efficiency and environmental optimisation services for industrial sites and facilities.

At 31 December 2014, EDF Fenice had a total electricity production capacity of 431MW and a heat generation capacity of 3,197MWth. EDF Fenice has 49 thermal energy (steam, superheated water, hot water), electricity and compressed air production sites.

In 2014, EDF Fenice reported sales of €400 million.

Italy

Contracts with the Fiat group still account for over half of EDF Fenice's business. A major goal in 2014 was to strengthen the relationship with this major customer by confirming the performance of the new contract and the excellent service provided under the new contractual model established in 2013. One of the benefits of this model is the development of partnership initiatives, increasing the likelihood that the contract will automatically be renewed for a further five years in 2017.

To establish its reputation and to train the Group's in-house teams, EDF Fenice has set up an energy efficiency campus, a training and customer relationship tool for services to industry. The aim is for the campus to become an exchange hub between customers, researchers, financial backers, public administrators and stakeholders in the EDF group.

In 2014 EDF Fenice designed an energy management system according to ISO 50001-2011. ISO 50001 certification promotes best practices in energy management with the specific aim of reducing greenhouse gas emissions and other environmental impacts, while reducing energy consumption. At end 2014, 8 of the 22 sites of the Fiat contract were certified (including both sites located in Spain), with the objective of having them all certified eventually.

Spain

EDF Fenice has operated in Spain since 2001 through its wholly owned subsidiary EDF Fenice Instalaciones Iberica.

EDF Fenice was significantly affected by the recent overhaul of the energy subsidies scheme, which has weighed considerably on the cogeneration and renewables sector. The reforms led to a sharp reduction in the company's operations in Spain (closure of three cogeneration plants and termination of operating agreements with customers who have ceased trading). However, EDF Fenice has managed to retain customer confidence, signing new partnerships such as the one with the Calidad Pascual group.

Poland

EDF Fenice has a wholly owned Polish subsidiary, EDF Fenice Poland. This company is involved primarily in outsourced management and thermal plant

operation, with combined generation of electricity, heating and cooling. It also provides various energy and environmental services (heating and cooling, compressed air, industrial gas, and waste and liquid effluent treatment). EDF Fenice Poland has begun diversifying beyond Fiat and is currently forming a service partnership with EDF Polska (see section 6.3.3.1.1.1 ("Poland")).

Russia

EDF Fenice also has a wholly owned subsidiary in Russia, Fenice Rus, which markets energy efficiency services to industrial companies. Since its creation, Fenice Rus has signed seven contracts with Avtovaz, Russia's leading car maker, and has finalised the implementation of six of them, which are now fully operational. The facilities built for TMH (TransMashHolding) are also operational. These projects have become a benchmark for customers and public authorities. They have the advantage that they can be replicated at other sites and in different business sectors.

EDF Fenice is continuing to support international groups that operate in Russia, such as Danone, Alstom and Renault Nissan.

6.4.1.3.3 TIRU

TIRU is 51% owned by the EDF group. It specialises in:

- energy recovery: incineration of household waste to generate energy (electricity and/or steam) for district heating or industrial applications;
- organic recovery: breakdown of organic matter and production of compost and biogas;
- materials recovery: sorting and packaging of recyclable materials (plastic, fibres, metals).

The remaining 49% is owned by Veolia Propreté (24%), CPCU (19%) and GDF Suez Énergie Services (6%).

TIRU designs, builds and operates energy-from-waste and biomass facilities in France, the UK and Canada (energy-from-waste plants, sorting, anaerobic digestion and composting plants, solid recovered fuel production facility, recycling centres). In 2014, the TIRU group reported revenue of €230 million and had 1,118 employees.

Its customer portfolio consists of local authorities, predominantly departmental and municipal consortia, waste management operators and some private-sector customers (greenhouse producers and manufacturers).

By focusing its efforts on waste recovery, TIRU contributes to the energy transition challenges. In 2014, TIRU saved the equivalent of 1.8 million barrels of oil, or 800,000 tonnes of avoided CO₂ emissions.

Its 18 thermal and biological treatment plants sold around 2.9TWh of electricity and steam (50% of which was clean energy) from 3.1 million tonnes of treated waste. This supplied heating to 346,000 inhabitants and electricity to 582,000 inhabitants. The Group's materials recovery plants processed 342,000 tonnes of waste (sorting/recycling and composting).

TIRU is a pioneer in the waste market. It industrialises new processes that are central to the development of energy services, such as:

- the anaerobic digestion of household waste and production of biogas and standardised compost;
- the production of solid recovered fuel, a stable fossil fuel alternative with a high calorific value;
- supplying hot water to agricultural greenhouses from the heat generated from energy-from-waste plants, an innovative solution for enhanced energy performance.

In France, TIRU renewed its contracts with Calais, Douchy-les-Mines and Paillé in 2014, and won the tender for the recycling of incinerator bottom ash (IBA) in Rungis. TIRU was awarded a ten-year contract to operate the biomass boiler at the Candia site in Awoingt, a first for TIRU in the industry.

In the UK, TIRU acquired the remaining 40% of the NEWLINCS company, which has the household waste management contract for North East Lincolnshire. In addition, TIRU opened its new energy-from-waste plant in Exeter, which treats some of the household waste from the county of Devon in south-west England.

6.4.1.3.4 Citelum

A wholly owned subsidiary of the EDF group since 25 July 2014, Citelum is one of the leading players in public lighting, not only in France, but throughout the rest of Europe and indeed worldwide.

In 2014, the Citelum group reported revenues of €250 million¹, of which €198 million generated abroad. With 500 employees in France, Citelum has a total of around 3,000 employees in 18 countries, including France, Italy, Spain, Brazil and Mexico. Citelum provides street lighting for 25 million people worldwide and has almost 1,000 contracts in total, for example in Copenhagen, Venice, Madrid and Mexico. It has around 250 contracts in France, including Nice, Bordeaux, Dijon and Sète.

Citelum, which partners local authorities in urban transformation, has expertise in lighting (street lighting, illuminations) and public transport management (signalling, traffic management, management and optimisation of electric vehicle charging infrastructure, video surveillance). To provide a safe, continuous and sustainable public lighting service, Citelum draws on a host of business synergies:

- design & engineering;
- operation & maintenance;
- construction works;
- energy management.

Its strategic offering is based on a complete, long-term management model, with a commitment to performance, especially in energy.

Citelum has developed in France and abroad based on five key services, defined by the EDF group. To secure its long-term future and to stand out from its competitors, Citelum offers services that incorporate financing solutions, innovation as a key competitiveness factor and expertise in contract engineering.

6.4.1.3.5 Other service subsidiaries of the EDF group

Other subsidiaries within the EDF group complete the range of energy services that EDF offers. These focus on specific areas, targeting different categories of customers (individuals, professionals, businesses and local authorities) and cover a wide range of activities including research, construction, equipment maintenance, investment financing and assistance with obtaining permits and subsidies.

Energy management

To help customers manage their energy and fluid consumption, the EDF group provides facility monitoring and management solutions. Its subsidiaries Netseenergy and Edelia are active in this strategic area.

Netseenergy

Netseenergy, which is wholly owned by EDF, has historically developed and produced a range of services giving corporate customers and local authorities access to an online graph of their consumption load curves. Since 2010, the company has been supplying a new range of remote services for energy efficiency in the business market.

Using the latest technological developments in smart metering, these services measure building energy and fluid consumption, which can be viewed on an intuitive, user-friendly website. Diagnostic and advisory services provided by a specialised team of energy experts are offered in addition to the remote services.

Lastly, Netseenergy is focusing an increasing part of its research on new technology, such as the fast-growing area of smart grids. The company is involved in numerous prototypes in mainland France and overseas territories, such as the "Nice Grid" project in Provence and the "Smart Electric Lyon" project in the Rhône-Alpes region. It also carries out remote curtailment of electricity use to smooth peaks in electricity consumption.

Edelia (Edev Téléservices)

Edelia, which is wholly owned by EDF, oversees the deployment and operation of prototypes for smart electronic systems (for example, *Une Bretagne d'avance*, a pilot load-shedding scheme for residential customers, implemented under Brittany's regional electrical agreement). Edelia is designing and service hub aiming to deal with several millions of customers (display screens for consumption, warnings, advices, etc.). Its other pilot projects include an interconnected solution with smart meters compatible with all energy-saving systems installed by customers.

Electric mobility

The uptake of electric mobility, which the EDF group has long supported, is now gathering pace in industrialised countries. Based on its years of experience and advantages in the field, the Group has been moving towards the role of an industrial operator in the electric mobility sector since 2011.

The Group's commercial offering includes:

- consulting services for local authorities and businesses on the positioning and scale of electric vehicle charging infrastructure;
- the installation of charging infrastructure for all customer segments (residential, local authorities and businesses, car parks and supermarkets);
- remote management and supervision of charging stations;
- small-scale car-sharing solutions in urban areas;
- continuation of the "on-board energy" service, i.e. rental and maintenance with performance guarantees for batteries for heavy vehicles (electric buses, trucks and river shuttles).

In addition to its recognised expertise in charging solutions, whether for on-board batteries or charging stations, EDF has developed full-scale trials with manufacturers such as Renault, PSA, BMW, Toyota, etc.

In the town of Font-Romeu in the Pyrenees, the EDF group is trialling a seasonal electric shuttle that operates a regular daily service between holiday apartments, the village centre and access to the slopes by gondola.

1. €133 million contribution to Group sales in 2014 after Citelum entered the EDF group scope of consolidation on 25 July 2014.

In Grenoble, the EDF group and Toyota have implemented an individual mobility demonstrator linked to a network of connected charging stations that are currently being installed. The aim is also to test new services for the interoperability of access and payment methods. Users will be able to use a single card for both public transport and car-sharing.

In Monaco, with "Mobbee", 15 Renault Twizy will be available for use 24 hours a day according to the free floating principle: "I can pick up my car and return it where I want".

Finally, the Group is involved in developing "intelligent and sustainable car parks", by optimising car park ventilation and lighting and offering users electric vehicle charging; Vinci Park and Sodetrel have signed a partnership to install self-service charging stations.

Sodetrel

Sodetrel, which is wholly owned by EDF, offers a range of electric mobility schemes for local authorities, businesses and individuals. It focuses on "on-board energy", i.e. rental and maintenance with performance guarantees for batteries for heavy vehicles (electric buses, lorries and river shuttles) based on lithium batteries. It also develops solutions for EV charging infrastructure – installation, operation and supervision of charging terminals. Sodetrel, in association with its eco-mobility partners, also offers EV car-sharing solutions and EV and hybrid fleet management solutions.

Through ELease, which is 70% owned by Sodetrel, the Group has developed a medium-term EV leasing scheme to allow companies and local authorities to use electric vehicles without having to buy the vehicles first.

Citelum

Active in the street furniture sector, Citelum supports the development of electric mobility by providing technical installation, operation and maintenance services. For a description of the company, see section 6.4.1.3.4 ("Citelum").

Electrical engineering

HTMS

HTMS, a wholly owned subsidiary of EDF, is involved in the operation and maintenance of high-voltage and medium-voltage equipment and substations, the supply and replacement of circuit breakers and transformers, troubleshooting, project management support and training.

The company's core business is the optimisation of maintenance operations to ensure operator safety, the availability of facilities and the sustainability of plant and equipment. The company also provides independent assessments and consulting (operational audits, definition of maintenance policies and equipment upgrades) and monitoring assignments for major projects.

Heating

CHAM

Wholly owned by EDF, CHAM maintains central heating and hot water systems for residential customers, offices, public housing managers and building management companies. CHAM is expanding its nationwide presence through targeted acquisitions. Its 2014 revenue was €75 million.

Financial services

Domofinance

Domofinance was created in 2003 and licensed as a financial company by the *Comité des établissements de crédit et entreprises d'investissement* on 29 September 2003, pursuant to Articles L. 511-9 to L. 511-14 of the French Monetary and Financial Code.

EDF holds a 45% equity interest in Domofinance; the remaining 55% is held by BNP Paribas Personal Finance (a subsidiary of the BNP Paribas group).

Domofinance meets the financing needs of EDF's residential customers and building management companies who wish to integrate energy-efficient solutions into their home renovation projects. Specifically, it markets and finances renovation loans subsidised by EDF and communal works for building management companies.

In 2014, Domofinance granted more than 51,000 loans.

6.4.1.4 Électricité de Strasbourg

The ÉS group is a regional multi-energy company that operates in three business lines: electricity distribution, sales and marketing of gas and electricity and energy services.

It is also present in Alsace in the area of deep geothermal energy, notably with its ÉS Géothermie engineering office and the ECOGI project.

The ÉS group is 88.64% owned by EDF, and the remaining shares are owned by the public and its employees. Its shares are traded on NYSE Euronext Paris.

6.4.1.4.1 Distribution

ÉS Réseaux (ESR) is the subsidiary of the ÉS group in charge of electricity distribution network management activities since 1 June 2009. ESR operates, maintains, develops and renews an electricity network more than 14,000 km in length in the 409 Alsatian communes that transferred their electricity distribution network to Électricité de Strasbourg. The contracts of these concessions were renewed between 1993 and 2001 for a term of 40 years. The territory serviced covers three fourths of the Bas-Rhin department and includes approximately 475,000 points of delivery for low-, medium- and high-voltage power, as well as connections with the ERDF network and two other downstream network managers (Erstein and Niederbronn-Reichshoffen regional authorities).

ESR also provides services to companies and Local Distribution Companies (LDC) in Alsace, in particular the regional authorities of Erstein, Niederbronn, Neuf-Brisach and Huningue (Hunélec). Électricité de Strasbourg has capitalistic links with this latter, the same as with Vialis, an energy and services distributor for the City of Colmar.

Net investments in 2014 are slightly down compared to the previous year, but they allow ESR to continue providing quality and continuity of electricity supply which is among the best in Europe.

Technically, the year 2014 is highlighted by several projects to replace transformers with more powerful units, in particular at the Lutzelse station (two 63/20 kV transformers).

The average annual outage time for all residential customers connected to the ESR network was 6 minutes and 55 seconds, in line with the good results for electricity supply quality for many years.

Électricité de Strasbourg completed the installation test of 1,000 electricity meters in its franchise area and more precisely over eight communes in Bas-Rhin.

In 2014, Électricité de Strasbourg also made a commitment to the Energy Regulation Commission (CRE) to upgrade its organisation for compliance with the CRE's interpretation of Article L. 111-61 of the French Energy Code. This work was structured in the ES group's governance and organisation adaptation project (PAGODE). A project to improve the Group's governance will be proposed in mid-2015 to the Board of Directors of Électricité de Strasbourg, following consultation with the works council.

6.4.1.4.2 Sales and marketing

ES Énergies Strasbourg is the sales and marketing subsidiary of the ES group. It resulted from the separation from distribution activities that was carried out in 2009 in application of European directives on the opening up of markets and was merged with Enerest on 1 May 2013.

ES Énergies Strasbourg provides energy to nearly 450,000 electricity customers (including renewable) and 110,000 gas customers, to both residential and business customers (services and industrial sectors) or to communities.

In addition to supplying electricity and gas, ES Énergies Strasbourg offers related services such as electricity, gas and plumbing corrective maintenance. In addition, for its residential customers, ES Énergies Strasbourg has continued implementing services providing assistance in renovation (help in prioritising work with eco-energy diagnosis) and construction (labelling and thermal studies assistance). To carry out their projects, the customers of ES Énergies Strasbourg have a network of 150 partner installers, ambassadors and installers of ESprit offers (insulation, electricity, gas, wood, and heat pumps).

Concerning customer management, ES Énergies Strasbourg places its emphasis on local service through personal assistance in its three agencies in Strasbourg, Haguenau and Molsheim, as well as at its eight "service points" (hosted by post offices), and aims for development of the online agency and, more generally, digital services.

ES Énergies Strasbourg attaches particular importance to customers who are having difficulties, to whom it provides specific solutions. As part of its public service missions and in partnership with local governments, ES Énergies Strasbourg mobilizes several advisors from social services and has implemented a system to assist its most vulnerable customers.

All of these actions result in a high customer satisfaction rate and in 2014 ES residential customers confirmed an average satisfaction rating of 7.4/10.

After fulfilling its obligation for the first three-year period, from 1 July 2006 to 30 June 2009, ES has continued its actions to produce energy savings certificates for the second period from 1 January 2011 to 31 December 2014. The level of this obligation, which reached 3.9TWh cumac (including gas), a significant rise compared to the previous period, was exceeded. The third period 2015-2017 began on 1 January 2015 with an obligation level that went up again (4.2TWh cumac).

As a historical gas operator following the 2013 absorption-merger with the company Enerest, ES Énergies Strasbourg has accompanied the implementation of the "Hamon Law" of 17 March 2014 governing consumption that calls for the progressive elimination of regulatory tariffs on natural gas sales to business clients. At the end of 2014, all customers who had been paying the tariff for annual use of more than 200MWh switched to a market offering. The procedures launched will continue in 2015 for gas business customers using more than 30MWh annually, but also for electricity customers whose subscribed power is greater than 36kVA, since the tariffs will disappear on 1 January 2016 for these customers.

The 2014 financial results are favourably impacted by the price adjustments resulting from the decision of the French Council of State (see section 6.2.1.2.1.3 ("Regulated sales tariff contracts" - "The tariff structure and the principle of the integrated electricity tariff")). Inversely, hotter than normal temperatures, especially in winter, have impacted gas and electricity sales. Electricity sales thus reached 5,739GWh, down 6.7% compared to 2013, and those of gas reached 4,184GWh, down by 21.6%.

6.4.1.4.3 Energy services

Écotral is today the main force of energy services, the third business line of the ES group. Its activities cover design, engineering, work, operation and maintenance, mainly in the renovation of low consumption buildings, electrical and thermal areas, heat networks and renewable energies.

In all cases Écotral's approach aims to provide a global offering centred on performance of use and optimisation of costs, from the programme phase to acceptance of work. This company assists project managers by providing them with all specific skills according to their needs, in the form of assistance in project management, engineering or operational services, delegated facility management, or with a general contracting or investor mission. Its expertise is recognised in low energy consumption renovation, technical building management, teleservices, energy facilities, heating and heat networks, air conditioning, renewable energy such as biomass, heat pumps and photovoltaics, electrical engineering, rehabilitation engineering and lighting.

In 2014, in spite of a still lacklustre economy, the company experienced growth in its order book and the year was marked by different projects including the Espace Vauban energy renovation that allowed to demonstrate the company's expertise in green building and environmental energy efficiency.

Finally, as part of a concession agreement signed in 2011, Écotral commissioned in 2014 the geothermal heating system of the Cronembourg eco-district in Strasbourg.

6.4.1.4.4 Deep geothermal energy

In the area of deep geothermal energy, the ES group is present through its engineering office ES Géothermie and its 40% investment in the ECOGI project for the use of geothermal heat in industry. This company, the result of a partnership with the company Roquette Frères and the Caisse des Dépôts, with the support of the ADEME, the Alsace Region and SAF-Environnement, is pursuing an ambitious project for the construction of a superheated water production plant (24MW Thermal) using a geothermal resource located more than 2,500 meters deep. ECOGI is an industrial division of the GEIE of Soultz-Sous-Forêts, a deep geothermal research project of which the ES group is a founding member.

After a first well was completed in 2013, the drilling of the second required implementation of great technical resources and took place successfully from mid-March to the end of July 2014. Circulation tests and trials between the two wells took place between September and the end of October 2014.

Positive results allowed to undertake the remainder of the work with the construction of the heat recovery plant and a 15 km pipeline between Rittershoffen and Beinheim, the place where the heat would be used, for commissioning of the facilities between now and the end of 2015.

6.4.1.5 EDF Trading Logistics

With a fuel oil supply volume of 0.9 million tonnes and 2.5 million tonnes of coal delivered in 2014, EDF Trading Logistics is EDF's vehicle for fuel oil purchases. It organises fuel oil and coal supply logistics operations for all of the EDF group's thermal plants in mainland France, Corsica and France's overseas departments. EDF Trading Logistics also acts as a coal freight forwarder for several large industrial companies (cement manufacturers, heating specialists, etc.), working closely with EDF Trading and operators of the coal terminals at the ports of Le Havre and Saint Nazaire. EDF Trading Logistics acquired these coal terminals under Law no. 2008-660 of 4 July 2008 on port reforms.

Furthermore, EDF Trading Logistics provides EDF with its expertise in the implementation of processes for managing risks relating to the transport of fuel oil (hazardous materials), an activity that has been awarded ISO 14001 certification, and in the management of environmental crises arising from this activity.

6.4.1.6 Other equity interests

In October 2014, EDF partnered with Amundi to set up a new joint venture¹ to raise funds from investors (insurance companies and institutional investors), and to manage funds on behalf of third parties to finance energy-transition projects. Within the framework of this partnership, EDF Invest and Amundi announced the launch of a property investment fund, which will be one of the investment channels for EDF Invest to establish a portfolio of unlisted property assets (see section 6.2.1.1.3.7 ("Assets available to cover long-term nuclear commitments (outside the operating cycle)")).

Finally, as well as interests in local distribution companies or LDCs (SMEG, Enercal, Électricité de Mayotte, EDSB), the EDF group has industrial subsidiaries and holdings. These companies contribute to the Group's missions in their respective business sectors (generation, fuel and engineering), and more specifically to those of the Generation and Engineering Division: namely to ensure the short and medium-term performance of EDF's portfolio of generation assets in France.

These companies include Cofiva, an EDF group holding company specialising in engineering; SAE, which specialises in fuel transport and trading operations on behalf of the EDF group; SHEMA, which specialises in hydropower generation by small power plants; Socodei, a wholly owned subsidiary of EDF specialising in the treatment and packaging of low- and Intermediate-Level radioactive Waste. Socodei has two machines that travel to the various nuclear power plants to treat primary circuit resins. Socodei treats metal waste by fusion and solid or liquid waste by incineration at its Centraco plant in Marcoule, in the Gard region of southern France (see section 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues" – "Back-end (downstream) in France" – "Storing conditioned ultimate waste" – "Short-Lived Low- and Intermediate-Level Waste (LILW-SL) and Very-Low-Level Waste (VLLW)")).

6.4.2 Gas activities

Active in gas markets for the past decade, EDF requires over 20 billion cubic metres of gas for its European operations, equivalent to just under half of France's national consumption. As such, EDF has developed a gas strategy to ensure the security of gas supply for its 4 million customers (including more than a million in France), its cogeneration plants (owned by its subsidiary Dalkia in France), and its gas power plants.

The EDF group is present throughout the natural gas chain, mainly through EDF Energy (United Kingdom), Edison (Italy), EDF Luminus (Belgium), as well as in France. The Group also operates through EDF Trading, particularly in the gas wholesale market, as well as through Dalkia, which became a wholly owned subsidiary of the Group in July 2014.

6.4.2.1 Natural gas end-market

In 2014, EDF's natural gas sales to its end customers in France totalled around 19.6TWh, equivalent to a market share of 4.7%. At 31 December 2014, some 1.1 million customers (ranging from residential customers to major accounts) had chosen EDF as their natural gas supplier. In 2013, these figures were 22TWh and 1.01 million customers respectively.

In Italy, the United Kingdom and Belgium, sales growth requires a more aggressive approach, with downstream customer portfolios composed of:

- in Italy: 553,200 customer accounts, 5.7Gm³ of gas (around 60TWh) and a market share of 13.6%;
- in the UK²: 2.1 million customers (28TWh), with a market share of around 5%;
- in Belgium: 581,000 customer accounts (13.2TWh), with a market share of around 18%.

6.4.2.2 Gas assets and projects

6.4.2.2.1 Supply sources

The Group's gas supply is provided mainly through a diversified portfolio of long-term contracts, originating from Qatar, Russia, the North Sea and North Africa.

The Group actively renegotiates these contracts with its suppliers to respond to fluctuations in the European gas markets and to restore profitability.

On 29 August 2014, an arbitration award has been rendered regarding the contract between Edison and Promgas, Gazprom's Italian subsidiary, for the supply of Russian gas. Arbitration proceedings are currently under way with ENI concerning the supply of gas from Libya (see also section 6.3.2.3 ("Edison")).

Moreover, on 17 July 2014, EDF signed a supply contract with the US company Cheniere for 0.77 million tonnes of liquefied natural gas (LNG) per year, for a period of 20 years from the commercial commissioning of the LNG terminal in Corpus Christi (Texas), which is scheduled no earlier than 2019.

EDF Trading entered the liquefied petroleum gas (LPG) market in 2014 by signing a supply contract with Enterprise Products Partners LP concerning the long-term export capacity from the Gulf of Mexico.

6.4.2.2.2 Infrastructure

Gas pipelines

On 29 December 2014, EDF and Gazprom signed an agreement for the acquisition by Gazprom of 15% of the EDF group's stake in the South Stream gas pipeline (South Stream Transport BV). Since this agreement, EDF has recovered the full amount invested in the project to date, calculated in accordance with previous agreements.

1. The formation of the management company remains subject to approval from the relevant regulatory authorities.

2. Excluding Northern Ireland.

In addition, EDF, through its subsidiary Edison, is also involved in gas import infrastructure projects (see section 6.3.2 ("Italy")):

- Galsi, a gas pipeline to connect Algeria and Italy via Sardinia, in which Edison holds a 20.8% share;
- IGI Poseidon, a company 50% owned by Edison, which is involved in the development of several projects to connect Greece and Italy (IGI), Greece and Bulgaria (IGB), and Cyprus and Greece (EastMed).

The Group also holds various transmission capacity rights on the European network.

Liquefied natural gas (LNG) regasification terminals

On 29 June 2011, EDF – through its subsidiary Dunkirk LNG (65% owned by EDF, 25% by Fluxys and 10% by Total) – made the final decision to build an LNG terminal with a capacity of 13 billion cubic metres per year on land owned by the *Grand Port Maritime de Dunkerque* in France. Construction on the Dunkirk LNG terminal began in January 2012 and commissioning is scheduled for the end of 2015. This project, which is the second largest industrial construction project in France after the Flamanville EPR, involves three main components: maritime infrastructure and platform (constructed by the Grand Port Maritime), the LNG terminal, and infrastructure connecting the facility to the French and Belgian networks (developed by the operators GRT Gaz and Fluxys). With three LNG storage tanks, each with a capacity of 190,000 cubic metres, the terminal will give greater flexibility to the gas network to supply gas-fired power plants, enabling them to cope with peak demand during winter.

This facility – unique in that it will be connected to two markets, France and Belgium – will be a major boost for efforts to secure and diversify European natural gas supplies. From an environmental perspective, EDF opted for a cutting-edge, energy-efficient system for heating the liquefied natural gas without generating CO₂, using hot water discharged from the Gravelines nuclear power plant.

In 2014, cryogenic tanks were built inside concrete reservoirs and then sealed. This was followed by a series of tests (hydraulic, pressure and radio-frequency tests). The main berth has been constructed, and five unloading arms have been installed at the end of December. In 2014 the tunnel boring machine suffered a mechanical failure, halting excavation work from May until November, with repairs having been carried out 50 metres beneath the western outer port. Tunnelling resumed in early November, and the boring machine arrived at the discharge channel of the Gravelines nuclear power plant at the end of December. At this point the construction project was 74.8% complete. The terminal is still on schedule to be commissioned in late 2015.

In Italy, Edison owns 7.3% of the share capital of Adriatic LNG Terminal, the company that operates the Rovigo offshore terminal, and 80% of the regasification capacity, i.e. 6.4 billion cubic metres per year (see section 6.3.2 ("Italy")).

Lastly, the Group holds regasification capacity in the LNG terminals of Fos Cavaou (France) and Zeebrugge (Belgium).

Storage

In Germany, EDF owns a gas storage facility in Etzel. The aboveground facilities are operated through a 50/50 joint-venture with EnBW. EDF has approximately 190 million cubic metres of volume capacity in this salt cavity storage.

In Italy, Edison operates two storage sites in depleted gas reserves: Cellino (since 1984) and Collalto (since 1994), giving a total volume of 700 million cubic metres (working gas). In 2013, Edison commissioned a third site, San Potito & Cotignola, currently in its ramp-up phase. Finally, Edison is developing a storage project on the Palazzo Moroni site (see section 6.3.2 ("Italy")).

In the UK, EDF Energy has developed and is in the process of delivering Hill Top Farm in Cheshire, a salt cavity fast-cycle gas storage facility next to the existing Hole House facility. Three cavities have been completed and are ready for commercial operation, pending final commissioning of the associated gas plant and delivery to the operator. The plant will import and export gas between the national transportation system and operational cavities. Work is under way to prepare the remaining cavities for commercial operation. In early April 2014, the Hole House gas storage business was acquired by EDF Energy from EDF Trading (see section 6.3.1.4.2 ("Generation business unit" – "Thermal energy generation and gas storage")).

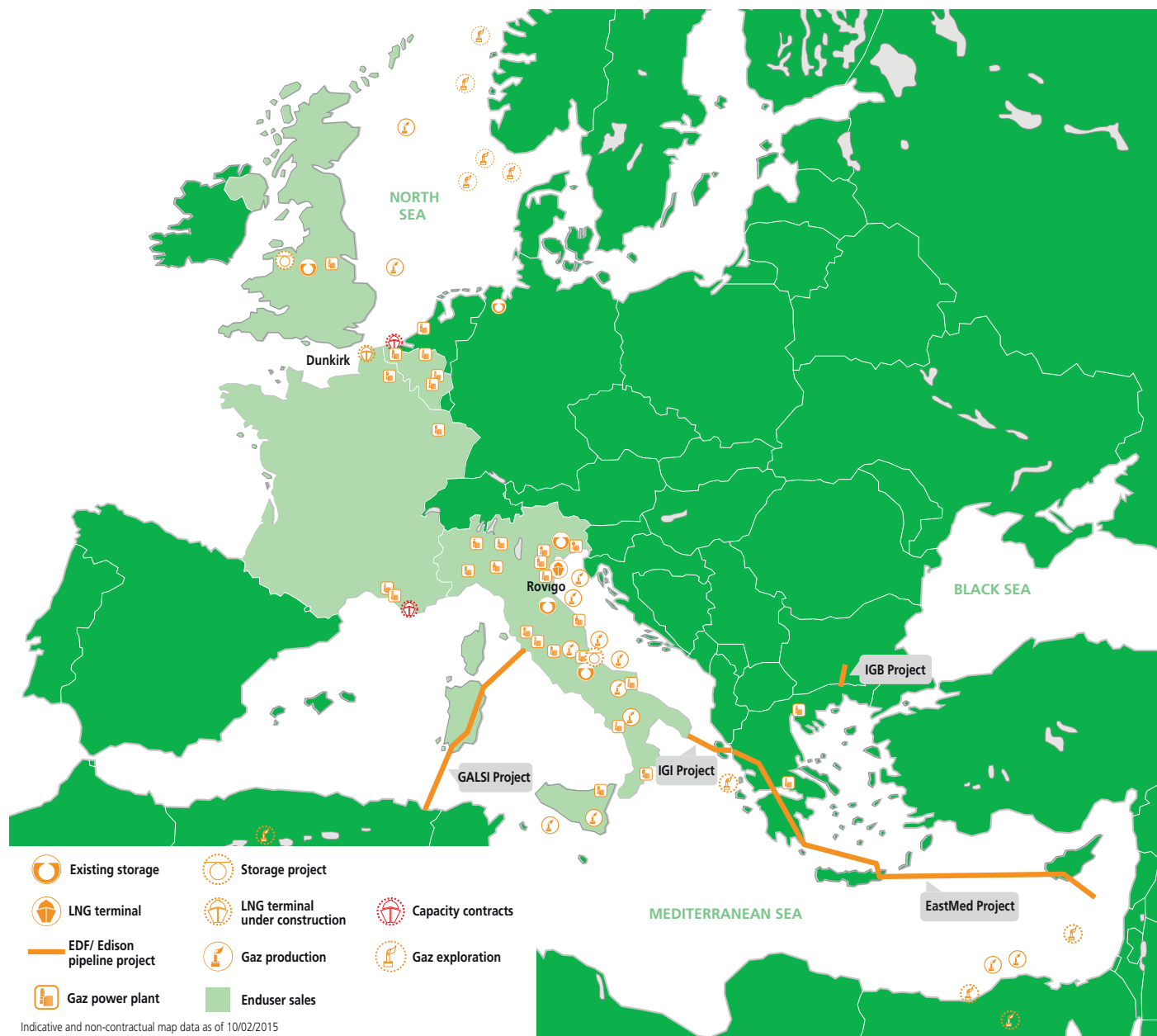
EDF also holds storage rights in the Netherlands, Belgium and France.

6.4.2.2.3 Exploration and Production (E&P)

The Group conducts upstream exploration and production (E&P) activities, mainly through Edison (see section 6.3.2 ("Italy")). Proven reserves total 46.2 billion cubic metres, with 2.8 billion cubic metres produced in 2014.

EDF Trading North America holds gas exploration and generation rights in Texas and Pennsylvania to develop its upstream gas activity in the United States (see section 6.3.3.2.2.3 ("EDF Trading in North America")).

Map of the gas projects and assets of the EDF group in Europe



6.5 Legislative and regulatory environment

EDF group entities are subject to a wide variety of regulations in conducting their business activities. In particular, EDF is subject to European legislation on the electricity and gas markets, which has been transposed into French law, as well as to the applicable environmental, nuclear power, health, hygiene and safety regulations.

The following review of legal and regulatory provisions is not designed to be an exhaustive description of all such provisions that are applicable to the EDF group.

6.5.1 EDF as a public undertaking

As of 31 December 2014, the French State held 84.49% of EDF's share capital and 84.56% of EDF's voting rights and, pursuant to Article L. 111-67 of the French Energy Code, must at all times hold at least 70% of EDF's capital.

As an undertaking in which the French State is a majority shareholder, EDF is subject to the provisions of Order no. 2014-948 of 20 August 2014 on the governance and equity transactions of companies with a public shareholding and its implementing Decree no. 2014-949 of the same date.

The French Government Shareholding Agency (APE), which was founded by Decree no. 2004-963 of 9 September 2004, fulfils the State's remit in its capacity as Company shareholder and, in this respect, proposes and implements the State's decisions and guidelines, in consultation with the ministers concerned.

In accordance with the legislation that applies to all undertakings of which the State is a majority shareholder, EDF may have to undergo certain State audit procedures, in particular through an economic and financial evaluation assignment, pursuant to Decree no. 55-733 of 26 May 1955 on State economic and financial evaluation and Decree no. 53-707 of 9 August 1953 on State evaluation of national public undertakings and certain organisations, the purpose of which has an economic or social component.

EDF also has to undergo the audit procedures performed by the French General Accounting Office (*Cour des Comptes*) and Parliament. Thus, in addition to the control performed by the statutory auditors, the Company's accounts and management and, where applicable, those of its directly-held majority subsidiaries, fall under the control of the French General Accounting Office, in accordance with Articles L. 111-4, L. 133-1 and L. 133-2 of the French Code of Financial Jurisdiction.

Moreover, the Legislative Decree of 30 October 1935 allows the Minister for the Economy to have EDF audited by the General Finance Inspection Office.

Lastly, the disposal of EDF shares by the State, or the dilution of the State's stake in EDF's capital, is subject to a specific procedure under Order no. 2014-948 of 20 August 2014 on the governance and equity transactions of companies with a public shareholding. Among other things, this Order simplified the previous rules that resulted from the so-called "privatisation" Laws no. 86-793 of 2 July 1986, no. 86-912 of 6 August 1986 and no. 93-923 of 19 July 1993.

6.5.2 Public service in France

Statutory definition of public service in France

Articles L. 121-1 *et seq.* of the French Energy Code outline the Public Electricity Service (see section 6.5.3.2 ("French legislation: Energy Code") below for a description of this regulation).

Public service missions

Articles L. 121-1 *et seq.* of the French Energy Code state that the purpose of the Public Electricity Service is, *inter alia*, to guarantee electricity supply throughout French territory, while acting in the general interest, to develop and operate public electricity networks and to supply electricity at regulated sales tariffs and at the basic necessity rate.

Balanced development of supply mission

The mission to promote the balanced development of electricity supply aims to achieve the objectives defined in the multi-year generation investment plan, which sets targets for allocating generation capacities by primary energy source and, where necessary, by generation technique and geographical area.

At present, the multi-year investment plan is defined by an Energy Minister Order of 15 December 2009.

This mission also involves guaranteeing the supply of areas that are not interconnected to continental Metropolitan France (Corsica, the overseas departments and territories).

As a power producer, EDF, along with the other producers, contributes to the performance of this mission.

Mission to develop and operate public transmission and distribution networks

The mission to develop and operate the public electricity transmission and distribution networks involves ensuring a rational electricity distribution service in France through the public transmission and distribution networks, in a way that is environmentally friendly, interconnection with neighbouring countries, as well as connection and access to the public transmission and distribution networks, under non-discriminatory conditions.

The public network managers that are designated by law are responsible for this mission, namely RTE for transmission, ERDF and the Local Distribution Companies ("LDCs") for distribution, and EDF in the areas not interconnected to the continental metropolitan network.

Mission to supply electricity

The public service mission to supply electricity involves ensuring the supply of electricity throughout France to customers who benefit from regulated electricity sales tariffs.

By law, this mission has been entrusted to EDF and to the LDCs.

The conditions under which customers can benefit from regulated electricity sales tariffs are defined in Articles L. 337-7 *et seq.* of the French Energy Code.

The mission to supply electricity also involves the application of the special "basic necessity" rate (TPN). This public service mission is now assigned to all electricity suppliers.

The mission to supply electricity moreover includes supplying emergency power to customers who are connected to the public networks. The relevant administrative authority designates emergency suppliers through one or more tendering procedures. As the implementing regulations have not yet been adopted, this provision has still not entered into force.

Social cohesion

Article L. 121-5 of the French Energy Code provides that the supply of electricity at regulated tariffs must contribute to social cohesion, in particular through the national equalisation of regulated electricity sale tariffs.

Article L. 115-3 of the French Social Action and Families Code prohibits electricity suppliers from cutting off electricity supplies to the primary residences of individuals or families during the winter period (1 November to 15 March) due to unpaid bills, including through contract termination. Electricity suppliers may, nevertheless, in certain cases, reduce the power supplied, except with regard to customers who benefit from basic necessity rates.

In its capacity as an electricity supplier, EDF is required to maintain electricity supplies under the conditions laid down by said Article and by Decree no. 2008-780 of 13 August 2008 on the procedure that is applicable in the event of unpaid electricity, gas, heating and water bills, implemented in its amended form pursuant to Decree no. 2014-274 of 27 February 2014.

Public Service contract

On 24 October 2005, a Public Service contract was signed by the State and EDF pursuant to Article 1 of the Law of 9 August 2004, now Article L. 121-46 of the French Energy Code. This contract, which details the commitments made by EDF and the State and specifies the rules governing the financial consideration for service commitments, will remain in force until a new contract is signed, as provided for in the contract itself.

Commitments by EDF (excluding network managers)

EDF's public service commitments include:

- access to the Public Electricity Service and the supply of electricity to customers who choose to remain at regulated tariffs;
- production and sales. These areas include the implementation of the energy policy and maintaining secure power generation that is environmentally friendly;
- contributing to the safety of the electricity network. In this regard, EDF undertakes to enter into several contracts with RTE, in particular concerning the optimisation of work on generation facilities and the availability of the resources required to maintain network balance.

Commitments by network managers

In the Public Service contract, the ERDF and RTE network managers made commitments concerning the management of the public networks for the transmission and distribution of electricity and the safety of the electricity system. These commitments are financed by the Tariff for Using the Public Electricity Transmission and Distribution Networks (TURPE).

These commitments concern, above all, network safety, supply quality, third party safety and the preservation of the environment – four areas where customer and local authority expectations are especially high.

More accessible services

On 28 September 2010, the State and EDF, as well as eight other major public service operators, signed a partnership agreement entitled “+ de services au public” (“more services to the public”), which aims to develop access to a set of services intended for rural populations in France (information on bill payment, general information, travel ticket sales, etc.).

Reception staff and internet access points are some of the many resources made available to users through shared facilities such as Multiservice Conciliation Information Points (PIMMS), Public Service Relays (RSP) and other structures such as town halls. Following the experimental phase, during which these services were deployed in 22 French *départements*, in July 2013, the Inter-ministerial Committee for the Modernisation of Public Action (CIMAP) decided to extend this initiative throughout France.

6.5.3 Electricity market legislation

6.5.3.1 European Legislation

Three European directives, which form the basis for the current organisation of the electricity market in France, were successively adopted in order to lay down the common rules for the generation, transmission, distribution and supply of electricity. Directive no. 96/92/EC of 19 December 1996 laid the foundation for opening up the electricity market to competition.

Directive no. 2003/54/EC of 26 June 2003 reiterated the major principles and took an additional step on the path to opening up the market, by progressively expanding eligibility to all customers.

Directive no. 2009/72/EC of 13 July 2009, known as the “third directive”, was adopted as part of the third “Energy Package”. This directive primarily strengthens the guarantees of the independence of transmission network managers and increases the power of the national regulatory authorities. These provisions have now been incorporated into the French Energy Code.

Moreover, the rules that govern the conditions for access to the network for cross-border exchanges in electricity are currently defined by Regulation (EC) no. 714/2009 of the European Parliament and of the Council of 13 July 2009, which is part of the third Energy Package. This Regulation, *inter alia*, provides for a compensation mechanism between transmission network operators for the costs incurred by hosting cross-border flows of electricity on their networks. This compensation is paid by the operators of the national transmission networks from which cross-border flows originate and the networks where those flows end.

Finally, the “Security of Electricity Supply” Directive no. 2005/89/EC, which was adopted on 18 January 2006, is intended to provide a better definition of the responsibilities of the various operators, ensure that minimum operational standards are respected, maintain balance between demand and supply, and direct investments toward the networks. The objectives of this directive have been taken into account in various French laws and regulations.

The Agency for the Cooperation of Energy Regulators

Regulation (EC) no. 713/2009 of the European Parliament and of the Council of 13 July 2009, established an Agency for the Cooperation of Energy Regulators (ACER). The ACER has a role in developing network codes in the electricity and gas sectors, and can make decisions relating to cross-border infrastructures (see also section 6.5.6.2.5 (“Regulations applicable to renewable energy generation”).

6.5.3.2 French legislation: Energy Code

The various pieces of legislation on energy law¹ were incorporated into the French Energy Code by Order no. 2011-504 of 9 May 2011, with the exception of provisions on nuclear energy, which were incorporated into the French Environment Code, pursuant to Order no. 2012-6 of 5 January 2012.

1. Law of 15 June 1906, Law no. 46-628 of 8 April 1946, Law no. 2000-108 of 10 February 2000, Law no. 2003-8 of 3 January 2003, Law no. 2004-803 of 9 August 2004, Law no. 2006-1537 of 7 December 2006 and Law no. 2010-1488 of 7 December 2010.

Moreover, the Policy Act that laid down energy policy guidelines (Law no. 2005-781 of 13 July 2005 – POPE) defined the energy policy priorities in France: supply security, reaffirmation of the role of nuclear power, competitive energy pricing, the fight against the greenhouse effect, and social and national cohesion.

Certain provisions of the French Energy Code will be amended by the draft bill on energy transition for green growth (see below and section 6.5.8.2 (“Future regulations at national level” – “Draft bill on energy transition for green growth”)).

Generation facilities

Anyone can operate an electricity generation facility, subject, above a certain power threshold determined by decree, to obtaining an operating licence issued pursuant to Article L. 311-5 of the French Energy Code. The powers and responsibilities of local authorities with regard to electricity generation are defined in Articles L. 2224-32 and L. 2224-33 of the French Local Authorities Code, and in Article 88 of Law no. 2010-788 of 12 July 2010 on the national commitment to the environment.

Regulated access to electricity from the existing nuclear fleet (ARENH)

The rules governing regulated access to electricity from the existing nuclear fleet (ARENH), provided for in Articles L. 336-1 *et seq.* of the French Energy Code, have been implemented since 1 July 2011. See section 6.2.1.3.5 (“Regulated access to historic nuclear power (*Accès Régulé à l’Énergie Nucléaire Historique*, or ARENH)”) on this point.

Choice of electricity supplier

All customers, without exception, have been eligible since 1 July 2007, *i.e.*, they may freely sign a contract for the purchase of electricity with a producer or supplier of their choice that is established on the territory of the European Union or on the territory of a State that is party to an international agreement with France (Article L. 331-1 of the French Energy Code).

Customers can choose to benefit from regulated electricity sales tariffs under the conditions set out in Articles L. 337-7 *et seq.* of the French Energy Code. Pursuant to these provisions:

- household and non-household customers whose power demand is less than or equal to 36 kVA benefit, at their request, from regulated sales tariffs; this is also true for all customers in areas that are not interconnected to the continental metropolitan territory;
- household and non-household end users whose power demand is greater than 36 kVA, who had not exercised their eligibility on 7 December 2010 may, until 31 December 2015, benefit from regulated sales tariffs. They may switch back and forth between the market offering and regulated tariffs, subject to a one-year wait each time. If said users exercised their eligibility after 7 December 2010, they may once again benefit from regulated sales tariffs. After 1 January 2016, they will no longer benefit from regulated tariffs. Article 25 of Law no. 2014-344 of 17 March 2014 on consumption requires EDF¹ to inform its customers who purchased power of more than 36 kVA and who still benefit from regulated tariffs, prior to said date and on three occasions, of the *de facto* termination of their contracts on said date. If they have not signed a new contract with a supplier before said date, and in order to benefit from the continuity of their electricity supply, the customers concerned will benefit from a contract with EDF² for a transitional period of six months, at the end of which they will no longer be supplied. Customers may terminate this contract at any time with no indemnity. EDF² has an obligation to inform the customers concerned, by letter, of the expiration of the transitional contract three months and one month before it ends.

Article L. 111-84 of the French Energy Code requires internal accounts to be kept that make it possible to distinguish between supply to customers who exercised their right to eligibility and supply to customers at regulated tariffs. The State and the CRE have a right of access to the electricity companies’ accounts.

Third-party access to networks

Article L. 111-91 of the French Energy Code provides that network managers must guarantee access to the public transmission and distribution networks in order to:

- perform the public service missions to supply electricity at regulated electricity sales tariffs and at basic necessity special rates;
- perform electricity procurement contracts;
- perform electricity export agreements signed by a producer or by a supplier who is located on French national territory.

Disputes concerning third-party access to networks are heard by the Settlement of Disputes and Sanctions Committee (CoRDIS), which is part of the Energy Regulation Commission (CRE).

The Tariffs for Using the Public Transmission and Distribution Networks (TURPE) mentioned in Articles L. 341-2 *et seq.* of the French Energy Code, which are currently in force, were established by the CRE Decision of 3 April 2013, which was published in the *Journal officiel* of 30 June 2013, for transmission (TURPE 4 HTB), and by the CRE Decision of 12 December 2013, which was published in the *Journal officiel* of 20 December 2013, for distribution (TURPE 4 HTA/BT).

For more details on the Tariffs for Using the Public Transmission and Distribution Networks, see section 6.2.2.4 (“Tariffs for Using the Public Electricity Transmission and Distribution Networks (TURPE)”) above.

Electricity purchase obligations

EDF is subject to electricity purchase obligations.

Articles L. 311-10 *et seq.* of the French Energy Code provide that the Minister for Energy may, when generation capacities do not meet the objectives of the multi-year investment plan, launch a tendering procedure. EDF, in its capacity as a “producer”, can submit a bid in response to this tendering procedure. EDF, in its capacity as a “buyer”, is then required to enter into an electricity purchase contract with the selected applicant(s) (this is a protocol in the event that EDF, in its capacity as “producer”, is itself the selected applicant).

Articles L. 314-1 *et seq.* of the French Energy Code moreover provide that EDF (as well as the LDCs that are responsible for supply in their service area) must sign a purchase contract, at the request of producers, for the electricity generated by:

- facilities that recover household waste or that supply a heating network;
- facilities whose installed capacity does not exceed 12MW and that use renewable energy sources (in particular photovoltaic energy) or high-performance technologies in terms of energy efficiency, such as cogeneration;
- facilities that use wind-based mechanical energy;
- facilities that use energy recovery sources;
- windmills and water mills that are refurbished to generate electricity;
- in the overseas departments, electric facilities that generate electricity from biomass sources, including sugar cane.

These facilities may benefit only once from a purchase obligation contract, except in the specific case, for certain sectors, of facilities that implement a renovation programme defined by order.

1. As well as the Local Distribution Companies that supply electricity at regulated tariffs.

2. Or their Local Distribution Companies.

Decree no. 2001-410 of 10 May 2001 provides that producers who benefit from the purchase obligation must sell all of their production to EDF and that the purchase agreement indicative models between EDF and the producers must be approved by the Minister for Energy. Purchasing terms and conditions, specifically the electricity purchase prices, are set by order of the Minister for Energy, after consulting the Higher Energy Council and the CRE.

The price conditions that are currently in force were laid down by an Order of 4 March 2011 that set the purchase conditions for electricity generated by facilities that use solar radiation energy, which establishes several price formulas that primarily take into consideration the integrated or non-integrated nature of the facility, its peak power and the peak power of all the other facilities connected or planned on the same building or the same land parcel.

Purchase prices for electricity of photovoltaic origin are adjusted quarterly, based on the cumulative power of the facilities for which complete connection requests were made during the previous quarter. Some facilities, especially ground facilities, must apply a quarterly sliding scale that does not take into account the volume of the connection requests filed with the network manager in question.

The arrangement is completed by a tendering procedure system for facilities on buildings of more than 100kWc, and ground facilities. The conditions for holding these tendering procedures are specified by Decree no. 2002-1434 on the tendering procedure for electricity generation facilities. Thus, a tendering procedure involving photovoltaic facilities installed on a building with peak power of more than 250kW is pending as of the filing date of this reference document.

The additional costs for EDF and the LDCs resulting from contracts signed pursuant to the obligation to purchase energy are compensated by a contribution received from final consumers, the CSPE. The CRE estimated the future costs of public electricity service at €6.3 billion for 2015, 39% of which are for costs linked to the photovoltaic energy sector. The additional costs linked to the purchase obligation for renewable energies (REN) paid by EDF and the LDCs are estimated at €4 billion, i.e. 63% of the total costs.

Under the draft bill on energy transition for green growth, currently under review by Parliament, EDF would also be required to sign contracts with energy producers from the sectors mentioned in Article L. 314-1 of the French Energy Code that offer additional remuneration, without any purchase of the electricity generated. Within this framework, EDF would not purchase the electricity generated. Such contracts could also be entered into following a tendering procedure. The facilities that benefit from a purchase contract would not be able to benefit from a contract that offers additional remuneration. The eligibility rules for both these renewable energy support mechanisms will apparently be defined by decree. The additional costs linked to the performance of these contracts could be offset by the CSPE.

Mechanism for compensating the additional costs of public service

The Contribution to Public Electricity Service (CSPE)

The Contribution to Public Electricity Service costs (CSPE), which is provided for by Articles L. 121-6 *et seq.* of the French Energy Code, is a tax intended to compensate the costs that are attributable to the electricity public service missions assigned to EDF and the LDCs.

The law states that in principle, the following costs are compensated in full using the CSPE:

- for electricity generation:
 - the additional costs that result both from electricity purchase agreements entered into by EDF and the LDCs after tendering procedures (Articles L. 311-10 *et seq.* of the French Energy Code) and

from purchase obligation agreements signed within the framework of Articles L. 314-1 *et seq.* of the French Energy Code, including when the facilities concerned are operated by EDF or an LDC,

- in zones not interconnected to continental metropolitan territory:
 - additional generation costs that are not covered by the generation portion in regulated sales tariffs,
 - the costs of storage facilities managed by the electricity system manager, within the limits of the additional generation costs they help to avoid,
 - additional electricity procurement costs (other than those, mentioned above, linked to the purchase obligation) that are not covered by the generation portion in regulated sales tariffs, within the limit of the additional generation costs they help to avoid,
 - the costs paid by electricity suppliers in respect of energy demand control initiatives, less any income received through these initiatives, within the limit of the additional generation costs they help to avoid,
- the remuneration paid by EDF to cogeneration facilities within the framework of transitional contracts, pursuant to Article L. 314-1-1 of the French Energy Code;
- for the supply of electricity:
 - loss of income and the additional costs incurred by suppliers due to the implementation of the special “basic necessity” rate (TPN),
 - costs incurred by suppliers as a result of their participation in the plan established for low-income persons (within the limit of a percentage, which is set by order, of the cost borne by the supplier in respect of the TPN for the year in question).

Moreover, in accordance with Law no. 2013-312 of 15 April 2013 on the preparation of the transition towards a low energy system (known as the “Brottes Act”), which, in particular, completed Article L. 121-10 of the French Energy Code, the purpose of the CSPE is to finance the premium owed to the demand response managers pursuant to Articles L. 123-1 and L. 271-1 of the same Code.

The CSPE is collected directly from the final customer, either as an additional levy on regulated sales tariffs or on network usage tariffs or directly from power producers that generate power for their own use.

The mechanism for compensating public service costs is governed by Articles L. 121-9 *et seq.* of the French Energy Code, which were amended, *inter alia*, by the Budget Act no. 2011-900 of 29 July 2011 and by the Amended Budget Act for 2013 no. 2013-1279 of 29 December 2013, as well as by Decree no. 2004-90 of 28 January 2004, which was amended most recently by Decree no. 2014-1136 of 7 October 2014. Pursuant to these provisions:

- on the basis of a proposal made by the CRE on 15 October at the latest, each year, the Minister for Energy sets the total amount of costs borne by EDF and the LDCs, as well as the amount of the CSPE; the increase in the amount of the contribution may be staggered over one year;
- if these amounts are not set by the Minister before 31 December, the amounts proposed by the CRE automatically become effective on 1 January. For the amount of the CSPE, this automatic entry into effect is nevertheless limited to a maximum increase of €0.003/kWh compared to the amount applicable before this date.

In 2013, the amount of the CSPE owed per consumption site was capped at €569,418. Pursuant to the Amended Budget Act for 2013, this limit, which is provided for in Article L. 121-12 of the French Energy Code, will be updated each year in a proportion equal to that of the change in the amount of the contribution mentioned in Article L. 121-13, within the limit of a 5% increase. Consequently, pursuant to decisions by the CRE, the cap was set at €597,889 for 2014 and €627,783 for 2015.

The massive expansion of facilities that generate electricity using renewable energy sources (mainly wind power and photovoltaic facilities) and that benefit from the purchase obligation, for several years has led to a significant increase in the costs to be compensated by the CSPE. This phenomenon continues today: accordingly, the CRE cost forecasts for 2015 (€6.3 billion) are 20% higher than the costs for 2013 (€5.3 billion). Since 2007, the amount of the CSPE has not been enough to compensate the increase in these costs. The deficit of a mechanism that is paid for exclusively by EDF weighs on the Group's debt.

In January 2013, EDF announced that it had reached an agreement with the authorities, which provides for the repayment of the debt formed by the CSPE deficit at 31 December 2012 (around €4.3 billion, adjusted to €5.0 billion at 31 December 2013 to take into account the deficits related to public service charges at 31 December 2012, as confirmed by the CRE decision of 9 October 2013 and the brokerage costs incurred by the Group of €0.6 billion). Under this agreement, this debt will be paid off by 31 December 2018, according to a progressive repayment schedule, and will be remunerated at a rate of 1.72% in accordance with the Decree of 7 October 2014. As a result of this agreement, in its 2012 financial statements, the Group recognised financial income of €0.6 billion, which corresponds to the recognition of past accrued brokerage costs as of 31 December 2012.

Article 59-I of the Amended Budget Act for 2013 added an Article L. 121-19-1 to the French Energy Code, which lays down the principle, for expenses incurred as from 1 January 2013, of using the CSPE to pay for any financial expenses incurred due to a new compensation deficit. Decree no. 2014-1136 of 7 October 2014 set at 1.72% the rate on the basis of which these expenses must be calculated. Pursuant to these provisions, as part of its assessment of the projected expenses for 2015, the CRE estimated at €86.3 million the financial expenses linked to the cost compensation deficit for 2013.

As regards the past, Article 59-III of the Amended Budget Act for 2013 stated that, without prejudice to Article L. 121-19-1, the compensation owed to EDF would exceptionally be increased by an amount set by order of the Ministers for Energy and the Budget, which will correspond to the brokerage costs that result from the delay in the compensation of the public service charges paid by EDF until 31 December 2012. This order was issued on 18 September 2014: it sets the amount of the brokerage costs at €627 million.

Compensation for additional distribution costs

The remit of the Electricity Equalisation Fund (FPE), the accounting management of which is entrusted to EDF under Article L. 121-29 of the French Energy Code, is to distribute the charges incurred as a result of public service missions assigned for managing the electricity distribution networks among the operators concerned, in particular those linked to the specificities of the networks operated and that will not be covered by the portion relating to the use of those networks in the regulated tariffs or by the tariffs for using the public electricity distribution networks. The costs linked to involvement in the development of areas with particular geographical, economic or social difficulties, as defined by Article 42 of Law no. 95-115 of 4 February 1995, are also concerned.

Capacity guarantees

Articles L. 335-1 *et seq.* of the French Energy Code, which are taken from the NOME law (New Organization of the Electricity Market – *Nouvelle organisation du marché de l'électricité*), obligate each electricity supplier to contribute to the security of electricity supply on continental metropolitan territory, in light of its customers' energy consumption patterns. Under penalty of an administrative sanction, each supplier must therefore provide direct or indirect guarantees of its load shedding and electricity generation capacities, which can be implemented to ensure balance between generation and consumption, in particular at peak periods.

The aims of this mechanism are:

- to guarantee the existence of the generation and demand response capacities that are required to ensure security of supply;
- to select the most efficient capacities, while minimising the cost of this security of supply;
- to set the correct price for these capacities and ensure their costs are covered;
- to share the expense of this security of supply among all suppliers.

The decree issued following consultation of the Council of State that specifies how this system will work in practice was published in the Official Journal of 18 December 2012 (Decree no. 2012-1405 of 14 December 2012). This decree refers to various applicatory measures that will determine how the future mechanism will be implemented. The "capacity mechanism rules" proposed by RTE were approved by a ministerial order of 22 January 2015 after consulting the CRE.

Other points mentioned in the decree must be the subject of a CRE decision (such as, for example, the capacity guarantees associated with volumes purchased from the ARENH, the sale prices or the guarantees that are part of the purchase obligation). On the filing date of this reference document, the CRE had not yet issued a decision on these matters.

Electricity demand response

Articles L. 271-1 and L. 123-1 of the French Energy Code set forth a statutory framework that is intended to facilitate the development of electricity demand response.

These provisions state that regulations adopted to implement them must include:

- the possibility for a demand response manager to cut off consumption without the agreement of the supplier of the sites to which electricity supply is curtailed, and to trade the reserve of electricity on the energy markets or incorporate it into the adjustment mechanism;
- a system for the demand response manager to pay the suppliers of the sites to which supply is curtailed; this system must be designed to take into account the quantities of electricity injected by or on behalf of the suppliers of the sites to which supply is curtailed and the electricity reserve of which is traded by the demand response manager;
- the payment of a bonus to the demand response managers, taking into account the advantages of demand response for the local or regional authority. This bonus is financed by the CSPE.

On the basis of these provisions, Decree no. 2014-764 of 3 July 2014 on electricity demand response was adopted, along with two sets of implementing rules.

The purpose of the Decree of 3 July 2014 is to determine "*the methodology used to establish the rules for trading demand response reserves on the energy markets and incorporating them into the adjustment mechanism*". It contains the following provisions, in particular:

- the amount of the payment must reflect the energy component of the price of supply to the sites to which supply is curtailed. By default, this is calculated using fixed scales that are established on the basis of the characteristics of the sites to which supply is curtailed. For some sites, for which they specify the characteristics, the implementing rules may provide, instead of the application of fixed scales, that the payment will be made, on behalf of the demand response manager, by the end user, on the basis of the energy component of the price of its supply contract;
- the bonus is set each year by order of the Ministers for the Economy and for Energy, after consulting the Energy Regulation Commission. It is paid to demand response managers, according to the certified volume of consumption cut-off and cannot cause the remuneration of the capital invested by the demand response managers to exceed normal remuneration for capital investments. The Order of 11 January 2015 set the bonus amounts in force as from 23 January 2015.

The decree moreover provides that *"consumption cut-off that is inseparable from the supply offer is not taken into account"* (Article 1).

Two sets of implementing rules were also adopted:

- The rules for trading demand response reserves on the energy markets, known as the "Nebef 2.0" Rules, were approved by an Energy Regulation Commission decision of 17 December 2014.
- The rules on incorporating demand response reserves into the adjustment mechanism are contained in the Rules on the Policy, the Adjustment Mechanism and the Balance Manager system, known as the "MA-RE" Rules, in the version approved by decision of the Energy Regulation Commission of 17 December 2014.

Provided that it is definitively adopted, the draft bill on energy transition for green growth, currently under review by Parliament, will change two fundamental aspects of the demand response mechanism. Firstly, it will include an option for final consumers to trade their demand response reserves directly with their supplier as part of a consumption cut-off offer that is inseparable from supply, or via demand response managers. Secondly, the bonus will be replaced by tenders launched by the government if the demand response reserve capacities do not meet the multi-year energy policy targets. Lastly, for consumption cut-offs that lead to major energy savings, the administrative authority may require the payment to the supplier to be shared between the demand response manager and the balance managers. See section 6.5.8.2 ("Future regulations at national level" – "Draft bill on energy transition for green growth").

Electricity sector regulation

The Energy Regulation Commission

The Energy Regulation Commission (CRE) is an independent administrative authority created by Article 28 of the Law of 10 February 2000.

Articles L. 131-1 *et seq.* of the French Energy Code give a general definition of the remit of the CRE, which is tasked with improving the situation of final consumers, and contributing to the correct functioning of the electricity and natural gas markets. In this respect, the CRE ensures, in particular, that the conditions for access to electricity and natural gas transmission and distribution networks do not impede the development of competition.

The CRE has significant powers: power to make proposals, advisory powers and decision-making powers (approval power and regulatory power).

The CRE makes proposals, in particular, to the Ministers for the Economy and for Energy regarding the amount of the costs that are attributable to the public service missions assigned to power producers, and the net amount of the related contributions. Once the decree has been published that specifies the methods for identifying and recognising the costs that are taken into account for the calculation of the ARENH price, the CRE will propose the price of the ARENH. Moreover, as from 31 December 2015, it will be its responsibility to propose changes in the regulated sales and transfer tariffs for electricity, on which it can only issue an opinion at present.

The CRE now has decision-making power to set the tariffs for use of the public electricity transmission and distribution networks (TURPE): it notifies its reasoned decision to the administrative authority, which can only ask the CRE for a new decision in the event of non-compliance with energy policy guidelines. Under its residual regulatory power, the CRE takes network connection decisions, as well as decisions to define the rules for calculating and adjusting the rights of suppliers to the ARENH.

The CRE is also vested with very broad powers that enable it to obtain any information that it may deem useful for the fulfilment of its remit, as well as authority to settle disputes and to apply penalties, through the Settlement of Disputes and Sanctions Committee (CoRDIS).

6.5.4 Gas market legislation

6.5.4.1 Community legislation

Directive no. 98/30/EC of 22 June 1998 and Directive no. 2003/55/EC of 26 June 2003 were the major steps towards opening up the gas market to competition.

New rules aimed at improving the functioning of the internal natural gas market were defined in Directive no. 2009/73/EC of 13 July 2009, and by Regulation (EC) no. 715/2009 of 13 July 2009 on conditions for access to the natural gas transmission networks.

6.5.4.2 French legislation: Energy Code

Directive no. 2009/73/EC of the European Parliament and of the Council of 13 July 2009 was transposed into French law by Order no. 2011-504 of 9 May 2011, which organised the legislative section of the French Energy Code. The Energy Code entered into force on 1 June 2011.

Access to natural gas networks

The French Energy Code provides that customers, suppliers and their agents have a right to access natural gas transmission and distribution infrastructures, as well as LNG facilities, under the terms and conditions set forth in an agreement with the operators that run them.

Natural gas network operators must refrain from discriminating between users or categories of users in any way.

Customers

Since 1 July 2007, all customers can freely choose their supplier.

Pursuant to the provisions of Article L. 445-4 of the French Energy Code, household and non-household customers who consume less than 30,000kWh per year may benefit from regulated tariffs, at their request and without having to meet any conditions. Household customers who are entitled to the special "basic necessity" rate for electricity may benefit from a special solidarity tariff applicable to the supply of natural gas for part of their consumption. The conditions for application of this provision are specified by Decree no. 2008-778 of 13 August 2008 on the supply of natural gas at the special solidarity tariff, as amended by Decree no. 2012-309 of 6 March 2012 on the automation of procedures for allocating social tariffs for electricity and natural gas. The additional costs that result from supply at this tariff are compensated by a contribution due by natural gas suppliers, based on the quantities of natural gas sold by these suppliers to final customers.

Customers whose consumption exceeds 30,000kWh per year can only benefit from regulated gas sales tariffs for a site if no new market offering has been accepted for such site, pursuant to Article L. 445-4 paragraph 2 of the French Energy Code.

Non-household final customers who consume more than 30,000kWh per year and who still benefit from the regulated tariffs for the sale of natural gas that are stipulated in Article L. 445-3 of the French Energy Code are not or will no longer be eligible for these tariffs on the following dates:

- for non-household consumers who are connected to the transmission network, since 18 June 2014;
- for non-household consumers whose consumption level exceeds 200,000kWh per year, since 31 December 2014;
- for non-household consumers whose consumption level exceeds 30,000kWh per year, by 31 December 2015 at the latest.

For customers who are concerned by the end of the regulated tariffs for gas sales on 31 December 2014 or 31 December 2015, Article 25 of Law no. 2014-344 of 17 March 2014 on consumption requires their suppliers¹ to inform them on three occasions, prior to these dates, of the de facto termination of their contracts. If they have not signed a new supply contract with a supplier by these dates, and in order to benefit from the continuity of their gas supply, the customers concerned will benefit from a contract with their supplier for a transitional period of six months, at the end of which they will no longer be supplied. Customers may terminate this contract at any time with no indemnity.

Suppliers

Article L. 443-4 of the French Energy Code defines suppliers as persons who (i) are established on the territory of a Member State of the European Union or on the territory of another State pursuant to international agreements, and (ii) hold a licence issued by the Minister for Energy.

EDF is authorised to supply natural gas to non-household customers that do not provide services in the public interest, pursuant to an Order of the Deputy Minister of Industry of 14 September 2004, and pursuant to an Order of 9 August 2005, to non-household customers that provide services in the public interest, as well as to natural gas distributors and suppliers, and pursuant to an Order of 15 June 2007, to household customers.

EDF only supplies its customers with a market offering and not at regulated sales tariffs, which can only be proposed by GDF Suez and the LDCs tasked with supplying gas.

Underground storage and third-party access to natural gas storage facilities

The French Energy Code requires all suppliers to hold, on 31 October of each year, directly or indirectly through an agent, sufficient inventories of natural gas in France to meet their direct or indirect contractual obligations to supply household customers and other customers that provide services in the public interest or that have not contractually accepted interruptible gas supply, during the period between 1 November and 31 March.

Decree no. 2006-1034 of 21 August 2006, as amended, specifies the legal framework that applies to underground storage facilities for natural gas. This Decree was amended by Decree no. 2014-328 of 12 March 2014 in order to increase the security of supply.

Control and penalties

The French Energy Code grants the Minister for the Economy and the Minister for Energy, as well as the Energy Regulation Commission, power to oversee the gas market. The Minister for Energy may also levy a fine, or withdraw or suspend an authorisation to supply natural gas. The CRE can carry out investigations into whether offences that breach the provisions of the French Energy Code have been committed (Article L. 135-13 of the French Energy Code).

6.5.5 Public electricity distribution concessions

French legal system applicable to concessions

In accordance with Articles L. 121-4 *et seq.* and L. 322-1 *et seq.* of the French Energy Code, and Article L. 2224-31 of the French Local Authorities Code, the public distribution of electricity is operated under a system of public

service concessions. Pursuant to this body of law, the contracting authorities organise public electricity distribution service through concession agreements and specifications that set forth the respective rights and obligations of the concession grantor and concession holder. Currently, the contracting authorities are most often public institutions for inter-municipal cooperation, and increasingly inter-département cooperation.

The unbundling of supply and network operations required under Community Directives has led to the identification of two separate public service missions: first, the mission to supply electricity at regulated tariffs assigned to EDF and the LDCs in their exclusive service areas and, second, the mission to develop and operate the public electricity distribution networks assigned to ERDF and the LDCs in their service areas, and to EDF for areas which are not interconnected to the continental metropolitan network.

Article L. 334-3 of the French Energy Code provides that the signature of new concession agreements and amendments, as well as renewals of existing concession agreements, must be executed by three parties: the concession grantor, the distribution network manager (for the provisions relating to management of the public distribution network) and by EDF (or the LDC having the authority in the geographic area) for supply at regulated tariffs. The current concession agreements in force are deemed to have been signed jointly by these three entities.

Rights of the contracting authorities

The rights of the concession grantor are detailed in section 6.2.2.2.2 ("Distribution activities") above.

6.5.6 Regulations applicable to the environment, nuclear power, health, hygiene and safety

EDF's business in France, as well as in other countries where EDF operates, is subject to regulations that are applicable to the environment, nuclear power, health, hygiene and safety. Compliance with these increasingly strict and continuously changing regulations exposes the Group to significant costs in order to ensure it does business compliantly.

6.5.6.1 Basic regulations applicable to the environment, health, hygiene and safety

Environmental regulations

Grenelle Laws 1 and 2

Following the Grenelle Environmental Forum that was initiated in 2007, in Law no. 2009-967 of 3 August 2009, known as the "Grenelle 1 Law", the French government undertook to meet a certain number of objectives and to implement certain environmental measures concerning the reduction of greenhouse gas emissions, energy efficiency, the development of renewable energy sources, ensuring clean bodies of water, the protection of biodiversity, the prevention of risks to health and the environment, waste management and ecological governance.

These commitments and objectives were implemented by Law no. 2010-788 of 12 July 2010 (known as the "Grenelle 2 Law"), many provisions of which impact EDF's activities.

1. GDF Suez and the LDCs that are responsible for gas supply.

Public involvement in environmental matters

Law no. 2012-1460 of 27 December 2012 on the implementation of the principle of public involvement recast the applicable procedure for the public to be involved in decisions by the State and public institutions (other than individual decisions) that have an impact on the environment, as from 1 January 2013.

Order no. 2013-714 of 5 August 2013, which has been applicable since 1 September 2013, specifies the rules for the public to be involved in the individual decisions by the public authorities.

Moreover, the draft bill on growth, business and equal economic opportunities (known as the "Macron draft bill") empowers the government to issue orders containing measures to reform procedures that are designed to ensure public involvement in certain development and facilities projects, in particular in order to better guarantee their compliance with constitutional requirements, and to ensure that the design process for projects is more transparent and that the public is more involved in this design process in practice.

Environmental Liability ("LRE" law)

The purpose of the Law of 1 August 2008 on environmental liability (LRE), which is incorporated into the French Environment Code under Articles L. 160-1 to L. 165-2, is to promote the prevention and remedying of environmental damage to water, soil and biodiversity that reaches a certain level of seriousness. The remedy must be environmental only and must allow the natural environment to return to its previous state or an equivalent state.

Balanced management of Water Resources

The Water Framework Directive of 23 October 2000 is the foundation of Community water policy. It defines a framework for the management and protection of water by major river basins and sets targets for maintaining and restoring the status of surface waters, in particular ensure the correct ecological and/or chemical status of water by 2015.

In France, the Directive was primarily transposed into law through the Water and Aquatic Environments Act of 30 December 2006, which stipulates the measures that are designed to ensure that the Directive's targets are attained. These targets are determined by major river basins in the master plans for water development and management (SDAGEs). All EDF's activities, which may impact water and aquatic environments, must be compatible with the targets set in the SDAGEs.

The Water Act also requires the various uses of water to be reconciled. The requisite balanced, sustainable management of water resources therefore has consequences for the operating rights of hydroelectric plants, and indirectly for all EDF's activities that affect aquatic environments.

Protection of biodiversity

As an occupant and user of natural land and water areas, EDF is directly concerned by biodiversity issues.

In order to protect and restore biodiversity, the Grenelle Environmental Forum set ambitious targets, which include the implementation of a national strategy for the creation of protected land areas (SCAP), which aim to provide extensive protection, by 2019, for at least 2% of metropolitan French land mass, as well as the creation of a green and blue belt, a tool for land-use planning that sets up green corridors to connect protected areas, thereby enabling flora and fauna to migrate.

The provisions on the green and blue belt are incorporated in the French Environment Code in Articles L. 371-1 to L. 371-6. Decree no. 2012-1492 of 27 December 2012 specifies the components of the green and blue belt, as well as the contents of the procedure for drawing up regional green coherence schemes (SRCE) that implement it. A Decree of 20 January 2014 (no. 2014-45) specifies the "national guidelines" to which the SRCE developed by the Regions and the State, in consultation with all local stakeholders, must adhere.

Comprehensive environmental authorisation and project certificate

Experimental procedures concerning the environment were implemented pursuant to the Law of 2 January 2014, which empowered the government to simplify and increase legal certainty for corporations. EDF's projects can potentially benefit from these procedures.

Order no. 2014-356 of 20 March 2014 set up a three-year project certificate experiment in certain regions. This is an instrument designed to provide legal certainty and stabilise the law whereby the Prefect notifies a commitment to a project manager regarding the various procedures to be complied with and the timeframes for issuing the authorisations requested. Order no. 2014-355 of 20 March 2014 set up, in certain regions and for certain categories of facilities, a comprehensive authorisation system, which aims to organise coordinated review and issuance in a single instrument of all the decisions required of the State for a project that requires authorisation due to the involvement of facilities that are classified for the protection of the environment (see section 6.5.6.2.1 ("Regulations applicable to facilities classified for the protection of the environment (ICPE)")). Another comprehensive authorisation procedure was, moreover, created for projects that require authorisation under the law on water and the protection of aquatic environments, by an Order of 12 June 2014.

The draft bill on energy transition for green growth, currently under review by Parliament, plans to extend the scope of experiments involving the "comprehensive authorisation" (see section 6.5.8.2 ("Future regulations at national level" – "Draft bill on energy transition for green growth")).

Social and environmental reporting obligation for businesses (RSE)

Articles L. 225-102-1 and R. 225-104 of the French Commercial Code require companies whose securities are admitted to trading on a regulated market, as well as companies that employ more than 500 staff and whose revenue or balance sheet total exceeds €100 million (for the latter, according to a schedule that covers the years 2012 to 2014), to disclose in the management report information on how they take into consideration the social and environmental consequences of their activity, as well as on their societal commitments to sustainable development ("RSE reporting"). EDF and some of its subsidiaries are concerned by these provisions.

Article L. 225-102-1 of the French Commercial Code authorises subsidiaries and controlled companies not to disclose their RSE information, provided that this information is published by the company that controls them, in detail by subsidiary or by controlled company, and that they state how to access this information in their own management report. Moreover, when subsidiaries and controlled companies are established in France and have facilities that are classified for the protection of the environment (ICPEs, that are subject to authorisation and registration), the information provided must concern each of them, if the information cannot be consolidated.

The social and environmental information provided in the management report must be verified, according to a schedule that takes into account, for non-listed companies, the number of their employees and their revenue, by a third party independent organisation, which is appointed in accordance with the provisions of Article R. 225-105-2 of the French Commercial Code. An Order of 13 May 2013 determined, in particular, the rules according to which the independent third party organisation will perform its assignment. The verification by this organisation leads to a certificate concerning the presence in the management report of all the required information and a substantiated opinion on the accuracy of the information itself (see section 17.1 ("Corporate responsibility commitments")).

PCBs and PCTs

The Group is subject to Regulations on polychlorobiphenyls (PCBs) and polychloroterphenyls (PCTs) in the various countries where it operates, particularly in Europe.

Directive no. 96/59/EC of 16 September 1996 required that an inventory of equipment containing PCBs and PCTs at levels of more than 500 ppm be drawn up, together with a national plan for decontamination and the gradual disposal of these substances, which are mainly found in certain electricity transformers and condensers. Decontamination of equipment containing these substances was to be completed by 31 December 2010 at the latest. EDF had a special disposal plan and has achieved this objective.

Pursuant to a Decree of 10 April 2013 (no. 2013-301), EDF must clean up and decontaminate equipment with pollution levels of between 50 and 500 ppm, with the possibility, as the holder of more than 150 pieces of equipment, of benefiting from a "specific plan" that is approved by order of the Minister for the Environment. This plan must, as a minimum, provide for the decontamination or destruction of one-half of the equipment before 1 January 2020 and all equipment before 31 December 2025. The contents of the application for the specific plan were defined by an Order of 28 October 2013. RTE's and ERDF's specific decontamination plans were approved by two orders of 14 April and 3 July 2014.

The Decree of 10 April 2013 also specified the new obligations in terms of identifying, labelling, declaring and using equipment with fluid containing PCBs with a volume of more than 5 dm³. The rules for conforming to these obligations were stipulated in detail by two orders of 7 January and 14 January 2014.

(See also section 17.2.2.6 ("Soil use and protection" – "Pyralene").)

Greenhouse gases

Allowance trading scheme

Some of the EDF group's activities fall within the scope of application of Directive 2003/87/EC of 13 October 2003, as amended by Directive no. 2009/29/EU of 23 April 2009, which established a European scheme for greenhouse gas (GHG) emission allowance trading, using the project mechanisms set forth in the Kyoto Protocol (the Emissions Trading System (ETS) Directive).

In France, this Directive was transposed and integrated into Articles L. 229-5, R. 229-5 *et seq.* of the French Environment Code. The Group has an annual obligation to surrender allowances equal to the level of CO₂ emitted by its facilities. In order to comply with this obligation, under certain conditions, the Group may use credits issued under projects eligible for the project mechanisms provided for under Articles 6 and 12 of the Kyoto Protocol (joint implementation and clean development mechanism).

Under the ETS Directive, the third period for the greenhouse gas (GHG) emission allowance trading scheme started on 1 January 2013. The provisions of the French Environment Code on this scheme were amended accordingly by Order no. 2012-827 of 28 June 2012 (ratified by Law no. 2013-619 of 16 July 2013) and by Decrees no. 2012-1343 of 3 December 2012 and no. 2014-220 of 25 February 2014. Since 1 January 2013, the rule for the electricity sector is the auctioning of allowances, in accordance with the rules defined by Regulation (EU) no 1031/2010 of 12 November 2010. Since that date, EDF has to purchase 100% of its allowances.

GHG Reporting

Pursuant to Articles L. 229-25 and R. 229-45 *et seq.* of the French Environment Code, companies with over 500 employees must provide an annual report on their greenhouse gas emissions and a summary of the actions they plan to take to reduce such emissions.

This report is disclosed to the public and must be updated every three years. The first EDF report was published in the Indicators section of the EDF annual report in March 2012.

Energy efficiency

Energy efficiency directive

On 25 October 2012, the European Union adopted a directive on energy efficiency (no. 2012/27/EU). The purpose of this directive, for which the transposition deadline was 5 June 2014, is to enable the European Union to reach its energy savings target of 20% by 2020. With this aim in mind, the directive boosts the provisions of existing directives on energy efficiency services (no. 2006/32/EC) and cogeneration (no. 2004/8/EC), which it abrogates.

The directive contains several provisions that are liable to impact the activities of the EDF group, first and foremost of which is the obligation for Member States to reach an energy savings target each year that is equivalent to an aggregate annual reduction in energy sales of 1.5% over the period 2014-2020, which can take the form of an obligation for energy distributors and/or suppliers to reduce sales. The directive also contains provisions on providing customers with information on their consumption, the promotion of energy services, taking into account energy efficiency in heat and cold production, and in the transmission and distribution of energy.

Law no. 2013-619 of 16 July 2013 transposed Article 8-4 of the directive into French law, which requires enterprises that are not SMEs to perform an energy audit on their business activities in France by 5 December 2015, then every four years. Decree no. 2013-1121 of 4 December 2013 determines the thresholds above which undertakings are concerned. Those undertakings that use a certified energy management system will, under certain conditions, be exempted from this obligation. Decree no. 2014-1393 of 24 November 2014 and Order of 24 November 2014 on the rules of application of energy audits will state the scope of the audit, as well as the conditions to be fulfilled by energy auditors.

Energy savings certificates

At national level, the energy savings certificates mechanism, which is provided for in Articles L. 221-1 *et seq.* of the French Energy Code, places energy suppliers under the obligation to save energy. This mechanism defines a three-year objective that is shared between persons subject to an obligation to achieve energy savings (the "obligors") based on their sales volumes. At the end of the relevant period and under penalty of sanctions, the obligors must produce energy savings certificates that correspond to the amount of the energy savings they are under the obligation to achieve, which are obtained either by carrying out (directly or indirectly) energy savings actions or by purchasing credits from the other "eligible" economic players through the national register of certificates.

For the second period of the mechanism, between 1 January 2011 and 31 December 2013, the stated total savings target was 345TWhc (compared to 54TWhc for the first period). In order to ensure the continuity of the mechanism, and until the third period starts, the second period has been extended by one year, from 1 January to 31 December 2014, by a Decree of 20 December 2013.

The third period started on 1 January 2015 and will end on 31 December 2017. The energy savings target for the third period is set at 700TWhc (i.e. 233.4TWhc/year). Decree no. 2014-1668 of 29 December 2014 and several implementing orders that were published in December 2014 determine the conditions and terms for the issuance of energy savings certificates for this new period.

The draft bill on energy transition for green growth amended the mechanism for energy savings certificates ("CEEs") for the third period and announced a fourth period between 1 January 2018 and 31 December 2020. An order will be issued before 31 March 2017 that will specify the amount of the energy savings obligation for this next period.

Registered natural sites and classified sites (buried lines)

The EDF group is also subject to regulations on classified and registered sites that are stipulated in Articles L. 341-1 to L. 341-22 and R. 341-1 to R. 341-31 of the French Environment Code.

The aim of these regulations is to preserve natural heritage sites and sites for which the conservation, from a landscape, artistic, historical, scientific, folkloric or scenic standpoint, is in the public interest. "Classification", which is reserved for the most singular sites, provides extensive protection, whereas "registration", for which the framework of rules is less restrictive, is proposed for less sensitive sites.

Under the French Environment Code, new electricity lines on classified sites must be buried. Registration and classification can also have an impact on the day-to-day operation of facilities (if more than one site is visible at the same time; obligation to obtain the opinion of the State architect – *architecte des Bâtiments de France*, etc.).

Protection of the environment through criminal law

Directive no. 2008/99/EC of 19 November 2008 on the protection of the environment through criminal law, the main purpose of which is to identify conduct that leads to serious environmental damage that must be punished by all Member States, was at the origin of French Order no. 2012-34 of 11 January 2012, which harmonised the criminal penalties laid down in the French Environment Code.

Health, hygiene and safety regulations

Asbestos

In France, the regulations require, among other things, the identification of materials containing asbestos in buildings and, if necessary, monitoring procedures or asbestos removal work. EDF is also subject to regulatory obligations to inform and protect workers who may be exposed to asbestos dust inhalation.

Legionella

EDF operates air cooling towers that are needed, in particular, for its electricity generation business, which are now subject to ICPE Regulations on basic nuclear facilities (BNF). EDF must, among other obligations, carry out a methodical analysis of the risk of proliferation of legionella in its air cooling towers and implement a preventive maintenance plan for cleaning and disinfection. EDF is also required to carry out analyses once or twice a month, depending on the type of facility involved.

Nanoparticle substances

As from 1 January 2013, Articles L. 523-1 *et seq.* and R. 523-12 *et seq.* of the French Environment Code make it mandatory to report the quantities and uses of nanoparticle substances or nanomaterials produced, distributed or imported in France. Information on these substances must be made available to the public and to inspection authorities. The information to be declared and the rules governing the declaration were specified in an Order of 6 August 2012. EDF is likely to be concerned by these provisions as it uses nanoparticle substances.

Exposure to Electromagnetic Fields (EMF)

Pursuant to the Grenelle 2 Law, Decree no. 2011-1697 of 1 December 2011 requires managers of public electricity transmission networks to perform regular verifications of the EMF caused by electric lines transmitting electricity.

Law no. 2015-136 of 9 February 2015 on sobriety, transparency, information and consultation regarding electromagnetic wave exposure creates an information obligation on persons who install equipment issuers of electromagnetic fields in the premises for residential use. This obligation is likely to involve forward, some entities of the EDF group.

Chemical products

Regulation (EC) no. 1907/2006 on the registration, evaluation and authorisation of chemicals, known as "REACH", which came into force on 1 June 2007, applies to EDF as a user, but also as a manufacturer and importer of chemical products. EDF has complied with its obligation to register substances that it manufactures or imports in quantities of more than 1,000 tonnes per year with the European Chemicals Agency. In May 2013, EDF registered the monochloramine that is manufactured in situ at certain nuclear plants.

In addition, the Biocides Regulation (EU) no. 528/2012 of 22 May 2012, provides for a new procedure, with an extended scope of application, of authorisations for placing on the market of biocidal products. In this new regulatory environment, EDF could be concerned as a manufacturer and user of monochloramine and sodium hypochlorite. Where necessary, applications for authorisation must be prepared and filed before 2017.

Health and the environment

Law no. 2013-316 of 16 April 2013 on the independence of expertise in the area of health, the environment and the protection of whistleblowers confirmed the recognition of an alert procedure in the area of public health and the environment within businesses and laid down the rules for using this procedure. This law also organises a system to protect whistleblowers and sets up the National Commission for Ethics and Public Health and Environment Alerts (CNDASE). Several decrees have specified the rules for the implementation of this system (Decree no. 2014-324 of 11 March 2014, Decree no. 2014-1629 and Decree no. 2014-1628 of 26 December 2014).

6.5.6.2 Regulations applicable to EDF group facilities and activities

6.5.6.2.1 Regulations applicable to facilities classified for the protection of the environment ("ICPEs")

Facilities concerned and main obligations

Certain facilities operated in France by the EDF group, in particular thermal power plants, are subject to legislation on facilities that are classified for the protection of the environment (ICPEs), which is organised in the French Environment Code. These facilities are subject to a prior declaration, simplified authorisation (known as "registration") or to an authorisation depending on the magnitude of danger or adverse effects they may cause to the environment or public health.

The ICPE Regulation requires that the site be restored when a facility is taken out of service depending on the expected future use of the land. Under Article L. 516-1 of the French Environment Code, lodging financial guarantees is also required for certain ICPE facilities that are subject to authorisation (including Seveso facilities) and registration. The basis and amount of the financial guarantees vary depending on the facility. The financial guarantees are designed to provide collateral for the financing of the measures that must be adopted in the event of an accident before or after closure, as well as the surveillance, safety works and restoration operations after closure. These guarantees do not cover compensation owed by the operator to third parties who may suffer damages in connection with the activity carried out.

The list of the ICPEs concerned by the obligation to lodge these guarantees and the rules for calculating and lodging the financial guarantees are stipulated by the Orders of 31 May (amended by an Order of 20 September 2013) and 31 July 2012. An Order of 5 February 2014 provides the framework for lodging guarantees via the intermediary of a private guarantee fund. The EDF group operates facilities that are concerned by these new requirements.

Seveso facilities

"Seveso" ICPEs are governed by the provisions of the Seveso 2 Directive (96/82/EC) and, as from 1 June 2015, the provisions of the Seveso 3 Directive (no. 2012/18 of 4 July 2012), which will replace it. The entry into force of the Seveso 3 Directive will result in the use of dangerous products (under the CLP Regulation of 16 December 2008) that were not covered by the Seveso 2 Directive being incorporated into the scope of the Seveso regulations.

The Seveso 3 Directive also contains stricter provisions concerning access by the public to information related to safety, public participation in the decision-making process and access to justice, as well as improvements in the way information is collected, managed, made available and shared. The Seveso 3 Directive also introduced stricter standards for facility inspections. Law no. 2013-619 of 16 July 2013 transposed the legislative portion of the directive into French law by inserting into the Environment Code (Articles L. 515-15 *et seq.*) a section that is specific to Seveso establishments. These provisions, which are complemented by two Decrees (no. 2014-285 and no. 2014-284) of 3 March 2014 and by an Order of 26 May 2014, will enter into force on 1 June 2015.

Facilities that are subject to the "IED" Directive ("3000" headings under the nomenclature)

Directive no. 2010/75/EU of 24 November 2010 on industrial emissions (known as the "IED" Directive) revised and recast into a single piece of legislation several existing Directives, including the IPPC, LCP, Waste Incineration and VOC Directives, among others.

Chapter III of this Directive affects EDF in particular as it regulates the combustion plants using thermal plants. The level of requirements applicable depends on the nominal thermal power of the combustion plants concerned and on the fuel used. This Directive, which has been partially transposed into French law via Order no. 2012-7 of 5 January 2012 (added to the French Environment Code under Articles L. 515-28 to L. 515-31), has the effect of broadening the scope of application of the IPPC Directive to include new activities, strengthening the application of the best available techniques (BAT) on which the fixed emission limit values will be based, causing a periodic reconsideration of operating conditions in order to take into account changes in BAT and, in certain cases, requiring a "baseline report" on the state of soil.

Decree no. 2013-5 of 2 January 2013 partially transposed the provisions of the IED Directive on the state of soil. Article 1 of the decree states that interim analysis of the soil will now be required in the event of a substantive change of the facility and, if pollution occurs, the operator must propose measures. Another Decree of 2 May 2013 (no. 2013-374) completes this transposition: it introduced provisions into Articles R. 515-58 to R. 515-84 of the French Environment Code that are specific to facilities that are covered by the IED Directive. These provisions apply to thermal plants, under the conditions laid down in particular by the Order of 26 August 2013 on combustion plants with power of 20MW or more.

6.5.6.2.2 Specific regulations applicable to basic nuclear facilities

In France, EDF is primarily subject to Law no. 2006-686 of 13 June 2006 on transparency and safety in the nuclear field (the "TSN Law"), integrated into the French Environment Code via Order no. 2012-6 of 5 January 2012 and to its implementing Decree no. 2007-1557 of 2 November 2007, as amended, and the Order of 7 February 2012, as amended, which laid down the general rules for basic nuclear facilities. This legislation establishes the legal system applicable to Basic Nuclear Facilities (BNF). The Law created

the Nuclear Safety Authority (NSA), an independent government agency, with the Ministers for nuclear safety retaining authority to issue the main authorisations and draft general regulations.

The TSN Law, as incorporated into the French Environment Code, provides that the establishment of Basic Nuclear Facilities may be authorised after a public inquiry has been conducted by way of a Decree issued by the Prime Minister. This Decree is issued after an opinion from the French NSA has been given and is based on the report from the Ministers for nuclear safety. The Decree authorising a Basic Nuclear Facility defines the identity of the operator, and records the type, perimeter and maximum capacity of the facility. The application for authorisation to set up a BNF must include, in particular, a preliminary security report (PSR), a study of the impact of the facility on the environment and health, a dismantling plan and a risk management study (RMS). An internal emergency plan (IEP) specifies the organisational methods, intervention methods and requisite resources implemented by the operator in the event of an emergency situation. The decree that authorises the BNF sets a time limit to commission the facility and sets the frequency of safety inspections if not equal to 10 years and, finally, lays down requirements to ensure the public safety, health and sanitation, and the protection of nature and the environment. The commissioning authorisation is granted by the NSA. Safety inspections assess the compliance of the facility with the applicable regulations and update the assessment of the risks that the facility poses to the interests mentioned above.

Pursuant to the decree that authorises the facility to be set up, the conditions applicable to pumping water, discharging liquid and gaseous wastes – whether radioactive or not – as well as the related limits placed on these activities are set by an NSA decision; decisions that set the limits for discharges by facilities into the environment require approval.

The NSA also issues regulations pursuant to the decree that authorises the facility to be set up, in order to prevent or limit the effects of any accidents or incidents, to define measures to protect residents on an individual and collective basis, limit noise pollution and manage the waste generated by and stored at the facilities.

Rules on the safety and inspection of nuclear facilities

The nuclear facilities operated by EDF are subject to nuclear safety regulations and, in this respect, must also comply with the general rules defined by ministerial decision with a view to guaranteeing the protection of public safety, health and sanitation, nature and the environment. In February 2012, the aforementioned "BNF" order was thus published, which precisely fulfils this objective. Its key provisions entered into force on 1 July 2013 and primarily cover the following topics: the safety policy, risk management, reduction of noise and harmful environmental impacts, waste management, emergency situations, and information provided to the authorities and the public.

The NSA also has the authority to issue regulatory decisions of a technical nature to complete the terms and conditions for application of the decrees and orders issued in the field of nuclear safety and radiation protection, with the exception of those related to occupational healthcare. These decisions are subject to the approval of the relevant Ministers. Since the aforementioned "BNF" order was published, out of the twenty or so decisions that are being prepared, six have been published and approved.

The TSN Law, as incorporated into French legislation, also sets up mechanisms for informing the authorities. In this respect, all accidents and incidents, whether nuclear or otherwise, that have or may have particular consequences for the security of a BNF, must be declared without delay by the operator, in particular to the NSA and to the State's representative in the *département* where the incident or accident took place. Moreover, the TSN Law created or improved tools used to inform the public, with, for example, the creation of a High Committee for transparency and information on nuclear safety or the possibility given to any person to ask the operator directly for information on the risks involved in exposure to ionising radiation and on the safety and radiation protection measures adopted to prevent or reduce these exposure risks.

Finally, increasingly strict administrative and criminal law penalties have been established to punish Basic Nuclear Facilities operators who do not comply with their legal and regulatory obligations, such as a three-year prison sentence and a €150,000 fine if a Basic Nuclear Facility is operated without authorisation, or a one-year prison sentence and a €30,000 fine if radioactive substances are transported without authorisation or approval.

In July 2014, the Council of Ministers of the European Union adopted Council Directive 2014/87/Euratom of 8 July 2014 amending Directive 2009/71/Euratom (see section 6.5.8.1 “Future regulations at Community level”).

Decommissioning of nuclear facilities

The final shutdown and decommissioning of a Basic Nuclear Facility are authorised by a Prime Minister's decree that is issued after a public enquiry and an opinion by the NSA. The decree specifies the stages of the decommissioning, how long it will last and the intended final status. Once the decommissioning has been completed, the operator must send the NSA a declassification request, which, following an approved decision by the NSA, makes it possible to end the BNF status of the facility. The Order of 7 February 2012 confirmed, from a legal standpoint, the decommissioning strategy implemented since the early 2000s by EDF by stating that decommissioning must take place within a timeframe that is “as short as possible” after final shutdown.

Radioactive waste

EDF's business is subject to French regulations on the sustainable management of radioactive waste. EDF bears liability for the radioactive waste resulting from its operations. In France, radioactive waste is managed by the National Agency for Radioactive Waste Management (ANDRA), a public institution of industrial and commercial nature created by the Law of 30 December 1991.

The management method used for radioactive waste in France depends on its level of radioactivity and lifespan of radioactivity. In addition to some storage on EDF sites, very low-level waste produced by EDF (for example, concrete or metal waste from the decommissioning of a nuclear power plant) is disposed of on an ANDRA site opened in 2003. Short-lived, low or Intermediate-Level radioactive Waste that is produced by EDF's operations is disposed of above ground at the ANDRA storage centre in the Aube *département* (see section 6.2.1.1.3.4 (“The nuclear fuel cycle and related issues”). Long-lived, high-level radioactive waste produced from the treatment of spent fuel is vitrified and stored temporarily by AREVA NC (formerly Cogema) at the La Hague site pending the adoption of a long-term management solution (see section 6.2.1.1.3.4 (“The nuclear fuel cycle and related issues”). Long-lived, Intermediate-Level Waste (for example, from shells, nozzles, sheaths, etc.) is either cemented or compacted and confined in stainless steel containers. This type of waste is currently in intermediate, temporary storage pending a final decision concerning long-term management (see section 6.2.1.1.3.4 (“The nuclear fuel cycle and related issues”).

The Law of 28 June 2006, as incorporated into Articles L. 542-1 *et seq.* of the French Environment Code, defines the organisation and the financing of radioactive waste management, along with the terms for a framework to evaluate and cover the costs of decommissioning Basic Nuclear Facilities, as well as managing spent fuels and radioactive waste, as incorporated into Articles L. 594-1 *et seq.* In particular, the assets allocated to cover provisions cannot be used for any other purpose by the operator, and separate accounting procedures for these assets must be used. The implementation of these provisions is controlled by the administrative authority, i.e. the Minister for Energy, which is itself overseen by a National Assessment Commission for the financing of decommissioning costs for BNFs and the management of spent fuels and radioactive waste.

Decree no. 2007-243 of 23 February 2007 on securing the financing of costs in the nuclear industry sets forth the terms and conditions for implementing the Law of June 2006.

A report is filed with the administrative authorities and the NSA every three years, with a copy sent to the Statutory Auditors and includes, in particular, a valuation of the costs, the methods used for the calculation of provisions, and the composition of the assets. The administrative authorities may require any additional supporting documents, have an outside organisation conduct a study, or require an expert valuation of the assets at the operator's expense.

Council Directive 2011/70/Euratom established a Community framework for the responsible and safe management of spent fuel and radioactive waste for a certain number of European Union Member States, and clarifies several concepts. This Directive presents, in particular, deep geological disposal as the safest and most sustainable option to manage long-lived, high-level waste and considers the possibility of creating disposal facilities shared between several Member States, on a voluntary basis.

Regulations on radiation protection

In France, nuclear activities that present a risk of exposure of persons to ionising radiation are regulated by two separate systems, depending on the category of persons to be protected. Regulations on the basic protection of the population against such radiation, which are governed by the French Public Health Code, are derived mainly through the subordination of all nuclear activities to a declaration or authorisation. Authorisations granted to establish a Basic Nuclear Facility serve as the authorisation required under the French Public Health Code. Article R. 1333-8 of the French Public Health Code sets the maximum exposure level of the general public at 1 mSv per year.

French Regulations on the protection of workers against the dangers of ionising radiation, which are governed by the French Labour Code, lay down various obligations for employers of workers who are likely to be exposed and, in particular, set a limit on exposure of workers to ionising radiation at 20mSv over a period of twelve consecutive months.

The French Health Code contains the provisions applicable to controlling high-level sealed radioactive sources and orphan sources.

Council Directive 2013/59/Euratom of 5 December 2013, which laid down “basic safety standards”, repealed Directive no. 96/29 of 13 May 1996. This Directive must be transposed before 6 February 2018. The government services concerned have organised working groups in which employers and employee representatives are represented, with a view to achieving transposition, the aim of which is to simplify the system.

Civil liability of nuclear facility operators

Several international conventions govern the civil liability of nuclear facility operators, in particular the Paris Convention of 29 July 1960 on Third-Party Liability in the Field of Nuclear Energy and the Brussels Convention of 31 January 1963, which supplements the Paris Convention. These two Conventions are applicable in the signatory countries that have ratified them, including France and the United Kingdom.

The Paris Convention established a special liability derogation system, with specific characteristics. Liability for nuclear damage to persons and property is objective (even in the absence of a fault), limited in terms of the amount and duration, and is focused on the operator of the nuclear facility only.

In France, the operator's liability is limited to approximately €91.5 million per nuclear incident at a facility and to approximately €22.9 million per nuclear incident during transport.

Over and above the maximum amount for which the operator is liable, the State in which the nuclear facility of the operator that is liable for the incident is located and where the incident occurred is responsible for compensating victims up to a maximum of €201.4 million (provided that said State is a Contracting State of the Brussels Convention); over and above this amount, Member States that have ratified the Brussels Convention (including France) contribute collectively to compensation up to a ceiling of €345.3 million.

The Convention also provides that the operator has an obligation to take out insurance or lodge a financial guarantee for the liability amounts established in order to guarantee the availability of funds. This insurance or financial guarantee must be approved by the State in which the insured or guaranteed facility is located. EDF has opted for insurance and is in compliance with the current coverage requirements (see section 4.2.3 ("Insurance")).

Protocols amending the Paris and Brussels Conventions were signed on 12 February 2004. They require significantly higher amounts of compensation to be available in order to cover a greater number of victims and types of damage that are eligible for indemnification. The operator's liability is accordingly at least €700 million per nuclear incident in a facility and €80 million per nuclear incident during transport. The State in which the nuclear facility of the operator that is liable for causing the damages is located is liable for amounts above the €700 million for which the operator is liable, up to €1,200 million (provided that said State is a Contracting State of the Brussels Convention). Above this amount, the Contracting States of the Brussels Convention are liable up to a maximum amount of €1,500 million. In addition, for personal injury only, the time limit to claim compensation has changed from 10 years to 30 years from the date of the incident. Another important change is the introduction of a detailed definition of "nuclear damage", which includes non material damage, the cost of preventive measures, the costs of measures of reinstatement of an impaired environment, and certain other losses resulting from damage to the environment. These new provisions were transposed into French law by the aforementioned "TSN" Law of 13 June 2006 and incorporated into the French Environment Code. However, they will only be applicable when the protocol that amends the Paris Convention comes into force, i.e. when at least two-thirds of the sixteen Contracting States have ratified it. France has adopted a law permitting ratification of both Protocols (Law no. 2006-786 of 5 July 2006), but has not yet filed the corresponding ratification instruments.

The draft bill on energy transition for green growth, currently under review by Parliament, seeks to increase compensation limits in the event of an accident (to €700 million for facilities, €70 million for reduced-risk facilities and €80 million for transport), without waiting for the Protocols amending the Paris and Brussels Conventions to come into force. Moreover, on 30 April 2014, France filed its ratification instrument for the joint protocol relating to the application of the Vienna Convention and the Paris Convention, which thus entered into force for France on 30 July 2014. This joint protocol establishes a link between the Paris Convention, which covers countries in Western Europe, and the Vienna Convention of 21 May 1963 on civil liability for nuclear damage, which covers (among others) countries in Eastern Europe. It enables the parties to one of these two conventions (Paris or Vienna) who adhere to the protocol to benefit from the coverage provided by the other convention.

Protection of nuclear facilities and material

The purpose of the regulations on the protection and control of nuclear material governed by Article L. 1333-1 of the French Defence Code is to detect and prevent the loss, theft or misappropriation of nuclear material that is stored at facilities or being transported, or any attempts to alter, damage or disperse such material.

These regulations were completely recast by Decree no. 2009-1120 of 17 September 2009 on the protection and control of nuclear material, facilities and transportation, as set forth in the French Defence Code. The main purpose of this decree was to extend the protection of nuclear material to the facilities where it is stored. Several orders published in 2011 detail operators' obligations.

For nuclear power plants, the Order of 10 June 2011 on the physical protection of facilities that house nuclear materials, which can only be held with an authorisation, is based on in-depth defence of targets, namely the nuclear material, equipment or functions, which, in the event of default or damage by a malicious act, are liable to have radiological consequences. Accordingly, the operator must set up several lines of protection in the form of six zones (e.g. access control zones, vital zone, internal zone, etc.).

The Order of 9 June 2011 organises the system for physically monitoring nuclear material, as well as the accounting conditions for nuclear material and operator obligations. Accordingly, operators must ensure that the physical monitoring and accounting are protected against the malicious actions identified when the authorisation is issued.

The Government has announced the creation of a form of protection known as "Nuclear Areas with Increased Access Protection"; it will be an offence to enter these areas. On 5 February 2015, during the first reading, French representatives adopted the draft bill put forward by the UMP representative Claude de Ganay, "*which aims to increase the protection of civilian facilities that house nuclear materials.*" The draft bill adopted provides for the creation of a specific criminal misdemeanour of trespassing in civilian facilities that house nuclear materials. The basic penalties are a one-year prison sentence and a €15,000 fine. These penalties are increased in the event of aggravating circumstances (to a three-year prison sentence and a €45,000 fine, in particular when the offence is committed in a group, and to a seven-year prison sentence and a €100,000 fine, in particular if the offence is committed with the use or threat of a weapon). The Senate has yet to review the draft bill.

6.5.6.2.3 Regulations applicable to thermal energy generation

The EDF group's thermal energy generation business is subject in France to the regulations that are applicable to ICPEs (see section 6.5.6.2.1 ("Regulations applicable to facilities classified for the protection of the environment (ICPEs)")). EDF's thermal facilities must also comply with specific regulations on air quality, adopted mainly as a result of European Directive no. 2001/81/EC of 23 October 2001 defining national emission ceilings for certain atmospheric pollutants ("NEC" Directive), and Directive no. 2001/80/EC of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants ("LCP" Directive). These directives were transposed into French law by several orders, in particular the Order of 30 July 2003 on boilers that are present in existing combustion facilities with a power rating of more than 20MWth.

Exemptions from obligations concerning emissions into the air are possible up until 2015. As of that time, the ceilings and the exemptions originating from the IED Directive mentioned above will apply, with, in particular, specific issues concerning production facilities in the overseas departments and emergency systems, for which the pollution levels require negotiating adapted provisions. Two orders of 26 August 2013, which entered into force on 1 January 2014, bring together all the provisions that are applicable to combustion facilities and specify the conditions under which these facilities will be allowed to exceed emissions limits.

Thermal energy production is also subject to the provisions of the Seveso 2 and 3 Directives and to the obligation to lodge financial guarantees (see section 6.5.6.2.1 ("Regulations applicable to facilities classified for the protection of the environment (ICPEs)")). Decree no. 2014-1501 of 12 December 2014, which amended the nomenclature for classified facilities, concerns certain thermal facilities that store heavy fuel and makes them subject to the Seveso 2 Directive.

6.5.6.2.4 Regulations applicable to hydropower facilities

In France, hydropower facilities are subject to the provisions contained in Articles L. 511-1 et seq. of the Energy Code. They require a concession agreement granted by decree (for facilities generating over 100MW) or by order of the Prefect (for facilities generating between 4.5MW and 100MW), or an authorisation from the Prefecture (for facilities under 4.5MW), (see section 6.2.1.1.4.4 ("Hydropower generation issues")) concerning hydropower concessions).

EDF's hydropower generation business is subject to the substantive provisions of water regulations. Such regulations cover in particular control over variations in water levels and flow rates, the safety of areas in the vicinity and downstream of hydropower facilities and, in general, maintaining balanced management of water resources (see section 6.5.6.1 ("Basic regulations applicable to the environment, health, hygiene and safety")).

Competitive tendering for hydropower concession contracts

Decree no. 94-894 of 13 October 1994, as amended by Decree no. 2008-1009 of 26 September 2008, specifies the conditions for the examination of an application for or renewal of a hydropower concession contract. This decree, which at present places concessions within the legal framework for public service delegation contracts, provides for a competitive tendering procedure for concession contracts that are about to end. The former preferential right of the outgoing concession holder was eliminated as it was not compatible with European law (Treaty and Directive no. 2014/23/EU of 26 February 2014 on the award of concession contracts).

The draft bill on energy transition for green growth, currently under review by Parliament, aims to complement this mechanism, by offering the State the possibility:

- of combining concession contracts that form a "series of facilities that are hydraulically linked" and, for concession contracts that are combined, the possibility of determining the end date for the concession contract, calculated using a "barycentric" formula;
- of creating semi-public hydroelectric companies (SEM) made up of private-sector operators and a public division (State, local authorities, etc.), each of which holds at least 34% of the shares;
- of extending certain concession contracts in return for investments by operators in connection with energy transition.

Annual concession fee

When a hydropower concession contract is renewed or extended under the conditions provided for by the draft bill on energy transition for green growth, an annual concession fee indexed to the revenues generated from sales of electricity generated by the hydropower facilities under concession will be levied, which is paid in part to the French State and in part to the French *départements* and municipalities through which the waterways used flow. The Grenelle 1 Law provided for the possibility of capping the amount of this fee above the current threshold of 25% of the aforementioned revenues. The Grenelle 2 Law provides for a cap to be set by the concession grantor on a case-by-case basis, for each new or renewed concession. To date, the decree has set three criteria for the choice of the future operator: a guarantee of the energy efficiency in the operation of the waterfall, respect for balanced management of water resources and better economic and financial conditions for the concession grantor. The new procedure to appoint concession holder now lasts for five years (compared to eleven years previously).

6.5.6.2.5 Regulations applicable to renewable energy generation

The "Climate Package" is the source of a set of measures aimed at ensuring that, by 2020, the EU will achieve the objectives of a 20% reduction of greenhouse gas emissions (GHG), a 20% improvement in energy efficiency and a 20% portion of renewable energy (REN) in energy consumption.

One of the five instruments that make up the Climate Package is Directive 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources, known as the "REN" Directive. The Directive allocates the effort to reach the target of a 20% share of energy from renewable sources in final EU energy consumption by 2020 among Member States, taking into account, among other aspects, the national energy mix, the potential of each State and its GDP, and requires Member States to adopt national renewable energy action plans.

Pursuant to Article 4 of the aforementioned REN Directive, France adopted its National Action Plan in favour of renewable energies (2009-2020). This Plan covers the objectives contained in the Multi-year Investment Programme (PPI) and lays down, in accordance with the Grenelle 2 Law, a national objective of a 23% share of energy from renewable sources in the gross final consumption of energy by 2020.

In order to achieve this objective, the Grenelle 2 Law created new land planning instruments with a view to enabling balanced development between the various renewable energy sectors, which include:

- regional climate, air and energy schemes (SRCAEs), for which the legal framework is laid down in Articles L. 222-1 to L. 222-3 and R. 222-1 to R. 222-7 of the French Environment Code. As of 1 May 2014, all regions had adopted their SRCAE;
- regional schemes for connection to renewable energy networks (S3RERs), of which Decree no. 2012-533 of 20 April 2012 (amended by Decree no. 2014-760 of 2 July 2014) specifies the composition, approval rules, host capacity management and financial conditions for the connection of electricity producers.

Under Article 15 of the REN Directive, an Order of 14 September 2011 (ratified by Law no. 2013-619 of 16 July 2013) amended the legal rules on the guarantee of origin of electricity produced using renewable sources or by cogeneration, laid down in Articles L. 314-14 *et seq.* of the French Energy Code. The terms and conditions to implement this new scheme and the rules for appointing the organisation in charge of managing guarantees of origin (issuing, transfer, cancellation) are stipulated in Decree no. 2012-62 of 20 January 2012. As producer and mandatory purchaser of electricity produced using renewable energy sources, the EDF group is concerned by these provisions.

The Grenelle 2 Law also contains more favourable provisions for sea-based renewable energies:

- an exemption from all urban planning procedures for facilities located off shore "on the public maritime domain which are underwater below the low tidemark", the characteristics of which will be included in a forthcoming decree (Article L. 421-5 of the French Urban Planning Code);
- a derogation allowing structures that connect marine facilities that use renewable energies to public networks to transmit and distribute electricity along coastal areas (and more specifically a 100-metre zone – Article L. 146-4 III of the French Urban Planning Code). The draft bill on energy transition for green growth extends this derogation to structures other than solely structures that are used to connect marine facilities.

In addition, Article 18 of Law no. 2014-1545 of 20 December 2014 on the simplification of corporate life empowers the Government to set up a dedicated, comprehensive authorisation system for sea-based facilities that produce renewable energy and that are located in the maritime public domain, and for the connection structures for these facilities.

The draft bill on growth, business and equal economic opportunities could create litigation rules that are more favourable to the operation of renewable energy generation facilities, for which the authorisations would be subject to a single appeal timeframe of two months.

6.5.6.2.6 Regulations specific to the generation of wind power

Pursuant to Articles R. 421-1 and R. 421-2 of the French Urban Planning Code, a building permit must be obtained for land-based wind farms with a height equal to or greater than 12 metres. The construction of wind farms on the public maritime domain is exempted from the requirement for a building permit, in accordance with Article R. 421-8-1 of the French Urban Planning Code.

In addition, the Grenelle 2 Law provides that land-based wind farms are now subject to the nomenclature applicable to ICPEs with the legal system of authorisation or declaration (see section 6.5.6.2.1 ("Regulations applicable to facilities classified for the protection of the environment ("ICPEs")")) under item 2980 "Terrestrial facilities for the generation of electricity using mechanical wind energy with one or several wind-power generators". In connection with the application for a building permit, an impact study must be done for wind farms subject to authorisation and submitted with the building permit file. A distance of 500 metres between the facilities and buildings used as housing, inhabited buildings and areas intended for housing is required for the operating authorisation to be issued. The draft bill on energy transition for green growth contains provisions designed to enable the implementation of land-based wind farm projects in municipalities concerned by the "coastline" law. The same bill provides that a decree will detail exemptions to the rule on wind farm location with regard to military facilities and sectors, weather monitoring equipment and air navigation equipment.

The operator of a wind farm, or in the event of default, the parent company, is responsible for decommissioning the farm and site restoration, as soon as operation is terminated for any reason (Articles L. 553-3 and R. 553-1 of the French Environment Code). For this purpose, the operator is required to lodge financial guarantees as of the start-up of generation and for subsequent accounting periods.

6.5.7 Regulations on the wholesale energy market

Inspired by the rules contained in Directive no. 2003/6/EC on market abuse applicable to financial markets (see section 16.5 ("Stock Exchange Ethics Code")), Regulation (EU) No. 1227/2011, known as the "REMIT" Regulation on wholesale energy market integrity and transparency came into force on 28 December 2011. This Regulation is aimed at preventing market abuse and manipulation on wholesale energy markets and strengthening the confidence of market participants and consumers.

Strengthening wholesale energy market integrity and transparency must foster open and fair competition on these markets, in particular so that prices set on these markets reflect a fair and competitive interplay between supply and demand. The Regulation prohibits insider trading and market manipulation and establishes an obligation to publish inside information as defined in the REMIT.

The European Agency for the Cooperation of Energy Regulators (ACER) is primarily responsible for monitoring wholesale trades in energy products, in order to detect and prevent transactions based on inside information and market manipulations.

ACER also collects the data needed to assess and monitor markets, inasmuch as the regulation provides that market participants, or a person empowered to do so on their behalf, must supply ACER with a detailed statement of wholesale energy market transactions.

Lastly, market participants that perform transactions for which a declaration to ACER is mandatory must register with the national regulatory authority of the Member State in which they are established (the CRE in France) or, if they are not established in the European Union, that of a Member State in which they do business.

6.5.8 Principal planned regulations that are likely to have an impact on the EDF group's business

Several planned regulations, both at community level and in France, could have a significant impact on the EDF group's business. The main regulations are described below.

6.5.8.1 Future regulations at Community level

Regulations on concession contracts

The Community directive on the award of concession contracts was definitively adopted on 26 February 2014 and published in the Official Journal of the European Union on 28 March 2014. The directive takes the form of a separate legal instrument from the Directives on Public Procurement, but nevertheless refers to a number of the same concepts.

The directive, which covers concession contracts for works and services, does not provide for a sectoral exemption for the sectors covered under Directives no. 2009/72/EC and no. 2009/73/EC, but ad hoc provisions will allow concessions for the distribution and supply of electricity at regulated tariffs to be excluded from the scope of the obligation to put out to competitive tender concession contracts. The impact on the legal system applicable to hydropower concessions, which is currently governed by the Sapin Act on public service delegation contracts, should be limited, except with regard to the possibilities of upratings under the 2005 POPE Act.

The Member States have until 18 April 2016 to transpose the directive into national law. The transposition is expected to take the form of an order, which will be published in the course of 2015.

Environment

The 2030 Energy and Climate Change Package

On 24 October 2014, the 28 Member States of the EU reached an agreement on their 2030 climate change and energy objectives and policies (known as the 2030 energy and climate change package). Within this timeframe, the agreement includes an objective of reducing EU greenhouse gas emissions by at least 40% (compared to 1990), increasing the portion of the EU's energy consumption to 27% of renewable energies and improving energy efficiency by 27%. The European Commissioner for Climate Action and Energy, Miguel Arias Cañete, has announced that the 2030 energy and climate change package would be translated into legislative proposals.

Nature conservation

The European Commission has announced a merger of Directive no. 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (known as the Habitats Directive) and Directive no. 79/409/EEC of 2 April 1979 on the conservation of wild birds (known as the Birds Directive).

Rules on the safety and control of nuclear facilities

In July 2014, the Council of Ministers of the European Union adopted Council Directive 2014/87/Euratom of 8 July 2014, which amended Directive no. 2009/71/Euratom that established a Community framework for the nuclear safety of nuclear facilities. The revised directive aims to update the European framework for nuclear safety following the Fukushima accident, in order to guarantee the uniform application of high standards for nuclear safety and control. Member States have until 14 August 2017 to transpose this directive into national law.

6.5.8.2 Future regulations at national level

Draft bill on reconquest of biodiversity, nature and landscapes

The draft bill on reconquest of biodiversity, nature and landscapes, which was announced during the 2012 Environmental Conference, is currently under review by Parliament. This law is expected to improve protection for biodiversity and set up a French Biodiversity Agency.

Reform of environmental law

A reform that aims to make the application of environmental law simpler and more efficient has been started as part of the forum on the modernisation of environmental law. Preparatory work on this reform is currently being led by the Government, with the support of a specialised commission on the modernisation of environmental law, which was set up within the National Council for Ecological Transition (CNTE). Certain measures generated by the work of the forum on the modernisation of environmental law should be introduced into positive law when the draft bill on energy transition for green growth, the draft bill for growth and business, and the draft bill on biodiversity are enacted.

On 6 January 2015, the Minister for Ecology also launched a participative democracy workshop on the environment. This should result in concrete proposals for the reform of public involvement in (public and private) project design. This reform is liable to impact the environmental procedures that are applicable to EDF group projects.

Environmental assessment

The EDF group is subject to the provisions of Articles L. 122-1 *et seq.* and Articles R 122-1 *et seq.* of the French Environment Code, which makes it mandatory to precede all planned works, structures and developments, which are liable to have appreciable impacts on the environment, with an impact study. These articles also stipulate the contents of this study.

As the European environmental impact assessment rules were amended by Directive 2014/52/EU of 16 April 2014 (which amended Directive no. 2011/92/EU), a reform of the French system of impact studies is expected to take place before 16 May 2017.

The amendments that will be made are liable to impact the authorisation procedures that are applicable to EDF group projects.

Non-financial reporting

At European level, Directive no. 2014/95/EU of 22 October 2014, which aims to improve the transparency of non-financial information between Member States, requires large undertakings to draw up a non-financial statement that includes information on "environmental matters, social and employee-related matters, respect for human rights, anti-corruption and bribery matters". It also requires these undertakings to provide a "description of the diversity policy applied in relation to their administrative,

management and supervisory bodies". France has until 6 December 2016 to transpose this directive.

Draft bill on energy transition for green growth

The draft bill on energy transition for green growth, which the National Assembly adopted during the first reading on 14 October 2014 and the Senate on 3 March 2015, sets new targets for greenhouse gas emission reductions, energy efficiency and the development of renewable energies. It also contains provisions on improving the energy performance of buildings, the development of clean methods of transportation and air quality planning, the promotion of the circular economy, the development of renewable energies, the improvement of nuclear safety, the simplification and clarification of administrative procedures, as well as energy transition tools and governance. Many of these provisions are liable to impact the EDF group's activities.

Numerous provisions are liable to concern the Group's activities. Provided that they are adopted in the bill, which should be enacted in the spring of 2015, we may note, in particular:

- the portion of electricity of nuclear origin in the national energy mix, which will be reduced to 50%, while the maximum nuclear energy generation will be capped at 63.2GW for the National Assembly and 64.85 for the Senate;
- the major reform of the CSPE, which will be initiated in order to ensure its compliance with various constitutional and Community standards;
- measures to support electro-intensive industries through various mechanisms: reduction in the TURPE, remuneration of interruptibility, adjustment of the concession fee for hydropower concessions according to the volume and price of the electricity sold to these industries;
- recasting of the demand response mechanisms through the possibility of trading demand response reserves either directly with the supplier via a demand response offer that is inseparable from supply, or on the electricity markets via demand response managers, and the elimination of the demand response bonus, which will be replaced by the possibility of using tendering procedures financed by the CSPE;
- the abolition of social tariffs, which will be replaced by an energy voucher;
- the possibility for areas that are not interconnected to the continental metropolitan network (ZNI) with less than 2,000 inhabitants to choose an operator other than EDF following a decision by the Minister for Energy;
- the civil liability cap for nuclear operators, which will be increased to €700 million, without waiting for the entry into force of the Protocols that amended the Brussels and Paris Conventions.
- the evolution of the governance of ERDF, the contracting authorities will have a representative to the supervisory board. Besides, the draft bill creates a committee of the system of public distribution of electricity asked to examine the investment policy of ERDF and organizing authorities of the system of public distribution, to play a consultative role with the supervisory board of ERDF and to follow the exchanges between ERDF and contracting authorities;
- a tariff method of construction of TURPE which includes the consideration of a normal pay for the distribution network operator and who allows the CRE to set up a tariff frame close to practices of the other European regulators, giving a visibility to the distributor favorable to the long-term investments;
- the greater role of territories regarding energy management defined as territories which make a commitment in an approach allowing to reach the balance between the consumption and the power production on a local scale, by reducing the needs for energy at the most. The law plans 200 experiments of TEPOS (positive energy territories) before 2017.

After its examination by a joint committee of the two chambers of the Parliament on 10 March 2015 and in the absence of compromise, the text has to be the object of a new reading in each of two chambers, the National Assembly ruling definitively.

Draft bill for growth, business and equal economic opportunities (known as the “Macron draft bill”)

The draft bill for growth, business and equal economic opportunities, which the National Assembly adopted on 19 February 2015, is liable to impact the activities of the EDF group in several areas. The draft bill contains provisions on the governance and equity transactions of companies with a public shareholding. It authorises the Government to transpose, via order, the “Concessions Contracts” directive of 26 February 2014. Moreover, the draft bill aims to expand and ensure the sustainability of the mechanisms for the comprehensive authorisation and project certificate, which were introduced on an experimental basis. Moreover, it increases the competencies of the French Nuclear Safety Authority in the area of international cooperation.

Draft bill on the duty of vigilance of parent companies and prime contractor companies

This draft bill was filed on 11 February 2015 with the National Assembly by left-wing representatives and will be given its first public reading on 30 March 2015. It was designed in consultation with the Government and includes the obligation for certain companies to set up a vigilance plan and ensure its “effective” implementation, in order to prevent the materialisation of risks of infringements of human rights and fundamental freedoms, serious bodily injury or harm to the environment or health risks. The draft bill also aims to set up a verification/penalty system for this obligation that will be applied by the courts.

Draft bill on redress of harm to the environment

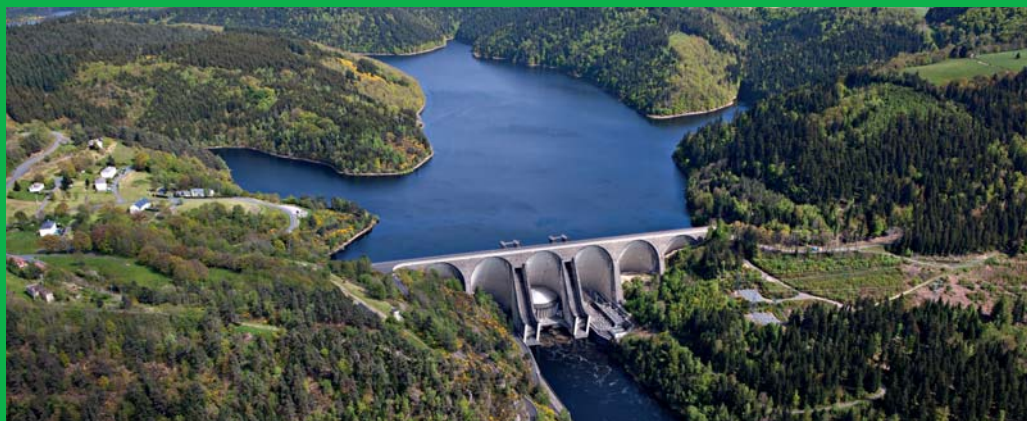
The Government announced its intention to present a draft bill on redress of harm to the environment during the first half of 2015. This draft bill could include the proposals made by the “Jegouzo” report of September 2013, which was favourable to the inclusion of redress of harm to the environment in the French Civil Code and made a set of proposals to determine the legal framework for this inclusion.

7

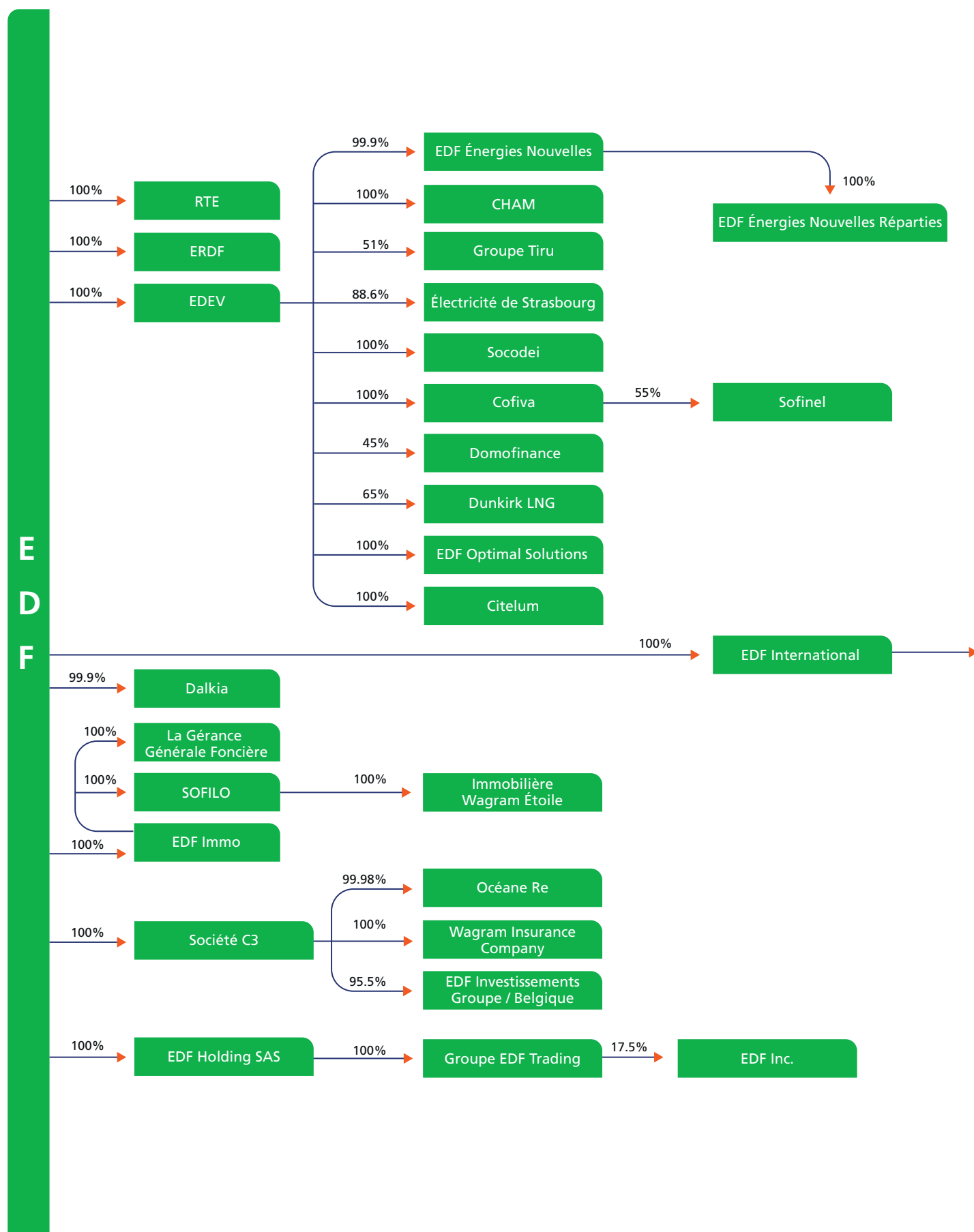
Organisational chart

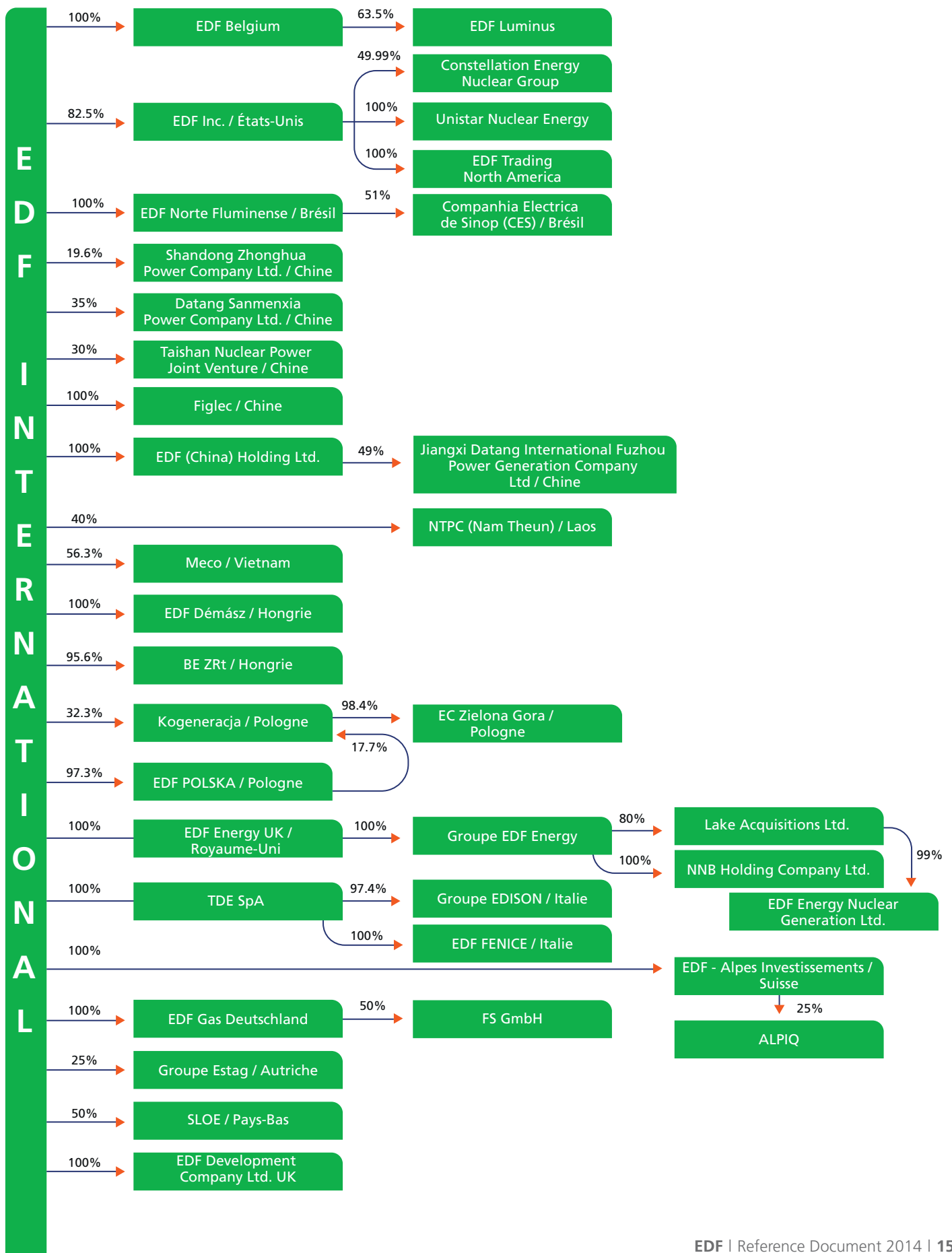


EDF – Christel Sasso ▲ Pierre Soissons ▼



A simplified organisational chart for the Group, as of 31 December 2014, is presented below. The percentages for each entity correspond to the ownership interest in capital.





The companies or groups of companies within the Group's scope of consolidation are indicated in Note 51 to the consolidated financial statements for the year ended 31 December 2014.

Information on subsidiaries

The presentation of the activities of the main subsidiaries of the Group, and their economic weighting in the Group, appear in section 6.2 ("Presentation of the EDF group's business in France") and in section 6.3 ("Presentation of the EDF group's international business") of this Reference Document.

In addition, note 6 to the consolidated financial statements for the year ended 31 December 2014 provides further information on the Group companies presented by operational sectors.

Offices held by EDF executives

The offices held by EDF executives within the Group's subsidiaries are indicated in section 14.1 ("Board of Directors").

Intra-group contracts

Cash pooling agreements entered into between EDF and its subsidiaries

The cash pooling system set up by EDF centralises all the cash positions of its subsidiaries and thus optimises the Group's liquidity. Cash pooling consists of grouping all the cash balances of subsidiaries at the level of the parent company. It includes certain French and international subsidiaries. It does not include RTE.

The cash pooling system in place for companies of the EDF group is defined under cash agreements. Bilateral agreements between EDF and each subsidiary define the specific conditions for each arrangement (remuneration of balances, etc.).

At international level, subsidiaries participating in the system enter into a framework agreement, whereby EDF serves as the Cash Centre.

EDF also centralises all the currency flows from its French subsidiaries.

Financial flows between EDF and its subsidiaries

In addition to the financial flows relating to the cash pooling agreements mentioned above, financial flows between EDF and its subsidiaries are also

related to distributions of dividends within the Group. A substantial portion of the dividends paid by some of the Group's subsidiaries (including EDF Energy) is paid exclusively to EDF International. Total dividends received by EDF International in 2014 amounted to €402 million. In 2014, EDF received a total of €1,285 million in dividends from its consolidated subsidiaries.

Other financial flows between EDF and its subsidiaries correspond mainly to loans, asset transfers and guarantees made by the parent company of the Group for the benefit of certain subsidiaries.

In the context of the Group's financing centralisation policy, decided on in 2006, EDF centralises the financing of its subsidiaries. In this context, in 2007 EDF created a subsidiary located in Belgium, EDF Investissements Groupe, which centralises medium- and long-term intra-group financing.

With regard to financial flows related to fees paid by subsidiaries, contracts for the supply of intra-group services have been concluded with the main subsidiaries under the scope of consolidation since 2012. EDF may also be required to provide specific services to certain subsidiaries or entities outside the Group. In addition, following EDF brand development work, the Company has set up licensing agreements with subsidiaries that use the EDF brand.

A description of the financial flows related to contracts between EDF and its subsidiaries is set out in note 23 to the consolidated financial statements.



8

Property, plant and equipment

8.1 Service sector real estate assets

EDF's Real Estate Division, attached to Group's Real Estate and Insurance Department, operates in France as the real estate provider of entities within EDF and ERDF by managing and optimising a real estate portfolio of nearly 4.4 million square meters of service premises, approximately 71% of which is owned outright by the Group and 29% is leased from third parties (leases and concessions).

The Real Estate Division is in charge of real estate asset management, lease management, the technical operation of building as well as the operation-maintenance of the facilities and the services provided to occupants, by offering areas through a sub-lease system for Group entities and units. By taking leases from third parties, the Real Estate Division made lease commitments for EDF amounting to €880 million for the period from 2015-2029.

8.2 Employer participation in the construction effort

Each year, EDF is subject to an obligation to participate in the French construction effort program. Its contribution is 0.45% of its total payroll, which represented approximately €17.6 million for 2014 (€17.0 million for 2013).

In exchange for this payment, EDF's employees benefit from services intended to facilitate their residential mobility: assistance with renting, assistance with home purchase, assistance with mobility, advice on financing.

8.3 Subsidised home ownership loans

As part of its social policy, EDF assists its employees to purchase their primary residence. Thanks to a partnership concluded with Crédit Immobilier de France (CIF), the bank manages the production, financing, and management of loans to the company's employees. EDF compensates the CIF for the difference between the subsidised rate at which CIF grants loans to EDF employees and the rate resulting from the bank survey conducted in 2005 on the basis of which the CIF was chosen.

As of 31 December 2014, the residual non-securitised balance for personal residence mortgages was €3.9 million on EDF's balance sheet (€4.6 million as of 31 December 2013).

9

Operating and financial review



EDF – Lionel Charrier ▲ Philippe Eranian ▼



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The elements of chapter 9 come from the 2014 management report (*Rapport d'activité*) as adopted by the Company's Board of Directors, meeting on 11 February 2015¹.

9.1 Key figures

Pursuant to European regulation 1606/2002 of 19 July 2002 on the adoption of international accounting standards, the EDF group's consolidated financial statements for the year ended 31 December 2014 are prepared under the international accounting standards published by the IASB and approved by the European Union for application at 31 December 2014. These international standards are IAS (International Accounting Standards), IFRS (International Financial Reporting Standards), and interpretations issued by the SIC and IFRIC.

The Group's accounting policies are presented in note 1 to the consolidated financial statements at 31 December 2014.

The figures presented in this document are taken from the EDF group's consolidated financial statements at 31 December 2014.

The comparative figures for 2013 presented in the notes to the consolidated financial statements have been restated following the change in accounting method resulting from retrospective application of IFRS 10 and IFRS 11.

The Group's key figures for 2014 are shown in the following tables. Variations in value and percentage are calculated by reference to the restated 2013 figures.

Extract from the consolidated income statements

(in millions of Euros)	2014	2013 restated	Variation	Variation (%)	Organic growth (%)
Sales	72,874	71,916	958	+1.3	-1.4
Operating profit before depreciation and amortisation (EBITDA)	17,279	16,099	1,180	+7.3	+6.5
Operating profit (EBIT)	7,984	8,334	(350)	-4.2	-4.3
Income before taxes of consolidated companies	5,433	5,392	41	+0.8	+0.9
EDF net income	3,701	3,517	184	+5.2	+6.2
Net income excluding non-recurring items ⁽¹⁾	4,852	4,117	735	+17.9	+18.7

(1) Net income excluding non-recurring items is not defined by IFRS, and is not directly visible in the consolidated income statements. It corresponds to the net income excluding non-recurring items and the net change in fair value on Energy and Commodity derivatives, excluding trading activities, net of tax (see section 9.3.9 ("Net income excluding non-recurring items")).

Extract from the consolidated balance sheets

(in millions of Euros)	31 December 2014	31 December 2013 restated
Non-current assets	146,078	137,748
Inventories and trade receivables	37,923	36,096
Other assets	65,609	57,589
Cash and cash equivalents, other liquid assets, loans to RTE and joint ventures	18,361	18,332
Assets held for sale	18	1,154
TOTAL ASSETS	267,989	250,919
Equity (EDF share)	35,191	34,207
Equity (non-controlling interests)	5,419	4,998
Special concession assets	44,346	43,454
Provisions	73,850	66,304
Loans and other financial liabilities	52,569	51,765
Other liabilities	56,614	50,191
Liabilities related to assets classified as held for sale	–	–
TOTAL EQUITY AND LIABILITIES	267,989	250,919

1. See in Appendix H the concordance table.

Cash flow after dividends

(in millions of Euros)	2014	2013 restated	Variation	Variation (%)
Cash flow after dividends ⁽¹⁾	(4,007)	(314)	(3,693)	n.a.

(1) Cash flow after dividends is not an aggregate defined by IFRS as a measure of financial performance, and is not comparable with indicators of the same name reported by other companies. It is equivalent to the operating cash flow after the changes in working capital and net investments as defined in section 9.4 ("Cash flows and net indebtedness"), allocations and withdrawals from dedicated assets, and dividends.

Details of net indebtedness

(in millions of Euros)	31 December 2014	31 December 2013	Variation	Variation (%)
Loans and other financial liabilities	55,652	51,637	4,015	+7.8
Derivatives used to hedge liabilities	(3,083)	128	(3,211)	n.a.
Cash and cash equivalents	(4,701)	(5,096)	395	-7.8
Available-for-sale financial assets – Liquid assets	(12,990)	(12,566)	(424)	+3.4
Loan to RTE	(670)	(670)	–	–
Net indebtedness ⁽¹⁾	34,208	33,433	775	+2.3

(1) Net indebtedness is not defined in the accounting standards and is not directly visible in the Group's consolidated balance sheets. It comprises total loans and financial liabilities, less cash and cash equivalents and liquid assets. Liquid assets are financial assets consisting of funds or securities with initial maturity of over three months that are readily convertible into cash and are managed according to a liquidity-oriented policy. It also includes the Group's loan to RTE.

9.2 Economic environment and significant events of 2014

9.2.1 Economic environment

9.2.1.1 Trends in market prices for electricity and the principal energy sources

In an increasingly interconnected European market, analysis of market prices in France and in the rest of Europe, particularly countries where the Group has operating, distribution, optimisation and trading activities, provides vital context. Energy prices in Europe were lower in 2014 than in 2013, due to low demand as a result of especially mild temperatures and retreating fuel prices.

9.2.1.1.1 Spot electricity prices in Europe¹

	France	United Kingdom	Italy	Germany	Belgium
Average baseload price for 2014 (€/MWh)	34.6	51.2	52.1	32.8	47.4
Variation in average baseload prices, 2014/2013	-19.9%	-13.4%	-17.3%	-13.3%	-0.2%
Average peakload price for 2014 (€/MWh)	43.8	57.7	58.7	41.0	54.9
Variation in average peakload prices, 2014/2013	-20.4%	-14.7%	-16.5%	-15.8%	-5.9%

1. **France and Germany:** average previous day EPEXSPOT price for same-day delivery;
Belgium: average previous day Belpex price for same-day delivery;
United Kingdom: average previous day EDF Trading OTC price for same-day delivery;
Italy: average previous day GME price for same-day delivery.

The comments below concern baseload prices.

In **France**, spot electricity prices stood at an average €34.6/MWh in 2014, €8.6/MWh lower than in 2013. The principal explanation for the fall in prices was the particularly mild temperatures over the year, leading to lower demand than the year before. 2014 was also marked by substantial renewable energy output, while the decline in spot prices for coal and gas added further downward pressure on spot electricity prices.

The combined effect of all these bearish factors in 2014 took the average spot price to its lowest level since 2004.

In the **United Kingdom**, spot electricity prices decreased by 13.4% compared to the same period in 2013. The mild temperatures kept the electricity supply/demand balance relaxed, but also limited demand for gas, resulting in a gradual decline in spot gas prices. However, the decrease in UK electricity prices was less pronounced than in the rest of Europe due to the rise in the UK's carbon tax as of 1 April 2014.

In **Italy**, spot electricity prices were down year-on-year by 17.3% as a result of the lower gas prices and mild temperatures throughout the year.

In **Germany**, spot electricity prices were an average €5.0/MWh lower than in 2013, largely due to mild temperatures and substantial output of renewable energies. The 2014 average spot price was the lowest since 2005.

In **Belgium**, spot prices remained stable on average compared to 2013, in contrast to the rest of Europe. Despite a significant decrease of around €18.0/MWh in the first quarter of 2014, the market tightened up over the rest of the year following the temporary outage of two nuclear reactors in Belgium in March 2014 (Tihange 2 and Doel 3). A further reactor (Doel 4) was also out of action from 4 August to 19 December 2014 (see section 9.2.2.4.2 ("Belgium")), putting even more pressure on the supply/demand balance. Average spot prices over the final three quarters were thus €5.8/MWh higher than for the same period of 2013.

9.2.1.1.2 Forward electricity prices in Europe¹

	France	United Kingdom	Italy	Germany	Belgium
Average forward baseload price in 2014 under the 2015 annual contract (€/MWh)	42.4	63.1	53.8	35.1	46.9
Variation in average forward baseload price under the annual contracts, 2014/2013	-2.0%	+2.8%	-14.3%	-10.2%	+7.7%
Forward baseload price under the 2015 annual contract at 23 December 2014 (€/MWh)	40.3	61.7	50.1	34.2	44.2
Average forward peakload price in 2014 under the 2015 annual contract (€/MWh)	53.1	71.3	60.0	44.4	57.2
Variation in average forward peakload price under the annual contracts, 2014/2013	-6.2%	+1.0%	-14.1%	-10.6%	+1.5%
Forward peakload price under the 2015 annual contract at 23 December 2014 (€/MWh)	50.5	68.8	57.2	42.9	54.2

In **France**, the annual contract baseload price ended the year at €40.3/MWh, having been on average 2.0% lower than in 2013. This decline over 2014 is mainly explained by the lower coal and gas prices, although it was mitigated by the rise in CO₂ emission rights prices. During the period from April to mid-July, forward prices stabilised at around €42/MWh, in keeping with the ARENH price at which electricity suppliers can purchase power.

After an upturn during the summer in line with gas prices, forward electricity prices stabilised in September at around €43/MWh. The rise in coal and CO₂ prices was offset by several announcements that tightened the supply/demand balance in certain neighbouring countries. The final quarter of the year was marked by a more relaxed supply/demand balance resulting from mild temperatures and high nuclear availability, which brought down electricity prices for the early months of 2015, and therefore the annual contract price. In addition to these factors, a decline in December in gas, coal and Brent oil prices contributed to the fall in the annual contract late in that month: it was down to €40.0/MWh at 22 December, its lowest level for more than 5 years.

In the **United Kingdom**, the April Ahead baseload contract price for 1 April Y+1 to 31 March Y+2 ended the year at €61.7/MWh, down by €1.5/MWh from the start of the year, in line with British gas prices. But on average, the contract traded at higher prices than in 2013 due to the rise in the UK

carbon tax on electricity generation. This tax will be raised by close to £9.0/t from 1 April 2015 to £18/t, and will then remain at that level until 2020.

In **Italy**, the baseload price under the annual contract ended the year at €50.1/MWh, having been €8.9/MWh lower than in 2013 on average. This substantial decrease was driven by the lower prices for gas, which is an important component of the Italian energy mix, and the rise of renewable energies.

In **Germany**, annual contract baseload prices declined by an average €4.0/MWh from 2013, ending the year at €34.2/MWh. As well as the fall in fuel prices, which had a significant impact on Germany's highly coal-dependent electricity system, this substantial downturn in electricity prices is explained by the expansion of German wind farms and photovoltaic solar plants.

In **Belgium**, the annual contract baseload price was €3.4/MWh higher than in 2013 on average. Prices rose strongly after two nuclear reactors were shut down temporarily at the end of March 2014, with no confirmed date as yet for resumption of operation. The outage of a third nuclear reactor (Doel 4) between 4 August and 19 December 2014 also contributed to the rise in the average price under this contract, which ended the year at €44.2/MWh although it only stood at €41.7/MWh at the beginning of January 2014.

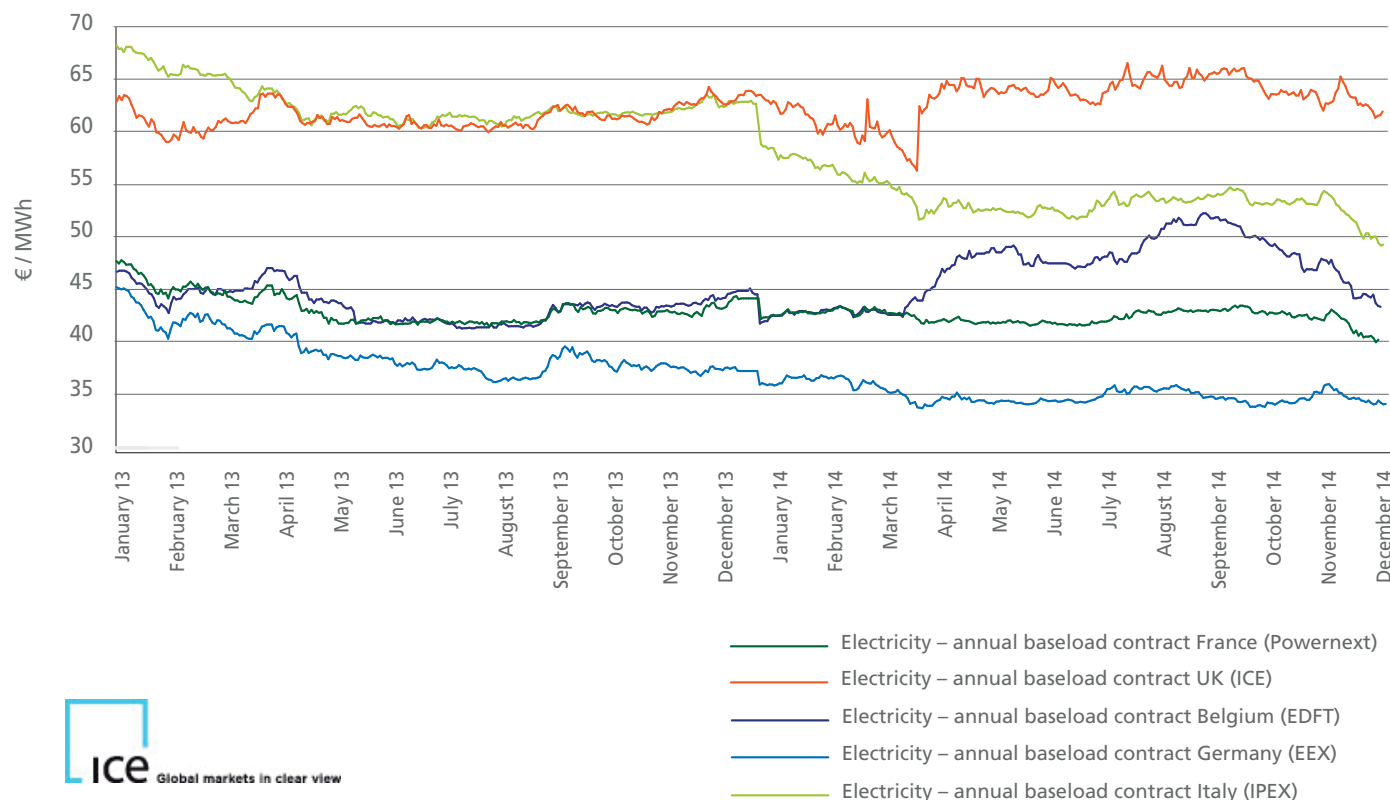
1. **France and Germany:** average year-ahead EEX price;

Belgium: average year-ahead EDF Trading price;

Italy: average year-ahead EDF Trading price;

United Kingdom: average ICE annual contract prices, April 2014 then April 2015 (in the UK, annual contract deliveries take place from 1 April to 31 March).

Principal forward electricity prices in Europe (baseload)



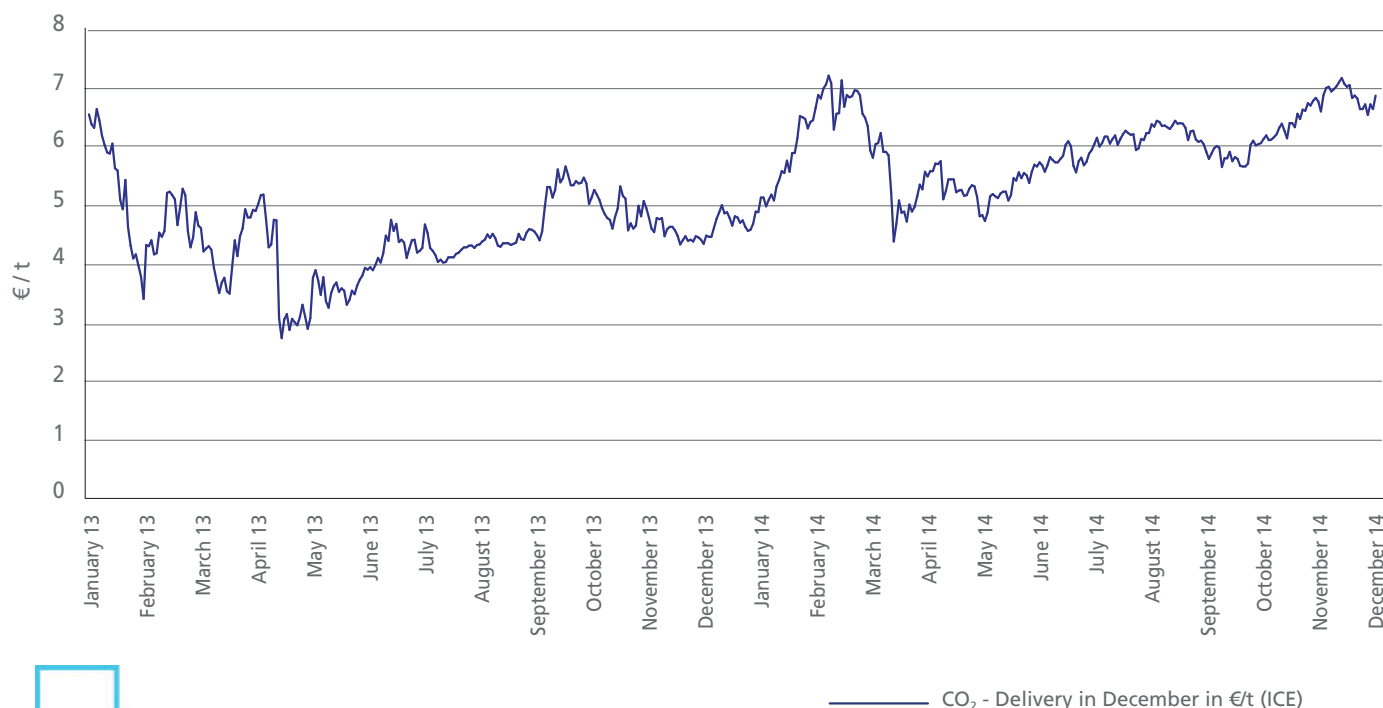
9.2.1.1.3 CO₂ emission rights prices¹

CO₂ prices increased in 2014 to €6.9/t by the end of the year, €1.9/t higher than at the start of January. The year 2014 was punctuated by announcements concerning “backloading” and the Market Stability Reserve (MSR), drawing reactions from market actors.

As the market for trading CO₂ emission rights was overallocated at European level, the European Commission set up a “backloading” plan to reduce supply temporarily. After several years of negotiations, this measure was

finally implemented in early 2014: 900 million tonnes of emission rights are to be withdrawn from auction between 2014 and 2016 (400 million for 2014 alone), but this volume will be put back on the market in 2019 and 2020. The MSR mechanism should complement this plan and reduce the number of emission rights in circulation, placing the surplus amounts in a reserve.

1. Average ICE prices for the annual contract, Phase III (2013-2020).

CO₂ emission rights prices9.2.1.1.4 Fossil fuel prices¹

	Coal (\$/t)	Oil (\$/bbl)	Natural gas (€/MWhg)
Average price for 2014	78.3	99.5	24.7
Average price variation, 2014/2013	-11.9%	-8.5%	-8.3%
Highest price in 2014	86.6	115.1	27.0
Lowest price in 2014	65.9	57.3	21.8
Closing price, 2013	82.3	110.8	27.2
Closing price, 2014	65.9	57.3	21.8

Forward prices for coal delivered in Europe continued their decline from 2013 levels, in keeping with a very relaxed supply/demand balance worldwide resulting from plentiful coal supplies in Russia, the US and Colombia at low prices, and lower-than-anticipated demand in Asia. Also, the mild temperatures across all of Europe in 2014 led to low coal consumption, and as a result stocks remained high. Coal prices decreased significantly right at the end of the year, as the rouble lost value in the Russian economic crisis. The price of coal thus dropped from \$86.6/t at the start of January to \$65.9/t on 31 December 2014, its lowest level since 2006.

At 31 December 2014, the crude oil price stood at \$57.3/bbl, a year-on-year drop of \$53.5/bbl. Brent prices were stable until the end of June at around \$110/bbl; a downward price trend then began in July, initially because the market's fears over conflicts in Ukraine and Iraq subsided, and subsequently due to plentiful supply and rising Libyan exports. Forecast demand in Europe and Asia has fallen, and there is surplus supply due to unchanged production levels by OPEC countries, mainly Saudi Arabia, and higher shale oil output in the US, which led to a very significant decrease in the month of December alone.

1. Coal: average ICE prices for delivery in Europe (CIF ARA) for the next calendar year (\$/t);

Oil: Brent first reference crude oil barrel, IPE index (front month) (\$/barrel);

Natural gas: average Powernext prices for delivery starting from October of year Y+1 to September of year Y+2 in France (PEG Nord) (€/MWhg).

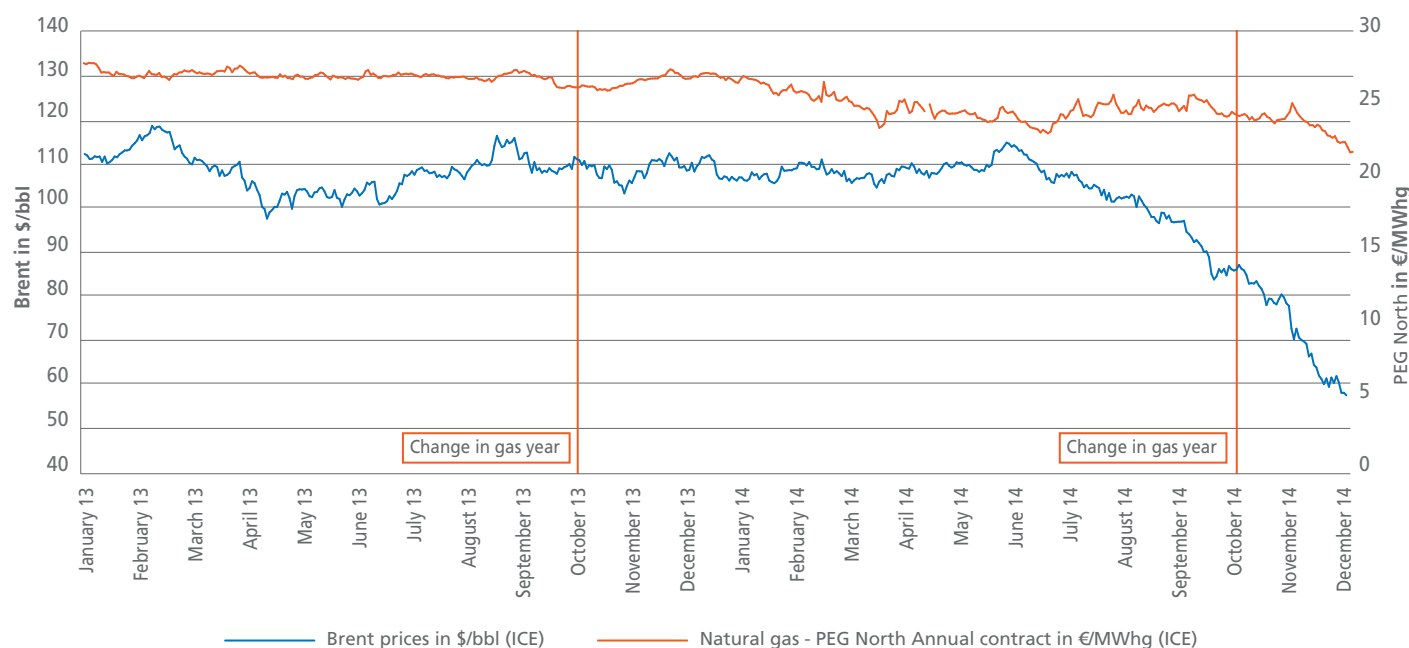
In 2014 the Gas Year Ahead contract for **natural gas** on the French PEG Nord hub, which runs from 1 October Y+1 to 30 September Y+2, traded at an average €24.7/MWh, €2.2/MWh lower than in 2013. It ended the year at €21.8/MWh, its lowest level since November 2010.

The high temperatures of the first quarter of 2014 made the short-term supply-demand balance very relaxed, such that there was little need to use long-term stocks, and it was even possible to replenish those stocks quickly, reassuring market actors for the following winter.

Movements in the gas contract price then reflected the conflict between Ukraine and Russia. The agreement signed between the two countries provisionally ended this crisis, guaranteeing deliveries of Russian gas to Ukraine during the winter of 2014-15.

Gas prices fell by €2.3/MWh during December 2014 in the wake of the Brent barrel price.

Natural gas and oil prices



9.2.1.2 Electricity¹ and gas² consumption

Overall electricity consumption in **France** in 2014 was 6% lower than in 2013. This decrease is mainly explained by the mild weather conditions: 2014 was the warmest year since the beginning of the 20th century, especially in the winter months.

After correction for weather effects, consumption in France was down by 0.4%. Consumption by small businesses and residential customers was also down by 0.5%, while consumption by large industrial customers was stable.

In the **United Kingdom**, estimated electricity consumption, which is not highly sensitive to temperatures, was 3.7% lower in 2014 than 2013 due to a decline in demand from residential customers and the mild temperatures. In **Italy**, domestic electricity consumption contracted by 3% from 2013.

Natural gas consumption in **France** decreased by 16.5% between 2013 and 2014 due to the exceptionally mild weather.

Estimated domestic natural gas consumption in the **United Kingdom** was down by 14.1% compared to 2013, again as a result of the mild weather. In **Italy**, domestic natural gas consumption was also down by 11.6% mainly as a result of unusually mild temperatures, growing contribution from renewable sources, especially hydroelectric and lower demand for electric power.

9.2.1.3 Electricity and natural gas tariffs

Details of recent developments concerning tariffs in France are provided in sections 9.2.2.6.1.4 ("Cancellation of regulated sales tariffs by the Council of State") and 9.2.2.6.1.5 ("Regulated electricity sales tariffs in France").

1. France: unadjusted data and data adjusted for weather effects provided by RTE.
United Kingdom: Department of Energy and Climate Change for the first 3 quarters, local subsidiary estimation for the final quarter.
Italy: data provided by Terna, the Italian national grid operator and adjusted by Edison.

2. France: unadjusted data provided by Smart GRTgaz.
United Kingdom: Department of Energy and Climate Change for the first 3 quarters, local subsidiary estimation for the final quarter.
Italy: Ministry of Economic Development, data from Snam Rete Gas adjusted by Edison: base 1 bcm = 10.76TWh.

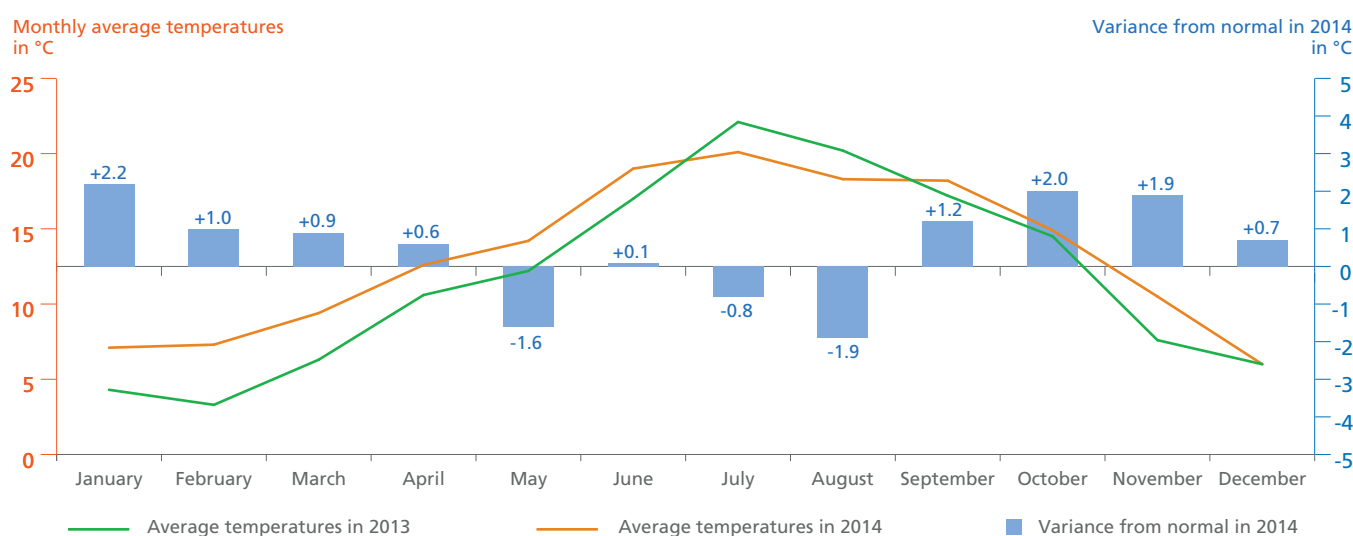
In the United Kingdom, EDF Energy raised its gas and electricity tariffs by 3.9% as of 3 January 2014. This was less than half the increase applied by its main competitors in the final quarter of 2013. EDF Energy was thus acting in anticipation of the downward adjustment to energy efficiency programme costs announced by the British government in December 2013. On 27 January 2015, EDF Energy announced a 1.3% reduction in its gas tariffs that will take effect from 11 February 2015 in response to the recent falls in wholesale gas costs. The vast majority of energy purchases to supply customers were made well in advance, at previously higher prices. This effect and the low prices already offered by EDF Energy limited the reduction in tariffs.

9.2.1.4 Weather conditions: temperatures and rainfall

2014 was exceptionally warm: average temperatures in France¹ were 0.5°C above normal, making 2014 one of the warmest years since 1900, ahead of 2011 and 2003. Widely contrasting temperatures were recorded during the year:

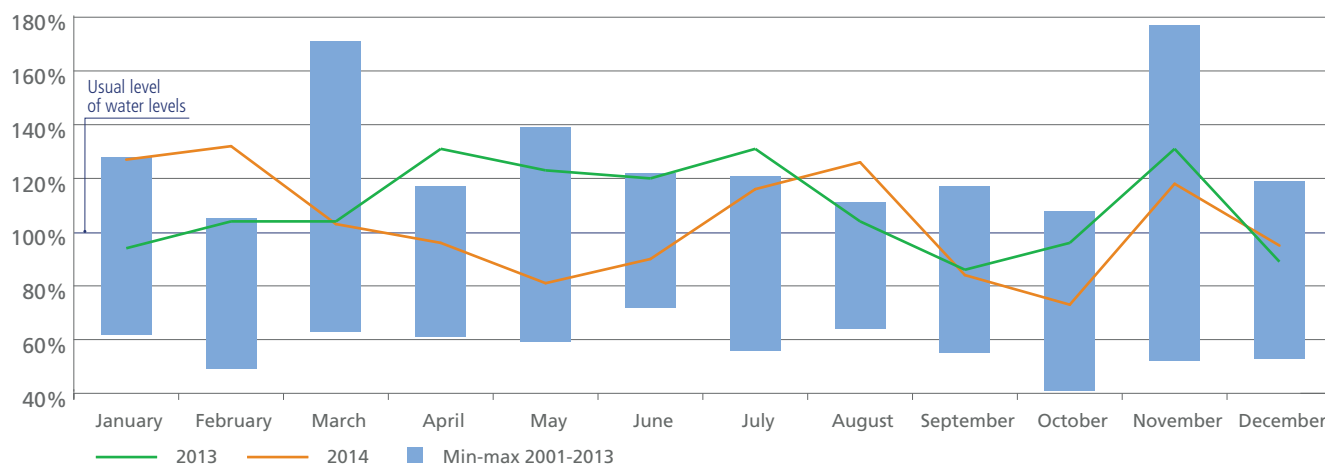
- they were higher than normal in the first four months and final quarter of the year especially;
- they were particularly cool in the late spring and early summer (May, July, August).

Temperatures¹ in France in 2014 and 2013



2014 saw abundant rainfall, registering above-normal levels around a large portion of the Mediterranean coast (including the Balkans) and to a lesser extent the Atlantic coast (Portugal, western France, the United Kingdom and south Scandinavia). In contrast, there was a shortfall in precipitation in the southern tip of Spain, north Scandinavia and regions further east.

Water levels in France in 2014 and 2013²



1. Average temperatures recorded in 32 cities weighted by electricity consumption.

2. Weekly OSGE energy observatory monitoring of French reservoir levels (Miréor project) as far as the coast.

In France, after a very wet, mild winter building up substantial snow levels in the southern Alps and the Pyrenees, a significant shortfall in precipitation developed from early March (except in the Pyrenees) to late June. There was particularly high rainfall in the summer, especially in July, and the ensuing autumn was marked by several storms in the Mediterranean and Cévennes region that provided heavy rainfall in the south-east quarter of the country.

As a consequence of these unusual weather patterns, the cumulative hydropower capacity in France was above normal until February, then gradually fell back in the spring, before regaining excess levels during the summer and late autumn. Overall across the year, hydropower capacity was slightly above normal (but well below its 2013 level).

9.2.2 Significant events¹

9.2.2.1 Strategic developments

9.2.2.1.1 Hinkley Point C nuclear power plant project

On 8 October 2014, the European Commission approved the main terms of the agreements between the EDF group and the UK Government to build a new power station at Hinkley Point C in Somerset. This decision resulted from an extensive and detailed review of the agreements conducted over a 12-month period by the European Commission, in accordance with EU rules on government aid mechanisms. Obtaining the green light from the European Commission is a major step forward for the Hinkley Point C project after the issuance of building permit and licences concerning the nuclear site, the approval of the EPR reactor's design by the UK regulator, and the agreement reached in October 2013 on the project's key commercial terms, particularly the Contract for Difference (CfD²) strike price over a duration of 35 years from the plant's date of commissioning, and confirmation of the project's eligibility for the UK Government's infrastructure funding guarantee programme ("Infrastructure UK").

The remaining steps prior to the final investment decision include in particular: the signing of agreements with strategic and financial partners for the project, approval by the European Commission and the UK government of the provisions governing the waste transfer contract, implementation of the funding guarantee in line with the Infrastructure UK programme, and the finalisation of the CfD as well as the agreements with the main suppliers (see also section 6.3.1.4.3 ("Nuclear New Build business")).

9.2.2.1.2 Finalisation of the agreement between EDF and Veolia Environnement concerning Dalkia

On 25 March 2014, EDF and Veolia Environnement announced that they had finalised the discussions begun in October 2013 and signed an agreement regarding their joint subsidiary Dalkia. Under the terms of this agreement, the EDF group has taken over all the Dalkia group's activities in France (including Citelum), while Dalkia International's activities have been taken over by Veolia Environnement. Veolia Environnement paid the EDF group an amount of €661 million in compensation for the difference in value between the stakes owned by the two shareholders in the various Dalkia entities. This payment, initially valued at €550 million, was adjusted based on the final scope of the transaction with no significant financial impact compared to the original plan.

Following European Commission approval and fulfilment of the other conditions, the Group finalised the operation with Veolia Environnement on 25 July 2014, on the terms laid down in the agreement of 25 March 2014.

This operation enables the Group to develop its involvement in energy services (see also section 6.4.1.3.1 ("Dalkia")).

9.2.2.2 Investments and partnerships

9.2.2.2.1 Extension of a series of existing agreements with EDF's Chinese partners

During a visit to France by the President of the People's Republic of China in March 2014, EDF signed a series of agreements with its Chinese partners.

In nuclear power, EDF reinforced its agreements with its partners: with CNNC on closer cooperation, particularly in engineering, operation and maintenance; and with China General Nuclear Power Group (CGN) on their "global partnership agreement".

On 29 January 2015, EDF signed a further agreement with CGN to share their experiences of plant operation and engineering for existing nuclear fleets, with the aim of preserving the highest safety levels and maintaining consistency between French and Chinese procedures and standards. EDF also signed an agreement with Huadian, a leading Chinese electric utility, paving the way for future cooperation on joint projects in China and at international level. There is a particular focus on three key areas: combined-cycle gas-turbine power plants, hydropower plants and renewable energies.

On 18 April 2014 EDF and the electricity operator China Datang Corporation (CDT) signed an agreement for EDF to take a 49% stake in Jiangxi Datang International Fuzhou Power Generation Company Ltd. (FPC), which is included in the consolidation under the equity method. This joint venture will build and operate an ultra-supercritical coal-fired power plant consisting of two 1,000MW units. Construction work has begun on the Fuzhou site in South-Eastern China's Jiangxi province. The new plant is scheduled for commissioning in 2016, and will be the first ultra-supercritical coal-fired power plant to be operated by EDF. The technology used guarantees high output efficiency combined with a lower environmental impact. This agreement enhances EDF's engineering and thermal plant operating expertise, and establishes new industrial synergies with world leaders in thermal power.

9.2.2.2.2 Final agreement with Exelon concerning CENG

After receiving the approval of the US Nuclear Regulatory Commission (NRC), on 1 April 2014 EDF finalised the agreement signed with Exelon on 29 July 2013 concerning Constellation Energy Nuclear Group (CENG).

Under the terms of this agreement, EDF delegated operational management of the five nuclear reactors owned by CENG (located in three sites in the United States, with total power of 4.2GW) to Exelon, the United States' leading nuclear operator.

CENG also paid the Group an exceptional dividend of US\$400 million (€290 million), funded by a loan to CENG from Exelon. CENG has given a commitment that once this loan is fully repaid, it will pay Exelon a dividend of present value equivalent to US\$400 million. EDF has also been granted an option to sell its holding in CENG to Exelon at fair value, which can be exercised between January 2016 and June 2022.

Following this operation, CENG is still owned 49.99% by EDF and 50.01% by Exelon, and its Board of Directors has equal numbers of directors designated by Exelon and EDF. In application of the analysis criteria defined by the new accounting standards IFRS 10 and IFRS 11, CENG is accounted for under the equity method (see also section 6.3.3.2.2.1 ("Existing nuclear facilities: Constellation Energy Nuclear Group (CENG)")).

1. All press releases are available from the EDF website: www.edf.com.

2. The CfD means that Hinkley Point C will offer stable, predictable prices. If the benchmark wholesale electricity prices rise above the CfD strike price, consumers will have no surplus to pay and the producer will have to reimburse the difference. If market prices fall below that price, the generator will receive a top-up payment. Customers will pay nothing until the power station is operational.

9.2.2.2.3 Signature of a LNG import agreement with the Cheniere Group

On 17 July 2014, EDF and Corpus Christi Liquefaction LLC, a subsidiary of the Cheniere group, signed a liquefied natural gas (LNG SPA) supply agreement for a 20-year term (with an option for extension by a further 10 years). The LNG will be produced and delivered at the Corpus Christi liquefaction facility in Texas, in volumes of approximately 0.5Gm³ per year after the start-up of the second train and 1Gm³ per year after the start-up of the third train. Execution of the contract is subject to certain conditions, including the investment decision relating to completion of the third liquefaction train.

9.2.2.2.4 Agreement between EDF and Exeltium

On 27 October 2014, the Exeltium consortium and EDF made an agreement to adjust Exeltium's electricity supply contract and restore competitiveness to the electro-intensive companies concerned, following the significant unexpected drop in market prices. Under this agreement, the price paid for electricity supplies will be decreased initially, before a subsequent adjustment based on changes in the market price for electricity. The whole mechanism thus makes the contract more flexible while retaining its overall economic balance. The other contractual parameters (delivery volumes, opt-out options and industrial risk sharing) are unchanged. The contract's philosophy, approved at the outset by the European Commission, remains the same: offering long-term visibility to the companies belonging to the consortium and ensuring competitive prices over the whole period, while allowing EDF to share part of its generation costs in the long run.

9.2.2.2.5 Conclusion of the arbitration between Edison and Promgas on the review of the long-term gas supply contract

On 29 August 2014, the Arbitration Institute of the Stockholm Chamber of Commerce announced its ruling on the reduction of the price under the long-term contract between Edison and Promgas for gas supplies from Russia. The price reduction granted to Edison will have a positive impact of €80 million on the Group's EBITDA for 2014.

9.2.2.2.6 Finalisation of the agreement between Edison, EDF Énergies Nouvelles and F2i

On 6 November 2014, Edison, EDF Énergies Nouvelles and F2i announced that they had finalised the share exchange process creating the third-largest Italian operator in the renewable energy sector with installed capacity of approximately 600MW. This new player in renewable energy will draw on Edison's skills in management and optimisation of electricity generation, and EDF Énergies Nouvelles' skills in operation and maintenance. Its capacity and financial skills will be strengthened by the involvement of a strategic partner like F2i, a long-term investor with longstanding experience in the energy sector.

The shareholders of the newly-formed company are F2i, with a 70% interest, and a holding company owned by Edison and EDF Énergies Nouvelles with the remaining 30%. In application of the accounting principles in effect at 1 January 2014, the defined governance system and related contractual arrangements allow Edison to fully consolidate the new company (see also section 6.3.2.3 ("Edison")).

9.2.2.2.7 EDF joins Eletronorte and CHESF in Brazil for construction of the SINOP hydroelectric dam

On 12 December 2014, EDF, through its subsidiary EDF Norte Fluminense, acquired a 51% stake in SINOP Energy Company (CES), which is in charge of building and operating the SINOP hydroelectric dam. The two other shareholders are Eletronorte (24.5%) and CHESF (24.5%), both subsidiaries of the Eletrobras group.

Work on this dam, which will have installed capacity of 400MW, began in spring 2014 and commercial operation is scheduled to start in the second half-year of 2017. Based on analysis of the governance arrangements set up between the shareholders of CES, the Group's investment is classified as a joint venture under IFRS 10 and is therefore accounted for by the equity method.

9.2.2.2.8 Agreement with Gazprom for the acquisition of EDF's stake in South Stream

On 29 December 2014 EDF and Gazprom signed an agreement for the acquisition by Gazprom of EDF's 15% stake, held through its subsidiary EDF International, in the South Stream gas pipeline project (South Stream Transport BV¹).

Given this development, in line with pre-existing agreements EDF International recovered the full amount invested in the project.

9.2.2.2.9 Investments and disposals by EDF Énergies Nouvelles

On 9 January 2014, EDF Énergies Nouvelles, through its US subsidiary EDF Renewable Energy, announced its acquisition of Spinning Spur 3, a 194MW wind farm project to be built in Texas. The project was originally developed by Cielo Wind Power LP and is expected to come on line in late 2015. Its electricity output will supply two municipal utilities under a 20-year power purchase agreement.

On 16 July 2014, EDF Énergies Nouvelles also announced a 96% investment in the 175MW wind farm project developed by Orion Energy Group and Vision Energy LCC. The project, named Pilot Hill and located in Illinois, is covered by a 20-year power purchase agreement with Microsoft Corporation.

EDF Énergies Nouvelles also sold several wind farms. The main sales took place in North America: half of Spinning Spurs 2 (161MW) and 90% of Shiloh IV (102.5MW) in the US; 60% of Lake Alfred (150MW), Massif du Sud (75MW) and Saint-Robert (40MW) in Canada. In the United Kingdom, 80% of Glassmoor (12MW), Green Rigg (36MW) and Rusholme (24MW) were sold. These facilities were owned 50% each with EDF Energy.

In solar power, EDF Énergies Nouvelles also sold 50% of the Catalina Solar plant (143MWp).

9.2.2.2.10 EDF Énergies Nouvelles agreements for operation and maintenance

In December 2014, EDF Énergies Nouvelles announced that it had signed several Operation and Maintenance (O&M) contracts to manage wind and solar power facilities on its own behalf and for third parties.

The largest contracts are for 656MW in the US, 599MW in Italy and 588MW in Canada. EDF Énergies Nouvelles' O&M activity grew by 30% overall in 2014, from 9GW to close to 12GW of capacities managed in nine countries.

1. South Stream Transport BV was previously owned 50% by Gazprom, the other shareholders being Eni (20%), Wintershall and EDF (15% each). It was formed to construct the undersea portion of the South Stream gas pipeline.

9.2.2.2.11 Poland

EDF Polska signed cooperation agreements with the city of Zielona Gora in April 2014, and the cities of Gdansk and Gdynia in September 2014. EDF Polska will provide support to these cities in energy efficiency, and matters of environmental protection more generally.

9.2.2.2.12 Belgium

During 2014 EDF Luminus signed cooperation agreements with the cities of Ghent and Genk, laying down the principles for collaboration on questions of sustainable cities, energy efficiency and training.

9.2.2.2.13 Snam, GIC and EDF Invest entered into an agreement with Crédit Agricole Assurances for its entry into the share capital of TIGF

On 28 January 2015, Snam, GIC, and EDF Invest entered into an agreement with Crédit Agricole Assurances for its entry into the share capital of TIGF with a 10% stake. The transaction was finalized on 26 February 2015. Upon completion of the transaction, Snam, GIC, and EDF Invest received slightly above €180 million and together with Crédit Agricole Assurances hold respectively 40.5%, 31.5%, 18.0% and 10.0% of the share capital of TIGF indirectly.

9.2.2.3 Investment projects

9.2.2.3.1 France

9.2.2.3.1.1 Flamanville EPR

Following the preliminary work for the Flamanville project review with all suppliers which indicated a shift in the construction schedule, the Group announced on 18 November 2014 that the plant was now due to start operation in 2017.

This revision of the schedule results from difficulties encountered by AREVA as regards:

- delivery of certain pieces of equipment such as the lid and internal structures to the vessel;
- implementation of France's ESPN¹ regulations for equipment under nuclear pressure for which Flamanville 3 is a first-of-a-kind, particularly concerning a set of assembly carried out by AREVA and its subcontractors.

AREVA has briefed EDF on the ongoing analysis of the welding defect in the steam generator, the qualification tests of the pressuriser valves, and the detailed metallurgical analysis of the vessel lid material.

The project review will enable EDF and all its suppliers to share this information so it can be integrated into the construction schedule, and to precisely define the consequences of the factors reported with a view to taking all the decisions necessary for the completion of construction (see also section 6.2.1.1.3.5 ("Preparing for the future of nuclear fleet in France")).

9.2.2.3.1.2 Start of the "Linky" smart meter rollout

The rollout of smart meters complies with European and French regulations on electricity metering systems (EU Directive 2009-072; French Law of 3 August 2009 (Article 18); French Decree of 31 August 2010, currently being updated; the French ministerial decision on metering of 4 January 2012). It follows a 300,000-meter pilot scheme conducted by ERDF in 2010 and 2011. After carrying out an assessment of this scheme, the French energy regulator CRE² recommended generalising the smart meter system in its decision of 7 July 2011.

At the initiative of France's Minister for Ecology, Sustainable Development and Energy, a working party with representatives of all stakeholders was formed in late 2012. The work done during 2013 led the Prime Minister to announce on 9 July 2013 that ERDF would install 3 million smart meters by 2016.

ERDF therefore launched a call for tenders in October 2013 for supply of the first meters. Contracts were awarded in early August 2014 to 6 industrial firms, which will supply the first meters by the end of 2015. ERDF has also issued calls for tenders for the installation of millions of meters. The first household meters are due to be installed from autumn 2015.

Following the public consultation that opened on 30 April 2014, the CRE's deliberations of 17 July 2014 on the tariff regulation framework for the Linky project were published in France's *Journal officiel* on 30 July 2014. Given the unusually large scale of this industrial project (€5 billion will be invested between 2014 and 2021 to install 35 million meters), a specific rate of return on assets has been set for a 20-year period.

9.2.2.3.1.3 Commissioning of new facilities by EDF PEI

In keeping with the objective of implementing guaranteed-power electricity generation facilities for Corsica and French overseas territories, the subsidiary EDF PEI (standing for *Production Électrique Insulaire* or Island Electricity Generation) commissioned the final 6 Diesel generators of the Bellefontaine power plant in Martinique, the 7 Diesel generators for the Lucciana plant in Upper Corsica, and the first 7 Diesel generators for the Pointe-Jarry plant in Guadeloupe, with a total combined generation capacity of close to 350MW.

9.2.2.3.1.4 Programme of investment in existing nuclear facilities in France

The 22 January 2015, EDF's Board of Directors approved in principle the major overhaul programme (so-called "*Grand carénage*") aimed at refurbishing the French nuclear fleet, enhancing reactor safety, and, if conditions allow, extending their operating lives. The Board of Directors also expressed its wish that the capex plan would be conducted, monitored and controlled based on the most exacting standards.

This investment programme is estimated to reach a maximum of €₂₀₁₃55 billion by 2025 for the 58 reactors currently operating. This indicative figure will be confirmed later and gradually after the optimising of solutions for rolling out the programme, additional review work, and taking into account the multi-year energy plans ("*Programmations Pluriannuelles de l'Énergie*" or PPE, and strategic plan) provided for under the energy transition bill.

This industrial programme will be gradually implemented, in compliance with the Energy Transition Law, multi-year energy plans, the opinions and orders of the French Nuclear Security Authority (ASN), as well as the procedures for authorisation for reactors to run for more than 40 years. Its accounting impact will be analysed in 2015.

9.2.2.3.2 United Kingdom

The Teesside offshore wind farm and the West Burton combined cycle gas turbine power plant were both officially opened on 16 April 2014. The Teesside wind farm off the coast near Redcar in north-east England has 27 turbines with total installed capacity of 62MW.

The West Burton B power station in Nottinghamshire is the EDF group's largest single capital investment project in the UK so far, with installed capacity of 1,300MW.

In December 2014, EDF Energy Renewables (owned 50% by EDF Energy and 50% by EDF Énergies Nouvelles) sold 80% of three wind farm facilities (Green Rigg, Rusholme and Glassmoor II, totalling 73MW) to China General Nuclear Power Corporation (CGN).

1. "Équipements sous pression nucléaire neufs" Regulation.

2. Commission de Régulation de l'Énergie.

9.2.2.3.3 Other activities

9.2.2.3.3.1 Main commissioning of wind farms and photovoltaic power plants

EDF Énergies Nouvelles commissioned a number of wind farms in Europe during 2014, particularly in France: in the north of France, Basse Thiérache Sud (24MW) in the Picardy region, Seuil de Bapaume and La Plaine de l'Escrebieux (combined capacity of 27MW) in the Nord-Pas-de-Calais region, and in the south of France, Conilhac (9.2MW), La Plaine de l'Orbieu (11.5MW) and La Vallée de l'Hérault (14MW) in the Languedoc-Roussillon region. The Group continued its expansion in Turkey with the commissioning of its eighth wind farm at Geycek, with capacity of 150MW. In the United Kingdom, 23MW of capacity was commissioned, including the M1, Burnfoot North and Barmoor facilities.

EDF Énergies Nouvelles also saw further growth in North America, notably in Canada where Blackspring Ridge (300MW) was commissioned. This is the largest wind farm in the west of Canada and is jointly owned in equal shares with the Enbridge group. Other facilities commissioned in Canada were first tranche of Rivière-du-Moulin (150MW), and Le Granit and La Mitis (combined capacity of 50MW) in Quebec. In the United States, the Hereford 2 (200MW) and Spinning Spur 2 (161MW) plants were commissioned.

In solar power, the Group commissioned its first 30MWp solar power plant in India. It also announced the development of five additional solar projects in Rajasthan with total capacity of 120MWp, for which it was awarded the contract after a call for tenders launched by the Indian government. In Israel, seven solar plants with cumulative capacity of 54MWp were commissioned.

As part of its expanding solar power activity in the United States, EDF also commissioned the Lepomis, Lancaster and CID power plants with combined capacity of 39MWp.

9.2.2.3.3.2 Allocation of Green Bond funds

In November 2013, the Group successfully undertook the first "Green Bond" issue in Euros by a large corporate, raising €1.4 billion to finance future renewable energy projects by EDF Énergies Nouvelles.

By 31 December 2014 €1,175 million¹ had been allocated to thirteen eligible projects (1.8GW): ten onshore wind farms, two solar projects and one biomethane plant, located in the United States, Canada and France.

9.2.2.4 Existing nuclear plants

9.2.2.4.1 United Kingdom: resumption of operation at Heysham 1 and Hartlepool

Heysham 1 nuclear power plant operated by EDF Energy was shut down on 11 June 2014 for refuelling and an inspection of one of its eight boiler units. This followed tests which had taken place during a period of planned maintenance and inspection in 2013, which led to confirmation that there was a defect on a part of the boiler known as the boiler spine.

Under its safety policy, EDF Energy took the decision on 11 August 2014 to shut down other British reactors of a similar design, Heysham 1 Reactor 2 and Hartlepool Reactors 1 and 2. The inspection of all the boiler units of the four reactors at Heysham 1 and Hartlepool has now been completed, and no other defects were identified.

Consequently, EDF Energy was able to put these four reactors back into operation, three in November 2014 and one in January 2015 at reduced capacity.

9.2.2.4.2 Belgium

After 10 months of outage for the Doel 3 and Tihange 2 nuclear reactors for inspections of the reactor vessels, which had been found to have micro-cracks during the summer of 2012, the Federal Nuclear Control Agency (AFCN) gave its authorisation on 17 May 2013 for both nuclear reactors to resume operation. The operator Electrabel had agreed on a battery of additional tests with the AFCN to evaluate the long-term behaviour of the reactor vessels. Since one of the tests conducted did not give the results experts had expected, Electrabel took the initiative on 25 March 2014 to shut both plants down temporarily as a precautionary measure until further test results are available. The EDF group owns 10.2% of these two reactors.

In addition to this, the Doel 4 nuclear reactor, in which EDF Luminus holds a 10.2% share, was out of operation from 4 August to 19 December 2014 after an oil leak in the non-nuclear section of the plant damaged the steam turbine. The possibility of sabotage has been raised, but the causes of the leak are still undetermined and an investigation is in process.

9.2.2.4.3 Findings of the AIEA's safety review of EDF's nuclear fleet

On 9 December 2014, the findings of the "Corporate OSART" mission were published by IAEA. This is the first assessment of integration of safety in the organising and functioning of the Group's corporate services, after a first review of this type with the Czech group CEZ, in 2013. This review was conducted over a period of two weeks by an Operational Safety Review Team (OSART) consisting of experts from third-country nuclear safety regulatory agencies. It dealt mainly with the management of serious accidents, human resources, technical support, communication and maintenance. The findings of the assessment are highly satisfactory, with no discrepancy found in comparison with IAEA standards and 17 good practices identified that could become international standards.

9.2.2.5 Energy transition

9.2.2.5.1 First-reading adoption by the French National Assembly of the energy transition bill

On 14 October 2014, the French National Assembly adopted the bill on the energy transition for green growth, on its first reading. This bill sets medium and long-term objectives.

The main objectives are to reduce greenhouse gas emissions from their 1990 levels by 40% by 2030 and 75% by 2050, and to halve final energy consumption by 2050, with an intermediate target of a 20% reduction by 2030.

The bill also aims to bring about changes in the French energy mix, reducing the share of nuclear electricity production from its current 75% to 50% by 2025, cutting primary consumption of fossil-based energy by 30% between 2012 and 2030, and increasing the share of renewable energies in final consumption to 32% by 2030.

Regarding nuclear power, the bill proposes to limit total nuclear generation capacity to 63.2GW, which is equivalent to the production capacity of the nuclear power plants currently in operation.

Other objectives include energy-efficient renovation for 500,000 homes a year from 2017, and renovation of all buildings to meet the BBC² low-energy building standards by 2050.

1. A detailed list of projects is published in Appendice F of this document.

2. Bâtiments basse consommation.

The bill also introduces a new governance structure for climate and energy policies. EDF would be required to prepare a strategic corporate plan compatible with the multi-year energy programme, giving the government commissioner the power to oppose investment decisions that are not compatible with the strategic plan.

The other key points of the bill include a reform of the support system for renewable energies and a reform to the governance of the CSPE (Contribution to the Public Electricity Service) system.

The legislative process is now continuing with the Senate's review of the bill in early 2015.

9.2.2.5.2 Partnership with Amundi to develop financing solutions for the energy transition

On 29 October 2014, EDF group and Amundi, Europe's No. 1 asset manager, announced the establishment of a partnership for the creation of a joint asset management company. The company's purpose will be to raise funds with institutional and retail investors and to manage third-party funds earmarked for energy transition projects. EDF and Amundi aim to provide the market with new categories of funds dedicated to renewable energy generation (wind power, photovoltaic, small hydropower stations, etc.) and B2B energy savings (particularly for electricity-intensive industries).

9.2.2.6 Regulatory environment

9.2.2.6.1 France

9.2.2.6.1.1 The NOME Law and the ARENH system

Supplies of electricity to EDF's competitors under the ARENH scheme for regulated access to nuclear power supplies concerned a volume of 71.3TWh for 2014 (36.8TWh of which were for the first half-year). The annual volume sold under this scheme cannot exceed 100TWh, plus a progressive increase from 1 January 2014 by the amounts sold to network operators to compensate for their power losses, according to a timetable set by government decision. Applications by suppliers in November 2014 to benefit from the ARENH tariff for the first half of 2015 (15.8TWh) were down substantially compared to the previous year, principally because wholesale market prices had fallen and became a more attractive source of energy supplies.

The ARENH price was set at €42/MWh from 1 January 2012, and is subsequently intended to reflect the economic conditions of generation by the existing nuclear fleet. The draft decree stipulating the valuation method for costs making up the ARENH price was examined by France's Higher Energy Board (CSE¹) on 19 June 2014, and has also been examined by France's Competition Authority and the CRE. It is currently under examination by the European Commission, which must approve the price formula. The French government has announced that this formula will apply from 1 July 2015. On 15 October 2014, the CRE stated in its report on regulated electricity sales tariffs that based on the information in its possession at that date, application of that formula would result in a rise of approximately €2/MWh in 2015 (see also section 6.2.1.3.5 ("Regulated access to electricity from the existing nuclear fleet (ARENH)")).

9.2.2.6.1.2 CSPE

The Contribution to the Public Electricity Service (*Contribution au Service Public de l'Électricité* or CSPE) exists to compensate for certain public service charges assigned to EDF in particular². The CSPE is based on electricity consumption and collected directly from the end-user.

Under the agreement signed in early 2013 by EDF and the French authorities, EDF is to be progressively reimbursed over the period to 31 December 2018 for the receivable consisting of the CSPE shortfall at 31 December 2012 and the costs of bearing this shortfall for the Group (a total amount of some €5.1 billion at 31 December 2014). France's amended Finance Law for 2013 also recognised the costs of bearing the shortfall in the CSPE mechanism as a public service expense entitling EDF to compensation through the CSPE system. The methods for calculating these costs were set out in articles L121-7 and L121-8 of the French Energy Code. The amount due to EDF at 31 December 2012 for bearing this shortfall, equal to €627 million, was defined in a decision published on 30 September 2014. Also in 2014, the CRE recognised an amount of €87 million for these costs owed to EDF in 2013.

The key developments of 2014 concerned the legislative environment for purchase obligations:

- Following a formal injunction from the European Commission, the photovoltaic tariff bonus system was cancelled by a decision dated 25 April 2014. This system, introduced in early 2013, applied additional bonuses for power plants using photovoltaic solar panels assembled in Europe.
- The French government awarded the second contract for offshore wind farms (1,000MW); the excess cost over market price will be compensated by the CSPE.
- On 17 June 2014, France's Ministry for Ecology, Sustainable Development and Energy signed a decision setting the terms for purchases of electricity from onshore wind farms. This decision, published in France's *Journal officiel* of 1 July 2014, replaced the previous terms laid down in 2008, which were cancelled by the Council of State on 28 May 2014 following legal action by the association *Vent de Colère*, for non-compliance with the procedure for notifying the European Commission of State aid. The new decision adopted the wind power purchase terms of the 2008 decision and the impact on the CSPE was unaffected.
- The CRE published a decision on 16 December 2014 allowing future sales on the wholesale market of energy covered by purchase obligations bought by EDF. Once a dedicated scope for assessing balance has been defined, EDF will be compensated for the cost of the differential between forecast and actual production of energy under purchase obligations. This will provide objective compensation for the surplus cost of energy under purchase obligations borne by EDF.

The amount of expenses to be covered by compensation for 2014 is €5,888 million, 15% more than in 2013. The main explanations for this rise are the lower market prices, and a rise in the volume of renewable energies produced by wind and photovoltaic facilities. Another more minor factor was the fact that solidarity charges resulting from the higher number of beneficiaries of the basic necessity tariff increased by some €100 million. The amounts received during 2014 totalled €5,195 million, up by 12% from 2013 following the CSPE rise applicable from 1 January 2014 (increase of €3/MWh from 2013 taking the CSPE to €16.5/MWh for 2014). The rise in the amount of CSPE collected was limited by the mild weather effect of 2014 and the rise in exempted volumes. At 31 December 2014 the expenses were €699 million³ higher than the income recorded by EDF.

The CRE's decision of 15 October 2014 states that all expenses to be compensated to operators in 2015 should amount to €6,431 million, while contributions recovered should total €7,002 million.

1. Conseil supérieur de l'énergie.

2. Local distribution companies and *Électricité de Mayotte* also make small contributions to the system.

3. Including the cost of bearing new shortfalls for 2013 and 2014.

9.2.2.6.1.3 TURPE 4 Network access tariffs

The Decree of 2001 on the tariffs for using public electricity transmission and distribution networks was amended on 11 December 2014 to comply with the provisions of EU Directive 2009/72/EC.

The amendment changes the methods for setting these tariffs, known as TURPE (*Tarifs d'Utilisation des Réseaux Publics d'Électricité*) considering that the CRE is now the only body with competence to do so.

For distribution tariffs from 1 January 2014, the CRE's decision of 12 December 2013 was published in the *Journal officiel* of 20 December 2013. These tariffs were raised by an average 3.6% as of 1 January 2014, then reduced by 1.3% from 1 August 2014. The reduction reflects the clearance of the income and expenses adjustment account (CRCP)¹, (2% offset by a 0.7% inflation effect²).

The French government also announced in a letter of 12 November 2013 to the President of the CRE that it intended to propose a law laying down a secure legal framework for setting the TURPE network access tariff, so that a normative economic regulation method can be implemented. This point is addressed in an article of the energy transition bill (see section 6.5.8.2 ("Future regulations at national level" – "Draft bill on energy transition for green growth")).

TURPE transmission tariffs were also reduced by 1.3% from 1 August 2014, again corresponding to 2% for the clearance of the income and expenses adjustment account (CRCP) offset by 0.7% inflation. On 27 May 2014, the CRE decided to apply an exceptional 50% reduction to the electricity transmission bills of industrial sites that are large electricity consumers. This measure has been in application since 1 August 2014 and will continue until 31 July 2015, for a total amount in the region of €60 million. This loss of income for RTE will automatically become a tariff-related receivable through the CRCP mechanism, to be compensated through the tariff changes of 1 August 2015 and 2016 (see also section 6.2.2.4 ("Tariffs for Using the Public Electricity transmission and distribution Networks (TURPE)")).

9.2.2.6.1.4 Cancellation of regulated sales tariffs by the Council of State

In a decision of 11 April 2014, the Council of State partly cancelled the regulated electricity sales tariffs for the period 23 July 2012 to 31 July 2013, following a petition for cancellation brought by the Anode (French association of energy retail operators). It had decided that the rises in the "yellow" and "blue" tariffs for the period, which were limited to 2% by the ministerial decision of 20 July 2012, were insufficient to cover EDF's electricity generation costs, and also too low in view of the legislator's aim to bring tariffs into line with supply costs for electricity distributed at market prices by 31 December 2015.

The Council of State ordered the ministers concerned to release a new retroactive tariff decision within two months, incorporating the principles laid down in its decision. In response to this order, the government published a draft tariff decision in the *Journal officiel* on 31 July 2014. This draft decision set a new scale for the "blue" tariff for the period 23 July 2012 to 31 July 2013. From 2015 EDF will therefore invoice an additional amount in respect of the bills sent out for the period concerned, and has recorded revenues (excluding taxes) of €921 million in its consolidated financial statements for 2014.

On 12 September 2014, the Council of State's judge for urgent applications rejected the ANODE's application for suspension of the decision of 28 July 2014 in which the ministers in charge of energy removed the forecast average 5% increase in the regulated "blue" tariff that was mentioned in a previous decision of 26 July 2013. The judge considered that urgent application proceedings were inappropriate as the question did not meet the relevant urgency requirements. A decision on the substance of the matter is now expected.

9.2.2.6.1.5 Regulated electricity sales tariffs in France

The tariff decision of 26 July 2013 provided for an average 5% rise in the "blue" regulated sales tariffs from 1 August 2014. On 4 July 2014, the French government announced that this rise was to be cancelled and a decision to this end was published.

The government also decided to amend decree 2009-975 of 12 August 2009 in order to introduce before 31 December 2015 a method for constructing regulated sales tariffs by "stacking" or adding up the cost of regulated access to historical nuclear electricity (ARENH), the cost of supply for the complementary purchases on wholesale power markets (which includes the capacity guarantee), electricity networks and commercial costs, plus a normal rate of return. The decree also reaffirms the cost coverage principle. This new decree was published on 28 October 2014. On this basis, an official decision set the new tariff scales as of 1 November 2014. The average rises were 2.5% for the "blue" tariff for residential customers, 3.7% for the "green" tariff, and 2.5% for the "yellow" tariff. The "blue" tariff for non-residential customers was reduced by an average 0.7%.

9.2.2.6.1.6 Court of Auditors' report on the cost of nuclear electricity generation

On 27 May 2014, the French Court of Auditors released a report on the cost of generating nuclear electricity as part of the French parliamentary commission investigation into the costs of nuclear power, updating its previous report of January 2012. The document discusses the rises in operating expenses for the nuclear fleet between 2010 and 2013, forecast investments in the existing nuclear fleet, future costs for the nuclear fleet, and the issues of accidents and civil liability in nuclear operation.

The January 2012 report estimated investment expenditure for the existing nuclear fleet at €₂₀₁₀55 billion for the period 2011-2025, including additional expenses to implement the recommendations issued by the French Nuclear Safety authority ASN after the Fukushima accident. This cost trajectory corresponds to a vast industrial overhaul programme encompassing standard and non-standard maintenance operations and safety improvements for the plants, in order to ensure a stable operating lifespan for nuclear facilities.

The 2014 report by the Court of Auditors estimates the total cost of this programme at €₂₀₁₀62.5 billion, including €₂₀₁₁55 billion for the period 2014 to 2025. This corresponds to a forecast estimated cost of €₂₀₁₂56.4/MWh to €₂₀₁₂61.6/MWh for the period 2011-2025, depending on how the extension of the plants' operating lifespan to 50 years is taken into account. This cost is coherent with the cost estimated by EDF based on the assumption that plants will have a 50-year operating lifespan (approximately €₂₀₁₁55/MWh).

1. A mechanism to measure and offset differences between the actual and forecast figures on which tariffs are based.

2. Percentage change between 2012 and 2013 in the average monthly French consumer price index excluding tobacco.

9.2.2.6.1.7 **Parliamentary commission report on the costs of nuclear power**

On 5 June 2014, the French parliamentary commission referred to in the previous section, set up to investigate the past, present and future costs of nuclear power, the operating lifespan of reactors and various economic and financial aspects of nuclear power generation and supply, also remitted its report.

After six months of work including more than sixty interviews with various stakeholders between January and May 2014 (ten with EDF), the commission made sixteen recommendations at the end of its report, intended to inform the parliamentary debate concerning the bill on the energy transition for green growth. On the question of nuclear costs, the commission's report gives the figures established by the Court of Auditors and expresses concern about the general trend in the sector's costs. It recommends that the public authorities should define a strategic energy framework to reduce the uncertainties affecting the nuclear power sector, particularly through the Energy Transition Law.

Regarding the nuclear fleet's operating lifetime, rather the systematic closure of plants after 40 years the report recommends staggered decommissioning between 40 and 50 years or more, to ensure gradual diversification of the electricity mix.

The other recommendations made by the commission are for further studies on the reprocessing policy and MOX fuels¹ the costs of a nuclear accident and the costs of the Cigéo waste storage centre project, stressing the need for rapid definition of a cost that is ratified by the public authorities.

9.2.2.6.2 **United Kingdom**

On 19 March 2014, the British government confirmed that it was setting up a capacity market. EDF Energy took part in the first capacity auction in December 2014 for agreements starting from October 2018, with 97% of its capacity or 12.2GW qualified.

In 2011, to meet its objectives in the fight against climate change, the British government introduced a Carbon Price Support mechanism intended to guarantee a minimum price for carbon, consisting of a tax added to the price of CO₂ emission rights. The aim of this mechanism is to bring the overall carbon price (emission right and tax) to £30/t in 2020, a target set when the price of CO₂ stood at around £15/t. In March 2014, in view of the significant decline in CO₂ prices on the markets, the British government decided to cap the carbon tax at £18/tonne from April 2016 until 2020.

On 26 June 2014, the UK's Competition Market Authority (CMA) began an investigation of the energy market. Its conclusions are expected to be released in December 2015 (see also section 6.3.1.4.5 ("United Kingdom Legal Environment")).

9.2.2.6.3 **Belgium**

The Law of 18 December 2013 amending the Law of 2003 on the timetable for withdrawal from nuclear energy laid down the principles of a three-party agreement between Electrabel, EDF and the Belgian government defining the terms for extension of operation by Tihange 1 (in which EDF Belgium directly owns a 50% stake) to 2025, particularly the fees due by the owners to the State. The agreement was signed on 12 March 2014 and sets out the operating, financial and legal conditions of this extension.

The Belgian government organised a strategic reserve through a call for tenders from thermal power plants that had announced their temporary or permanent shutdown, in order to secure the country's energy supply during the winter periods. The most attractive proposals were selected once the CREG², Belgium's electricity and gas regulator, approved the prices as reasonable. The power plants included in this reserve will receive payment to cover their fixed costs. The Seraing plant, fully-owned by EDF Luminus, was selected for a 3-year period starting in winter 2014, bringing an end to the plant's temporary shutdown announced in March 2013.

On 18 December 2014, the Belgian government announced that it wanted to extend operations by the Doel 1 and Doel 2 nuclear reactors by 10 years. Their operating lifetime would not extend beyond 2025, or 50 years. This extension requires prior approval by the relevant authority (AFCN), setting the conditions for safety and security in the installations concerned. It will also require overall agreement from all stakeholders.

9.2.2.6.4 **Hungary**

The Group has heat and electricity production operations in Hungary through its subsidiary Budapesti Erőmű ZRt ("BE ZRt") and also distributes and sells electricity through EDF Démász ZRt. From September 2014 the regulator applied a further reduction in regulated tariffs for supplies of gas, electricity and heat to domestic customers. This reduction was 5.7% for domestic electricity customers, after two previous reductions applied in January (-10%) and November 2013 (-11.1%).

1. Fuel made from reprocessed plutonium.

2. Commission de Régulation de l'Électricité et du Gaz.

9.3 Analysis of the business and the consolidated income statements for 2013 and 2014

Presentation and analysis of the consolidated income statements for 2013 and 2014 is shown on two levels for sales and EBITDA: a first focusing on the Group, then a second examining the different business segments (France, United Kingdom, Italy, Other International and Other activities). EBIT (operating profit) and net income are analysed from a more general standpoint.

The comparative figures for 2013 have been restated to reflect the impact of retrospective application of IFRS 10 and IFRS 11 (-€666 million impact on EBITDA, no impact on EDF net income).

(in millions of Euros)	2014	2013 restated
Sales	72,874	71,916
Fuel and energy purchases	(36,704)	(38,116)
Other external purchases	(9,181)	(8,287)
Personnel expenses	(11,785)	(11,291)
Taxes other than income taxes	(3,593)	(3,481)
Other operating income and expenses	5,668	5,358
Operating profit before depreciation and amortisation (EBITDA)	17,279	16,099
Net changes in fair value on Energy and Commodity derivatives, excluding trading activities	203	14
Net depreciation and amortisation	(7,940)	(7,154)
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(157)	(227)
(Impairment)/Reversals	(1,189)	(617)
Other income and expenses	(212)	219
Operating profit (EBIT)	7,984	8,334
Financial result	(2,551)	(2,942)
Income before taxes of consolidated companies	5,433	5,392
Income taxes	(1,839)	(1,896)
Share in net income of associates and joint ventures	179	262
GROUP NET INCOME	3,773	3,758
EDF net income	3,701	3,517
Net income attributable to non-controlling interests	72	241
EARNINGS PER SHARE (EDF SHARE) (in Euros)		
Earnings per share	1.78	1.84
Diluted earnings per share	1.78	1.84

9.3.1 Sales

Consolidated sales were up slightly (+1.3%), while showing an organic decline of 1.4%.

9.3.1.1 Change in Group sales

(in millions of Euros)	2014	2013 restated	Variation	Variation (%)	Organic growth (%)
Sales	72,874	71,916	958	+1.3	-1.4

Sales amounted to €72,874 million in 2014, an increase of €958 million (+1.3%) from 2013. This includes the favourable €921 million impact of the regulated tariffs catch-up for 2012-2013¹. Excluding the effects of exchange rates (+€519 million), principally reflecting the pound sterling's rise against the Euro, and excluding changes in the scope of consolidation (+€1,449 million) essentially relating to the takeover of Dalkia in France, sales showed an organic decline of 1.4% due to the mild weather effect.

¹. Regulated tariffs catch-up for the period from 23 July 2012 to 31 July 2013 following the French State Council's decision of 11 April 2014.

9.3.1.2 Change in sales by segment

(in millions of Euros)	2014	2013 restated	Variation	Variation (%)	Organic growth (%)
France	39,910	40,210	(300)	-0.7	-0.2
United Kingdom	10,160	9,782	378	+3.9	-1.9
Italy	12,687	12,689	(2)	0.0	-0.4
Other International	5,603	6,349	(746)	-11.7	-11.1
Other activities	4,514	2,886	1,628	+56.4	+0.8
Total excluding France	32,964	31,706	1,258	+4.0	-2.9
GROUP SALES	72,874	71,916	958	+1.3	-1.4

Sales outside the France segment represented 45.2% of total consolidated sales in 2014, compared to 44.1% in 2013.

9.3.1.2.1 France

Change in sales in the France segment

France's contribution to Group sales amounted to €39,910 million, corresponding to an organic decline of €90 million (-0.2%) compared to 2013.

This decline in sales mainly results from the lower volumes sold to final customers due to weather effects (-25.4TWh) with an impact of

€1,899 million, which was only partly offset by the increase in electricity tariffs in August 2013 and November 2014, the change in the TURPE network access tariff and the regulated tariffs catch-up for 2012-2013 (+€908 million). Sales of gas to final customers were down by €133 million, principally because of the weather (-3.1TWh).

At 31 December 2014, EDF's volume market share for electricity sales to all final customers was 78.8%, 0.9 points down from 31 December 2013. EDF's share of the natural gas market was 4.7%, 0.3 points higher than at 31 December 2013.

Breakdown of sales for the "France" segment between Generation and Supply¹ (deregulated activities), network activities² and island activities³

(in millions of Euros)	2014	2013 restated	Variation	Variation (%)	Organic growth (%)
Sales	39,910	40,210	(300)	-0.7	-0.2
Generation and Supply (deregulated activities)	37,678	38,007	(329)	-0.9	-0.3
Network activities	13,276	13,807	(531)	-3.8	-3.8
Island activities	1,071	931	140	+15.0	+15.0
Eliminations	(12,115)	(12,535)	420		

The 0.9% decrease in sales by Generation and Supply (deregulated activities) is explained by the unfavourable impact of a decline in volumes, essentially driven by the very mild weather in 2014 (compared to the cold weather of 2013), which was only partially offset by the tariff increases of 1 August 2013 and 1 November 2014, and the regulated tariffs catch-up.

Sales by the network activities were down by 3.8%, as the transmission volumes declined due to very mild weather in 2014 compared to 2013, despite the favourable impact of the TURPE tariff increase from 1 January 2014.

1. Generation, Supply and Optimisation in mainland France, and sales of engineering and consulting services.

2. Network activities now only include Distribution, as a result of application of the equity method to the Transmission activity since 31 December 2010. In mainland France, network activities are regulated via the network access tariff TURPE (Tarifs d'Utilisation des Réseaux Publics d'Électricité). Sales for the regulated activities include the delivery cost included in integrated tariffs.

3. EDF's generation and distribution activities in the island energy systems (IES and PEI).

Electricity generation

Nuclear generation produced 415.9TWh in 2014, compared to 403.7TWh for 2013, an increase of +12.2TWh. This surpassed the Group's upper end of the 410–415TWh target for 2014 announced to the market. This significant improvement was driven by better control over the duration of scheduled outages with an average duration of the extension of planned outages reduced by half. The availability coefficient was 80.9% in 2014, higher than in 2013 (78.0%).

Hydropower output stood at 37.5TWh, down by 5TWh from 2013: conditions were less favourable after the exceptionally high water levels of 2013 (see section 9.2.1.4 on weather conditions).

Thermal generation produced 6.9TWh, 8.7TWh less than in 2013. This decline is essentially caused by progressive decommissioning of the highest-pollution power plants, a lower solicitation of the thermal power plant fleet on the back of weather conditions and a less favourable spread between electricity prices and fossil fuel prices.

Sales volumes to final customers (a market segment that includes Eurodif and local distribution firms) were down by 26.8TWh, of which 25.4TWh relate to the temperature differential. The effects of the end of the VPP¹ auction system, which were first felt in 2012, account for a 5.4TWh downturn in sales in 2014. The volume of electricity supplied under the ARENH system was 71.3TWh.

EDF was a net seller on the markets to the extent of 27.0TWh in 2014, an increase of 24.5TWh from 2013.

9.3.1.2.2 United Kingdom

The **United Kingdom's** contribution to Group sales amounted to €10,160 million in 2014, 3.9% more than in 2013, corresponding to an organic decline of 1.9%. This includes a favourable exchange effect of €572 million.

The primary reason for the lower level of gas sales was the weather effect, which was less favourable than in 2013.

9.3.1.2.3 Italy

Italy contributed €12,687 million to consolidated sales, a stable result compared to 2013, or -0.4% in organic terms.

In an environment marked by sharply declining demand for electricity and gas, affected by exceptionally mild winter temperatures and lower prices on the gas and electricity markets, Edison's sales remained practically stable (+0.2%), or -0.2% in organic terms.

In the electricity business, sales rose by 9.7% due to the strong progression in volumes sold on the wholesale markets and to final users, largely offsetting the negative effects of the fall in market prices.

In the hydrocarbon business, in contrast, sales were adversely affected by a strong weather effect which had a significant impact on sales volumes to residential customers and thermal power plants. Sales to industrial customers progressed substantially over the year.

Fenice registered sales of €400 million, an organic decline of -€22 million from 2013 due to its business in Spain which were affected by the energy reform.

9.3.1.2.4 Other international

The **Other international** segment principally covers operations in Europe, excluding the United Kingdom and Italy, and operations in the United States, Brazil and Asia (China, Vietnam and Laos).

This segment contributed €5,603 million to Group sales in 2014, €746 million or -11.7% less than in 2013. Excluding foreign exchange effects (-€44 million), sales declined in organic terms (-11.1% compared to 2013).

The downturn is essentially explained by the following factors:

- in **Belgium**, (-€594 million organic decline), the downturn in sales was particularly due to a decrease in the volumes of gas sold, in keeping with the milder weather of 2014 and pressure on electricity prices from tougher competition;
- in **Poland** (-€124 million organic decline), the downturn related to lower market prices caused by the milder weather in 2014;
- in **Hungary** (-€74 million organic decline), sales were affected by the fall in electricity prices and volumes sold on the markets, and penalised by an unfavourable regulatory context concerning the tariff for regulated activities.

However, sales rose in **Brazil** (+€113 million organic growth), driven by electricity sales on the spot market at exceptionally high prices as water levels were particularly low.

9.3.1.2.5 Other activities

Other activities comprise, among other entities, EDF Énergies Nouvelles, EDF Trading, Electricité de Strasbourg and Dalkia.

The contribution by the **Other activities** segment to Group sales in 2014 was €4,514 million, up by €1,628 million or 56.4% from 2013, corresponding to organic growth of €22 million (+0.8%). The scope effect was +€1,614 million or +55.9%, and mostly concerns the takeover of Dalkia's activities in France in late July 2014.

EDF Énergies Nouvelles' contribution to Group sales registered organic growth of €36 million (+4.6%) from 2013. This rise essentially results from expanding business in the generation activity.

EDF Trading's² sales showed organic growth of €85 million from 2013 (+11.0%) due to good performance in North America businesses.

However, sales by **Electricité de Strasbourg** showed an organic decline of €50 million (-6.1%) from 2013, mainly caused by lower sales volumes due to the milder weather in 2014.

Sales for this segment include a favourable scope effect reflecting the takeover of Dalkia's activities in France from 25 July 2014.

1. Virtual Power Plant capacity auction system, generating deliveries for periods ranging from a few months to 3 years.

2. EDF Trading sales consist of its trading margin.

9.3.2 Operating profit before depreciation and amortisation (EBITDA)

EBITDA rose by 7.3%, with organic growth of 6.5% (including +4.6% from the 2012-2013 tariff catch-up). Excluding Edison and the regulated tariffs catch-up for 2012-2013, organic growth was 3.2%, higher than the 3% target set by the Group in early 2014.

(in millions of Euros)	2014	2013 restated	Variation	Variation (%)	Organic growth (%)
Sales	72,874	71,916	958	+1.3	-1.4
Fuel and energy purchases	(36,704)	(38,116)	1,412	-3.7	-5.3
Other external expenses	(9,181)	(8,287)	(894)	+10.8	+1.1
Personnel expenses	(11,785)	(11,291)	(494)	+4.4	+0.7
Taxes other than income taxes	(3,593)	(3,481)	(112)	+3.2	+2.8
Other operating income and expenses	5,668	5,358	310	+5.8	+6.0
EBITDA	17,279	16,099	1,180	+7.3	+6.5

9.3.2.1 Change in consolidated EBITDA and analysis

Consolidated EBITDA for 2014 amounted to €17,279 million, up by 7.3% from 2013. EBITDA includes the favourable €744 million impact of the regulated tariffs catch-up for 2012-2013. After adjustment for the positive €22 million scope effect, essentially related to the takeover of Dalkia's activities in France in July 2014, and favourable foreign exchange effects of €109 million, mainly resulting from the pound sterling's rise against the Euro, organic growth was +6.5%.

The Group stepped up its efforts to control its operating costs. Whereas the Spark cost-cutting plan limited their increase to 1.1%¹, the increase in operating costs continued to slow in 2014, to +0.9%².

The Group's **fuel and energy purchases** amounted to €36,704 million in 2014, down by €1,412 million (-3.7%) from 2013, or €2,003 million (-5.3%) in organic terms.

In **France**, the organic decline of €1,219 million (-7.3%) is essentially explained by:

- a lower level of purchases on the markets as sales volumes were down;
- recognition in 2013 of a €208 million increase in the provision for long-term radioactive waste management to reflect ANDRA's new financing requirements for studies concerning geological storage plans.

An organic decline was observed in **Italy** (-€214 million or -2.0%), as the strong downturn in prices in 2014 offset the rise in the volume of fuel and energy purchases. The decline in **Belgium** (-€456 million or -14.5%) is correlated with the decrease in sales volumes.

Other external expenses amounted to €9,181 million for 2014, up by €894 million (+10.8%) from 2013 (an organic rise of €94 million or +1.1%). In **France**, other external expenses increased by €167 million (+3.1%).

The Group's **personnel expenses** totalled €11,785 million, an increase of €494 million from 2013 (+€76 million or +0.7% in organic terms). In **France**, personnel expenses amounted to €9,071 million, an organic increase of 0.5% from 2013 mainly reflecting the growth in the workforce, which offset the decrease in pension expenses (mostly resulting from the 2013 pension reform).

Taxes other than income taxes amounted to €3,593 million for 2014, up by €112 million or +3.2% from 2013 (+2.8% organic growth). This rise includes the effect of higher non-income taxes for the Generation activity in **France**.

Other operating income and expenses generated net income of €5,668 million in 2014, €310 million more than in 2013 (organic growth of €324 million or +6.0%). In **France**, other operating income and expenses registered an organic increase of €481 million, largely due to the rise in the CSPE. In **Italy**, there was an organic decrease of €275 million principally attributable to the non-recurring effects of renegotiations and arbitration concerning long-term gas contracts, which were higher in 2013 (Algeria and Qatar) than 2014 (Russia).

1. At constant scope, exchange rates and methods.

2. At constant scope and exchange rates.

9.3.2.2 Change in consolidated EBITDA and analysis by segment

(in millions of Euros)	2014	2013 restated	Variation	Variation (%)	Organic growth (%)
France	12,198	10,778	1,420	+13.2	+12.6
United Kingdom	1,941	1,992	(51)	-2.6	-8.5
Italy	886	1,059	(173)	-16.3	-17.3
Other international	632	814	(182)	-22.4	-21.4
Other activities	1,622	1,456	166	+11.4	+15.0
Total excluding France	5,081	5,321	(240)	-4.5	-5.8
GROUP EBITDA	17,279	16,099	1,180	+7.3	+6.5

9.3.2.2.1 France

Change in EBITDA for the France segment

France contributed €12,198 million of consolidated EBITDA for 2014, up by 13.2% with organic growth of 12.6% compared to 2013 (including +6.8% for the regulated tariffs catch-up). The weather effect was more than offset by good operating results. This contribution accounted for 70.6% of Group EBITDA in 2014 against 66.9% in 2013.

Breakdown¹ of EBITDA for the France segment between Generation and Supply (deregulated activities), network activities and island activities

(in millions of Euros)	2014	2013 restated	Variation	Variation (%)	Organic growth (%)
EBITDA	12,198	10,778	1,420	+13.2	+12.6
Generation and Supply (deregulated activities)	7,929	6,705	1,224	+18.3	+17.3
Network activities	3,558	3,641	(83)	-2.3	-2.2
Island activities	711	432	279	+64.6	+64.6

EBITDA for Generation and Supply (deregulated activities) rose by 18.3%. After adjustment for the €731 million impact of the regulated tariffs catch-up for 2012-2013 and the €63 million scope effect related to the transfer of upstream gas portfolio management activities to the "Other activities" segment, EBITDA was up by €430 million or +6.4%. This increase is essentially explained by the improved nuclear output (+€289 million), the rise in the energy component of regulated sales tariffs (+€413 million), and the decrease in costs associated with CO₂ emissions allowances (+€151 million) which offset the effect of the mild weather (-€141 million) and the lower hydropower output (-€170 million), as water levels had been excellent in 2013. The moderate increase (+0.7%) in other external expenses and personnel costs are due mainly to efforts to control costs and the solid results of nuclear reactors planned outages programme.

EBITDA for the network activities decreased by 2.2%, as the effects of the mild weather (-€385 million) were only partly counterbalanced by the rise in the TURPE network access tariff and the lower purchases to compensate for network losses due to falling electricity market prices.

EBITDA for the island activities was up by €279 million (+64.6%), primarily due to new power plants commissioned by the subsidiary EDF PEI following the Group's investment effort begun in 2009, with the aim of renewing practically all diesel-fired power plants.

9.3.2.2.2 United Kingdom

The United Kingdom's contribution to Group EBITDA for 2014 was €1,941 million, 2.6% lower than in 2013 (including €116 million in favourable foreign exchange effects), corresponding to an organic decline of 8.5%.

Nuclear generation output was 56.3TWh in 2014, down by -4.2TWh from the previous year. This decrease essentially results from unplanned outages of the Heysham 1 and Hartlepool reactors. Following inspections of the boiler units, operation was resumed in late 2014 and early 2015. Generation by the rest of the nuclear fleet registered a very good operating performance.

EBITDA for the B2C activity progressed, mainly thanks to the average increase in product accounts and EDF Energy's ongoing efforts to reduce costs despite the adverse weather effect on gas sales.

9.3.2.2.3 Italy

The Italy segment contributed €886 million to the Group's consolidated EBITDA, 16.3% lower than in 2013 or an organic decline of 17.3%.

This movement essentially concerned Edison, which made a €801 million contribution to Group EBITDA in 2014, down by €176 million or -18.2% in organic terms. The decrease is attributable to the non-recurring effects of negotiations and arbitration concerning long-term gas contracts, which were

1. Further details of this breakdown can be found in section 9.3.1.2.1 ("France").

higher in 2013 (Algeria and Qatar) than 2014 (Russia). Once corrected for these non-recurring effects, EBITDA for the Italy segment showed organic growth of more than 10%, reflecting a good operating performance.

The second round of negotiations concerning the Libyan gas contract is expected to conclude in the first half of 2015. This will bring to an end the cycle of price revisions initiated in late 2012 for all contracts.

In a context of falling prices, EBITDA for the electricity activities remained at its 2013 level, due to the very good hydro conditions and optimisation of the thermal power plants' potential for flexibility.

Fenice contributed €86 million to Group EBITDA in 2014, down by 5.5% from 2013 as a result of the Spanish energy reform.

9.3.2.2.4 Other international

EBITDA for the **Other international** segment stood at €632 million in 2014, down by 22.4% from 2013 corresponding to an organic decline of 21.4%.

EBITDA in **Belgium** registered an organic decline of €158 million, having been adversely affected by the temporary unplanned shutdowns of the Doel 3, Doel 4 and Tihange 2 nuclear reactors (see 9.2.2.4.2 ("Belgium")), lower gas sales volumes caused by mild weather effects, and falling electricity margins in a difficult market.

EBITDA in **Poland** registered an organic decline of €59 million, due to a price downturn on the wholesale electricity markets and lower volumes of heat

sold due to weather effects; these factors were only partly offset by better green energies generation margins and renewed support for cogeneration.

In 2013 this segment had recorded the favourable effect of the gain on sale of SSE, which has no equivalent in 2014.

Brazil achieved organic growth of €65 million in EBITDA, largely due to an improvement in electricity margins thanks to favourable market conditions.

9.3.2.2.5 Other activities

Other activities contributed €1,622 million to Group EBITDA for 2014, an organic rise of 15.0% from 2013.

EDF Énergies Nouvelles' contribution to consolidated EBITDA totalled €690 million in 2014. The organic growth of €40 million (+6.2%) compared to 2013 was driven by particularly active business in Development and Sales of Structured Assets. EDF Énergies Nouvelles also continued development of its operation and maintenance activity, which covered close to 12GW of capacities at 31 December 2014 compared with 9GW at 31 December 2013.

EBITDA at **EDF Trading** amounted to €632 million in 2014, with organic growth of €105 million (+19.9%) from 2013. This increase is principally due to the good business performance in North America.

Dalkia contributed €32 million to Group EBITDA due to the 5-month consolidation and the one-off impact of the opening balance sheet.

9.3.3 Operating profit (EBIT)

EBIT decreased by 4.2%.

(in millions of Euros)	2014	2013 restated	Variation	Variation (%)
EBITDA	17,279	16,099	1,180	+7.3
Net changes in fair value on Energy and Commodity derivatives, excluding trading activities	203	14	189	+1,350.0
Net depreciation and amortisation	(7,940)	(7,154)	(786)	+11.0
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(157)	(227)	70	-30.8
(Impairment)/reversals	(1,189)	(617)	(572)	+92.7
Other income and expenses	(212)	219	(431)	-196.8
OPERATING PROFIT (EBIT)	7,984	8,334	(350)	-4.2

The Group's consolidated **EBIT** amounted to €7,984 million for 2014, down by €350 million from 2013. This downturn is principally explained by the increase in net depreciation and amortisation, especially in France, higher impairment and unfavourable developments in other income and expenses.

9.3.3.1 Net changes in fair value on energy and commodity derivatives, excluding trading activities

The net changes in fair value on Energy and Commodity derivatives, excluding trading activities, rose from +€14 million in 2013 to +€203 million in 2014. The favourable developments were mostly located in **Italy**, where they concerned economic hedging of the industrial gas portfolio, under the combined effect of a significant decrease in forward contracts on the European gas markets and volumes hedged, and to a lesser extent in the **United Kingdom**.

9.3.3.2 Net depreciation and amortisation

Net depreciation and amortisation was higher than in 2013 (+11.0%).

France registered a €645 million increase in net depreciation and amortisation, largely relating to the replacement of major nuclear plant components, investments in the fleet currently in operation, and investments made in distribution.

In the **United Kingdom**, the €104 million rise in net depreciation and amortisation (€54 million in organic terms) is essentially attributable to the commissioning of the West Burton B combined cycle gas turbine (CCGT) plant from the second quarter of 2013 and the rise in maintenance investments for the nuclear fleet. These effects were partly counterbalanced by the favourable impact of extensions in operating lives announced by EDF Energy, including at Dungeness B for ten years until 2028; the expectation is an average life extension of eight year for the seven AGR (advanced gas-cooled reactors) power plants relative to the scheduled closure dates at British Energy acquisition in January 2009.

The €51 million increase in EBITDA in the **Other activities** segment mainly results from the first consolidation of **Dalkia** as of July 2014.

9.3.3.3 Net increases in provisions for renewal of property, plant and equipment operated under concessions

The €70 million decrease between 2014 and 2013 in net increases in provisions for renewal of property, plant and equipment operated under concessions is mainly attributable to ERDF.

9.3.3.4 Impairment/reversals

In 2013, impairment amounted to €617 million and principally concerned:

- **Belgium**: €229 million, particularly for an EDF Luminus thermal generation plant;

- **Poland**: €127 million mainly due to the suspension of the supercritical coal-fired power plant project.

In 2014, impairment amounted to €1,189 million and essentially concerned:

- **Belgium**: €586 million in respect of the subsidiary EDF Luminus, due to the deterioration in long-term assumptions regarding market prices;
- the **United Kingdom**: €169 million in respect of the West Burton B combined cycle gas turbine plant due to the decline in market prices for gas, and the Hill Top Farm gas storage cavities in Cheshire following the reduction in the number of storage capacities put into development for reasons of site security and unfavourable market conditions;
- **Edison**: €167 million, mostly in respect of hydropower and wind power assets, which were affected by lower market prices.

9.3.3.5 Other income and expenses

Other income and expenses generated a net expense of €212 million in 2014, compared to net income of €219 million in 2013.

In 2013, the main components of other income and expenses were:

- income of €472 million related to the favourable effect of the pension reform in France;
- an expense of €174 million related to EDF's investment in SLOE, a combined cycle gas plant in the Netherlands;
- restructuring expenses for the Group's activities, particularly in Belgium, Poland and Hungary.

In 2014, the main components of other income and expenses were:

- the gain on the sale of Dalkia International and the takeover of Dalkia's activities in France;
- an expense for revision of the contractor quotes for decommissioning of permanently shut-down French nuclear plants (UNGG plants, Creys-Malville, Brennilis and Chooz A).

9.3.4 Financial result

(in millions of Euros)

	2014	2013 restated	Variation	Variation (%)
Cost of gross financial indebtedness	(2,243)	(2,262)	19	-0.8
Discount effect	(2,996)	(2,931)	(65)	+2.2
Other financial income and expenses	2,688	2,251	437	+19.4
FINANCIAL RESULT	(2,551)	(2,942)	391	-13.3

The financial result for 2014 was a financial expense of €2,551 million, an improvement of €391 million from 2013, as a result of the following:

- a slight decrease in the cost of gross financial indebtedness, as the rise in gross debt was offset by a decline in average coupon rates from 3.8% at 31 December 2013 to 3.3% at 31 December 2014 due to the favourable impact of fixed to floating operations;

- a €65 million increase in discount expenses, particularly resulting from the higher nuclear provisions and an increase in provisions for long-term and post-employment benefits in France and the United Kingdom;
- a €437 million improvement in other financial income and expenses, primarily relating to the increase in capital gains on divestment of dedicated assets.

9.3.5 Income taxes

Income taxes amounted to €1,839 million, corresponding to an effective tax rate of 33.8% in 2014. The effective tax rate was 35.2% in 2013.

The effective tax rate was pushed up by impairment; after adjustment to eliminate this factor, it stood at 32.2% in 2014 compared to 34% in 2013.

The main explanation for the fall in the effective tax rate between 2013 and 2014 is the higher deduction of payments made during 2014 to bearers of perpetual subordinated bonds, and the favourable effects of the Dalkia operation in 2014. These impacts were partly offset by a positive effect in 2013, associated with a reduction in the UK tax rate that had no equivalent in 2014.

9.3.6 Share in net income of associates and joint ventures

The Group's share in net income of associates and joint ventures was a positive €179 million in 2014, compared to €262 million in 2013. The downturn mainly results from the €115 million decrease in RTE's net income as a result of the mild weather in the early part of 2014 compared to 2013.

The share in net income of associates also includes impairment in 2014 totalling €425 million, including €206 million in respect of Alpiq, reflecting the less favourable energy environment, €122 million on CENG due to worsening prospects for long-term electricity prices in the United States, and €83 million on the investment in the joint venture Estag (Austria).

In 2013, impairment of €443 million was recognised, including €284 million on Alpiq and €146 million on CENG.

9.3.7 Net income attributable to non-controlling interests

Net income attributable to non-controlling interests¹ amounted to €72 million in 2014, €169 million less than in 2013. This change is essentially explained by the decline in Centrica's revenues on nuclear generation activities in the United Kingdom since volumes were down, and the lower revenue for non-controlling interest in EDF Luminus' net income.

9.3.8 EDF net income

EDF net income totalled €3,701 million for 2014, up by €184 million (+5.2%) compared to 2013.

9.3.9 Net income excluding non-recurring items

The Group's net income excluding non-recurring items² stood at €4,852 million for 2014, up by 17.9% compared to 2013.

1. Formerly called "minority interests".

2. Group net after-tax income excluding non-recurring items and net changes in fair value on Energy and Commodity derivatives, excluding trading activities, net of tax. Non-recurring items and net changes in fair value on Energy and Commodity derivatives, excluding trading activities, net of tax:

- -€1,290 million for miscellaneous risks and impairment in 2014, compared to -€615 million in 2013;
- +€139 million of net changes in fair value on Energy and Commodity derivatives, excluding trading activities, net of tax in 2014, compared to +€15 million for 2013.

9.4 Cash flows and net indebtedness

9.4.1 Cash flows

<i>(in millions of Euros)</i>	2014	2013 restated	Variation	Variation (%)
Net cash flow from operating activities	10,625	10,865	(240)	-2.2
Net cash flow used in investing activities	(12,393)	(11,707)	(686)	+5.9
Net cash flow from financing activities	1,223	896	327	+36.5
NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS	(545)	54	(599)	N.A.
Cash and cash equivalents - opening balance	5,096	5,035	61	+1.2
Net increase (decrease) in cash and cash equivalents	(545)	54	(599)	n.a.
Effect of currency fluctuations	113	14	99	n.a.
Financial income on cash and cash equivalents	17	16	1	+6.3
Effect of other reclassifications	20	(23)	43	n.a.
CASH AND CASH EQUIVALENTS - CLOSING BALANCE	4,701	5,096	(395)	-7.8

n.a. = not applicable.

9.4.1.1 Net cash flow from operating activities

<i>(in millions of Euros)</i>	2014	2013 restated	Variation	Variation (%)
Income before taxes of consolidated companies	5,433	5,392	41	+0.8
(Impairment)/Reversals	1,189	617	572	+92.7
Accumulated depreciation and amortisation, provisions and changes in fair value	8,981	9,245	(264)	-2.9
Financial income and expenses	1,068	1,488	(420)	-28.2
Dividends received from associates and joint ventures	672	369	303	+82.1
Capital gains/losses	(1,311)	(880)	(431)	+49.0
Change in working capital	(1,041)	(1,711)	670	-39.2
Net cash flow from operations	14,991	14,520	471	+3.2
Net financial expenses disbursed	(1,752)	(1,719)	(33)	+1.9
Income taxes paid	(2,614)	(1,936)	(678)	+35.0
NET CASH FLOW FROM OPERATING ACTIVITIES	10,625	10,865	(240)	-2.2

The net cash flow from operating activities amounted to €10,625 million in 2014, €240 million less than in 2013.

This change reflects:

- the decline in net financial expenses (-€420 million) from 2013, notably resulting from a lower cost of financial indebtedness after fixed to floating operations on debt;
- the rise in capital gains and losses, which were €431 million higher than in 2013, largely due to the increase in gains on sales of dedicated assets and the €217 million gain generated by operations related to the investment in Dalkia;

- the €678 million increase in income taxes paid, principally due to the higher advance instalments paid in France in 2014.

These effects were partly offset by higher impairment in 2014 than 2013 (+€572 million), the increase in dividends received from associates (+€303 million) and the improvement in working capital (+€670 million compared to 2013).

9.4.1.2 Net cash flow used in investing activities

The net cash outflow for investing activities amounted to €12,393 million in 2014, compared to €11,707 million in 2013. The following table sets forth the breakdown of the net cash flow used in investing activities between purchases and disposals of property, plant and equipment and intangible assets, acquisitions and disposals of companies net of cash acquired/transferred, and the change in financial assets:

<i>(in millions of Euros)</i>	2014	2013 restated	Variation	Variation (%)
Investments in intangible assets and property, plant and equipment	(13,721)	(13,042)	(679)	+5.2
Net proceeds from sale of intangible assets and property, plant and equipment	314	229	85	+37.1
Net Capex	(13,407)	(12,813)	(594)	+4.6
Acquisitions/disposals of equity investments, net of cash acquired/transferred	1,308	749	559	+74.6
Changes in financial assets	(294)	357	(651)	n.a.
NET CASH FLOW USED IN INVESTING ACTIVITIES	(12,393)	(11,707)	(686)	+5.9

Net capex

Net capital expenditure amounted to €13,407 million in 2014, up by €594 million (+4.6%) from 2013.

Changes in the Group's net capital expenditure over the period were as follows:

<i>(in millions of Euros)</i>	2014	2013 restated	Variation	Variation (%)
Generation and Supply (deregulated activities)	5,579	5,340	239	+4.5
Network activities	2,974	3,215	(241)	-7.5
Island activities	446	438	8	+1.8
France	8,999	8,993	6	+0.1
United Kingdom	1,585	1,338	247	+18.5
Italy	403	329	74	+22.5
Other international	508	389	119	+30.6
Total international	2,496	2,056	440	+21.4
Total Other activities	1,912	1,764	148	+8.4
NET CAPEX	13,407	12,813	594	+4.6

Capital expenditure is one of the components of net investments excluding strategic operations, for which details are given in section 9.4.2.

Acquisitions/disposals of equity investments, net of cash acquired/transferred

Net equity investments rose by €559 million in 2014 to €1,308 million. They mainly concern the finalisation of the operations relating to Dalkia, and the sale of the Group's investment in the South Stream gas pipeline.

In 2013, net equity investments chiefly comprised the sale of the Group's investment in SSE, the sale of the Sutton Bridge plant in the United Kingdom and the partial sale of the Fallago Rig wind farm by EDF Energy and EDF Énergies Nouvelles.

Changes in financial assets

The overall change in financial assets in 2014 was -€294 million, principally reflecting the Group's investments in construction of the South Stream gas pipeline (which has since been sold) and the ultra-supercritical coal-fired power plant on the Fuzhou site in China.

In 2013, the +€357 million change in financial assets essentially consisted of the sale of EDF's entire investment in Veolia Environnement.

9.4.1.3 Net cash flow from financing activities

(in millions of Euros)	2014	2013 restated	Variation	Variation (%)
Transactions with non-controlling interests ⁽¹⁾	355	162	193	n.a.
Dividends paid by parent company	(2,327)	(2,144)	(183)	+8.5
Dividends paid to non-controlling interests	(229)	(301)	72	-23.9
Purchases/sales of treasury shares	2	4	(2)	-50.0
Cash flows with shareholders	(2,199)	(2,279)	80	-3.5
Issuance of borrowings	6,894	5,158	1,736	+33.7
Repayment of borrowings	(7,470)	(8,263)	793	-9.6
Issuance of perpetual subordinated bonds	3,970	6,125	(2,155)	-35.2
Payments to bearers of perpetual subordinated bonds	(388)	(103)	(285)	n.a.
Funding contributions received for assets operated under concessions	177	171	6	+3.5
Investment subsidies	239	87	152	n.a.
Other cash flows from financing activities	3,422	3,175	247	+7.8
NET CASH FLOW FROM FINANCING ACTIVITIES	1,223	896	327	+36.5

(1) Contributions via capital increases and acquisitions of additional interests in controlled companies.

Cash flows related to financing activities generated a net inflow of €1,223 million in 2014, an increase of €327 million from 2013. This change primarily reflects:

- a €152 million increase in investment subsidies received, mainly at EDF Énergies Nouvelles;

- a decrease of €2,155 million in subordinated bonds compared to 2013, offset by a €2,529 million increase in issuance of borrowings (net of redemptions);
- the higher amount of dividends paid out by EDF in 2014 compared to 2013.

9.4.2 Net indebtedness

Net indebtedness comprises total loans and financial liabilities, less cash and cash equivalents and liquid assets. Liquid assets are financial assets consisting of funds or securities with initial maturity of over three months that are readily convertible into cash and are managed according to a liquidity-oriented policy. It also includes the Group's loan to RTE.

The Group's net indebtedness stood at €34,208 million at 31 December 2014 compared to €33,433 million at 31 December 2013.

Changes in the Group's net indebtedness were as follows:

<i>(in millions of Euros)</i>	2014	2013 restated	Variation	Variation (%)
Operating profit before depreciation and amortisation (EBITDA)	17,279	16,099	1,180	+7.3
Cancellation of non-monetary items included in EBITDA	(1,901)	(224)	(1,677)	
Net financial expenses disbursed	(1,752)	(1,719)	(33)	
Income taxes paid	(2,614)	(1,936)	(678)	
Other items including dividends received from associates and joint ventures	679	357	322	
Operating cash flow ⁽¹⁾	11,691	12,577	(886)	-7.0
Change in working capital	(1,041)	(1,711)	670	
Net investments excluding strategic operations ⁽²⁾	(12,045)	(11,830)	(215)	
Cash flow after net operating investments excluding strategic operations and changes in working capital	(1,395)	(964)	(431)	
Net investments in strategic operations ⁽³⁾	158	755	(597)	
Dedicated assets	174	2,443	(2,269)	
Cash flow before dividends ⁽⁴⁾	(1,063)	2,234	(3,297)	
Dividends paid in cash	(2,944)	(2,548)	(396)	
Cash flow after dividend	(4,007)	(314)	(3,693)	
Issuance of perpetual subordinated bonds	3,970	6,125	(2,155)	
Other monetary changes	(44)	(55)	11	
(Increase)/decrease in net indebtedness, excluding the impact of changes in exchange rate	(81)	5,756	(5,837)	
Effect of change in exchange rate	(990)	377	(1,367)	
Effect of other non-monetary changes	296	(14)	310	
(Increase)/decrease in net indebtedness	(775)	6,119	(6,894)	
NET INDEBTEDNESS AT BEGINNING OF PERIOD	33,433	39,552		
NET INDEBTEDNESS AT END OF PERIOD	34,208	33,433		

(1) Operating cash flow is not an aggregate defined by IFRS as a measure of financial performance, and is not directly comparable with indicators of the same name reported by other companies. This indicator, also known as Funds From Operations (FFO), is equivalent to net cash flow from operating activities excluding changes in working capital after adjustment where relevant for the impact of non-recurring effects, less net financial expenses disbursed and income taxes paid.

(2) Net investments excluding strategic operations are operating investments (excluding Linky) and financial investments for growth, net of disposals. They also include net debts acquired or transferred in acquisitions or disposals of securities, investment subsidies received, and non-Group partner investments.

(3) Net investments in strategic operations are operations related to Linky and changes in the Group's portfolio of businesses.

(4) Cash flow before dividends is not an aggregate defined by IFRS as a measure of financial performance, and is not comparable with indicators of the same name reported by other companies. It is equal to the operating cash flow defined in note (1) after the changes in working capital, net investments excluding strategic operations (note (2)), net investments in strategic operations (note (3)) and allocations and withdrawals from dedicated assets.

The **operating cash flow** amounted to €11,691 million in 2014 compared to €12,577 million in 2013, a decline of €886 million (-7.0%).

This change was mainly driven by elimination of non-monetary items with a favourable effect on EBITDA (-1,901 million, compared to -€224 million in 2013). This mainly reflects increases in certain types of expense, particularly the surrender of CO₂ certificates in 2014 for the first time, offset by reversals of provisions at the level of EBITDA, and a favourable change in 2014 in fair value on financial instruments related to trading activities, in contrast to the unfavourable change in 2013.

Other factors were an increase in income taxes paid (-€678 million), principally due to the higher advance instalments paid in 2014 in France.

These effects were partly offset by the rise in EBITDA (+€1,180 million) and the exceptional dividend received from CENG in 2014 (+€290 million).

The **change in working capital** increased by €1,041 million over 2014. Excluding the rise in the CSPE receivable (-€699 million), the increase amounted to -€342 million, and is mainly explained by:

- trade receivables related to the regulated tariffs catch-up for 2012-2013, which will be received from 2015 (increase of -€979 million);
- the mild weather of 2014, which generated a +€504 million decrease in trade receivables in France, +€178 million in the United Kingdom, and approximately +€100 million in Belgium;
- a -€217 million increase in inventories, principally driven by a price effect on uranium stocks in France and the United Kingdom.

Net investments excluding strategic operations amounted to €12,045 million for 2014 compared to €11,830 million in 2013, an increase of €215 million (+1.8%). Details are as follows:

(in millions of Euros)	2014	2013 restituted	Variation	Variation (%)
Generation and Supply (deregulated activities)	5,574	5,347	227	+4.2
Network activities	2,722	3,011	(289)	-9.6
Island activities	438	424	14	+3.3
France	8,734	8,782	(48)	-0.5
United Kingdom	1,519	1,172	347	+29.6
Italy	78	304	(226)	-74.3
Other international	488	518	(30)	-5.8
International	2,085	1,994	91	+4.6
Other activities	1,226	1,054	172	+16.3
NET INVESTMENTS EXCLUDING STRATEGIC OPERATIONS	12,045	11,830	215	+1.8

In France, net investments excluding strategic operations were down by -€48 million (-0.5%).

- In Generation and Supply (deregulated activities), the €227 million increase mainly resulted from payments made in 2014 for significant investments in the nuclear power fleet undertaken during 2013;
- In the network activities, the decline in net investments (-€289 million) was essentially explained by the lower number of customer connections and later timing in 2014 of investments to improve network coverage quality and network reinforcement.

In other countries, net investments excluding strategic operations were up by €91 million or +4.6%.

- In the United Kingdom, the increase of €347 million or +29.6% is largely explained by higher expenditure on new nuclear facilities, and fewer sales of wind farms in 2014 than 2013;
- In Italy, the decline of €226 million or -74.3% was principally caused by the arrival of an external partner (F2i) in the renewable energies sector.

In the Other activities segment, net investments excluding strategic operations were up by €172 million or +16.3%. This rise was primarily due to a scope effect resulting from consolidation of Dalkia France's investments in 2014.

Net investments in strategic operations concern operations relating to Linky smart meters and changes in the Group's portfolio of businesses. In 2013, they principally concerned the sale of the Group's investment in SSE, the sale of the Sutton Bridge plant in the United Kingdom, and disposal of shares in Veolia. In 2014, strategic operations correspond to the sale of Dalkia International and the takeover of Dalkia's activities in France.

In compliance with the French Law of 28 June 2006 on the sustainable management of radioactive materials and waste, EDF has built up a portfolio of **dedicated assets** for secure financing of its long-term nuclear obligations which amounted to €23,033 million at 31 December 2014.

Overall, the changes in dedicated assets comprise:

- allocations to reach full coverage of obligations;
- reinvestment of financial income (dividends and interest) generated by these assets;
- withdrawals of assets corresponding to the costs incurred over the period in application of long-term nuclear obligations falling within the scope of the Law of 28 June 2006;
- exceptional withdrawals proposed to the governance bodies in charge of managing dedicated assets when the value of the portfolio exceeds the amount of the obligations to be financed; such withdrawals must be validated by these bodies.

The net change of €2,443 million in 2013 mainly reflected the exceptional withdrawal of +€2,407 million and the allocation of the total CSPE receivable to dedicated assets on 13 February 2013; these two operations brought coverage of EDF's nuclear liabilities concerned by the Law of 28 June 2006 to 100%. In 2014, the changes observed correspond to the second and third types of change described above.

Cash flow before dividends in 2014 was negative at -€1,063 million (compared to +€2,234 million in 2013) and is mainly explained by the following factors:

- operating cash flow of €11,691 million;
- a change in working capital of -€1,041 million;
- net investments excluding strategic operations of -€12,045 million.

The -€3,297 million difference from 2013 is essentially due to the exceptional withdrawal of €2,407 million from dedicated assets in 2013 which had no equivalent in 2014, the €812 million rise in net investments (including strategic operations) and the €886 million decrease in operating cash flow, partly offset by a more favourable change in working capital (+€670 million) than in 2013.

Dividends paid in cash (€2,944 million) comprise:

- the balance of the 2013 dividends (€1,268 million);
- the interim dividend for 2014 (€1,059 million) decided by the Board of Directors on 10 December 2014 and paid on 17 December 2014 at the rate of €0.57 per share;
- dividends paid by Group subsidiaries to their minority shareholders (€229 million);
- the payments made in 2014 to bearers of perpetual subordinated bonds for the "hybrid" issues of January 2013 and January 2014 (€388 million).

The **cash flow after dividends** amounted to -€4,007 million, €3,693 million below 2013. This decrease principally reflects the change in cash flow before dividends.

On 15 January 2014 EDF launched a perpetual subordinated bond in Euros, US dollars, and sterling ("**hybrid**" **bond issue**) in several tranches:

- US\$1,500 million at 5.625% coupon with a 10-year first call date;
- €1,000 million at 4.125% coupon with an 8-year first call date;
- €1,000 million at 5% coupon with a 12-year first call date;
- £750 million at 5.875% coupon with a 15-year first call date.

This bond issue is the second phase in the financing programme launched in January 2013, with the aim of building up an amount of subordinated instruments coherent with the portfolio of industrial assets in development.

The **foreign exchange effect** (rise of the pound sterling and US dollar against the Euro¹) had an unfavourable impact of -€990 million on the Group's net indebtedness at 31 December 2014.

9.5 Management and control of market risks

9.5.1 Management and control of financial risks

This section sets forth the policies and principles for management of the Group's financial risks defined in the Financial management framework (liquidity, interest rate, foreign exchange rate and equity risks), and the Group counterparty risk management policy set up by the EDF group. These principles apply only to EDF and operationally controlled subsidiaries or subsidiaries that do not benefit by law from specific guarantees of independent management such as ERDF. In compliance with IFRS 7, the following paragraphs describe the nature of risks resulting from financial instruments, based on analyses of sensitivities and credit (counterparty) risks.

Since 2002, a dedicated body – the Financial Risks Control department (*département Contrôle des Risques Financiers et Investissements* – CRFI) – has been in charge of financial risk control at Group level by ensuring correct application of the principles of the Financial management framework. This department, which has reported to the Group's Risk Control Division since 2008, is an independent unit that also has the task of carrying out a second-level check (methodology and organisation) of EDF entities and operationally controlled Group subsidiaries (excluding ERDF), and a first-level check of financing activities at parent company level, including Trading room activities.

The CRFI department issues daily monitoring reports of risk indicators relevant to activities in EDF's Trading room.

Regular internal audits are carried out to ensure controls are actually applied and are effective.

9.5.1.1 Liquidity position and management of liquidity risks

9.5.1.1.1 Liquidity position

At 31 December 2014, the Group's liquidities, consisting of liquid assets, cash and cash equivalents, totalled €17,691 million and available credit lines amounted to €10,756 million.

For 2015, the Group's scheduled debt repayments (principal and interest) are forecast at €10,217 million at 31 December 2014, including €4,096 million for bonds.

At 31 December 2014, no Group company was in default on any borrowing.

9.5.1.1.2 Management of liquidity risk

On 13 January 2014 EDF launched a "senior" bond issue in several tranches in US dollars:

- US\$750 million with 3-year maturity and a floating rate;
- US\$1,000 million with 3-year maturity and a 1.15% coupon;
- US\$1,250 million with 5-year maturity and a 2.15% coupon;
- US\$1,000 million with 30-year maturity and a 4.875% coupon;
- US\$700 million with 100-year maturity and a 6% coupon.

1. The pound sterling rose by 7.0% against the Euro, from €1.199/£1 at 31 December 2013 to €1.284/£1 at 31 December 2014.
The US dollar rose by 13.6% against the Euro, from €0.725/\$1 at 31 December 2013 to €0.824/\$1 at 31 December 2014.

On 17 January 2014 EDF also issued a £1,350 million bond with 100-year maturity and a 6% coupon.

These issues enabled the Group to prepare for redemptions of bonds maturing in 2014 by taking advantage of good market conditions, and to continue its financing policy aiming to extend the average maturity of debt and bring it closer to the operating lifespans of its long-term industrial assets.

In addition, on 15 January 2014 EDF issued a perpetual subordinated bond in Euros, US dollars, and sterling (a "hybrid" bond) in several tranches:

- US\$1,500 million at 5.625% coupon with a 10-year first call date;
- €1,000 million at 4.125% coupon with an 8-year first call date;
- €1,000 million at 5% coupon with a 12-year first call date;
- £750 million at 5.875% coupon with a 15-year first call date.

These bonds include redemption options at EDF's initiative, exercisable after a certain minimum period (8 to 15 years depending on the currency), and subsequently at each coupon date or in the event of highly specific circumstances (such as a change in IFRS or tax regime).

The annual yield is set and revalued based on contractual clauses that differ with the currency. EDF has no obligation to pay interest as a result of contractual clauses that allow it to defer payment. Nonetheless, payment of the deferred interest is required by these clauses if it is decided to pay a dividend to the shareholders of EDF.

All these features give EDF an unconditional right to avoid paying out cash or another financial asset in reimbursement or interest on the principal. Consequently, in compliance with IAS 32, this issue is recorded in equity from reception of funds at the amount of €3,970 million.

This issue forms the second phase of the financing programme launched in January 2013 to build up an amount of subordinated instruments coherent with the portfolio of industrial assets in development.

The average maturity of Group debt was thus 13.2 years at 31 December 2014, compared to 8.9 years at 31 December 2013. For EDF, the average maturity of debt was 14.4 years against 9.9 years at 31 December 2013.

At 31 December 2014, the residual maturities of financial liabilities (including interest payments) are as follows under IAS 39 (valued based on exchange and interest rates at 31 December 2014):

31 December 2014 (in millions of Euros)	Debt	Hedging instruments ⁽¹⁾		Guarantees given on bonds
		Interest rate swaps	Currency swaps	
2015	10,217	(391)	19	359
2016-2019	19,385	(1,252)	75	332
2020 and later	54,908	(1,691)	(12)	169
TOTAL	84,509	(3,334)	82	860
Debt repayment	54,404			
Interest expense	30,105			

(1) Data on hedging instruments include both assets and liabilities.

The EDF group was able to meet its financing needs by conservative liquidity management, and has obtained financing on satisfactory terms.

A range of specific levers are used to manage the Group's liquidity risk:

- the Group's cash pooling system, which centralises cash management for controlled subsidiaries. The subsidiaries' cash balances are made available to EDF in return for interest, so as to optimise the Group's cash management and provide subsidiaries with a system that guarantees them market-equivalent financial terms;
- centralisation of financing for controlled subsidiaries at the level of the Group's cash management department. Changes in subsidiaries' working capital are financed by this department in the form of stand-by credit lines provided for subsidiaries, which may also receive revolving credit from the Group. The investment subsidiary EDF Investissements Groupe ("EDF IG"), set up in partnership with the bank Natixis Belgique Investissements, also provides medium and long-term financing for EDF group operations outside France, arranged independently by EDF IG. The company sets its own terms, which are the same as the subsidiary would have in an arm's-length market transaction;

- active management and diversification of financing sources used by the Group: the Group has access to short-term resources on various markets through programmes for French commercial paper (*billets de trésorerie*), US commercial paper and Euro market commercial paper. For EDF, the ceilings for these programmes are €6 billion for its French commercial paper, \$10 billion for its US commercial paper and \$1.5 billion for its Euro market commercial paper.

At 31 December 2014, the amount of commercial paper outstanding was €650 million for French commercial paper, and \$4,075 million for US commercial paper. No Euro market commercial paper was outstanding. EDF has access to the world's main capital markets: the Euro markets through its EMTN (Euro Medium Term Note) programme, which currently has a ceiling of €30 billion, particularly for Euro and sterling issues; and the domestic markets used for stand-alone issues in US dollars (144 A), yen (samurai bonds) and Swiss francs.

The table below sets forth the Group's borrowings, by type, of more than €650 million or the equivalent value in other currencies by maturity at 31 December 2014:

Type of borrowing (in millions of currency units)	Entity	Issue date ⁽¹⁾	Maturity	Nominal amount	Currency	Rate
Euro MTN	EDF	01/2009	01/2015	2, 000 ⁽²⁾	EUR	5.13%
Euro MTN	EDF	10/2001	10/2016	1,100	EUR	5.50%
Euro MTN	EDF	02/2008	02/2018	1,500	EUR	5.00%
Bond	EDF	01/2009	01/2019	2,000	USD	6.50%
Bond	EDF	01/2010	01/2020	1,400	USD	4.60%
Euro MTN	EDF	05/2008	05/2020	1,200	EUR	5.38%
Euro MTN	EDF	01/2009	01/2021	2,000	EUR	6.25%
Euro MTN (green bond)	EDF	11/2013	04/2021	1,400	EUR	2.25%
Euro MTN	EDF	01/2012	01/2022	2,000	EUR	3.88%
Euro MTN	EDF	09/2012	03/2023	2,000	EUR	2.75%
Euro MTN	EDF	09/2009	09/2024	2,500	EUR	4.63%
Euro MTN	EDF	11/2010	11/2025	750	EUR	4.00%
Euro MTN	EDF	03/2012	03/2027	1,000	EUR	4.13%
Euro MTN	EDF	04/2010	04/2030	1,500	EUR	4.63%
Euro MTN	EDF	07/2001	07/2031	650	GBP	5.88%
Euro MTN	EDF	02/2003	02/2033	850	EUR	5.63%
Euro MTN	EDF	06/2009	06/2034	1,500	GBP	6.13%
Bond	EDF	01/2009	01/2039	1,750	USD	6.95%
Euro MTN	EDF	11/2010	11/2040	750	EUR	4.50%
Euro MTN	EDF	10/2011	10/2041	1,250	GBP	5.50%
Euro MTN	EDF	09/2010	09/2050	1,000	GBP	5.13%
Bond	EDF	01/2014	01/2017	1,000	USD	1.15%
Bond	EDF	01/2014	01/2019	1,250	USD	2.15%
Bond	EDF	01/2014	01/2044	1,000	USD	4.88%
Bond	EDF	01/2014	01/2114	1,350	GBP	6.00%

1. Date funds were received.

2. After redemption of part of the initial debt in late 2010, the real amount the Group will pay out on maturity is €1,382 million.

EDF has an overall amount of €9,747 million in available credit facilities (syndicated credit and bilateral lines).

Syndicated credit lines amount to €4 billion with maturities extending to November 2019 (with an additional one-year extension option). No drawings had been made on these syndicated credit lines at 31 December 2014.

Credit lines represent an available amount of €5,747 million, with expiry dates extending to November 2019. The level of these credit facilities is regularly reviewed to ensure that the Group has sufficient back-up facilities.

The credit line with the European Investment Bank was increased by an additional €200 million at 31 December 2014. No drawings have been made on this new facility, which has maturity of 4 to 10 years.

EDF Energy has an external credit line of £500 million which was totally drawn.

EDF IG has an external credit line of €150 million (maturing in April 2016) and syndicated credit lines amounting to €600 million (maturing in April 2016). At 31 December 2014, a total of €587 million was drawn on these credit lines.

In November 2014, Edison subscribed a new €500 million credit line with a pool of banks (maturing in November 2016).

9.5.1.2 Credit ratings

The financial ratings agencies Standard & Poor's, Moody's and Fitch Ratings attributed the following long-term and short-term ratings to EDF group entities at 31 December 2014:

Company	Agency	Long-term rating (LT)	Short-term rating (ST)
EDF	Standard & Poor's	A+, stable outlook	A-1
	Moody's	Aa3, negative outlook ⁽¹⁾	P-1
	Fitch Ratings	A+, negative outlook	F1
EDF Trading	Moody's	A3, negative outlook	n.a
EDF Energy	Standard & Poor's	A, négative outlook	A-1
Edison	Standard & Poor's	BBB+, stable outlook	A-2
	Moody's	Baa3, stable outlook	n.a

n.a.: not applicable.

(1) Moody's placed EDF's ratings on review for downgrade on 20 March 2015.

9.5.1.3 Management of foreign exchange risk

Due to the diversification of its activities and geographical locations, the Group is exposed to the risk of exchange rate fluctuations, which may have an impact on the translation differences affecting balance sheet items, Group financial expenses, equity and net income.

To limit exposure to foreign exchange risks, the Group has introduced the following management principles:

- local currency financing: to the extent possible given the local financial markets' capacities, each entity finances its activities in its own accounting currency. When financing is contracted in other currencies, derivatives may be used to limit foreign exchange risk;
- matching of assets and liabilities: the net assets of subsidiaries located outside the Euro zone expose the Group to a foreign exchange risk. The foreign exchange risk in the consolidated balance sheet is managed either by matching with liabilities for acquisitions in the same currency,

or by market hedging involving use of financial derivatives. Hedging of net assets in foreign currencies complies with risk / return targets, and the hedging rate varies from 37% to 92% depending on the currency (apart from the BRL and CNY). If no hedging instruments are available, or if hedging costs are prohibitive, the foreign exchange positions remain open and the risk on such positions is monitored by sensitivity calculations;

- hedging of operating cash flows in foreign currencies: in general, the operating cash flows of EDF and its subsidiaries are in the relevant local currencies, with the exception of flows related to fuel purchases which are primarily in US dollars, and certain flows related to purchases of equipment, which concern lower amounts. Under the principles of the Financial management framework, EDF and the main subsidiaries concerned by foreign exchange risks (EDF Energy, EDF Trading, Edison, EDF Énergies Nouvelles) are required to hedge firm or highly probable commitments related to these future operating cash flows.

As a result of the financing and foreign exchange risk hedging policy, the Group's gross debt at 31 December 2014 breaks down as follows by currency after hedging:

Gross debt structure by currency, before and after hedging

31 December 2014 (in millions of Euros)	Initial debt structure	Impact of hedging instruments ⁽¹⁾	Debt structure after hedges	% of debt
EUR	30,110	7,647	37,757	68%
USD	12,948	(10,073)	2,875	5%
GBP	11,095	1,939	13,034	23%
Other currencies	1,499	487	1,986	4%
TOTAL DEBT	55,652	–	55,652	100%

(1) Hedges of liabilities and net assets of foreign subsidiaries.

The table below presents the impact of an unfavourable variation in exchange rates on the Group's gross debt at 31 December 2014.

Sensitivity of the Group's gross debt to foreign exchange rate risks

31 December 2014 (in millions of Euros)	Debt after hedging instruments converted into Euros	Impact of a 10% unfavourable variation in exchange rates	Debt after a 10% unfavourable variation in exchange rates
EUR	37,757	–	37,757
USD	2,875	287	3,162
GBP	13,034	1,303	14,337
Other currencies	1,986	199	2,185
TOTAL DEBT	55,652	1,789	57,441

Due to the Group's foreign exchange risk hedging policy for liabilities, the income statement for companies controlled by the Group is marginally exposed to foreign exchange rate risk.

The table below sets forth the foreign exchange position relating to net assets in foreign currencies of the Group's subsidiaries.

Net asset position

31 December 2014 ⁽¹⁾ (in millions of currencies)	Net assets	Bonds	Derivatives	Net assets after management
USD	4,843	2,050	552	2,241
CHF (Switzerland)	1,150	730	–	420
HUF (Hungary)	93,480	–	86,000	7,480
PLN (Poland)	3,137	–	1,170	1,967
GBP (United Kingdom)	15,093	5,435	3,268	6,390
BRL (Brazil)	833	–	–	833
CNY (China)	8,007	–	–	8,007

(1) Net assets at 30 September 2014; Derivatives and bonds as at 31 December 2014.

The above table shows the assets of the Group's foreign subsidiaries in foreign currencies, adjusted for changes in the fair value of cash flow hedges and available-for-sale financial assets recorded in equity, and changes in the fair value of financial instruments recorded in income.

The following table sets forth the risk of foreign exchange loss in equity on net assets in foreign currencies of the Group's principal subsidiaries at 31 December 2014, assuming unfavourable, uniform exchange rate variations of 10% against the Euro. Net assets are converted at the closing rate and impacts are reported in absolute value.

Sensitivity of net assets to exchange rate risks

(in millions of currencies)	31 December 2014 ⁽¹⁾			31 December 2013		
	Net assets after management, in currency	Net assets after management, converted into Euros	Impact on equity of a 10% variation in exchange rates	Net assets after management, in currency	Net assets after management, converted into Euros	Impact on equity of a 10% variation in exchange rates
USD	2,241	1,845	185	333	242	24
CHF (Switzerland)	420	349	35	648	528	53
HUF (Hungary)	7,480	24	2	33,028	111	11
PLN (Poland)	1,967	460	46	1,020	246	25
GBP (United Kingdom)	6,390	8,204	820	4,547	5,454	545
BRL (Brazil)	833	259	3	717	220	22
CNY (China)	8,007	1,063	106	7,019	841	84

(1) Net assets at 30 September 2014.

The foreign exchange risk on available-for-sale securities is mostly concentrated in EDF's dedicated asset portfolio, which is discussed in section 9.5.1.6 ("Management of financial risk on EDF's dedicated asset portfolio").

The foreign exchange risk associated with short-term investments and operating liabilities in foreign currencies remains restricted for the Group at 31 December 2014.

9.5.1.4 Management of interest rate risk

The exposure of the Group's cash positions to interest rate fluctuations covers two types of risk: a risk of change in the value of fixed-rate financial assets and liabilities, and a risk of change in the cash flows related to floating-rate financial assets and liabilities.

To limit exposure to interest rate risk, the Group (apart from entities it does not control operationally) fixes principles as part of its general risk management policy, designed to limit the risk of change in the value of

assets invested or possible increases in financial expenses. Some of the debt is variabilised and the distribution of exposure between fixed and floating rates is monitored with reference to asset / liability management criteria and expected fluctuations in interest rates. This distribution may involve the use of interest rate derivatives for hedging purposes.

The Group's debt after hedging instruments at 31 December 2014 comprised 60% at fixed rates and 40% at floating rates.

A 1% uniform annual rise in interest rates would generate an approximate €222 million increase in financial expenses at 31 December 2014, based on gross floating-rate debt after hedging.

The average cost of Group debt (weighted interest rate on outstanding amounts) was 3.3% at the end of 2014.

The table below sets forth the structure of Group debt and the impact of a 1% variation in interest rates at 31 December 2014. The impact of interest rate fluctuations was €93 million higher than in 2013.

Group debt structure and sensitivity to interest rate

31 December 2014 (in millions of Euros)	Initial debt structure	Impact of hedging instruments	Debt structure after hedging	Impact on income of a 1% variation of interest rates
Fixed rate	48,795	(15,377)	33,418	–
Floating rate	6,857	15,377	22,234	222
TOTAL	55,652	–	55,652	222

Interest rate variations on fixed-rate debt have no accounting impact.

Concerning financial assets, the table below presents the interest rate risk on floating-rate bonds and negotiable debt securities held by EDF, and their sensitivity to interest rate risks (impact on net income).

Sensitivity to interest rates of floating-rate instruments

31 December 2014 (in millions of Euros)	Value	Impact on income of a 1% variation of interest rates	Value after a 1% variation in interest rates
FLOATING-RATE INSTRUMENTS	1,529	(15)	1,514

9.5.1.5 Management of equity risks

The equity risk is concentrated in the following areas:

Coverage of EDF's nuclear obligations

Analysis of the equity risk is presented in section 9.5.1.6 ("Management of financial risk on EDF's dedicated asset portfolio").

Coverage of employee benefit obligations for EDF, EDF Energy and British Energy

Assets covering EDF's employee benefit liabilities are partly invested on the international and European equities markets. Market trends therefore affect the value of these assets, and a downturn in equity prices would lead to a rise in balance sheet provisions.

28.9% of the assets covering EDF's employee benefit obligations were invested in equities at 31 December 2014, amounting to €3 billion.

At 31 December 2014, the two pension funds sponsored by EDF Energy (EDF Energy Pension Scheme and EDF Energy Group Electricity Supply Pension Scheme) were invested to the extent of 46.9% in equities and equity funds, representing an amount of £523 million of equities.

At 31 December 2014, the British Energy pension funds were invested to the extent of 33.7% in equities and equity funds, representing an amount of £1,720 million of equities.

CENG fund

CENG is exposed to equity risks in the management of its funds established to cover nuclear decommissioning and employee benefit obligations.

EDF's long-term cash management

As part of its long-term cash management policy, EDF has continued its strategy to reduce the portion of equity-correlated investments, resulting in a non-significant position well below €1 million at 31 December 2014.

Direct investments

At 31 December 2014, EDF's investment in AREVA amounted to €78.1 million, with estimated volatility of 41.9% (annualised volatility of monthly returns observed over three years).

9.5.1.6 Management of financial risk on EDF's dedicated asset portfolio

Dedicated assets have been built up progressively by EDF since 1999 to secure financing of its long-term nuclear commitments. The Law of 28 June 2006 and its implementing regulations defined provisions not related to the operating cycle, which must therefore be covered by dedicated assets; they are listed in note 47 to the consolidated financial statements at 31 December 2014.

The dedicated asset portfolio is managed under the supervision of the Board of Directors and its advisory committees (Nuclear commitments monitoring committee, Audit committee).

The **Nuclear Commitments Monitoring Committee (CSEN)** is a specialised Committee set up by EDF's Board of Directors in 2007.

A **Nuclear Commitments Financial Expertise Committee (CEFEN)** exists to assist the company and its governance bodies on questions of matching assets and liabilities and asset management. The members of this Committee are independent of EDF. They are selected for their skills and diversity of experience, particularly in the fields of asset / liability management, economic and financial research, and asset management.

Governance and management principles

The governance principles setting forth the structure, decision-making process and management of dedicated assets are validated by EDF's Board of Directors. These principles also lay down rules for the asset portfolio's structure, selection of financial managers, and the legal, accounting and tax structure of the fund.

Strategic asset allocation is based on asset / liability reviews carried out to define the most appropriate target portfolio for financing long-term nuclear expenses. Strategic allocation is validated by EDF's Board of Directors and reviewed every three years unless circumstances require otherwise. Since 2013, this target allocation has consisted of a financial portfolio and around one quarter of unlisted assets. The unlisted assets are managed by EDF Invest (formed in July 2013 following the decree of 24 July 2013) and comprise infrastructures, real estate and investment funds.

The financial portfolio principally contains two sub-portfolios, "equities" and "bonds", themselves divided into "secondary asset classes" or "pockets" that correspond to specific markets. The strategic allocation of the financial portfolio is 49% international equities and 51% bonds. A benchmark index is set for monitoring performance and controlling the risk on the financial portfolio.

As part of the regular revision of strategic allocation and the ongoing diversification of assets, a new long-term target structure for the bonds sub-portfolio was decided in the early part of the year, replacing the sovereign index previously used (100% Citigroup EGBI) by a more diversified sovereign and corporate benchmark index (60% Citigroup EGBI and 40% Citigroup EuroBIG corporate). This change was validated by the Board of Directors on 12 February 2014 for application from 1 January 2014.

A third "cash" sub-portfolio exists to provide secure coverage for the disbursements related to the purpose of the asset covered, and may be reinforced tactically, particularly when a prudent approach is required in the event of a market crisis.

The CSPE receivable was allocated to dedicated assets on 13 February 2013.

Tactical management of the financial portfolio has several focal areas:

- monitoring of exposure between the "equities" and "bonds" sub-portfolios;
- within each sub-portfolio, allocation by "class of secondary assets";
- selection of investment funds, aiming for diversification:
 - by style (growth securities, unlisted securities, high-return securities),
 - by capitalisation (major stocks, medium and small stock),
 - by investment process (macroeconomic and sector-based approach, selection of securities on a "quantitative" basis, etc.),
 - by investment vehicle (for compliance with maximum investment ratios);
- for bonds, a choice of securities held directly, through brokers, or via investment funds incorporating the concern for diversification:
 - by type of issue (fixed income, indexed income),
 - by type of instrument (government or supranational bonds, covered bonds and similar, corporate bonds),
 - by issuer and by maturity.

The allocation policy for the financial portfolio was developed by the Operational Management Committee¹ on the basis of the economic and financial outlook for each market and geographical area, a review of market appreciation in different markets and market segments, and risk analyses produced by the CRFI department.

Changes in the portfolio during 2014

In 2014, EDF Invest acquired a minority interest in Porterbrook in a consortium with three other long-term infrastructure investors: Alberta Investment Management Corporation, Allianz Capital Partners and Hastings Funds Management. Porterbrook is one of the three main rolling stock leasing companies in the United Kingdom. This investment was allocated to EDF Invest's infrastructures pocket alongside TIGF and RTE.

EDF Invest also continued to build up its real estate and investment fund portfolio.

Amundi and EDF Invest have announced the creation of a non-exclusive real estate investment fund to invest at European level. This fund will raise EDF Invest's exposure to the real estate asset class, to complement its direct investment strategy. This initiative led to a first real estate investment in Germany in late 2014.

The **total net allocation** to dedicated assets for 2014 was zero, as the realisable value of the assets now exceeds the value of the provisions they are intended to cover, following allocation of the CSPE receivable which resulted in a net allocation of €2,591 million in 2013.

Disbursements relating to decommissioning expenses incurred in 2014 were financed by the dedicated asset portfolio to the extent of €403 million, compared to €326 million in 2013.

1. A permanent internal committee for evaluation, consultation and operational decision-making in the management of dedicated assets.

Content and performance of EDF's dedicated asset portfolio

Breakdown of the portfolio

	31 December 2014	31 December 2013
Equities sub-portfolio	32.9%	36.4%
Bonds sub-portfolio	27.9%	23.7%
Cash sub-portfolio	2.8%	3.7%
CSPE after funding	22.3%	23.2%
Unlisted assets (EDF Invest)	14.2%	13.0%
TOTAL	100%	100%

At 31 December 2014, the total value of the portfolio was €23,033 million compared to €21,737 million in 2013 (pro forma figures for RTE share valuations following application of IAS 19 (revised)).

The distribution of the financial portfolio is also presented in note 47 to the consolidated financial statements at 31 December 2014.

Portfolio content under the classification from Article 4, decree 2007-243 of 23 February 2007

	31 December 2014		31 December 2013	
Categories (in millions of Euros)	Book value ⁽¹⁾	Realisable value	Book value	Realisable value
OECD government bonds and similar	3,332	3,627	2,643	2,828
OECD corporate (non-government) bonds	901	968	808	841
Funds investing in the above two categories	2,300	2,483	2,144	2,308
Equities traded on a recognised market	–	–	–	–
Funds not exclusively invested in OECD bonds	5,891	7,578	6,398	7,873
Hedges, deposits, amounts receivable	(23)	(23)	5	5
TOTAL FINANCIAL PRODUCT PORTFOLIO	12,401	14,633	11,998	13,855
CSPE after funding	5,136	5,136	5,049	5,049
RTE (50% of the Group's investment)	2,015	2,555	2,015	2,567
Other unlisted securities and real estate assets	604	709	266	266
Adjustments on unlisted securities	–	–	8	–
TOTAL DEDICATED ASSETS	20,156	23,033	19,336	21,737

(1) See note 38 to EDF's corporate financial statements at 31 December 2014.

Performance of EDF's dedicated asset portfolio

The table below presents the performance by portfolio at 31 December 2014 and 31 December 2013:

	31/12/2014 Stock market or realisable value	Performance for 2014		31/12/2013 Stock market or realisable value	Performance for 2013	
		Portfolio	Benchmark index ⁽¹⁾		Portfolio	Benchmark index ⁽²⁾
(in millions of Euros)						
Equities sub-portfolio	7,574	11.8%	14.1%	7,918	21.1%	20.5%
Bonds sub-portfolio	6,419	9.9%	11.2%	5,147	1.0%	2.2%
Total financial portfolio	13,993	10.7%	12.6%	13,065	11.6%	10.9%
Cash sub-portfolio	640	0.7%	0.1%	790	0.7%	0.1%
Total financial and cash portfolio	14,633	10.3%	12.6%	13,855	11.1%	10.9%
CSPE after funding	5,136	1.7%		5,049	1.4%	
Unlisted assets ⁽³⁾	3,264	8.4%		2,833	11.1%	
including RTE shares	2,555	4.4%		2,567	11.1%	
TOTAL DEDICATED ASSETS	23,033	7.9%		21,737	9.4%	

(1) Benchmark index in 2014: MSCI World AC DN hedged in Euros 50% (excluding emerging country currencies) for the equities sub-portfolio, composite index of 60% Citigroup EGBI and 40% Citigroup EuroBIG corporate for the bonds sub-portfolio, Eonia Capitalisé for the cash subportfolio, 49% equities index + 51% bonds index for the total financial portfolio.

(2) Benchmark index in 2013: MSCI World AC DN hedged in Euros 50% (excluding emerging country currencies) for the equities sub-portfolio, Citigroup EGBI for the bonds sub-portfolio, Eonia Capitalisé for the cash sub-portfolio, 49% equities index + 51% bonds index for the total financial portfolio.

(3) Performance for assets held at the start of the year.

2014 was a very eventful year in macroeconomic and geopolitical terms. Growth in the United States was significantly impacted by extreme weather conditions early in the year, but then picked up strongly, reaching an estimated 5% on an annual basis in the third quarter. However, emerging and European economies disappointed expectations. Even Germany was affected by the slowdown. The only good news in the Euro zone was that the Iberian Peninsula seems to be on the road to recovery, as business saw a strong upturn. Growth in France and Italy, in contrast, was particularly disappointing. In the emerging countries, business activity slowed down further in China, although the slowdown appears to be well maintained by the authorities. But at the end of the year the situation was much more complicated for commodity exporting countries, especially oil exporters. In the second part of the year, black gold lost more than half its value in US dollars. While this was good news for consumers, it caused a falloff in both economic activity and currency values in the exporting countries. Russia has been the principal victim, experiencing a very significant drop in the rouble. The Russian economic crisis was aggravated by the sanctions imposed by western countries following the unrest in eastern Ukraine. The rivalries and civil wars tearing the Middle East apart were also sources of tension in the OPEC, which was not conducive to agreements on oil prices in the organisation.

Against this background, there was a significant shift in central bank action with a growing dichotomy between countries where the economy is recovering (USA, UK) and countries that are still fragile (Japan, Euro zone). The US Federal Reserve completely discontinued Quantitative Easing and is probably preparing to raise its base rates in 2015, whereas the Bank of Japan and the ECB have introduced securities purchase programmes and significant injections of cash. In early 2015 the ECB decided to undertake a broader asset repurchase programme. This divergence in monetary policies led to a very strong rise in the US dollar.

Worldwide, the markets registered good growth over the year despite several readjustments during the second half-year. The world equities markets (MSCI World AC DN index hedged in Euros 50% excluding emerging country currencies) were up by 14.1%. This was in line with many analysts' forecasts, but there was a more surprising 11.2% rise in the European bond index (60% Citigroup EGBI and 40% Citigroup EuroBIG corporate). 10-year rates were down considerably in the Euro zone in both core and other countries: -1.39% in Germany, -1.73% in France, -2.24% in Italy and -2.54% in Spain.

In this market environment, the financial portfolio performance was very positive and exceeded the 10% level for the third consecutive year at +10.7%. This should be compared with the composite benchmark, which rose by +12.6%. Half of the -195 bp difference is explained by the below-benchmark performance of the equities sub-portfolio managers. The other half is explained by allocation decisions that have emphasised a conservative approach:

- bond under-sensitivity was maintained in core and non-core countries early in the year, although this underweighting became less pronounced during the year and allocation to non-core countries was substantially reinforced;
- there was underweighting in the Pacific and Emerging countries equities pockets at the start of the year, then the equities allocation was reduced, especially in the Euro zone during the summer as geopolitical tensions intensified.

In 2014, the overall after-tax performance of dedicated assets (impact on reserves and net income) was +€1,135 million: +€855 million on the financial portfolio and cash (+1,380 million before tax), +€53 million for the CSPE receivable after funding (+€86 million before tax) and +€227 million for EDF Invest (including +€113 million for the RTE shares allocated to dedicated assets).

Dedicated assets' exposure to risks

EDF is exposed to equity risks, interest rate risks and foreign exchange risks through its dedicated asset portfolio.

The market value of the equities sub-portfolio in EDF's dedicated asset portfolio was €7,574 million at 31 December 2014. The volatility of the equities sub-portfolio can be estimated on the basis of the volatility of its benchmark index, which at 31 December 2014 was 12.4% based on 52 weekly performances, compared to 10.1% at 31 December 2013. Applying this volatility to the value of equity assets at the same date, the Group estimates the annual volatility of the equities portion of dedicated assets at €939 million. This volatility is likely to affect the Group's equity.

At 31 December 2014, the sensitivity of the bond sub-portfolio (€6,419 million) was 5.38, i.e. a uniform 100 base point rise in interest rates would result in a €343 million decline in market value which would be recorded in consolidated equity. The sensitivity was 4.70 at the end of 2013. While the sensitivity of the bond sub-portfolio was higher than in 2013, it remained below the sensitivity of the benchmark index (6.14).

The table below gives details, by rating, of the EDF group's consolidated exposure to counterparty risk. At 30 September 2014, 90% of the Group's exposure concerns "investment grade" counterparties, mainly as a result of the predominance of exposures generated by the Cash and asset management activity, with most short-term investments in low-risk assets.

	AAA	AA	A	BBB	BB	B	CCC/C	Unrated	Total
31/03/2014	3%	18%	42%	26%	1%	1%	0%	10%	100%
30/09/2014	2%	19%	43%	26%	1%	1%	0%	8%	100%

The exposure to counterparty risk by nature of activity is distributed as follows:

	Purchases	Insurance	Distribution and sales	Cash and asset management	Fuel purchases and energy trading	Total
31/03/2014	4%	0% ⁽¹⁾	8%	77%	11%	100%
30/09/2014	6%	1% ⁽¹⁾	8%	75%	10%	100%

(1) 0.48% and 0.68% respectively of 31 March 2014 and 30 September 2014.

Exposure in the energy trading activities is concentrated at the level of EDF Trading, where each counterparty is assigned a limit that depends on its financial robustness. A range of methods are used to reduce counterparty risk at EDF Trading, primarily position netting agreements, cash-collateral agreements and establishment of guarantees from banks or affiliates.

For counterparties dealing with EDF's Trading room, the CRFI department has drawn up a framework specifying counterparty authorisation procedures and the methodology for calculation of allocated limits. The level of exposure can be consulted in real time and is systematically monitored on a daily basis. The suitability of limits is reviewed without delay in the event of an alert or unfavourable development concerning a counterparty.

As the situation in the Euro zone was still unstable, EDF continued to apply a prudent management policy for its cash investments in non-core countries. Apart from dedicated assets, purchases of sovereign debt are restricted to Italy and Spain (no exposure in Portugal, Greece, Cyprus, etc.) for maximum maturities of three years. Only "investment grade" banking counterparties are authorised, for limited amounts and maturities.

9.5.1.7 Management of counterparty/credit risk

Counterparty risk is defined as the total loss that the EDF group would sustain on its business and market transactions if a counterparty defaulted and failed to perform its contractual obligations.

The Group has a counterparty risk management policy which applies to the parent company and all operationally controlled subsidiaries (except Dalkia). This policy, updated in September 2014, sets out the governance associated with counterparty risk monitoring, and organisation of the counterparty risk management and monitoring (including definition of limits and Group indicators). The policy also involves monthly consolidation of the Group's exposures, updated monthly for financial and energy market activities and quarterly for other activities. The CRFI department closely monitors Group counterparties (daily review of alerts, special cautionary measures for certain counterparties).

9.5.2 Management and control of energy market risks

9.5.2.1 Framework for management and control of energy market risks

In keeping with the opening of the final customer market, development of the wholesale markets and on the international scene, the EDF group is exposed to price variations on the energy market which can significantly affect its financial statements.

Consequently, the Group has an "energy markets" risk policy for all energy commodities, applicable to EDF and entities over which it has operational control.

The purpose of this policy is to:

- define the general framework for management of energy market risks, governing the various Group entities' asset portfolio management activities (energy generation, optimisation and sale, and trading for EDF Trading);

- define the responsibilities of asset managers and traders and the various levels of control of activities;
- implement a coordinated Group-wide hedging policy that is coherent with the Group's financial commitments;
- consolidate the exposure of the various entities operationally controlled by EDF on the structured energy-related markets.

At Dalkia, EDF Énergies Nouvelles and Edison, the principles of the energy market risk policy are currently being rolled out. These entities are managed under a risk management framework approved by the Group's Executive Committee (Comex) and their respective Boards of Directors.

At entities not operationally controlled by EDF, the risk management framework is reviewed by the governance bodies.

9.5.2.2 Organisation of risk control

The process for controlling energy market risks for entities operationally controlled by the Group is based on:

- a governance and market risk exposure measurement system, clearly separating management and risk control responsibilities;
- an express delegation to each entity, defining hedging strategies and establishing the associated risk limits. This enables the the Comex to set an annual Group risk profile consistent with the financial objectives, and thus direct operational management of energy market risks over market horizons (generally 3 years).

Given its close interaction with the decisions made in the generation and supply businesses, this process involves Group management and is based on a risk indicator and measurement system incorporating escalation procedures in the event risk limits are exceeded.

The Group's exposure to energy market risks through operationally controlled entities is reported to the Comex on a quarterly basis. The control processes are regularly evaluated and audited.

9.5.2.3 Principles for operational management and control of energy market risks

The principles for operational management and control of energy market risks for the Group's operationally controlled entities are based on clearly-defined responsibilities for managing those risks, distinguishing between management of assets (generation and supply) and trading.

Managers of generation and supply assets are responsible for implementing a risk management strategy that minimises the impact of energy market risks on the variability of their financial statements (the accounting classifications of these hedges are described in note 41 to the 2014 consolidated financial statements). However, a residual risk remains that cannot be hedged on the market due to factors such as insufficient liquidity or market depth, uncertainty over volumes, etc.

For operationally controlled entities in the Group, positions on the energy markets are taken predominantly by EDF Trading, the Group's trading entity, which operates on the markets on behalf of other Group entities and for the purposes of its own trading activity associated with the Group's industrial assets. Consequently, EDF Trading is subject to a strict governance and control framework, particularly the European regulations on trading companies.

EDF Trading trades on organised or OTC markets in derivatives such as futures, forwards, swaps and options (regardless of the accounting classification applied at Group level). Its exposure on the energy markets is strictly controlled through daily limit monitoring overseen by the subsidiary's management and by the division in charge of energy market risk control at Group level. Automatic escalation procedures also exist to inform members of EDF Trading's Board of Directors of any breach of risk limits (value at risk limit) or loss limits (stop-loss limits). Value at Risk (VaR) is a statistical measure of the potential maximum loss in market value on a portfolio in the event of unfavourable market movements, over a given time horizon and with a given confidence interval¹. The stop-loss limit stipulates the acceptable risk for the trading business by setting a maximum level of loss over a rolling three-month period. If the limit is exceeded, EDF Trading's Board of Directors takes appropriate action, which may include closing certain positions.

In 2014, EDF Trading's commitment on the markets was subject to a daily VaR limit of €36 million (with a daily confidence interval of 97.5%), and a stop-loss limit of €180 million². The VaR and stop-loss limits were not exceeded in 2014, and EDF Trading's risks remained within the limits of the mandate from EDF at all times. The stop-loss has never been triggered since its introduction.

At Edison, for operational purposes net exposure³ is calculated based on its entire portfolio of assets and contracts (industrial portfolio), and on assets and contracts related to its trading business for the company's own purposes (trading portfolio). The level of economic capital engaged in the markets, expressed in terms of Profit at Risk (PaR⁴) is then determined using this net exposure.

For an analysis of the fair value of the Group's commodity hedging derivatives, see note 41.5 to the 2014 consolidated financial statements. For details of commodity contracts not classified as hedges by the Group, see note 42.3 to the same consolidated financial statements.

9.5.3 Management of insurable risks

The EDF group has an extensive insurance programme that covers EDF and controlled subsidiaries as they are integrated, including ERDF and Edison which was incorporated into the Group's main programmes in 2012 and 2013. The coverage, exclusions, excesses and limits are appropriate to each business and the specificities of these subsidiaries.

The main insurance programmes cover:

- **conventional damage to Group property:** EDF is a member of the international mutual insurance company OIL⁵. Additional insurance coverage is provided by EDF's captive insurance subsidiary Wagram Insurance Company Ltd.⁶, other insurers and reinsurers;

1. EDF Trading assesses VaR by the Monte Carlo method, which refers to historical volatilities and correlations estimated on the basis of market prices observed over the 40 previous trading days. The VaR limit applies to EDF Trading's overall portfolio.

2. Five times the VaR. €180 million.

3. Net exposure is the residual exposure after using all natural hedging options provided by vertical and horizontal integration of the various techniques.

4. Profit at Risk or "PaR" is a statistical measure of the maximum potential decline, related to unfavourable market movements, in the margin compared to budget for a given time horizon and confidence interval.

5. Oil Insurance Limited.

6. An Irish insurance company fully-owned by EDF.

- **damage to the EDF group's nuclear facilities:** In addition to coverage through EDF's membership of OIL, physical damage (including following a nuclear accident) to EDF's nuclear installations in France and EDF Energy's nuclear facilities in the United Kingdom, and nuclear decontamination costs, are covered by a Group insurance policy involving the French nuclear pool (Assuratome), the British atomic pool National Risk Insurers (NRI) and the European Mutual Association for Nuclear Insurance (EMANI).

In connection with CENG's operations in the United States, EDF Inc. is a member of NEIL¹;

- **damage to merchandise transported;**
- **nuclear operator's civil liability:** EDF's current insurance policies comply with French Law no. 68-943 of 31 October 1968, as amended by Law no. 90-488 of 16 June 1990, which codified the civil liability obligations imposed on nuclear facility operators by the Paris Convention. To guarantee availability of the funds required to meet such obligations, EDF opted to use insurance policies. The cover provided by EDF's policies with Allianz and the European Liability Insurance for the Nuclear Industry (ELINI) is equal to the limits of liability set by law in the event of an accident, whether at a nuclear facility or during transport.

For onsite accidents, total cover is €91.5 million per nuclear accident, for a maximum of two occasions per site within a three-year period. In accordance with the law, these insurance policies purchased do not include an excess. However, Oceane Re, a Group reinsurance company, shares this risk through reinsurance agreements entered into with Allianz and ELINI.

In the United Kingdom, where EDF Energy operates nuclear plants, the liability scheme applicable to operators of nuclear facilities is similar to that in France. EDF Energy is insured to the extent of £140 million, the current limit for civil liability applicable to nuclear plant operators in the United Kingdom. Since 1 January 2014, this insurance has been provided by ELINI and Wagram Insurance Company Ltd. Oceane Re is associated with this risk via the reinsurance contract issued to the benefit of Wagram Insurance Company Ltd.

In the United States, the specific Price-Anderson Act regime would apply in the event of a significant nuclear accident (above \$300 million);

- **general civil liability:** this programme covers the Group against the possible financial consequences for third parties of the (non-nuclear) risks inherent to the EDF group's businesses;
- **civil liability of directors and senior executives:** EDF's insurance programme covers the Group's directors and senior executive personnel;
- **construction risks:** for these risks, EDF takes out insurance policies covering specific worksite risks (general worksite risks/ general assembly risks). These policies are not part of a Group programme but are purchased on an ad hoc basis for major projects such as the Flamanville EPR, or construction of combined cycle power plants, dams, combustion turbines, etc. This cover is recorded as an investment in the EDF financial statements;
- **exploration and production:** Edison had a specific insurance policy providing Damage and Civil Liability coverage for these assets worth €2.2 billion, both onshore and offshore. Through optimised use of EDF's membership of OIL, Edison was able to construct a new specific "Exploration and Production" programme from 1 January 2013;
- on 11 August 2011, ERDF took out a policy with Natixis/Swiss Re that runs until 30 June 2016 (five storm seasons) for **coverage of ERDF's overhead distribution network** against the consequences of exceptional events such as storms and gales. This "cat-bond" provides maximum cover of €150 million, with payouts based on a parametric index dependent on wind speed. On 27 December 2011, additional €40 million coverage was subscribed for a four-year period, to reduce the excess.

The total value of premiums for all types of coverage provided by EDF's insurance programmes and Group programmes managed by EDF Assurances was €146 million in 2014, including Dalkia and €18 million for coverage of ERDF's overhead networks.

9.6 Information under article L. 441-6-1 of the French Commercial Code

Since 1 December 2008, EDF has applied the law 2008-776 of 4 August 2008 (the French law on modernisation of the economy) and settles supplier invoices within 60 days of the invoice date.

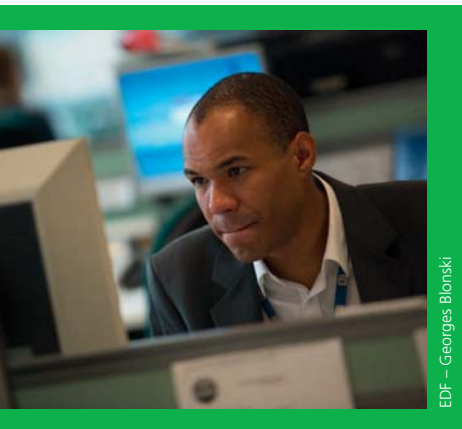
EDF's trade payables excluding invoices receivable amounted to €2,540 million at 31 December 2014 and to €3,161 million at 31 December 2013, distributed as follows:

	31 December 2013		31 December 2014	
	(in millions of Euros)	(in %)	(in millions of Euros)	(in %)
Invoices due	18	0.6	23	0.9
Invoices payable within 60 days	3,063	96.9	2,497	98.3
Invoices payable after 60 days	80 ⁽¹⁾	2.5	20 ⁽²⁾	0.8

(1) Most supplier invoices payable after 60 days relate mainly to contracts for nuclear activities that were negotiated before 1 January 2009 and have not been renegotiated.

(2) Most supplier invoices payable after 60 days relate mainly to contracts for nuclear activities that were negotiated before 1 January 2009, whose renegotiation will only take effect from 2015.

1. Nuclear Electric Insurance Limited.



10

Cash flows and capital

For information pertaining to capital and cash flows, see section 9.4 (“Cash flows and net indebtedness”) in this reference document.

For information on to the issuer’s financing structure, see section 9.5.1.1 (“Liquidity position and management of liquidity risk”) in this reference document.

11

Research and development, patents and licenses



EDF – Rudy Burbant – Bruno Conty ▼



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The main goals of the EDF group's Research and Development ("R&D") Division are to contribute to the improvement in the performance of the operational units, to identify and prepare mid and long-term growth vectors and to anticipate the major challenges facing the Group in the global energy context. Aspects of this context include, in particular:

- fossil fuels and global warming, prompting reflection and regulations on the rate of greenhouse gas emissions;
- water uses and management of the environment;
- the rapid development of emerging countries and the subsequent shift in areas of consumption;
- the significant development of information technologies in the energy sector, offering new opportunities in electricity generation; and
- customers, individual and collective consumers who are also becoming producers, who want to use energy more efficiently and live in more energy self-sufficient buildings, neighbourhoods and towns.

In this context, R&D has a crucial role in finding solutions to all of these challenges. Its research areas focus on three major priorities:

- to consolidate and develop competitive carbon-free generation mixes: one of the major challenges of the transition is to ensure the effective

coexistence of traditional generation resources, particularly by further improving the safety and performance of the current nuclear fleet and extending its life span, with the development of new renewable energy sources;

- to prepare the electricity networks of tomorrow, firstly, by optimizing the life span of network infrastructure and, secondly, by facilitating the adaption of the electricity network by improving the management of network assets, optimization models and economic scenarios for new transport infrastructure projects, the insertion of intermittent energies and the development of smart grids;
- to develop and test new energy services for customers, that provide flexible low-carbon energy demand through better demand awareness, increased customer energy efficiency, the promotion of new efficient uses for electricity often associated with renewable energy (heat pumps, electrical mobility, etc.), the development of technical and economic modelling to engineer buildings, industry and sustainable cities, and the further integration of uses and consumption into the electricity network via *smart grids* and tariffs.

11.1 R&D organisation and key figures

EDF's R&D is integrated and multidisciplinary in order to facilitate synergies and transfers of processes between the Group's business lines.

In 2014, the Group's total research and development budget was €650 million, including €550.1 million for EDF. It is one of the highest R&D budgets among the big electricity players. About two-thirds of the budget is allocated to annual programmes developed and contractualised with EDF operational departments and subsidiaries. The remaining third is dedicated to medium- and long-term anticipatory programmes aligned with the Group's R&D priorities.

In 2014, around 21% of this budget was dedicated to environmental protection. These expenses specifically cover research on energy efficiency, the uses of electricity as a substitute for fossil energy, renewable energy and its integration within the electricity network, sustainable cities, the local impacts of global warming and other environmental issues such as biodiversity, water quality or reduction of pollution.

EDF's R&D has more than 2,125 employees of 29 nationalities, 80% of which are managers and 33% women, as well as 150 Ph.D. candidates. There are 200 researchers teaching in universities and major graduate schools. Each year, it hires about 100 people and regularly places personnel in other entities within the EDF group. The R&D Division has 15 departments. Its expertise covers all of the Group's fields of activity: renewable energies, networks, nuclear generation, thermal, hydropower, energy management, trade, Information Systems, environment. They represent disciplines, businesses, projects and are integrated over major systems. EDF's R&D manages an internal training organisation, the Institute of Technology Transfer ("ITech"), tasked with sharing R&D practices, know-how and innovations with the

EDF group as a whole. A catalogue of about a hundred training courses is updated each year and has now been incorporated into the Skills Academies (see section 17.3.1.4 ("Skill development: preparing for the future")).

R&D is currently organised around several sites. Three are located in France in the Paris region, seven abroad: one in Germany, one in the United Kingdom, one in Poland, one in China, one in the United States, one in Singapore and one in Italy. The Chatou and Renardières centres, near Fontainebleau, have around 500 people each. The Clamart centre has nearly 1,000 people. 230 researchers work outside France, including thirty or so expats.

In November 2010, EDF's Board of Directors approved the plan to move EDF's main R&D centre, currently in Clamart, to the campus at Paris-Saclay. This centre is intended to accommodate up to 1,500 people, including Group researchers, doctoral candidates and interns. EDF is thus taking its R&D to the next level and putting innovation and scientific and industrial research at the heart of its priorities. A new EDF training centre will be established locally. The EDF Paris-Saclay Lab will bring the research and training centres together in one place. This positions EDF as a leading player on the Paris-Saclay campus and will allow it to profit from a dynamic and enhanced cooperation with higher education institutions and public and private research centres established nearby.

Accordingly, a new agreement came into force on 1 July 2014 following signing by the EDF R&D Division and all the trade union organizations representing R&D staff. This agreement, reached as a result of sustained social dialogue between the stakeholders, defines the measures taken to support EDF Clamart employees moving to the new centre.

Furthermore, several partnerships have already been contractualised with institutions present on the site of the future Paris-Saclay university:

- SEIDO, a joint research laboratory between EDF and Telecom Paris Tech, on the Internet of things and cybersecurity for electricity networks. Its challenge is to prepare for and facilitate the rollout of energy efficiency and energy demand management services based on communicating, interoperable energy devices (heating, air conditioning, white and brown goods, electric vehicles, etc.), and thus help ensure the cohesion of the entire system, as well as its safety (security, confidentiality, etc.);
- the joint Rise Grid laboratory with Supelec on "smart grid" modelling and simulation;
- the SEISM institute for earthquake modelling from fault to structure, comprising EDF, CEA, Ecole Centrale de Paris, ENS Cachan and CNRS;
- the Gaspard Monge programme for optimisation and operations research (PGMO), in conjunction with the Jacques Hadamard Mathematical Foundation, which was made possible by sponsorship from EDF's R&D Division;
- the Mechanical Laboratory of Industrial Sustainable Structures, which has hosted ENSTA with EDF, the CNRS and the CEA Saclay since 2014;
- the joint Finance and Energy Markets Laboratory with Dauphine, the ENSAE and the Ecole Polytechnique.

The R&D sites house two combined CNRS research units: the Mechanical Laboratory of Industrial Sustainable Structures (LaMSID) and the Research and Development Institute on Photovoltaic Energy (IRDEP), as well as an international R&D centre: the *Materials Ageing Institute* (MAI).

In order to achieve its goals, EDF continues to invest in powerful and reliable digital simulation equipment. It develops calculation codes and leading calculation methods. Its current capacity is 1,400 teraflops.

Furthermore, the Group has unique experimental resources, such as specific analytical loops (chemistry-corrosion, rupture, aero-acoustics, etc.), loops centred on components or processes, on-site trials of response resources, or resources means dedicated to the characterisation of materials and their aging. Two recent flagship facilities are:

- "Concept Grid": Concept Grid is a small-scale electricity network whose purpose is to test the integration of the innovative equipment and "smart" systems that make up a smart grid before installing them on the network. Concept Grid aims to prepare for changes in the distribution network, by studying the integration of new components and equipment derived from information and communication technologies and facilitating demand management. It also aims to facilitate the integration of decentralised generation by studying how generation methods affect the electricity network and by conducting research into electricity storage applications. Concept Grid is the missing link between a traditional research laboratory, in which innovations are tested under quasi-real-world conditions, and the actual network, on which the need for quality service limits experimentation;
- Vercors: the construction of a 1:3 scale model reactor building for studying the ageing processes of double-walled enclosures.

R&D also reinforces its ability to industrialise and promote internal innovation and develop an opening for external innovation. It aims to integrate the innovations in the industrial processes of the Group. The approach is organised around two actions:

- to better use internal innovation and speed up the time to business through initiatives in collaboration with the business lines to expedite and promote the industrialisation phase. Thus, a dedicated team helps to protect and use EDF R&D's intellectual property and expertise potential and to accelerate the transfer and industrialisation of innovations;
- to develop an opening on external innovations, and, as needed, demonstrate external innovations.

EDF is the lead investor in Electranova Capital, a venture capital fund for start-ups specialising in "clean technology", launched in May 2012 in conjunction with Allianz and Bpi France and managed by Idinvest Partners. The Electranova Capital fund has an investment capacity of approximately €90 million and the mission of promoting the emergence of innovative projects in new technologies to meet the challenge of a low-carbon energy model.

Seven investments were made in young companies, including four French ones. All the companies are connected with one or more of EDF's business lines.

- Actility, major French smart grid company.
- Enlighted: expert in energy optimization, Enlighted offers a commercial, industrial and tertiary building lighting control solution.
- Forsee Power Solution: French company specialized in battery design.
- Seatower: this Norwegian company has developed innovative gravity bases for offshore wind farms.
- SunFire: this German company specializes in fuel cells and electrolysis for stationary storage.
- Leosphere: created in 2004, this French company is now the world leader in the use of Lidar, a technology based on lasers and their reflections off the atmosphere.
- Techniwood: the most recent investment, this French company designs, manufactures and markets the next industrial generation of ultra-high-performance composite wood and insulation material construction system, Panobloc®.

EDF is also involved in the Amorçage Technologique Investissement (ATI) fund, managed by CEA Investissement, dedicated to young French companies working on technological innovation in the fields of energy, the environment, and micro- and nanotechnologies.

Finally, interests were acquired in venture capital funds in France, North America and China to invest in a wide range of global start-ups and innovative companies:

- Robolution Capital, fund dedicated to robotics launched in March 2014;
- Chrysalix, Canadian fund dedicated to cleantech venture capital;
- Tsing capital, first Chinese fund dedicated to cleantech venture capital;
- DBL Investors in the United States, a fund created in 2008.

11.2 R&D priorities

EDF's R&D works for all the businesses of the Group. It provides technological solutions or innovative and economic business models that improve the performance of the businesses and prepares the long-term future of the Group through medium and long-term anticipatory programmes. It contributes to making EDF a worldwide industrial group of carbon-free electricity networks.

The ambition of EDF's R&D in the deeply changing field of energy can be seen in three major areas: consolidating and developing competitive carbon-free generation mixes, preparing the electricity networks of tomorrow, and finally developing and testing new energy services for customers.

R&D also conducts research in the Information Technologies in support of these three areas. This work focuses on four major themes: complex systems, management and processing of large volumes of data, the internet of things and simulation for physical problems.

Efforts in this area serve a twofold purpose:

- improving business performance through advanced simulation technologies; and
- creating new opportunities for businesses with the innovative use of new Information and Communication Technologies.

11.2.1 Consolidating and developing competitive carbon-free generation mixes

In nuclear power generation, Hydropower and thermal power, EDF's R&D develops tools and methods to improve the safety of generation methods, to optimise their operating life and to increase their generation and environmental performance. Three major goals are priorities: to perpetuate the Group's nuclear power dominance, develop renewable energy sources, and study the industrial feasibility of carbon capture and storage.

In order to reinforce and perpetuate the Group's nuclear power advantage, R&D works to protect EDF's assets by incorporating its actions into the safety improvement process for the facilities, with the aim of enhancing their generation and environmental performance and extending their operating life. In 2014, for example, R&D worked on the understanding and modelling of material ageing processes, particularly for steels used for nuclear reactor vessels or for concrete containment walls, which is essential to manage the life span of facilities, particularly for non-replaceable components.

Actions in the area of nuclear power also deal with difficulties linked to the fuel cycle. They include the design of new power plants, in particular fourth-generation plants and Small Modular Reactors (SMRs).

Lastly, R&D's actions help EDF understand and manage the impact of the facilities on the environment and in parallel to take account of environmental risks on industrial tools. R&D therefore studies the outlook for the availability of water resources linked to climate change and changing regions. R&D's work thus offers insight into the possible risks and consequences for the generation fleet (availability of the cooling source, modulation capacity, placement optimisation).

The questions posed by the above topics require a sound understanding of the phenomena in play. In support of these programmes, R&D thus develops

digital simulation tools and experimental test methods, as well as the tools capable of managing the new challenges faced by the growth in mass of digital data, computer security and new information and communication technologies.

The events at Fukushima in 2011 have led to intensified research on safety, the environment (external attacks) and life span, as well as to interest in new fields such as the rehabilitation of an inhabited area that is evacuated after a nuclear accident. EDF's R&D, in conjunction with other European nuclear power players, spearheaded NUGENIA, an international non-profit association formed in March 2012 whose objective is to become the single framework for R&D cooperation in Europe for Generation II and III nuclear plants within the European Sustainable Nuclear Energy Technology Platform (SNETP). The association brings together 80 members from 20 countries from industry, research entities, safety authorities and so on. EDF holds the presidency of the association, which will facilitate the creation of synergies and joint projects between members or with national R&D programmes in the following areas: safety and risk analysis, serious accidents, reactor core and performance, component integrity and aging, fuels, waste and dismantling, "Generation III innovative design", as well as cross-functional challenges regarding the harmonisation of safety and other practices and non-destructive checks and assessments. In 2014, NUGENIA submitted, for the 2014-2015 request for proposals, fifteen or so projects, mainly in the field of the security and life span of the current fleet. Furthermore, the NUGENIA + project launched its own request for proposals with funds allocated by the European Commission.

EDF also provided the impetus for the launch in 2012 of the "Connexion" project relating to future digital nuclear instrumentation and control systems, as part of the French government's "Investment in the Future" programme¹. This project brings together industrial partners and academics in the French nuclear industry to work on an ambitious research programme to develop future methods for designing, qualifying and upgrading power plants' digital instrumentation and control facilities. This initiative also meets the challenge of harmonising industrial solutions within the sector.

The second priority is support for the development of renewable energies. These play a growing role in the European energy landscape and EDF, an already significant participant, wants to continue to grow its positions in this domain.

R&D's objective for renewable energy is to identify technological breakthroughs with significant competitive implications and contribute to the development of the most promising technologies, in partnership with the academic and industrial world. EDF is studying several types of renewable energy: hydropower, photovoltaic, onshore and offshore wind power, thermodynamic solar, biomass, marine energy and geothermal projects.

R&D is also working on the development of tools and methods to enhance the operating performance and optimise the project costs of EDF's renewable energy-based electricity generation systems, in order to:

- reduce investment risks – for instance, EDF's R&D is lending its expertise to EDF's offshore wind power projects, with particular regard to turbine system and wind turbine foundation design, turbine certification, and generation capability evaluation methods and the qualification of a floating Lidar to measure wind on offshore wind power projects. R&D is also preparing for the future by studying technologies for floating offshore wind turbines and supporting EDF EN in the development of the Provence Grand Large project;

1. "Investment in the Future" is a loan issued by the French State to fund innovative research activities relevant to the economic development of France.

- improve operating performance – for example, R&D has developed a tool to analyze machine performance based on monitoring of turbine operating parameters. This diagnostic tool helps to identify under-performing turbines and make an initial diagnosis;
- manage technical and economic impacts on the electricity network and ensure a balance in the electricity network while integrating renewable energy. The works deal with the definition of integration methods for renewable energies in the electricity network. This will require various solutions to integrate intermittent renewable energy and assess the limits and costs of integration in large networks to be analysed: storage, “super grids”, “smart grids”, demand management, etc.

The third priority is carbon capture and storage and limiting the CO₂ emissions of power plants (see section 6.2.1.1.5 (“Thermal generation”)). Cost, the impact on the facility’s yield and the deadlines for implementing such processes are all important issues.

For the existing power plants, the capture of CO₂ by processing exhaust gases now appears to be the best solution. The work of R&D is intended to give a clear vision of the technical and economic maturity of technologies to inform the future development of the Group’s thermal power plants (coal and gas).

With the support of the ADEME and its partners, EDF has installed a CO₂ capture research test unit on the EDF carbon electricity generation power plant in Le Havre. The technology, tested on the CO₂ present in the exhaust gases coming from carbon combustion, is an advanced “post combustion amine capture” process. This research test unit, by capturing nearly 2,000 tonnes of CO₂ between autumn 2013 and spring 2014, made it possible to verify the proper performance of this technology in an industrial environment, in terms of both energy and solvent consumption. This test unit is an indispensable step in the development of more efficient industrial energy solutions.

EDF’s R&D is also investigating new ways to prepare for the emergence of a second generation of CO₂ capture and storage technologies, with a lower energy penalty.

11.2.2 Preparing the electricity networks of tomorrow

The transition toward a carbon-free energy economy in Europe implies meeting new challenges: how to better manage the intermittent nature of renewable energy generation sources; how to integrate new electricity uses by optimising means of production and network requirements; how to develop local, regional, national and supra-national energy management systems, where to develop network infrastructures and how to optimise electricity flows in Europe. More generally, with due regard to the public interest and competitive pricing, the question is how to optimise the economic balance of the electricity network (generation investments, investments in grids and the costs and benefits of energy and environmental efficiency solutions) without significant increase in customer bills or added complexity, while also maintaining the quality and reliability of the electricity network.

The shift toward smarter electricity networks, known as smart grids, is one of the pivotal points of the transition to a carbon-free energy economy in Europe. The major challenges are technical, economic and regulatory. Apart from integrating renewable energy and new uses, they are tied to the management of information for different network users and the need to control costs.

In order to meet these challenges, R&D has set several priorities. First, to anticipate the arrival of new technologies and changes in the energy

landscape, it models and optimises energy savings (global macro-economic environment and energy policies, competitive and regulatory environment). In order to anticipate the consequences of the development of new generation resources or new uses, it is developing models of the energy system that provide better management of the balance between supply and demand. To obtain an objective assessment of the costs and benefits of the different options, it implements and proposes harmonised methods of analysis to the different stakeholders.

The second priority is to improve the performance of electrical networks. The work carried out by R&D in this field aims to:

- improve the management of network assets in France and abroad by working on equipment lifespans and network availability;
- increase the automation of distribution networks to optimise the quality of service and reduce operating costs.

The third priority is to prepare the transition to smart grids, notably through the following objectives:

- supporting the development of the Linky project (see section 6.2.2.2.5 (“Future challenges (replacement, development, smart meters)”) and section 9.2.2.3.1.2 (“Start of the ‘Linky’ smart meter rollout”)) and anticipating new smart metering architectures and associated services;
- preparing and assisting smart grid experiments;
- inserting intermittent and decentralised generation in networks, developing new system services and preparing for future balances at the local level.

EDF’s R&D thus contributes to the development of new functionalities for grid management and operations, and of new solutions for new smart meters such as EDF’s Linky project. For example, R&D has developed and tested a new functionality for managing the distribution network when generation is decentralised. With this innovative method of management, it is possible, using an estimate of the condition of the network, to keep the voltage on the HVA network within the contractual range, even in the case of decentralised generation power fluctuations.

R&D is also testing electricity use management systems based on the Linky infrastructure. This testing has in particular shown the feasibility of load disruption, such as electric heating, to reduce peak consumption periods.

It develops tools to improve forecasts of losses on the network and develop energy assessment forecasts at the local level (source substations).

It contributes its expertise to every aspect of the Linky project, including the drafting of specifications and equipment qualification.

Finally, R&D also covers electricity networks and “super grids”, the direct-current networks that could emerge with the insertion of renewable energies that alter the technical and economic fundamentals of electricity networks.

To find solutions to these new challenges, a cooperative approach is being taken to developing a number of smart electrical test units in France and Europe. R&D is closely involved (NiceGrid, Smart Electric Lyon, Millener, Premio, Venteea, *Une Bretagne d’avance*, etc.), with the aim of shedding light on the issues associated with the transition of the electricity network, learning technical and economic but also social and environmental lessons, as well as considering business models and regulation. EDF R&D also tests multiple innovative solutions before their roll-out in the field, with its new test platform dedicated to the smart electricity networks of tomorrow: the “Concept Grid”. These projects also provide an opportunity for discussion and innovation with the electricity sectors and new information and communication technologies (NICT) to best adapt the equipment to the flexibility requirements of the electricity network of the future. Numerous tests are therefore under way to explore the full potential of communicating metering, the first link in the smart electricity network chain.

11.2.3 Developing and testing new energy services for customers

The development of energy efficiency and distributed renewable energy, regulatory and technological (digitisation) changes, as well as the opening up to market competition, are causing profound changes in the relationship between energy utilities and their customers. They allow customers to actively consume or produce energy at the individual or regional level.

In this context, the EDF group's marketers face multiple challenges:

- changes to rate-price trajectories;
- demand side management: with the Green Deal in the UK and Energy Savings Certificates in France, suppliers must assume increasing obligations;
- the development of smart technologies: the arrival of "smart meters" will, for the general public, mean access to new services enabled by smart technologies (monitoring, more personalised offers, etc.);
- the increasing digitisation of customer relationships and the subsequent, inevitable shift and rise in customer expectations. However, this modernised relationship should not overshadow the parallel rise in energy poverty impacting customers in need of an adequate service from their energy company;
- increased local influence: Local governments, which are already active in the areas of urban planning and public distribution of energy, want an increasing say over their energy destiny. The concept of regional sustainability, combining aspects of development (green neighbourhoods) and mobility (electric vehicles), will structure local policies. Where the development of smart technologies and the increasing influence of local communities meet, there are new fields of services to be explored.

In order to meet these challenges, EDF's R&D is organising its efforts around several priorities:

- develop load curve methods and models for a better understanding of demand and new tariff approaches, thus encouraging dynamic management of demand to meet new requirements in terms of the flexibility of the electricity network (upstream-downstream optimisation and intermittent nature of renewable energies);
- innovate to develop new uses of electricity (heat pumps for buildings and industry, electric vehicles) in order to boost future electricity demand;
- propose efficient energy solutions for all customer segments in accordance with the new regulatory frameworks;
- develop methods and tools to modernise customer relationships through new information technologies and related data processing, experiment with smart grids downstream from meters in connection with the development of Linky, and prepare the way for Linky-ready services and equipment in buildings;
- develop the technical building blocks of a service offering for regional and urban sustainability.

As a result, work on new uses for electricity, such as electric vehicles, heat pumps and more fuel-efficient buildings has been carried out. R&D has developed a prototype of an industrial high-temperature heat pump enabling the free heat from customer processes to be recovered. The deployment of this technology in a service offering to customers is currently underway. Innovations that will reduce the costs of building heat pumps have also been developed. Finally, innovations to intelligent energy management of thermal electricity uses were carried out, in particular on residential heat pumps and on upgrading buffer tanks so as to make them compatible with innovative monitoring methods such as solar off-peak hours.

These works are specifically carried out on the ground via smart grid test units, such as Nice grid or Smart Electric Lyon, in which R&D examines new models surrounding the aggregation of different types of flexible demand (disruption, shift in consumption, own consumption, renewable energies, energy planning and local management). R&D has also launched an experimental industrial interruptibility project based on the remote monitoring of processes.

Regarding customer relationships, in order for residential customers to determine how much electricity they are consuming between two bills, EDF has designed and developed a prototype range of services compatible with smart metering, such as a module for smartphones and computers that allows customers to estimate their bill by taking into account factors such as their seasonal electricity consumption and past consumption. EDF's R&D is also working on research to fight energy poverty, for example, by designing personalised customer relationship services and tools.

With regard to Regional Sustainability, in order to meet the needs of towns wanting to optimise infrastructures and infrastructure management at the local level (transport, waste treatment, buildings, energy production, networks) and be "smart cities" or "sustainable cities", R&D is developing city engineering tools for EDF marketers in France, such as the study conducted for the Nice metropolitan area. R&D is also investing in a partnership with the city of Singapore to develop a city planning decision support project. As a result, a development agreement for the City of the Future was signed in June 2013 between EDF and the Housing Development Board of Singapore, the leading builder of city housing, to develop an innovative urban modelling software tool. Through this tool, this collaboration with the Singapore authorities covers the following areas: energy efficiency of buildings and their air conditioning systems, as well as the collection of household waste. It also makes it possible to deal with issues relating to the integration of photovoltaics into buildings, green roofs and local water recycling. This modelling is combined with innovative tools for 3D visualisation, at the building and neighbourhood level, of the impacts of the planning choices, for example, on greenhouse gas emissions. The Singapore experience will be a showcase for the project. A first version of the tool was delivered in 2014. In 2014 a centre of excellence was created in Singapore, with the principal objective of supporting the development of smart city projects in South-East Asia outside China.

Electric vehicles are an important dimension of the sustainable city: Electrical transportation constitutes a profound change of outlook regarding modes of transport. Battery storage is the key technology in electrical transportation. R&D action in this area consists firstly of characterising battery security and performance in the laboratory and secondly, of innovating in terms of breakthrough technology that may highly improve their autonomy or cost reductions. R&D also studies the stationary applications of these battery technologies (coupling with renewable energy, system services, etc.).

More generally, the objectives of R&D activities in the field of electric vehicles (EV) and plug-in hybrid electric vehicles (PHEV) are as follows:

- support the development of this new use (monitoring of initial experiments, standardisation, innovations likely to remove market barriers (wireless charging));
- control integration into the electricity network (smart charging, sizing and location of recharging stations);
- develop mobility service tools (fleet supervision platform, software for the operation of recharging stations, tools for mobility consulting for local communities).

11.3 International and partnerships

To conduct its research and development programmes, EDF's R&D develops numerous partnerships in the world. These partnerships aim to maintain its expertise at the highest level, worldwide, in the disciplines at the heart of EDF's challenges and to complete its internal areas of expertise.

The partnership policy of R&D takes various forms both nationally and internationally.

Several years ago, in France, R&D set up 14 joint laboratories with academic partners and technical or industrial centres and participates with them in collaborative research projects financed by national agencies like the National Research Agency, the ADEME or the *Fonds unique interministériel* through competitiveness zones. Each joint laboratory is an opportunity to create a joint team around a shared scientific and technical problem, in order to create value, expertise and knowledge for all the partners, and constitutes an asset for participating in cooperative projects. R&D also supports four targeted teaching and research chairs.

In the field of nuclear R&D, the tripartite agreement between CEA, EDF and AREVA that was set to expire at the end of 2012 (extended for a year by amendment) was the subject of a new agreement on nuclear R&D in early 2014. This new agreement aims to increase the coordination of R&D programmes between partners (CEA, EDF and Areva) and to have programmes developed based on set objectives, particularly industrial ones. Its practical effects have been:

- the establishment of a tripartite programme team in charge of the supervision and coordination of programmes. This team has four members per partner, making a total of 12 members;
- the organisation of these programmes into projects monitored by the tripartite programme team;
- the implementation of these programmes in the existing joint laboratories.

At the same time, the tripartite R&D agreement between CEA, IRSN and EDF, initially set to expire in 2012 and extended over 2013, was discussed in 2014, with the aim of implementing a four-party agreement between CEA, IRSN, EDF and Areva and stepping up coordination with the "*Institut*" initiative.

R&D has also involved in Energy Transition Institutes (ITE), introduced as part of Investment in the Future:

- the *Institut photovoltaïque Île-de-France* (IPVF): this institute, of which EDF is a founding member, targets technological breakthroughs to make photovoltaic energy competitive in the market. The Institute will ultimately bring together approximately 150 researchers from different partners at a state-of-the-art facility in Saclay;
- *France Énergies Marines*, for marine energy and offshore wind;
- *Paris-Saclay Efficacité Énergétique* (PS2E), for energy efficiency of industrial processes and energy control in industrial zones;
- SuperGrid, dedicated to major transmission networks to connect remote renewable energy generation sites;
- Vedecom, for electric vehicles;
- Efficacy for energy efficiency and sustainable cities; and
- INEF 4 in the field of building rehabilitation and sustainable construction.

EDF also provided the impetus for the launch in 2012 of the "Connexion" project relating to future digital nuclear instrumentation and control systems, as part of the French government's Investment in the Future programme

(see section 11.2.1 ("Consolidating and developing competitive carbon-free generation mixes")). In Europe, R&D is participating in about thirty projects and has established a relationship with the Joint Research Center, a European Union energy and transport research centre whose objective is to collaborate on low-carbon technologies and on electricity storage in particular. Through collaboration with the Energy Technology Institute, the Engineering and Physical Sciences Research Council, and various British universities, it is expanding its presence in the British research partnership.

Since the start of the 2000s, EDF has had a research centre in Germany – ELFER – in conjunction with the Karlsruhe Institute of Technology (KIT). This centre is mainly dedicated to decentralized generation (fuel cells, hydrogen) and the sustainable city.

Since 2010, research activity has been strengthened internationally around several centres in Poland, the United Kingdom, China, Singapore, the United States and Italy.

The British centre consolidates the Group's positions in the British research ecosystem. It is particularly involved in tidal wind energy and nuclear power in the United Kingdom. In 2012, this research centre was transformed into an independent legal entity named EDF Energy R&D UK Centre Ltd. This subsidiary is part of EDF Energy. Its new status increases EDF's visibility and the research capabilities in Great Britain in keeping with the Group's development strategy.

The research team within EDF Polska is dedicated to carbon thermal questions and biomass co-combustion. The Krakow R&D centre, for example, conducts studies on optimization of fossil fuel combustion and biomass co-combustion.

The centre based in Beijing facilitates participation in large-scale Chinese test units focusing on smart grids, smart cities and some renewable energy technologies. This centre is also being used to support the implementation of the nuclear research contract in China (see section 6.3.3.3.1 ("EDF group's activities in China")). The creation of the centre is accompanied by development focusing on academic and industrial partnerships in China. For example, EDF has signed a joint research programme in China on solar thermal power. The cooperation with the Institute of Electrical Engineering of the Chinese Academy of Sciences mainly concerns research and innovation work carried out on a testing platform dedicated to solar thermal power technologies located in Badaling. One of EDF's challenges is to develop its modelling capabilities by using the measurements taken during tests conducted on this platform.

The Edison R&D team in Italy is tasked, *inter alia*, with the oversight of all gas research programmes for the EDF group.

In the United States, the R&D and innovation sector is one of the largest and most dynamic in the world. This sector has some 1.3 million researchers. In addition to a partnership with MIT (Massachusetts Institute of Technology) in the United States, EDF has had an R&D and Innovation team located for several years on the premises of the Electric Power Research Institute (EPRI)¹. Its objectives are to optimise collaboration between EDF and the EPRI in multiple areas such as nuclear energy, renewable energies, smart grids, energy efficiency and the capture and storage of carbon; to establish collaborative efforts between the EDF group and US research bodies (universities, laboratories, industry, etc.) selected for their expertise or equipment; and to assess opportunities for new business models in the United States.

In Singapore, in support of our service agreement signed with the city's property management organisation, a centre of excellence was set up in early 2014.

1. The Electric Power Research Institute is one of the key R&D players in the field of electricity in the United States. This non-profit body provides technologies and economic analyses and develops strategies for its funding members, who account for over 90% of the electricity generated in the United States and include approximately 40 countries.

11.4 Intellectual property policy

Industrial property plays a major role in protecting the EDF group's technologies and know-how against competition, as well as in the capitalisation of these assets through licensing.

EDF wants to strengthen its intellectual property portfolio intended to make the most of its capacities for innovation and its technological expertise. This portfolio is made up of patents, trademarked software and formalised know-how.

Patents

At the end of 2014, EDF's portfolio included 497 patented inventions protected by 1,694 intellectual property titles in France and abroad.

Strengthening of the patent portfolio is a top priority. It is intended to facilitate R&D cooperation, to provide protection in the development of EDF's activities, to contribute to the external image of EDF, to reinforce researchers' motivation and to focus fully on inventions.

In 2014, EDF lodged 60 patent applications (54 in 2013).

Trademarks

"EDF" is a trademark registered in more than 90 countries. The Group's name is an essential element of its image and its heritage. The EDF trademark, internet domain names and logos are thus monitored constantly to protect them against any fraudulent use that could jeopardise the Group's image. In addition, following the works of branding EDF, the Company set up licensing agreements with subsidiaries using the EDF brand.

The Group has also registered various other trademarks, in particular, those related to the business of its various subsidiaries.

The trademark portfolio of the EDF group at the end of 2014 included some 420 names protected by over 1,340 intellectual property titles.



12

Informations on trends

12.1 Subsequent events

This chapter describes the material events that occurred between 11 February 2014, when the Board of Directors closed the financial statements, and the filing date of this reference document (see note 50 of the Appendix to the consolidated financial statements for the fiscal year ended 31 December 2014).

EDF Énergie Nouvelles expands into the Brazilian market

On 25 February 2015, EDF Énergies Nouvelles announced its first step into South America, by setting up a local subsidiary in Brazil, EDF EN do Brasil. EDF Énergies Nouvelles has purchased a portfolio of wind energy development projects from SOWITEC, one of the leading international renewable energy developers, with a total capacity of about 800MW, including 70MW already entitled to sign a regulated Power Purchase Agreement (PPA).

Brazil, the 19th country in which EDF Énergies Nouvelles establishes its presence, is positioned as one of the world's key renewable energies markets. Indeed, Brazil had 5.6GW in wind energy capacity at year-end 2014 and aims to increase this to 22.5GW by 2023.

Modification of the regulatory framework on securing financing of nuclear expenses

The decree No. 2015-331 of 24 March 2015 and an order of the same date made changes to the decree No. 2007-243 of 23 February 2007 and to the order of 21 March 2007 relating to the securing of nuclear expenses financing.

These texts set forth:

- the modification of the formula for calculating the regulatory maximal discount rate on long-term provisions for nuclear expenses, taking into account a sliding average of the TEC 30 index over ten years instead of four;
- the obligation for operators of basic nuclear facilities to increase the assets dedicated to funding their provisions for long-term expenses without

taking into account disbursements nor increases in provisions, as long as the funding rate of these provisions is below 110% (the provisions must always be 100% covered);

- the modification of the maximum fund assets, that can be managed by the same investment service provider, previously set at €1 billion, that can now be brought to 20% of the realisable value of the fund assets;
- the modification of the conditions in which the operators can allocate real estate assets to fund these provisions, on condition that they are buildings for tertiary usage not located on one of their facilities for industrial use.

Flamanville EPR: continuation of vessel qualification tests

On 7 April 2015, AREVA and EDF have informed the French Nuclear Safety Authority (ASN) of a new series of tests starting in April 2015 for the qualification of the Flamanville EPR reactor head and bottom. This series of tests follows chemical and mechanical tests performed on a representative model of the reactor vessel head and bottom.

Following the initial tests, the results communicated to the ASN by AREVA showed that one of the criteria was not met in an area with greater than average carbon content.

The EDF and AREVA teams are working to perform the additional tests as soon as possible, following approval by the ASN on the test conditions, and to provide the safety authority with all the necessary information to demonstrate the safety and quality of the corresponding equipment. In its information note dated 8 April 2015, the ASN specified that it would issue a statement on the testing programme, monitor its proper conduct and process the file that AREVA will present to demonstrate the strength of the Flamanville EPR reactor vessel. It will call upon its technical support, the IRSN, as well as on the permanent Group of experts dedicated to the equipment under nuclear pressure.

In parallel, work continues at the Flamanville EPR.

12.2 Changes in market prices in France in January and February 2015

The price of a barrel of Brent was significantly down from January and February 2014 (\$54.1/bbl on average, a decrease of \$53.8/bbl). It reached its lowest level since March 2009 on 13 January 2015 at \$46.6/bbl. This

fall is mainly due to OPEC countries' will to maintain a high level of production with regard to global demand. Oil abundance on the market thus contributed to this fall.

The price of gas on the French PEG Nord market was €21.7/MWh on average in January and February 2015, down by €3.6/MWh over the comparable period last year. This is mainly explained by high volumes unleashed on the market; indeed, due to low LNG prices on Asian markets, numerous cargos came to the European coasts and led to an untight supply demand balance. Supply by pipelines from the North Sea and Russia remained stable, whereas withdrawals from gas storages helped network balance.

CO₂ prices are up compared to last year (€7.2/t compared to €5.8/t at the same time). This increase is explained by the increasingly likely implementation of the Market Stability Reserve mechanism, that should contribute to supporting the price level of emissions quotas by counterbalancing the excess of quotas on the market.

Coal prices are strongly down compared to last year. On average they stood at \$61.2/t, down by 27% compared to the beginning of 2014. Supply is still abundant faced with a declining demand, especially in Asia. Exports of Russian coal also increased, as coal production has become very competitive in this country due to the depreciation of the ruble against the dollar. Finally, the decline in the price of oil led to a decline in the cost of transport, facilitating cheap exports of coal to the European market.

In January and February 2015 spot prices for electricity amounted in France, on average and at base, to €45.5/MWh (+€6.6/MWh compared to the first two months of the year 2014), to €32.5/MWh in Germany (+€1/MWh) and to €50.2/MWh in England (-€5.4/MWh). In France, this increase is explained mainly by the temperature sensitivity of demand, considering that January and February faced colder weather conditions this year than last year, when they were particularly mild. In England, the price of electricity also followed the price of gas overall.



13

Financial outlook

2014 was an eventful year in developments key to EDF group's future. With the European Commission's approval received for the contract for difference and the Infrastructure UK guarantee (see section 6.3.1.4.3 ("Nuclear New Build business unit")), the Hinkley Point C new nuclear project in the UK has achieved an important milestone in moving towards a final investment decision¹. With the consolidation of Dalkia's assets in France, the Group now has a platform sized to its ambitions in energy services (see section 6.4.1.3.1 ("Dalkia")). The innovative financing solutions from the partnership with Amundi (see section 6.4.1.6 ("Other equity interests")) open the door to an accelerated development of energy transition projects identified by the Group.

In 2015, the Group faces several major challenges to its financial equation:

- industrial challenges involving (i) the existing French nuclear fleet with the roll-out of the so-called "Grand carénage" programme (see section 6.2.1.1.3.1 ("EDF's nuclear fleet")); (ii) the finalisation of agreements and of the financing package for the Hinkley Point C project with a view to a final investment decision; and (iii) the conclusion of the current cycle of Edison gas contracts renegotiations;
- commercial challenges arising from the end of the yellow and green regulated tariffs and from the ARENH formula (see section 6.2.1.2.1.3 ("Regulated sales tariff contracts")); and

- energy policy challenges, with the expected adoption of the French energy transition law.

Against this backdrop, the Group announced on 12 February 2015 the following financial guidance for 2015:

- **Group EBITDA:** organic growth from 0 to 3%²;
- **Net financial debt / EBITDA:** between 2x and 2.5x;
- **Payout ratio, based on net income excluding non-recurring items post-hybrid**³: 55% to 65%.

With regard to operations in France, in 2015 EDF intends to consolidate the measures taken in 2014 to manage the outages' duration for its nuclear fleet. In 2015, EDF scheduled a volume of planned outages equivalent to 2014 and, against this backdrop, is once again targeting a nuclear output between 410 and 415TWh in 2015. Elsewhere, in the United Kingdom, the Group expects an increase in nuclear output in 2015 compared to 2014.

The Group is targeting net investment of around €13 billion for 2015. Essentially, this concerns both the generation fleet in France, with the industrial maintenance programme aiming at sustaining the fleet's performance throughout the period, and investments in maintenance and distribution renovation (see section 6.1.4 ("Investment policy")).

Outlook for 2018

The Group had announced its ambition in February 2014 to achieve positive cash flow after dividends excluding Linky in 2018. Given the trends of 2014 in key components of the cash flow, the Group has put a roadmap in place for meeting this ambition.

Regarding EBITDA, the Group is striving to maximise its gross margin and step up its efforts in controlling operating expenses while taking into account the regulatory environment and changing markets.

The action plan also aims to continue improving working capital requirements, with an objective of €1.8 billion in optimised cash flow in 2018 on a like-for-like basis.

In 2015, the Group's net investment trajectory will peak at around €13 billion. This increase, compared with 2014, is mainly due to the industrial maintenance programme for the French nuclear fleet. Net investment excluding new developments should then gradually recede as projects are commissioned, reaching no more than €11 billion in 2018. The investments for new developments will be financed mostly by reallocating the proceeds from non-strategic assets disposals, the value of which will be optimised throughout the duration of the plan.

These targets and forward-looking statements are based on reasonable assumptions. However, those factors may change or be modified as a result of uncertainties that may arise in the economic, financial, competitive, regulatory and climatic environments. Moreover, if certain of the risks described in Chapter 4 ("Risk factors") of this Reference Document were to materialise, this would have an impact on the Group's business and its capacity to achieve its objectives. In addition, the achievement of these targets and forward-looking statements presupposes successful implementation of the strategy described in section 6.1 ("Strategy") of this Reference Document. Consequently, EDF does not give any undertaking or guarantee concerning the attainment of targets, and the forward-looking information contained in this chapter concerning the Group's financial prospects should not be used to forecast future results.

1. The next steps before a final investment decision include: entering into agreements with the project's strategic and financial partners; approval by the European Commission and the UK government of the waste transfer contract arrangements; setting up the financing guarantee under the "Infrastructure UK" programme; the finalising of the contract for difference (CfD) and contracts with the main suppliers.

2. At a constant scope and exchange rates, and excluding the impacts on 2014 EBITDA of the adjustment in 2012-2013 regulated tariffs.

3. Net income from ordinary activities adjusted to take account of hybrid securities recognised in equity.

14

Administrative, management and supervisory bodies and Executive Management



EDF – Robert Fahl ▲ Patrice Dhumes ▼



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14.1 Board of Directors

14.1.1 Members of the Board of Directors

Members of the Board of Directors before the Shareholders' Meeting of 21 November 2014

Until the Shareholders' Meeting of 21 November 2014 and in accordance with article 6 of law 83-675 dated 26 July 1983 relating to the democratization

First name, surname	Category	Date of appointment	Replacing
Mrs. Sidonie DELALANDE	Director elected by the employees	1 February 2014	Mr. Philippe MAÏSSA
Mrs. Colette LEWINER	Director appointed by the Shareholders' Meeting	11 April 2014	Mrs. Mireille FAUGÈRE
Mr. Régis TURRINI	Director representing the French state	15 September 2014	Mr. David AZÉMA
Mr. Christian MASSET	Director representing the French state	26 September 2014	Mr. Pierre SELLAL

Members of the Board of Directors after the Shareholders' Meeting of 21 November 2014

The Shareholders' Meeting held on 21 November 2014 modified the Company's articles of association in order to implement the new provisions of order 2014-948 of 20 August 2014 relating to governance and transactions on share capital of state-owned companies. In accordance with this order, EDF is now administered by a Board of Directors consisting of three to eighteen members, including members appointed by the Shareholders' Meeting, if applicable on recommendation from the French state in accordance with article 6 of the order, one representative of the French state and one third employee representatives elected in accordance with the provisions of the law of 26 July 1983 (see section 16.2.1.1 ("Members of the Board")).

On 31 December 2014, the EDF Board of Directors accordingly consisted of eighteen members, whose terms of office came into effect on 23 November 2014: eleven appointed by the Shareholders' Meeting, one representative of the French state and six Directors representing the employees.

The terms of office of the following seven Directors were renewed at the Meeting of 21 November 2014: Olivier Appert, Philippe Crouzet, Bruno Lafont, Bruno Léchevin, Marie-Christine Lepetit, Colette Lewiner and Christian Masset.

of the public sector, the Company's Board of Directors consisted of eighteen members divided into three categories. The Board of Directors accordingly consisted of six Directors appointed by the Shareholders' Meeting, six Directors representing the French state appointed by decree and six Directors elected by the employees. Their term of office expired on 22 November 2014.

Between 1 January 2014 and the Shareholders' Meeting of 21 November 2014, the following modifications were made to the membership of the Board of Directors:

Four new Directors were also appointed by the Meeting: Jean-Bernard Lévy, Gérard Magnin, Laurence Parisot and Philippe Varin.

Amongst the eleven Directors appointed or re-appointed at the Meeting of 21 November 2014, five were on recommendation from the French state in accordance with the order of 20 August 2014: Marie-Christine Lepetit, Olivier Appert, Bruno Léchevin, Gérard Magnin and Christian Masset.

Mr. Régis Turrini was appointed representative of the French state to the EDF Board of Directors by order of 21 November 2014¹.

Mr. Jean-Bernard Lévy was appointed Chairman & Chief Executive Officer of EDF by decree of the President of the Republic of France of 27 November 2014 (see section 16.2.1.4 ("Method of Executive Management - Appointment and powers of the Chairman and Chief Executive Officer")).

From the Shareholders' Meeting of 21 November 2014 and until the date of filing of this Reference Document, no modifications were made to the membership of the Board of Directors.

1. Order of the Minister for Finance and Public Accounts and the Minister for the Economy, Industry and Digital Affairs dated 21 November 2014, published in the official gazette of the Republic of France of 22 November 2014.

The table below shows on 31 March 2015 the names of the members of the Board, their ages, principal positions held within or outside the Company, as well as the offices held and expired outside the Company over the past five years.

EDF's Directors are all French nationals.

Directors appointed by the Shareholders' Meeting

Name, surname, date of birth, office or position held within the Company	Current offices/Principal position held outside the Company	Expired offices held outside the Company over the past five years
Jean-Bernard LÉVY 60 years old Chairman and Chief Executive Officer since 27 November 2014 ⁽¹⁾ Director since 23 November 2014 Term expires: Shareholders' meeting called to approve the financial statements for the fiscal year closing 31 December 2018 Chairman of the Strategy Committee	Chairman of the Board of Directors of Edison Chairman of the Board of Directors of EDF Energy Holdings Chairman of the Board of Directors of the EDF Foundation Chairman of the Board of Directors of Institut Mines-Télécom Director of Dalkia Director of EDF Énergies Nouvelles Director of Société Générale Director of Institut Pasteur Director of Vinci	<i>In France:</i> Chairman and Chief Executive Officer of Thales Chairman of JBL Consulting & Investments Chairman of the Supervisory Board of Viroxis Chairman of the Management Board of Vivendi Chairman and Chief Executive Officer of SFR Chairman of the Supervisory Board of Canal+ Group Chairman of the Supervisory Board of Canal+ France Deputy Chairman of GIFAS (French Aerospace Industries Association) Director of DCNS Member of the Advisory Board of A.T. Kearney Paris <i>Abroad:</i> Chairman of the Board of Directors of Activision Blizzard Chairman of the Board of Directors of Global Village Telecom (Holding) GVT Deputy Chairman of the Supervisory Board of Maroc Telecom
Olivier APPERT 65 years old Director since 17 June 2013 Last re-elected: 23 November 2014 Term expires: Shareholders' meeting called to approve the financial statements for the fiscal year closing 31 December 2018 Member of the Nuclear Commitments Monitoring Committee and the Strategy Committee	Principal position held outside the Company: Chairman & Chief Executive Officer of IFP Énergies Nouvelles Other offices and positions held: Chairman of the French Energy Council (<i>Conseil Français de l'Énergie</i>) Member of the National Academy of Technologies of France Director of Technip Director of CGG	Director of Storengy Director of the <i>Institut de Physique du Globe de Paris</i> (IPGP – Paris Institute of Earth Physics)
Philippe CROUZET 58 years old Director since 23 November 2009 Last re-elected: 23 November 2014 Term expires: Shareholders' meeting called to approve the financial statements for the fiscal year closing 31 December 2018 Chairman of the Nuclear Commitments Monitoring Committee and member of the Audit Committee	Principal position held outside the Company: Chairman of the Management Board of Vallourec Other offices and positions held: <i>In France:</i> Chairman of Vallourec Tubes (formerly Vallourec & Mannesmann Tubes) Director of the Théâtre National de l'Opéra-Comique and the Théâtre de la Ville (Paris). Deputy Chairman of Institut de l'Entreprise <i>Abroad:</i> Director of Vallourec Tubos do Brasil S.A. (formerly V & M do Brasil)	<i>In France:</i> Chairman and member of the Supervisory Board of V&M France Director of Vallourec Oil & Gas France <i>Abroad:</i> Director of Finalourec

(1) Mr. Jean-Bernard Lévy was appointed Interim Chairman and Chief Executive Officer from 23 November 2014, by ministerial decisions of 21 November 2014.

Name, surname, date of birth, office or position held within the Company	Current offices/Principal position held outside the Company	Expired offices held outside the Company over the past five years
Bruno LAFONT 58 years old Director since 20 May 2008 Last re-elected: 23 November 2014 Term expires: Shareholders' meeting called to approve the financial statements for the fiscal year closing 31 December 2018 Chairman of the Appointments and Remunerations Committee	Principal position held outside the Company: Chairman and Chief Executive Officer of Lafarge Other offices and positions held: <i>In France:</i> Director of ArcelorMittal Chairman of MEDEF's Sustainable Development Centre <i>Abroad:</i> Director of Lafarge Shui on Cement Chairman of the European Round Table "Energy and Climate" group Member of the World Business Council for Sustainable Development (WBCSD) Executive Committee	<i>In France:</i> Chairman of the French <i>Entreprises pour l'Environnement</i> (EPE) association <i>Abroad:</i> Director of Lafarge India
Bruno LÉCHEVIN 63 years old Director since 6 May 2013 Last re-elected: 23 November 2014 Term expires: Shareholders' meeting called to approve the financial statements for the fiscal year closing 31 December 2018 Member of the Ethics Committee	Principal position held outside the Company: Chairman and Chief Executive Officer of the French Environment and Energy Management Agency (ADEME) Other offices and positions held: Deputy chairman of Électriciens sans frontières (Electricians without borders)	General Delegate to the French national energy mediator Special advisor to the Chairman of the French Energy Regulation Commission (CRE)
Marie-Christine LEPETIT 53 years old Director since 7 May 2012 Last re-elected: 23 November 2014 Term expires: Shareholders' meeting called to approve the financial statements for the fiscal year closing 31 December 2018 Chair of the Audit Committee and member of the Nuclear Commitments Monitoring Committee	Principal position held outside the Company: Head of the Inspectorate General of Finance at the Ministry for the Economy, Industry and Digital Affairs and the Ministry for Finance and Public Accounts Other offices and positions held: Director of the Fondation Nationale des Sciences Politiques	

Name, surname, date of birth, office or position held within the Company	Current offices/Principal position held outside the Company	Expired offices held outside the Company over the past five years
<p>Colette LEWINER 69 years old</p> <p>Director since 11 April 2014</p> <p>Last re-elected: 23 November 2014</p> <p>Term expires: Shareholders' meeting called to approve the financial statements for the fiscal year closing 31 December 2018</p> <p>Chair of the Ethics Committee and member of the Audit Committee and the Appointments and Remunerations Committee</p>	<p>Principal position held outside the Company: Professional administrator</p> <p>Other offices and positions held:</p> <p><i>In France:</i> Non-executive chair of TDF (non-listed public company (SAS)) Director of Bouygues group Director of Eurotunnel Director of Nexans Member of the Strategic Research Committee reporting directly to the French Prime Minister</p> <p><i>Abroad:</i> Director of TGS Nopec Director of Crompton Greaves</p>	<p>Director of La Poste Director of Lafarge</p>
<p>Gérard MAGNIN 64 years old</p> <p>Director since 23 November 2014</p> <p>Term expires: Shareholders' meeting called to approve the financial statements for the fiscal year closing 31 December 2018</p> <p>Member of the Ethics Committee</p>	<p>Principal position held outside the Company: Member of the Franche-Comté Economic, Social and Environmental Council Self-employed</p>	<p>General Delegate for the European Energy Cities network</p>
<p>Christian MASSET 58 years old</p> <p>Director since 26 September 2014</p> <p>Last re-elected: 23 November 2014</p> <p>Term expires: Shareholders' meeting called to approve the financial statements for the fiscal year closing 31 December 2018</p> <p>Member of the Strategy Committee</p>	<p>Principal position held outside the Company: General Secretary at the Ministry for Foreign Affairs and International Development</p> <p>Other offices and positions held:</p> <p>Director on the Board of Directors of AREVA Director of France Médias Monde Director of the Agence Nationale des Titres Sécurisés (French national secure identity document agency) Member of the Board of Directors of the Commission de récolement des dépôts d'œuvres d'art (Commission for the Verification of the Registration of Works of Art) Director of the Etablissement de préparation et de réponse aux urgences sanitaires (Organisation for preparing for and responding to health emergencies) Director of ENA (National School of Administration) Director of the Institut Français Member of the Atomic Energy Committee Member of the High Council of the Institut du Monde Arabe (Arab World Institute)</p>	<p>Chairman of the Board of Directors of the Agency for French Education Abroad Director of France Expertise Internationale Director of the Institut Français Director of the Agence Française de Développement (French development agency) Director of the Fondation France-Israel Member of the Supervisory Board of AREVA</p>

Name, surname, date of birth, office or position held within the Company	Current offices/Principal position held outside the Company	Expired offices held outside the Company over the past five years
Laurence PARISOT 55 years old Director since 23 November 2014 Term expires: Shareholders' meeting called to approve the financial statements for the fiscal year closing 31 December 2018 Member of the Audit Committee and the Strategy Committee	Principal position held outside the Company: Deputy Chair of the Management Board of IFOP group Other offices and positions held: Director of BNP Paribas Member of the Supervisory Board of Michelin Chair of the Scientific Council of Fondapol Member of the Economic, Social and Environmental Council	Director of COFACE Member of the Supervisory Board of Fives
Philippe VARIN 62 years old Director since 23 November 2014 Term expires: Shareholders' meeting called to approve the financial statements for the fiscal year closing 31 December 2018	Principal position held outside the Company: Chairman of the Board of Directors of AREVA Other offices and positions held: Director of Saint-Gobain Special representative of the Ministry for Foreign Affairs and International Development for ASEAN countries (Association of South-East Asian Nations) Chairman of the Cercle de l'Industrie	<i>In France:</i> Chairman of the Management Board of Peugeot SA Chairman of the Board of Directors of Peugeot Citroën Automobiles SA Chairman of the Board of Directors of GEFCO SA Director of Banque PSA Finance SA Director of Faurecia SA Member of the Supervisory Board of AREVA <i>Abroad:</i> Director of PCMA Holding BV Director of BG Group Plc.

Director representing the French state

Name, surname, date of birth, office or position held within the Company	Current offices/Principal position held outside the Company	Expired offices held outside the Company over the past five years
Régis TURRINI 56 years old Director since 15 September-2014 Last re-elected: 23 November-2014 Term expires: Shareholders' meeting called to approve the financial statements for the fiscal year closing 31 December-2017 Member of the Strategy Committee and the Appointments and Remunerations Committee	Principal position held outside the Company: Commissioner for State holdings Other offices and positions held: Director of BPI Groupe Director of Renault Director of Thales	<i>In France:</i> Director of SFR Member of the Supervisory Board of Canal+ Group <i>Abroad:</i> Director of Activision Blizzard Member of the Supervisory Board of MAROC TELECOM Director of Universal Music Group Director of GVT

Directors elected by the employees

Name, surname, date of birth, office or position held within the Company	Current offices/Principal position held outside the Company	Expired offices held outside the Company over the past five years
Christine CHABAUTY 43 years old Commercial attaché to the EDF Trading Division Key Accounts department Director since 23 November-2009 Last re-elected: 23 November-2014 Term expires: 22 November-2019 Member of the Ethics Committee	Member of an elected industrial tribunal (<i>conseiller prud'homme</i>)	
Jacky CHORIN 55 years old Representative of the Human Resources Manager of the EDF Generation-Engineering Division Director ⁽¹⁾ since 23 November-2014 Term expires: 22 November-2019 Member of the Audit Committee, the Strategy Committee and the Ethics Committee	Member of the Economic, Social and Environmental Council (Economic Activities Section) Member of the <i>Conseil Supérieur de l'Énergie</i> (French higher energy council) Member of the <i>Conseil national du débat sur la transition énergétique</i> (French national council for discussion on the energy transition) then the <i>Conseil national de la transition écologique</i> (French national council for the ecological transition)	Representative of the Force Ouvrière trade union to the Board of IRES (French institute for economic and social research), a multi-union research body reporting to the French Prime Minister Federal Secretary of the FO Energies & Mines trade union, in charge of the Skills Centre
Marie-Hélène MEYLING 54 years old Senior Engineer at the EDF Upstream/Downstream Optimisation and Trading Division Director since 1 September-2011 Last re-elected: 23 November-2014 Term expires: 22 November-2019 Member of the Audit Committee, Nuclear Commitments Monitoring Committee, Strategy Committee and Ethics Committee	Substitute member of the <i>Conseil Supérieur de l'Énergie</i> (French Higher Energy Council) as representative of employees in the Electricity and Gas Industries for the CFDT union	

(1) Jacky Chorin was Director of EDF (EPIC then SA) from September 2004 to November 2009.

Name, surname, date of birth, office or position held within the Company	Current offices/Principal position held outside the Company	Expired offices held outside the Company over the past five years
<hr/>		
Jean-Paul RIGNAC 52 years old		
Research Engineer at the EDF Research and Development Division		
Director since 7 November-2007		
Last re-elected: 23 November-2014		
Term expires: 22 November-2019		
Member of the Strategy Committee		
<hr/>		
Christian TAXIL 39 years old	Elected to the board of the <i>Syndicat mixte d'électricité, de gaz et des télécommunications du Val-d'Oise</i> (SMDEGTVO) (Val-d'Oise joint union of electricity, gas, and telecommunications)	General secretary of the <i>Fédération CFE-CGC Énergies</i> union Local councillor in Courdimanche (95) Deputy mayor in Courdimanche Representative to the French Higher Council of Electricity and Gas, now the Higher Energy Council
Representative of the Human Resources Division		
Director since 23 November-2014		
Term expires: 22 November-2019		
Member of the Audit Committee and the Strategy Committee		
<hr/>		
Maxime VILLOTA 55 years old		
Purchasing policy coordinator at the finance and industrial relations department of the EDF nuclear power plant (Tricastin)		
Director since 13 December-2006		
Last re-elected: 23 November-2014		
Term expires: 22 November-2019		
Member of the Audit Committee, Nuclear Commitments Monitoring Committee and Appointments & Remunerations Committee		
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14.1.2 Personal information on members of the Board of Directors

Directors appointed by the Shareholders' Meeting

Jean-Bernard Lévy: a former student of *École polytechnique* (graduating in 1973) and Télécom Paris Tech, Jean-Bernard Lévy, 60 years old, began his career at France Télécom in 1979 as a works engineer at the Angers Division. In 1982, he became responsible for managing executive managers and HR budgets at head-office, then assistant to the head of HR. In 1986, he was appointed Technical Advisor to the office of Gérard Longuet, minister for Postal Services and Telecommunications. From 1988 to 1993, Jean-Bernard Lévy managed the telecommunications satellite activity of Matra Espace, now Matra Marconi Space. In 1993 and 1994, he ran the office of Gérard Longuet, minister for Industry, Postal Services and Communications and foreign Trade. In 1995, he was appointed Chairman & Chief Executive Officer of Matra Communication. In 1998, he joined Oddo & Cie as Chief Executive Officer then Managing Partner. In summer 2002, Jean-Bernard Lévy joined Vivendi. He served as its Chief Executive Officer until April 2005 and became Chairman of its Management Board in April 2005, until June 2012. From December 2012 to November 2014, he was Chairman and Chief Executive Officer of the Thales defence and aerospace group. Since 27 November 2014¹, he has been Chairman and Chief Executive Officer of the EDF group. Jean-Bernard Lévy is married with 4 children and is an Officer of both the *Légion d'honneur* and *Ordre national du mérite*.

Olivier Appert: a former student of the *École polytechnique* and a *Corps des Mines* engineer, Olivier Appert, 65 years old, began his career at the *Service des Mines* in Lyon. After having held a range of positions at the Ministry for Industry and the Prime Minister's office, he was then appointed Deputy Director of the office of the Minister for Industry from 1984 to 1986. In 1987 he became Director of strategy at Télécommunications Radioélectriques et Téléphoniques (TRT). Appointed in 1989 as Director of Hydrocarbons at the Ministry for Industry, in 1994 Olivier Appert joined the General Directorate of IFP where he was in charge of research and development. In 1998, he became Chief Executive of Isis, a technological holding whose majority shareholder was IFP. In 1999, he became Director of Long-term Cooperation and analysis of energy policies at the International Energy Agency (IEA). Since 2003, he has been Chairman and Chief Executive Officer of IFP, which became IFP Énergies Nouvelles (IFPEN) in July 2010. He has also been a Director of Technip and CGG since 2003. He has also been Chairman of the *Conseil Français de l'Énergie* (French Energy Council) since 2010 and a member of the National Academy of Technologies of France since 2011. Olivier Appert has been a Director of EDF since June 2013.

Philippe Crouzet: a graduate of the *Institut d'études politiques de Paris* (Paris Institute of Political Studies) and a former student of the *École nationale d'administration* (ENA), Philippe Crouzet, 58 years old, is a former Counsel (*maître des requêtes*) at the French Council of State. He spent most of his career at Saint-Gobain, which he joined in 1986. He served successively as Head of Corporate Planning, Chief Executive Officer of Papeteries de Condat, General Manager for Spain and Portugal and Head of the Industrial Ceramics Branch. From 2000 to 2004, he held the position of Vice President for Finance, Purchasing and Information Systems. He was then appointed Group Vice President in charge of the Building Distribution Division, before joining Vallourec, the world leader in steel tubes for the energy markets. He has been a member of the Supervisory Board of Vallourec since April 2008 and became Chairman of the Group Management Board in April 2009. He is also Deputy Chairman of the Institut de l'Entreprise and Director of

the *Théâtre national de l'Opéra-Comique* and the *Théâtre de la Ville* (Paris). Philippe Crouzet has been a Director of EDF since November 2009.

Bruno Lafont: a graduate of the *École des hautes études commerciales* (HEC) and a former student of the *École nationale d'administration* (ENA), Bruno Lafont, 58 years old, began his career with the Lafarge Group in 1983, serving in several positions in the Corporate Finance Division and internationally. In 1995, he became Group Vice President Finance and joined the Executive Committee. In 1998, he became Chairman of the plaster business. In 2003 he was appointed Group Deputy Chief Executive Officer and then Director in 2005. Appointed Chief Executive Officer in 2006, he became Chairman and Chief Executive Officer of Lafarge in 2007. He has been a Director of ArcelorMittal since 2011. He has been a member of the World Business Council for Sustainable Development (WBCSD) Executive Committee since November 2013 and Chairman of the MEDEF Sustainable Development Division since February 2014. Bruno Lafont has been a Director of EDF since May 2008.

Bruno Léchevin: holder of a postgraduate degree from the *Institut d'études politiques de Paris*, Bruno Léchevin, 63 years old, began his career at EDF and subsequently held various union roles. Federal secretary of the CFDT Gaz-Électricité federation from 1983 to 1988, he was then its General Secretary in 1988 and member of the national board of the CFDT union association from 1988 to 1997 then Secretary of the Chimie-Énergie union (1997-1999). At the same time, he was member of the *Haut Conseil du secteur public* (High Council of the Public Sector) from 1992 to 1999. Appointed in 2000, for two years, commissioner of the French Energy Regulation Committee (CRE), his term of office was extended for six years. General Delegate of the National Energy Mediator from March 2008 to March 2013, he was simultaneously Special Advisor to the Chairman of the French Energy Regulation Commission. Bruno Léchevin is also Deputy Chairman, founder member of *Électriciens Sans Frontières* (Electricians without borders), an organisation that works to provide access to energy and water in developing countries. Its principal areas of intervention are energy markets, regulation, energy efficiency and protecting energy consumers. Appointed as a member of the Board of Directors of the French Environment and Energy Management Agency (ADEME) in February 2013, he became its Chairman in March 2013. Bruno Lechevin has been a Director of EDF since May 2013.

Marie-Christine Lepetit: a former student of the *École polytechnique* and the *École nationale d'administration* (ENA), Marie-Christine Lepetit, 53 years old, joined the Inspectorate General of Finance in 1987, where she held auditing and advisory positions. Then in 1991, she was recruited by Jean Lemierre to the Directorate General for Tax in order to introduce management control. In January 1995, she was placed in charge of synthesis work at the tax law department in before joining the office of the Prime Minister, Alain Juppé, as technical advisor in tax matters and macroeconomic studies then taxation and SMEs from 1995 to 1997. She continued her career at the General Directorate for Tax, working to improve service quality (pre-filled tax returns, remote procedures, certification). She was appointed Director of Tax Law at the Ministry for the Economy and Finance in 2004 and used this role to push through tax reforms from 2004 to 2012. At the same time, she co-chaired the working group on reform of the financing of social welfare in 2006 and co-signed the conference of experts report on the "energy-climate contribution" chaired by Michel Rocard. She also sat on the Local Authorities Reform Committee chaired by Édouard Balladur as executive Director and was a member of the Public Life Renewal and Ethics Committee chaired by Lionel Jospin. She has been Head of the Inspectorate General of Finance at the Ministry for the Economy, Industry and Digital Affairs and the Ministry for Finance and Public Accounts since March 2012. Director of the *Fondation nationale des sciences politiques* (French national political science foundation) since 2013, Marie-Christine Lepetit has been a Director of EDF since May 2012.

1. Mr. Jean-Bernard Lévy was appointed Interim Chairman and Chief Executive Officer from 23 November 2014, by ministerial decisions of 21 November 2014.

Colette Lewiner: a former student of the *École normale supérieure* and holder of an *agrégation* degree in physics and Doctorate in science, Colette Lewiner, 69 years old, joined Électricité de France in 1979. In 1989 she created the Development and Commercial Strategy Division, accordingly becoming the first woman appointed Executive Vice President at EDF. From 1992 to 1998, she was Chair and Chief Executive Officer of SGN, a subsidiary of AREVA. In 1998, she joined Capgemini to create then manage until June 2012 the Global Energy and Utilities sector. Since July 2012, she has been, as Manager of Cowin, a Consultant in the energy field. She has also been non-executive Chair of TDF (SAS) since 2010, a member of the National Academy of Technologies of France and member of the Strategic Research Committee reporting directly to the French Prime Minister since 2014. She is a Director of Bouygues group as well as Eurotunnel, Nexans, TGS Nopec (Norway) and Crompton Greaves (India). Colette Lewiner has been a Director of EDF since April 2014.

Gérard Magnin: a graduate in Economic Sciences from the University of Besançon, holder of a diploma in Electrical Engineering from the University of Belfort and a higher studies diploma in Economic Sciences from University Lyon II, Gérard Magnin, 64 years old, taught Economic and Social Sciences for eight years. He was then, from 1985 to 1994, Regional Delegate of the French Environment and Energy Management Agency (ADEME) for the Franche-Comté region. Founder in 1990 of the Energy Cities European city network, Gérard Magnin was its General Delegate from 1994 to June 2014. Since October 2013, he has been a member of the Franche-Comté Economic, Social and Environmental Council. Gérard Magnin has been a Director of EDF since 23 November 2014.

Christian Masset: a former student of the *École nationale d'administration* (ENA), graduate of *Institut d'études politiques de Paris* and *École supérieure des sciences économiques et commerciales* (ESSEC), Christian Masset, 58 years old, began his career at the Political Affairs Division of the Ministry for Foreign Affairs in 1984. In 1987, he was appointed First Secretary to the French Embassy in London, before joining, in 1989, the Economic Affairs Division of the Ministry for Foreign Affairs in Paris. From 1991 to 1994, he was Chief Advisor to the French Embassy in Pretoria, then, from 1994 to 1997, Advisor to the French permanent representation to the European Union. From 1997 to 1999, he served as Technical Advisor to the office of the Minister for Foreign Affairs. Diplomatic advisor at the French Embassy in Rome between 1999 and 2002, he was France's deputy permanent representative to the European Union between 2002 and 2007, then was appointed Director of Economic and Financial Affairs at the Ministry for Foreign Affairs. In 2009, he was appointed Director of the General Directorate for Globalisation, Development and Partnerships. Accordingly, he held the position of Chairman of the Board of Directors of the Agency for French Education Abroad as well as of the public interest group France Coopération Internationale. From January 2012 to July 2014, he was French Ambassador to Japan. Since 1 August 2014, he has been General Secretary at the Ministry for Foreign Affairs and International Development. Christian Masset has been a Director of EDF since September 2014.

Laurence Parisot: holder of a Masters in public law from University Nancy II and a MAS in Political Studies from the *Institut d'études politiques de Paris*, Laurence Parisot, 55 years old, began her career in 1983 working with Alain Lancelot, Chairman of CEVIPOF (Centre for the Study of French Political Life). In 1985, she became survey manager at the Louis Harris Survey Institute, of which she became Chief Executive Officer in 1986. In 1990, she joined the IFOP Survey and Market Study Institute and was appointed as its Chair and Chief Executive Officer. She is now Deputy Chair of the Management Board of the IFOP group. In 2005, she was elected Chair of MEDEF and re-elected in 2010. She is also a Director of BNP Paribas and a member of the Supervisory Board of Michelin. She is a member of the Economic, Social and Environmental Council and chairs the Scientific Council of Fondapol. Laurence Parisot has been a Director of EDF since 23 November 2014.

Philippe Varin: a former student of the *École polytechnique* and the *École des Mines* in Paris, Philippe Varin, 62 years old, joined the Pêchiney group in 1978 as a researcher. He subsequently held a range of management positions within this Group (management control, strategy, project management) before being appointed in 1995 Director of the Rhenalu Division then Chief Executive Officer of the Aluminium Division and member of the Group Executive Committee in 1999. In 2003, he joined the Anglo-Dutch steel group Corus as Chief Executive Officer. Appointed Chairman of the Management Board of PSA Peugeot Citroën in June 2009, he left the Group in June 2014. He is currently Chairman of the Board of Directors of AREVA and Director of Saint-Gobain. Philippe Varin has been a Director of EDF since 23 November 2014.

Director, Representative of the French state

Régis Turrini: a graduate in literature and law as well as from the *Institut d'études politiques de Paris*, a former student of ENA, Régis Turrini, 56 years old, is a lawyer at the Paris Bar. He began his career as Counsel at the Administrative Court and Administrative Court of Appeal, before joining first Cleary Gottlieb Steen & Hamilton (1989-1992) then Jeantet & Associés (1992-1995), as a business lawyer. In 1995, he joined Arjil & Associés Banque (Lagardère group) as Advisor to Management, then Manager and finally, from 2000, Managing Partner. Régis Turrini joined Vivendi in January 2003, as Director of Sales, Mergers & Acquisitions, Director of Strategy and Development and Member of the Executive Committee. He has been Commissioner to State holdings, reporting to the Minister for the Economy, Industry and Digital Affairs and the Minister for Finance and Public Accounts since September 2014. Director of BPI Groupe, Renault and Thales since September 2014, Régis Turrini has also been a Director of EDF since September 2014.

Directors elected by the employees

Christine Chabauty: a graduate in Law, Christine Chabauty, 43 years old, gained professional experience in a legal environment and in 2000 joined EDF's Customer Division as commercial attaché to the Key Accounts department. She now works for the Key Accounts Division's Marketing and Operations Department. Since December 2008, she has also served as a member of an elected industrial tribunal (*conseiller prud'hommal*). Sponsored by the CGT union, re-elected in May 2014, she has been a Director of EDF since November 2009.

Jacky Chorin: a graduate from the *Institut d'études politiques de Paris* and a Doctor of Law, Jacky Chorin, 55 years old, began his career at EDF as a legal specialist at the Corporate Office of the Equipment Division in 1983. He is currently representative of the Human Resources Manager at the EDF Generation & Engineering Division. A member of the Economic, Social and Environmental Council (Economic Activities Section) since 2010 and of the French Higher Energy Council since 2012, he is also a member of the French National Ecological Transition Council. Sponsored by the Force Ouvrière (FO) trade union, Director of EDF from September 2004 to November 2009, he was re-elected in May 2014. Jacky Chorin has been a Director of EDF since 23 November 2014.

Marie-Hélène Meyling: a graduate in communication (University Paris V), Marie-Hélène Meyling, 54 years old, joined EDF in 1982 where she has held a range of communication positions. She then focused on activities relating to the opening of the electricity market as well as support for renewable energy. From 2008 to 2011, she was a member of the EDF Central Works Council. She is currently Senior Engineer at the EDF Upstream/Downstream Optimisation and Trading Division. In November 2012, Marie-Hélène Meyling also obtained the Company Director Certificate jointly issued by the *Institut d'études politiques de Paris* and the *Institut français des administrateurs* (French Institute of Directors). Sponsored by the CFDT union, re-elected in May 2014, Marie-Hélène Meyling has been a Director of EDF since September 2011.

Jean-Paul Rignac: holder of a doctorate in energy from the *Institut national polytechnique* in Toulouse, Jean-Paul Rignac, 52 years old, served as secretary of EDF Research & Development's joint generation committee for five years. Since March 1991, he has been a research engineer at EDF's Research & Development Division (Renardières Centre), and currently works on energy efficiency in industrial buildings. Sponsored by the CGT union, re-elected in May 2014, Jean-Paul Rignac has been a Director of EDF since November 2007.

Christian Taxil: a graduate from the *École des Mines* in Douai, Christian Taxil, 39 years old, began his career in 1999 at EDF Gaz de France Distribution in customer, local authority and concession management positions. From 2004 to 2008, he was in charge of electricity and gas industry social dialogue on the Fédération CFE-CGC Énergies union's management team. In 2008, he

joined EDF and began working at the EDF group Auditing Division before being elected, from June 2009 to September 2014, General Secretary of the Fédération CFE-CGC Énergies union. Sponsored by the CFE-CGC union, he was elected in May 2014. Christian Taxil has been a Director of EDF since 23 November 2014.

Maxime Villota: 55 years old, joined EDF in 1981. Maxime Villota began his career at the Dampierre-en-Burly nuclear power plant, before joining the Tricastin nuclear power plant in 1987, where he is currently purchasing policy coordinator. He is a member of the *Fédération CGT Mines Énergie* trade union. Sponsored by the CGT union, re-elected in May 2014, Maxime Villota has been a Director of EDF since December 2006.

14.2 Executive Committee

14.2.1 Members of the Executive Committee

The Chairman and Chief Executive Officer is assisted by an Executive Committee which includes representatives of all the Group's lines of business (see section 16.3 ("Bodies created by Executive Management")).

On the filing date of this Reference Document, the members of the Executive Committee were as follows:

Names	Position
Jean-Bernard Lévy	Chairman and Chief Executive Officer
Antoine Cahuzac	Group Senior Executive Vice President, Renewable Energies
Henri Lafontaine	Group Senior Executive Vice President, Customers, Services and Regional Action
Marianne Laigneau	Group Senior Executive Vice President, Human Resources
Bruno Lescœur	Group Senior Executive Vice President, Gas and Italy
Dominique Minière	Group Senior Executive Vice President, Nuclear and Thermal Power Plants Division
Thomas Piquemal	Group Senior Executive Vice President, Group Finance
Vincent de Rivaz	Group Senior Executive Vice President
Simone Rossi	Group Senior Executive Vice President, International Division
Pierre Todorov	Group Senior Executive Vice President, Group General Secretary
Philippe Torrior	Group Senior Executive Vice President, Innovation, Strategy and Planning
Xavier Ursat	Group Senior Executive Vice President, New Nuclear Projects and Engineering

Alexandre Perra is Secretary of the Executive Committee.

14.2.2 Personal information on members of the Executive Committee

Antoine Cahuzac, 60 years old, a graduate of the *École polytechnique* and *École de la météorologie nationale*. After a first engineering position at the Ministry for Transport, Antoine Cahuzac joined EDF's Study and Research Department in 1982. In 1985, he joined the swaps department at Crédit Commercial de France (CCF), before becoming its manager in 1988. After spending three years at Vinci, where he was chief advisor to the company's CEO, he returned to CCF in 1994 where he held a range of successive positions at CCF's Investment Bank then HSBC from 2000 at the same time

as being, for many years, joint manager of the energy and utility sector for the HSBC group. Before returning to France in 2008 to monitor MSEs for the Chief Executive Officer of HSBC France, he was based in Dubai, for nearly 3 years to monitor the MENAT region for the Investment Bank. From May 2011, he managed HSBC's private banking activities in France. He was also a member of HSBC France's management board for a number of years. Antoine Cahuzac has been Chief Executive Officer of EDF Énergies Nouvelles since 2012 and Group Senior Executive Vice President, Renewable Énergies since March 2015. He is also a Director of EDF Luminus and EDF Trading.

Henri Lafontaine, 58 years old, a graduate of the Supélec Engineering School and holder of a Master's in Mathematics. Henri Lafontaine joined EDF in 1983 where he had a wide range of responsibilities in the Distribution Division. In 1997, he became Deputy Executive Vice President of EDF GDF

Services Corse, then Director of EDF GDF Services Marseille in 2000. In 2002, he was appointed as Chief Executive Officer of Edenor, the largest distributor of electricity in Argentina with 25% of the market. Edenor was one of the EDF group's main international subsidiaries. In 2005, he went on to become Director of the project to create a subsidiary for Distribution, which led to the creation of ERDF, then Director of EDF Island Power Systems in 2007, before being made Director of EDF Entreprises in the Commerce Division in 2010. In September 2012, he was appointed Senior Executive Vice President. In July 2013, Henri Lafontaine was appointed Group Senior Executive Vice President responsible for Commerce, Optimisation and Trading as well as Island Energy Systems. He has been Group Senior Executive Vice President, Customers, Services and Regional Action since March 2015. He manages the Operational Division of EDF Commercial Division and supervises Dalkia, TIRU and Citelum. He is also Chairman of Citelum and Director of several companies: EDF Energy, Fenice, EDF International and of the EDF Foundation.

Marianne Laigneau, 50 years old, a former student of *École normale supérieure de Sèvres* and of the *École nationale d'administration* (ENA), holder of the *agrégation* degree in classics and a graduate of the *Institut d'études politiques de Paris*. Marianne Laigneau is a member of the French Council of State. After leaving ENA, Marianne Laigneau joined the French Council of State and served, amongst other roles, as a legal advisor to the Ministry for Cooperation, project Director for international cooperation at the State Reform Commission and a member of the United Nations electoral mission to Mozambique and the EU electoral mission to Gaza. In 1997, she was assigned to the Ministry for Foreign Affairs and served as First Councillor to the French Embassy in Tunis, where she was in charge of negotiations, political, community and legal affairs and communications. From 2000 to 2002, as a member of the French Council of State, she was specifically responsible for the mission to the Director of ENA, legal advisor to the Ministry for Culture, and senior lecturer in public law at ENA. In 2003, Marianne Laigneau joined Gaz de France as Head of the Institutional Affairs Department at Headquarters, and then in September 2004 became Representative for Public Affairs. She joined the EDF group in 2005 as Legal Counsel, then served as Deputy General Secretary, and in 2007 became General Secretary and member of the Executive Committee. Marianne Laigneau has been EDF group Executive Vice President, Human Resources since 1 December 2010. She is also a member of the General Board of the Bank of France and Chair of the ENS Ulm alumni association.

Bruno Lescœur, 61 years old, a former student of the *Ecole Polytechnique* (1973) and a graduate of the *École Nationale de la Statistique et de l'Administration Économique* (ENSAE) and of the *Institut d'Études Politiques de Paris* (1978). He joined EDF's General Economic Studies Department in 1978 and was responsible for pricing matters. He became head of the Mulhouse combined distribution subdivision (EDF and GDF) in 1987, before transferring to London in 1990, where he negotiated and established EDF's position in the new organisation of the British electricity industry. He was Director of EDF GDF Services Var from 1991 to 1993, before joining the finance division of EDF as Deputy Finance Officer, with responsibility for cash management, financing, mergers and acquisitions in and outside France. In 1998, he was appointed Chairman of London Electricity, which he developed into what became EDF Energy. From early 2002 to the end of 2004, he was Director of Generation, Engineering and Group Trading, at a time when EDF was restructuring its fossil-fired power plants, and chose to build the new EPR nuclear power station in Flamanville. In December 2004, he was appointed Vice President of EDF and member of the Executive Committee, with responsibility for international matters. Among other things, he negotiated EDF's withdrawal from Latin America and was an advocate of EPR internationally, both in the USA (2007 agreement with Constellation) and in China (Taishan). In 2008, as head of EDF's gas activities, he negotiated the cooperation agreement with Gazprom (including EDF's involvement in project South Stream), and led the development of the Dunkirk re-gasification terminal, in partnership with TOTAL and Fluxys. In 2010, as a member of the Group's newly formed Management Committee, he also assumed responsibility for Italy and Southern Europe. In April 2011 he was appointed CEO of Edison, which EDF would subsequently take over, and that became the group's gas platform. He was then confirmed as CEO of Edison, head of the EDF group Gas and in charge of activities in Italy and Southern Europe. Since March 2015, Bruno Lescœur has been Group

Senior Executive Vice President, Gas and Italy. He is also the chairman of the *Observatoire Méditerranéen de l'Énergie*.

Dominique Minière, 56 years old, graduate of the *École des Mines de Paris* (1978). He joined EDF in 1982 as a young engineer and quickly took on responsibilities within the "Maintenance" department of the division in charge of the operation of French nuclear and thermal power plants; nearly a third of the fleet currently in operation was commissioned during this period. From 1986 to 1989, he participated in the start-up of the Golfech nuclear power plant (Tarn-et-Garonne), then, from 1993 to 1997, in the start-up of the Daya Bay nuclear power plant in China. In 1997, he moved to the Cattenom power plant (Moselle) where he became manager in 1999. From 2002 to 2013, he successively occupied the positions of Deputy Director then Director of the Nuclear Generation Division, which supervises EDF's 58 :nuclear generation units in France. In March 2013, he became Deputy Director of the Generation & Engineering Division, with responsibility for EDF's whole nuclear, thermal and hydraulic electrical generation fleet. He has been Group Senior Executive Vice President, Nuclear and Thermal Power Plants Division since March 2015.

Thomas Piquemal, 45 years old, graduate of the *École supérieure des sciences économiques et commerciales* (ESSEC). Thomas Piquemal began his career in 1991 with audit firm Arthur Andersen, where he specialised in restructuring companies in difficulty. In 1995, he joined the Mergers & Acquisitions Department of Lazard Frères bank, becoming managing partner five years later. In this role, he was involved in several major financial and strategic transactions in the utilities, distribution, financial services and real estate sectors in connection with capital restructuring, privatisation and IPOs. In 2008, he took over responsibility in London for the strategic partnership signed between Lazard and the American investment fund Apollo for investment in Europe. In January 2009, Thomas Piquemal joined Veolia Environnement as Senior Executive Vice President in charge of Finance and joined the group's Executive Committee. In this post, he devoted his efforts to debt reduction, in particular through an asset disposal program. Committed to the fight against social exclusion, in 2008, together with three-time world boxing champion Christophe Tiozzo, Thomas Piquemal founded the *Académie Christophe-Tiozzo*, whose mission is to promote the social and occupational integration of young people from deprived areas. Thomas Piquemal is currently Group Senior Executive Vice President, Group Finance.

Vincent de Rivaz, 61 years old, graduate in Engineering from the *École nationale supérieure d'hydraulique* in Grenoble. Vincent de Rivaz began his career with the EDF group in 1977 as hydraulic engineer in the External Engineering Department, participating in the building of hydroelectric works in Africa, Guyana and New Caledonia. From 1985 to 1991 he was responsible for the Far East Region at the International Division and contributed to the Group's development in China in the nuclear, thermal, hydraulic and distribution sectors. From 1991 to 1994 he was Director of the EDF National Centre for Hydraulic Equipment, responsible for engineering on the EDF group's hydraulic projects, in France and abroad, and specifically managed the launch of the Nam Theun 2 project in Laos. In 1995, he was appointed Deputy Director of the International Division, and then became Director of Major Projects of this Division. In this capacity, he contributed to the development of EDF's investment projects in IPPs, specifically in China, Egypt, Mexico, Vietnam and Laos, as well as acquisitions of companies in Poland, Switzerland and England, including London Electricity in 1998. In 1999, Vincent de Rivaz was appointed Vice President of the Corporate Finance Division and in 2000 became Director of Strategy and Financial Operations. Appointed Chairman and Chief Executive Officer of LE Group in England in February 2002, he directed the acquisition and integration operations of Seaboard, with the former London Electricity and the grids of eastern England, creating EDF Energy in 2003. In 2008 and 2009, the acquisition then integration of British Energy, the largest British nuclear plant operator, made EDF Energy the leader on the British electricity market, first in both electricity generation and supply. In 2010, he managed the implementation of the disposal of EDF Energy's distribution network activity. He has led the development of EDF's new nuclear projects in Great Britain, the Hinkley Point C project as first target. Vincent de Rivaz is currently Chief Executive Officer of EDF Energy and has been Group Senior Executive Vice President since March 2015.

Absence of family ties, convictions and conflicts of interest among members
of the administrative bodies and Executive Management

Simone Rossi, 46 years old, a graduate of the University of Bocconi (Milan) in business administration. Simone Rossi started his career as a consultant, first at KPMG Consulting in corporate finance, then, starting in 1996, at McKinsey & Company, where he mainly specialised in the energy, financial institutions, information technologies and communication sectors. In 2004, he joined Edison SpA in Milan, as Head of Strategy, before being promoted to the position of Director of Planning, Control and IT in 2007. At the end of 2009, he was appointed Chief Financial Officer of Constellation Energy Nuclear Group (CENG), a US company based in Baltimore. He then became Chief Financial Officer of EDF Energy in April 2011. Since March 2015, Simone Rossi has been Group Senior Executive Vice President, International Division.

Pierre Todorov, 57 years old, a former student of the *École Normale Supérieure* (Ulm) and the *École Nationale d'Administration* (ENA), and holder of an advanced teaching degree in philosophy. Pierre Todorov was an auditor, then counsel, at the Council of State from 1986 to 1990. At this time, he joined the Lagardère Group, where he held various positions in the media division, in particular that of International Deputy General Manager of Hachette Filipacchi. In 1997, he was appointed General Secretary of the Accor Group, a position he held until 2008. Between 2008 and 2011, he was a partner at Hogan Lovells LLP, before joining PSA Peugeot Citroën in 2011, as Corporate Secretary and member of the General Management Committee. Pierre Todorov has been the Group General Secretary and a member of the Group Executive Committee since 2 February 2015.

Philippe Torrion, 60 years old, a former student of the *École polytechnique* and a graduate of the *École nationale supérieure des Mines*. Philippe Torrion started his career at EDF in 1977 as a manager at the Paris Regional Division and, until 1999, held various positions within the company: he was a technical manager at the Boulogne-sur-Mer distribution centre, an economic engineer

then head of the internal Economic Unit at the General Economic Studies Department. In 1992 he was appointed Director of the EDF-GDF Services Center in the Gard-Cévennes region, then five years later Head of the System Economy Department at the Production and Distribution Division. In 1999, he was appointed Head of Strategy, then in 2001 Regional Policy Delegate and PACA Regional Delegate, before becoming Chief Executive Officer of EDF Trading in 2005. In August 2008, he was appointed Head of the Upstream/Downstream Optimisation & Trading Division (DOAAT). Since March 2015, Philippe Torrion has been Group Senior Executive Vice President, Innovation, Strategy and Planning. He is also the Chairman of the EDF Trading Board of Directors.

Xavier Ursat, 48 years old, a graduate of the *École Polytechnique* and of *Télécom Paris*. He joined EDF in 1991 and held various positions in the hydraulic engineering department until 2002. He was, inter alia, the construction manager of EDF's hydraulic engineering centres and contributed to international projects, in particular in South America. Between 2002 and 2005, he was a special advisor to EDF's Executive Vice President in charge of Production and Engineering. Between 2005 and 2007, he was Assistant Director of the Alps Production Unit in Grenoble and from 2007 to 2010, Director of the Southwest Production Unit in Toulouse. From 2010 to 2014, he was successively Deputy Director and Director of the Hydraulic Production and Engineering Division. Since March 2015, Xavier Ursat has been Group Senior Executive Vice President, New Nuclear Projects and Engineering. He is a member of the Board of Directors of ONEMA (*Office National de l'Eau et des Milieux Aquatiques*), EDF Energies Nouvelles and EDF Norte Fluminense. He is also a member of the National Water Committee and the World Water Council's Board of Governors.

14.3 Absence of family ties, convictions and conflicts of interest among members of the administrative bodies and Executive Management

14.3.1 Absence of family ties

To EDF's knowledge, there are no family ties between members of the administrative bodies or Executive Management.

14.3.2 Absence of convictions

To EDF's knowledge, within at least the past five years, no member of the EDF Board of Directors or Executive Management has been subject to: (i) a conviction for fraud, (ii) bankruptcy, receivership or liquidation, or (iii) conviction and/or official public sanction issued by the statutory or regulatory authorities.

Moreover, to EDF's knowledge, no member of the EDF Board of Directors or Executive Management has been prevented by a court from serving as a member of an administrative, management or supervisory body of an issuer or from participating in the management or direction of an issuer's affairs during the past five years.

14.3.3 Conflicts of interest

To the Company's knowledge, on the date of filing of this Reference Document, there are no potential conflicts of interest involving EDF between

the duties of the members of the Company's Board of Directors and Executive Management and their private interests or other duties (regarding the rules applicable to the members of the Board of Directors in terms of conflicts of interest, see section 16.2.1.3 ("Obligations and duties of Directors")). Because of Philippe Varin's office as Chairman of the Board of Directors of Areva, the Company has set up a specific procedure aiming to solve the situations that could generate potential risks of conflicts of interest.

Subject to the specific legal and regulatory provisions applicable to the members of the Company's Board of Directors (see sections 14.1.1 ("Members of the Board of Directors") and 16.2.1.1 ("Members of the Board")), to the Company's knowledge, no arrangements or agreements have been entered into with shareholders, clients, suppliers or others under which a member of the Board of Directors or Executive Management has been appointed in this capacity.

To the Company's knowledge, no member of the Board of Directors has agreed to restrict for a fixed period of time his/her ability to sell his/her holdings in the Company's capital, except for the restrictions resulting from the EDF Stock Exchange Ethics Code (see section 16.5 ("Stock Exchange Ethics Code")).

In addition, corporate officers holding shares in mutual funds through an EDF group Corporate Savings Plan invested in EDF shares, or who has acquired shares from the French state within the legal framework of the privatisation, can be subject to the lock-in and non-transferability rules resulting from the provisions applicable to these transactions.

ADMINISTRATIVE, MANAGEMENT AND SUPERVISORY BODIES AND EXECUTIVE MANAGEMENT

Shareholding by Directors and trading in EDF securities by corporate officers and executives of the administrative bodies and Executive Management

14.4 Shareholding by Directors and trading in EDF securities by corporate officers and executives

14.4.1 Shareholding by Directors

On 31 December 2014, the members of the Company's Board of Directors held a total of 3,316 shares. The table, below, breaks down the number of EDF shares held individually by Directors on 31 December 2014:

	Number of EDF shares held on 31/12/2014
Christine CHABAUTY	6
Jacky CHORIN	217
Philippe CROUZET	200
Bruno LAFONT	150
Colette LEWINER ⁽¹⁾	1,771
Marie-Hélène MEYLING ⁽²⁾	28
Christian TAXIL ⁽³⁾	912
Maxime VILLOTA ⁽³⁾	32
TOTAL	3,316

(1) Shares held directly and through a mutual fund.

(2) Shares held directly.

(3) Shares held through a mutual fund.

Mrs. Lepetit and Parisot and Messrs Appert, Léchevin, Lévy, Magnin, Masset, Rignac, Turrini and Varin held no EDF shares on 31 December 2014.

The table, below, breaks down the number of EDF shares held individually by Directors on 31 December 2013:

	Number of EDF shares held on 31/12/2013
Henri PROGLIO ⁽¹⁾	51
Christine CHABAUTY ⁽²⁾	23
Philippe CROUZET ⁽¹⁾	200
Mireille FAUGÈRE ⁽¹⁾	106
Alexandre GRILLAT ⁽²⁾	59
Michael JAY ⁽¹⁾	200
Bruno LAFONT ⁽¹⁾	150
Philippe MAÏSSA ^{(1) (3)}	39
Pierre MARIANI ⁽¹⁾	1
Marie-Hélène MEYLING ⁽¹⁾	28
Maxime VILLOTA ⁽²⁾	30
TOTAL	887

(1) Shares held directly.

(2) Shares held through a mutual fund.

(3) Director until 31 January 2014.

Mrs. Lepetit and Messrs. Appert, Azéma, Léchevin, Morin, Rignac and Sellal did not hold any EDF shares on 31 December 2013.

**Shareholding by Directors and trading in EDF securities by corporate officers and executives
of the administrative bodies and Executive Management**

14.4.2 Trading in Company securities

Under the terms of article L. 621-18-2 of the French Monetary and Financial Code, the executives of companies with shares listed for trading on a regulated market must declare trades in company securities to the AMF and to the company within five trading days of their completion.

The AMF¹ General Regulations also state that the EDF Board of Directors must mention in its annual report to the Ordinary Shareholders' Meeting trades that have been declared by executives and similar persons² during the past fiscal year.

No trades involving EDF shares were declared to the AMF or to the Company during the 2014 fiscal year by members of the Company's Board of Directors and Executive Committee.

1. Article 223-26 of the AMF General Regulations.

2. At EDF, staff "similar to executives" are the members of the Company's Executive Committee.

15

Compensation and benefits



EDF – Stéphanie Jayet ▲ Christel Sasso ▼



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15.1 Compensation of corporate officers

The compensation and benefits of all kinds paid in the 2014 fiscal year to corporate officers by the Company and the companies it controls are listed below.

The tables below were drawn up in accordance with the format recommended by the AFEP-MEDEF Consolidated Code of Corporate Governance and the AMF's position-recommendation 2009-16, modified on 5 December 2014.

15.1.1 Total compensation of the Chairman and Chief Executive Officer

The table below presents the summary of the compensation of all kinds owed to Henri Proglio, Chairman and Chief Executive Officer until 22 November 2014 for the 2013 and 2014 fiscal years.

Summary table of compensation and options and shares awarded to the executive officers⁽¹⁾

(in euros)	2014 fiscal year	2013 fiscal year
Henri Proglio, Chairman and Chief Executive Officer until 22 November 2014		
Compensation due for the fiscal year	415,818	457,696
Valuation of variable multiannual compensation awarded during the fiscal year	none	none
Valuation of options awarded during the fiscal year ⁽²⁾	none	none
Valuation of bonus shares awarded during the fiscal year ⁽²⁾	none	none
TOTAL	415,818	457,696

(1) Table 1 of AMF position-recommendation 2009-16.

(2) As indicated in section 15.3, the Company has not implemented any stock options plans and the corporate officers receive no allocation of bonus shares.

Regarding the compensation of Mr. Jean-Bernard Lévy, appointed Chairman and Chief Executive Officer of EDF by decree of 27 November 2014, see section 15.1.1.2.

Summary table of the compensation of the executive officers⁽¹⁾

The table below details the compensation of all kinds owed and paid to Henri Proglio, Chairman and Chief Executive Officer until 22 November 2014, for the 2013 and 2014 fiscal years.

(in euros)	2014 fiscal year		2013 fiscal year	
	Amounts due for the fiscal year	Amounts paid during the fiscal year	Amounts due for the fiscal year	Amounts paid during the fiscal year
Henri Proglio, Chairman and Chief Executive Officer until 22 November 2014				
Fixed compensation	402,632 ⁽²⁾	402,632 ⁽²⁾	450,000	450,000
Variable compensation	0	0	0	286,250 ⁽³⁾
Variable multiannual compensation	none	none	none	none
Exceptional compensation	none	none	none	none
Directors' fees	none	none	none	none
Benefits in kind ⁽⁴⁾	13,186	13,186	7,696	7,696
TOTAL	415,818	415,818	457,696	743,946

(1) Table 2 of AMF position-recommendation 2009-16.

(2) Amount calculated on a pro rata basis until the date of expiry of the term of office as Chairman and Chief Executive Officer of Mr. Henri Proglio on 22 November 2014.

(3) Variable portion due for the 2012 fiscal year, paid during 2013.

(4) The benefits in kind consist of a company car and the energy benefit in kind.

Regarding the compensation of Mr. Jean-Bernard Lévy, see section 15.1.1.2.

15.1.1.1 Terms and conditions for the setting of compensation

In accordance with article 3 of Decree no. 53-707 of 9 August 1953 and Article L. 225-47 of the French Commercial Code, the items comprising the compensation of the Chairman and Chief Executive Officer are set by the Company's Board of Directors on recommendation from the Appointments and Remunerations Committee and approved by the Minister for the Economy after consultation of the relevant ministers.

Decree no. 2012-915 of 26 July 2012 modified the decree of 9 August 1953 by introducing a limit of €450,000 on compensation payable to corporate officers of state-owned companies to which this decree is applicable.

15.1.1.2 Setting of the compensation of the Chairman and Chief Executive Officer

Compensation of Mr. Henri Proglio for the 2013 and 2014 fiscal years

On recommendation from the Nominations and Compensation Committee, EDF's Board of Directors, meeting on 3 April 2013 decided to set, from 1 October 2012, the Chairman and Chief Executive Officer's compensation at the limit introduced by decree 2012-915 of 26 July 2012, i.e. fixed annual remuneration of €450,000 without a variable portion.

This compensation was maintained for the 2014 fiscal year.

In accordance with the AFEP-MEDEF code recommendations, the items of compensation of the Chairman and Chief Executive Officer for the 2013 fiscal year were submitted for the first time to the Shareholders' Meeting of 15 May 2014 for consultative opinion. The Meeting issued a favourable opinion on the items submitted to it by 99.96% of the vote.

Compensation of Mr. Jean-Bernard Lévy for the 2014 and 2015 fiscal year

On recommendation from the Nominations and Compensation Committee, EDF's Board of Directors, meeting on 8 April 2015, decided to set at a gross amount of €450,000 the Chairman and Chief Executive Officer's annual fixed compensation for the 2014 and 2015 fiscal year. With respect to fiscal year 2014, this remuneration shall be calculated from the date of appointment of Mr. Jean-Bernard Lévy as Interim Chairman and Chief Executive Officer on 23 November 2014, which corresponds to a gross amount of €47,368 for 2014.

The Board of Directors also decided to grant the Chairman and Chief Executive Officer a severance payment in case of termination of his office subject to the conditions described in section 15.1.1.3 below.

15.1.1.3 Other items of compensation

In 2014, Messrs. Henri Proglio¹ and Jean-Bernard Lévy² did not receive any Directors' fees for their duties as Chairman of the Board of Directors and Director of EDF. They also did not receive any Directors' fees for positions held in companies controlled by EDF, or any compensation of any kind whatsoever from the companies controlled.

The Company allocated no stock options to the Chairman and Chief Executive Officer in 2014 and no options were exercised during the fiscal year. Similarly, no bonus share was allocated to the Chairman and Chief Executive Officer during the past fiscal year, and no such share became available.

Messrs. Henri Proglio and Jean-Bernard Lévy did not receive any hiring bonus from EDF.

Employment contract, supplementary pension plans, severance payments and non-competition clause

Chairman and Chief Executive Officer ⁽¹⁾	Employment contract	Supplementary pension plan	Compensation or benefits due or liable to be due for termination or modification of duties	Non-competition clause compensation
Henri Proglio, Chairman and Chief Executive Officer until 22 November 2014	none	none	none	none

(1) Table 11 of AMF position-recommendation 2009-16.

Mr. Henri Proglio did not receive any severance payment linked to the termination of his duties at the Company in 2014.

Chairman and Chief Executive Officer ⁽¹⁾	Employment contract	Supplementary pension plan	Compensation or benefits due or liable to be due for termination or modification of duties	Non-competition clause compensation
Jean-Bernard Lévy, Chairman and Chief Executive Officer since 27 November 2014 ⁽²⁾	none	none	yes	none

(1) Table 11 of AMF position-recommendation 2009-16.

(2) Mr. Jean-Bernard Lévy was appointed Interim Chairman and Chief Executive Officer from 23 November 2014.

1. Until 22 November 2014.

2. Since 23 November 2014.

On recommendation from the Nominations and Compensation Committee, EDF's Board of Directors, meeting on 8 April 2015, decided to grant the Chairman and Chief Executive Officer a severance payment in compliance with the French commercial Code and the AFEF-MEDEF Consolidated Code of Corporate Governance in case of termination of his office as Chairman and Chief Executive Officer of EDF. This severance payment shall be subject to the following terms and conditions:

- **triggering event of the payment:** final grant upon decision of the Board of Directors only in the event of a compulsory departure (dismissal with an exception in case of dismissal for wrongful misconduct (*faute grave ou lourde*));
- **calculation and maximum amount:** initial amount of the severance payment of €200,000 (gross amount) after one year of seniority computed as from the date of the first appointment, ie. 23 November 2014, increased afterwards by an amount of €60,000 (gross amount) for each additional quarter of seniority, subject to a cap set at one year of compensation;
- **performance criteria:** the payment will only be owed if at least 80% of the budgeted Group EBIDTA is reached during 2 fiscal years out of the previous 3 fiscal years at the time of the termination of the office; if the termination of his office occurs during the second year after his

appointment, the Board of Directors will assess if the performance criterion is met by reference to the latest fiscal year; if the termination of his office occurs during the third year after his appointment, the assessment will be performed by reference to the previous two fiscal years.

See in Appendix C the special report of the statutory auditors on the Regulated Commitment referred to in Article L. 225-42-1 of the French Commercial Code.

15.1.2 Total compensation of Directors

No exceptional compensation was paid to Directors during the 2014 fiscal year in return for their duties.

The table below shows the amount of Directors' fees paid in 2013 and 2014 to the members of the Board of Directors.

The amounts paid during the fiscal year correspond to the Directors' fees allocated for the fixed portion, 50% for the first half of this fiscal year and 50% for the second half of the previous fiscal year, as well as 100% of the variable portion from the previous fiscal year.

Table of Directors' fees paid to Directors⁽¹⁾

(in euros)	2014	2013
Philippe Crouzet	30,000	36,783
Mireille Faugère ⁽²⁾	33,448	47,972
Michael Jay	39,310	38,182
Bruno Lafont	23,104	34,685
Colette Lewiner ⁽³⁾	4,444	-
Pierre Mariani	44,138	42,378
Henri Proglio ⁽⁴⁾	n. a.	n. a.
TOTAL	174,444	200,000

n. a.: non-applicable.

(1) Gross amounts.

(2) Director until 8 April 2014.

(3) Director since 11 April 2014.

(4) Director until 22 November 2014.

Budget and distribution of Directors' fees

The Directors representing the employees hold office without fees in accordance with law 83-675 of 26 July 1983 concerning the democratisation of the public sector, and the Chairman of EDF's Board of Directors receives no Directors' fees.

In accordance with Order no. 2014-948 of 20 August 2014, the Directors' fees allocated to Directors appointed by the Shareholders' Meeting on recommendation from the French state in accordance with article 6 of the order and who are French civil servants are paid to the French state budget. The same applies to Directors' fees exceeding a limit set by the Minister for the Economy¹ payable to other Directors appointed by the Shareholders' Meeting on recommendation from the French state and who are not French civil servants.

Regarding the Representative of the French state appointed in accordance with article 4 of the order of 20 August 2014, any compensation payable to him/her for the exercise of their duties is paid to the French state budget.

After the issuing of an opinion by the Appointments and Remunerations Committee and approval by the Minister for the Economy and the Minister for Energy in accordance with Article 3 of Decree no. 53-707 of 9 August 1953, the Board of Directors submits for the approval of the Shareholders' Meeting the budget for the Directors' fees to be allocated to Directors based on the distribution rules approved by the Board of Directors. The Shareholders' Meeting held on 24 May 2011, upon proposal from the Board of Directors, had approved the amount of €200,000 for the annual budget for the Directors' fees for the 2011 fiscal year and the subsequent fiscal years, until a new decision is made by the Meeting.

Given the modifications made to the composition of the EDF Board of Directors in accordance with the order of 20 August 2014, the Shareholders' Meeting of 21 November 2014, upon proposal from the Board of Directors after issuing of the opinion of the Appointments and Remunerations Committee, decided to increase the budget for Directors' fees allocated to the Board for the 2014 fiscal year, increasing it to €226,000, and to set the annual budget for Directors' fees allocated to the Board for 2015 and subsequent years to €440,000.

1. An order of 18 December 2014 introduced pursuant to Article 6-V of the Order of 20 August 2014 specifies the Company pays to the French state budget the compensation exceeding a limit of 30% of the compensation that should be received by these Directors.

The terms and conditions for the distribution of the annual budget for Directors' fees applicable since the 2011 fiscal year were adopted by the Board of Directors on 22 June 2011, upon recommendation from the Appointments and Remunerations Committee. The total budget is divided into a fixed portion and a variable portion, each representing half of the budget, distributed as follows:

- the fixed portion is shared equally between the relevant Directors;
- the distribution of the variable portion between the Directors is set by applying a coefficient varying based on the type of meetings (Board or Committee) and based on the specific positions held by each Director (Committee member or Chairmanship): a coefficient of 2 for presence at a meeting of the Board of Directors, a coefficient of 2 for presence of a Chairman at a Committee meeting and, finally, a coefficient of 1 for presence of a Director as a member at a Committee meeting. The variable portion is divided by the total of the coefficients for the fiscal year in order to set the unit value of the coefficient.

15.2 Provisions for pensions, retirement and other benefits

The Company's executive officers do not benefit from any specific pension scheme (see section 15.1.1.3 ("Other items of compensation")).

15.3 Stock options – Bonus shares

The Company has not implemented any stock options plans and the corporate officers receive no allocation of bonus shares ¹.

¹. With the exception of any Directors elected by the employees who may benefit from the systems implemented by the Company for the benefit of all its employees.

16

Functioning of administrative and management bodies



EDF – Bruno Conty ▲ Marc Didier ▼



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16.1 Corporate Governance Code

EDF adheres to the consolidated AFEP-MEDEF Code, revised in June 2013, which is the Corporate Governance Code to which the Company refers, in accordance with Article L. 225-37 of the French Commercial Code¹, subject to the specific laws and regulations applicable to EDF.

These specific laws and regulations, which result from EDF's status as a state-owned company and in particular the application to the Company of Order no. 2014-948 of 20 August 2014 and its implementing texts, French Law no. 83-675 of 26 July 1983 relating to the democratisation of the public sector and Decree no. 53-707 of 9 August 1953, are specified in

this Reference Document and relate specifically to the terms and conditions for the setting of the compensation of the Chairman and Chief Executive Officer (see section 15.1.1.1 ("Terms and conditions for the setting of compensation")), or otherwise the method of executive management (see section 16.2.1.4 ("Method of Executive Management – Appointment and powers of the Chairman and Chief Executive Officer")).

In addition to the aforementioned specific laws and regulations, the table below sets out the AFEP-MEDEF code recommendations that are not applied by the Company and the related explanations:

Issue addressed by AFEP-MEDEF code recommendation	Company's position	Explanation	Relevant section of Reference Document
Members of the Board of Directors	EDF's Board of Directors has eighteen members, including eleven Directors appointed by the Shareholders' Meeting (five appointed on recommendation from the French state) and one representative of the French state. It also includes one third Directors elected by the employees.	This membership of the Board is the result of the application to the Company of Order no. 2014-948 of 20 August 2014.	See sections 14.1.1 ("Members of the Board of Directors") and 16.2.1.1 ("Members of the Board").
Staggered re-election of the Board of Directors	The re-election of the whole Board of Directors is no longer compulsory in accordance with the Order of 20 August 2014.	As the re-election of the whole Board of Directors is no longer compulsory, the Company recently modified its articles of association accordingly at the Shareholders' Meeting of 21 November 2014, which will enable it to consider the staggering of the re-election of the members of the Board.	See section 16.2.1.2 ("Term of office of Directors").
Terms and conditions for the appointment of the Chairman and Chief Executive Officer of EDF	The Chairman and Chief Executive Officer of EDF is appointed by decree of the President of the Republic of France on recommendation from the Board of Directors, after interviewing the candidates and based on the opinion of the permanent committees of the French National Assembly and Senate.	The terms and conditions for the appointment of EDF's Chairman & Chief Executive Officer are based on the Order of 20 August 2014 and Article 13 of the French Constitution.	See section 16.2.1.4 ("Method of Executive Management – Appointment and powers of the Chairman and Chief Executive Officer").
Holding of Company shares by Directors	The Company's articles of association and the Board's internal rules of procedures do not specify that Directors must possess a relatively high number of shares in relation to the Directors' fees paid.	In accordance with the Law of 26 July 1983 the Directors representing the employees receive no Directors' fees. Furthermore, the Directors' fees payable to members recommended by the French state who are civil servants are paid to the French state budget. Representatives of the French state who are not civil servants can only receive 30% of the Directors' fees due to them, the remainder being paid to the French state budget. Finally, the Chairman of the Board of Directors does not receive any Directors' fees. For these reasons, a specific rule applicable only to Directors receiving Directors' fees has not been adopted. Each Director must also act in the Company's best interests, irrespective of the number of Company shares they hold.	See section 14.4 ("Shareholding by Directors and trading in EDF securities by corporate officers and executives").

1. After having considered the AFEP-MEDEF recommendations of October 2008 on the compensation of corporate officers and Directors of companies, the Company's Board of Directors met as soon as 17 December 2008 to approve these recommendations, deeming that they are in line with EDF's corporate governance approach, and that they had already been implemented by the Company.

Issue addressed by AFEP-MEDEF code recommendation	Company's position	Explanation	Relevant section of Reference Document
Rules for the distribution of the Directors' fees	A significant but not "preponderant" share of the Directors' fees is dependent upon actual attendance by the Directors at the Board and Committee meetings.	<p>Special distribution rules were adopted, which in particular take account of the level of responsibilities and the time spent by the Directors on their duties.</p> <p>Though the variable portion of the compensation paid in Directors' fees is not preponderant, the Company considers that it is nonetheless significant and appropriate since the total budget for Directors' fees is divided between a fixed portion and a variable portion (each 50% of the total budget) distributed as follows: (i) the fixed portion is shared equally between the eligible Directors, and (ii) the variable portion is distributed between these Directors by applying a variable coefficient depending on the type of meetings and the specific positions held by each of them.</p>	See section 15.1.2 ("Total compensation of Directors")

16.2 Functioning of the Board of Directors

The internal rules of procedure of the Board of Directors set the principles of its functioning and the terms and conditions according to which the Board and its specialised Committees fulfil their duties. It also defines the role and powers of the Chairman and Chief Executive Officer.

At its meeting held on 10 December 2014, the Board of Directors updated its internal rules of procedure to bring them into line with the modifications to the articles of association and the legislative and regulatory changes (see section 16.1 ("Corporate governance code")).

16.2.1 Members and functioning of the Board of Directors

16.2.1.1 Members of the Board

Until the Shareholders' Meeting of 21 November 2014 and in accordance with Article 6 of Law no. 83-675 of 26 July 1983 relating to the democratization of the public sector, the Company's Board of Directors consisted of eighteen members divided into three categories. Six Directors were appointed by the Shareholders' Meeting, six Directors representing the French state were appointed by decree and finally six Directors were elected by the employees.

The Shareholders' Meeting held on 21 November 2014 modified the Company's articles of association in order to implement the new provisions of Order no. 2014-948 of 20 August 2014 relating to governance and trading in shares of state-owned companies. In accordance with this order, EDF is now administered by a Board of Directors consisting of three to eighteen members, including members appointed by the Shareholders' Meeting, if applicable on recommendation from the French state in accordance with article 6 of the order, a French state representative chosen by the Minister

for the economy from the civil service in accordance with article 4 of the order, and one third employee representatives elected in accordance with the provisions of the Law of 26 July 1983¹.

On the date of filing of this Reference Document, the Board of Directors has eighteen members: six Directors elected by the employees, one Representative of the French State and eleven Directors appointed by the Shareholders' Meeting including five on recommendation from the French State.

The list of Directors and their personal information appear in section 14.1 ("Board of Directors").

The Government Commissioner² and Head of the French State General Economic and Financial Supervisory Mission to the Company³ and the Secretary of the Central Works Council attend the meetings of the Board of Directors in a consultative capacity.

Balanced representation of men and women on Boards of Directors

In accordance with Law no. 2011-103 of 27 January 2011 relating to balanced representation of women and men on Boards of Directors and Supervisory Boards and equal access to employment, EDF, as a French public limited company listed on the stock exchange and a state-owned company, is subject to the provisions applicable to listed companies and the provisions applicable to state-owned companies.

In accordance with the aforementioned law of 27 January on the date of filing of this Reference Document, the EDF Board of Directors featured five women, including two Directors elected by the employees, i.e. a proportion of 27.8% women in relation to the whole Board and 25% women in relation to the members of the Board taken into account to calculate this percentage in accordance with the AFEP-MEDEF code (i.e. excluding the Directors representing the employees).

1. The representatives of the employees mentioned in I of Article 7 of the Order of 20 August 2014 are subject, for their election and their status, to the same provisions as those provided, for representatives of the employees of companies subject to the Law of 26 July 1983, to sections II and III of title II of this law.

2. Article 15 of the Order of 20 August 2014.

3. This mission exercises the French state's economic and financial supervision of EDF, in accordance with Article 8 of Decree no. 55-733 of 26 May 1955. It can exercise extensive supervisory procedures.

16.2.1.2 Term of office of Directors

Under the terms of the aforementioned Order of 20 August 2014, the term of office of the Directors is no longer compulsorily set as 5 years as stated in Article 11 of the Law of 26 August 1983 relating to the democratisation of the public sector, and the whole Board of Directors no longer has to be re-elected after 5 years.

In accordance with the option provided by the Order of 20 August 2014, the Shareholders' Meeting held on 21 November 2014 modified the Company's articles of association and reduced the term of office of the Directors to 4 years. As an exception, the articles of association state that the first term of office of the Directors representing the employees that came into effect after the Shareholders' Meeting held on 21 November 2014 shall be 5 years and that the term of office of the Directors appointed by the Shareholders' Meeting held on 21 November 2014 shall expire at the end of the Shareholders' Meeting called to approve the financial statements for the fiscal year ending 31 December 2018.

The Directors appointed by the Shareholders' Meeting can be dismissed at any time by the Shareholders' Meeting. In accordance with Article 12 of the law on the democratisation of the public sector, the Directors elected by the employees can be individually dismissed for gross negligence in the exercise of their duties by order of the Presiding Judge at the District Court delivered at summary proceedings upon request from the majority of the members of the Board. However, in the event that serious dissent disrupts the Company's administration, dismissal pronounced by the Shareholders' Meeting can be extended to representatives of the employees. The Representative of the French State ceases their duties by resigning or if they lose the capacity by virtue of which they were appointed; they can be replaced at any time for the remainder of the term of office.

16.2.1.3 Obligations and duties of Directors

The internal rules of procedure of the Board of Directors state that its members are subject to obligations such as: acting in the corporate interest of the Company, informing the Board of situations of conflict of interest, and refraining from voting on any decision in which there might be a conflict of interest, fulfilling the obligation of confidentiality and complying with the EDF Stock Exchange Code of Ethics. Members of the Board and the Chairman and Chief Executive Officer are required to immediately inform the Board of any agreement entered into by the Company in which they hold a direct or indirect interest, or which might be entered into through an intermediary.

Each Director receives a Directors' guide, which is regularly updated and specifically contains the following documents: the Company's articles of association, the internal rules of procedure of the Board of Directors and its Committees, the Stock Exchange Ethics Code (see section 16.5 ("Stock Exchange Ethics Code"), below), Group Ethics Code, Group CSR commitments and the AFEP-MEDEF listed company code of corporate governance.

16.2.1.4 Method of Executive Management – Appointment and powers of the Chairman and Chief Executive Officer

In accordance with the option provided for in Article 18 of the Order of 20 August 2014, EDF's articles of association state that the Chairman of the Board of Directors is the Executive Manager of the Company and holds the title of Chairman and Chief Executive Officer. The "non-separated" executive management structure is therefore set out in the Company's articles of association. The Board's internal rules of procedure, and in particular the limitations it applies to the powers of the Chief Executive Officer, ensure a balance between the Chairman and Chief Executive Officer and the Board

of Directors, whilst preserving the flexibility, effectiveness and responsiveness necessary in the administration and management of the Company.

EDF's Chairman and Chief Executive Officer is appointed by decree of the President of the Republic of France, on recommendation from the Board of Directors. They can be dismissed by decree in accordance with Article 20 of the Order of 20 August 2014.

In accordance with the provisions of Article 13 of the French Constitution, the Chair is appointed based on the candidates' interviews and the opinion of the permanent committees of the French National Assembly and Senate. Mr. Jean-Bernard Lévy was appointed following this process as Chairman and Chief Executive Officer of EDF by Decree of 27 November 2014.

In case of vacation of the office of Chairman and Chief Executive Officer, Article 21 of the Order of 20 August 2014 states that the French state can appoint someone to the role temporarily¹ until the appointment of the new Chairman and CEO.

Subject to the specific legal provisions governing public sector companies and the powers specifically reserved by law or by the articles of association to the Board of Directors or to Shareholders' Meetings, and the limits to the powers of the Chairman and Chief Executive Officer provided for by the internal rules of procedure of the Board of Directors as internal rules (see section 16.2.1.5 ("Powers and duties of the Board of Directors") below), the Chairman and Chief Executive Officer is vested with the most extensive powers to act on behalf of the Company under all circumstances, within the limits of the corporate purpose. The Chairman and Chief Executive Officer organises and supervises the work of the Board of Directors and reports to the Shareholders' Meeting. They oversee the proper running of the Company's bodies and, in particular, ensures that the Directors are in a position to fulfil their duties.

16.2.1.5 Powers and duties of the Board of Directors

In accordance with the law, the Board of Directors sets the strategies for the Company's activities and oversees their implementation. It defines the major strategic, economic, financial and technological objectives for the Company and the Group. Subject to powers expressly attributed to the Shareholders' Meetings and as limited by the Company's corporate purpose, the Board may consider any question relating to the proper running of the Company and acts, through its deliberations, on any such issue.

In accordance with its internal rules of procedure, the Board of Directors alone is competent to authorise the following transactions:

- transactions of external or internal growth or disposals involving a financial exposure for the Company exceeding €200 million; this threshold falls to €50 million for acquisitions not in line with the Company's strategic objectives;
- real estate transactions exceeding €200 million;
- certain financial transactions, whenever their amount exceeds a value set each year by special decision of the Board; for the 2014 fiscal year, the Board set: (i) at €1.5 billion, the total authorised budget for sureties, endorsements or guarantees (the Chairman and Chief Executive Officer reports to the Board on any transaction of this kind that exceeds €100 million, granted on behalf of the Company or by a company controlled by the Company) and (ii) at €5 billion, the individual unit amount of certain financial transactions. For 2015, the Board of Directors decided to maintain the same authorisation limits;
- contracts (supplies, work or services with or without financial commitment) involving amounts, including any necessary subsequent amendments signed during the same year, equal to or exceeding €200 million, or between €100 million and €200 million if these contracts relate to a new strategic direction or a new business line for the Group;

1. Mr. Jean-Bernard Lévy was appointed temporary Chairman & Chief Executive Officer from 23 November 2014, by ministerial decisions of 21 November 2014.

- long-term contracts for the purchase or sale of energy, CO₂ emission credits and quotas, by the Company or by a company it exclusively controls, for annual volumes or amounts in excess of: 10TWh for electricity, 20TWh for gas (detailed information must also be provided on long-term gas purchase or sale agreements greater than 5TWh and less than 20TWh at the meeting of the Board of Directors following their signing) and €250 million for coal and carbon dioxide;
- strategies relating to upstream and downstream operations of the nuclear fuel cycle;
- operations involving the transfer of obligations relating to decommissioning or downstream processes of the nuclear fuel cycle.

The Board of Directors sets the framework of the policy for the constitution, management and risk management of assets for hedging EDF's nuclear commitments, specifically ruling on asset/liability management, asset allocation strategy, asset quality and the method of selecting any financial intermediaries. If the Nuclear Commitments Monitoring Committee issues a negative opinion on a plan for investment in unlisted assets for dedicated assets, the Board of Directors has sole authority to authorise the aforementioned plan (see section 16.2.3.2 ("Nuclear Commitments Monitoring Committee")). It set limits on market, counterparty and liquidity risks.

Finally, in accordance with Law no. 2011-103 of 27 January 2011 relating to the balanced representation of women and men on Boards of Directors and Supervisory Boards and equal access to employment, the Board of Directors must annually approve the Company's policy with regard to equal access to employment and equal pay.

16.2.1.6 Evaluation of Directors' independence

The AFEP-MEDEF corporate governance code, revised in June 2013, recommends that, in companies with a controlling shareholder, the proportion of independent Directors should be at least one third of the Board of Directors and specifies that Directors representing employees are not taken into account to calculate the proportion of independent Directors.

Given the specific legal framework applicable to the Company, the Board of Directors has, out of a total of eighteen members, one representative of the French state who cannot meet the independence criteria defined by the AFEP-MEDEF code, as well as six Directors representing the employees who are not taken into account to calculate the proportion of independent Directors. Likewise, the Chairman and Chief Executive Officer in his capacity as Chairman and Chief Executive Officer cannot be considered as independent as regards the criteria defined by the AFEP-MEDEF code in such matters.

At the joint meetings of 21 November 2014 and 10 December 2014, the Ethics Committee and the Appointments and Remunerations Committee examined the individual situation of the Directors appointed by the Shareholders' Meeting of 21 November 2014. After the issuing of an opinion by these Committees, the Board of Directors proceeded, at its meeting of 21 November 2014, to assess the independence of the Directors as regards the criteria defined by the AFEP-MEDEF corporate governance code and classified Mrs. Colette Lewiner and Laurence Parisot as well as Messrs. Philippe Crouzet and Bruno Lafont as independent Directors, as the Board deemed that these Directors have no relations with the Company, its Group or its Management that might compromise the exercise of their freedom of judgment. In particular, the Board of Directors examined the existence of any business ties that might exist between Directors and the Company and their significance, and noted the absence of significant business ties regarding each of the Directors that it classified as independent. After approval from these Committees, the Board of Directors, at its meeting of 10 December 2014 considered that Mr. Philippe Varin could not be considered as an independent Director since his appointment as Chairman of the Board of AREVA in January 2015.

On the date of this document, the Company's Board of Directors therefore features four independent Directors out of the twelve taken into account

to make the calculation in accordance with the revised AFEP-MEDEF code, i.e. a proportion of independent Directors of one third, in accordance with the recommendations of the code.

16.2.1.7 Evaluation of the functioning of the Board of Directors

In accordance with the provisions of the AFEP-MEDEF code, the Board's internal rules of procedure state that the Ethics Committee will report annually on the functioning of the Board of Directors and propose areas for improvement. Once a year, therefore, the Board dedicates one item on its agenda to this evaluation and holds a discussion on its functioning in order to improve its efficiency and ensure that important issues are appropriately prepared and discussed by the Board. Furthermore, every three years, this evaluation is conducted by an external consultant under the supervision of the Ethics Committee.

The last evaluation conducted by an external consultant was in 2013. In 2014, the annual evaluation was conducted internally, before the Board's re-appointment, using a questionnaire, approved by the Board of Directors on recommendation from the Ethics Committee. The results examined by the Ethics Committee on 13 November 2014 and presented to the Board of Directors on 10 December 2014 show that the Directors are generally satisfied with the functioning of the Board. They consider that the number of meetings and their periodicity are consistent with the Company's needs. They particularly appreciate the extensiveness of the discussions of both the Board and its specialised Committees, the exhaustiveness of the information with which they are provided and also the quality of the reports presented by the Company, including the executive summaries attached. They underline the usefulness of the various informative documents issued to them (Directors' guide, "News" document, monthly media analysis, etc.). They consider themselves adequately informed and trained to meet the requirements resulting from their office.

16.2.1.8 Information and training of Directors

Under the terms of the Board's internal rules of procedure, it periodically receives information on the financial, treasury and commitments position of the Company and the Group, as well as information such as the financial balance sheet for agreements approved by the Company for the purchase of nuclear fuels, a performance review of the Company's principal subsidiaries on the occasion of the presentation of the annual and semi-annual financial statements, sales policy, purchasing and subcontracting policy and human resources policy.

A document reviewing the Group's current major sectors of business and the market trends, as well as the economic, financial and institutional context is prepared for each meeting of the Board of Directors.

The principal events relating to the Company occurring between two meetings of the Board as well as the monitoring of the decisions taken by the Board of Directors are reported to the Directors.

The Directors can add to this information by meeting with the principal executives of the Company or Group.

In addition, information meetings are organised on complex matters or issues of major strategic importance, together with any training requested by members. Accordingly, the Directors elected by the employees can be trained in business management and the Company's specific industrial and operational characteristics, which can be extended to other Directors.

16.2.1.9 Compensation

The applicable principles and rules adopted by the Board of Directors in order to set the compensation of the Chairman & Chief Executive Officer and the terms and conditions for the distribution of the Directors' fees, as well as the amounts paid to Directors in 2013 and 2014, appear in section 15 of this Reference Document.

16.2.2 Activities of the Board of Directors in 2014

The Board of Directors meets as often as the interest of the Company requires, in accordance with applicable legislative and regulatory provisions.

Over the 2014 fiscal year, the Board of Directors met eleven times and thirty-four Committee meetings were held to prepare for these meetings. Board meetings lasted an average of two hours, allowing for an in-depth review and discussion of the items on the agenda.

The average attendance rate for Directors at the meetings of the Board was 86.7% for 2014.

In 2014, the Board of Directors examined and authorised, in addition to various items relating to the Company's regular business, issues such as the agreement between EDF and Veolia Environnement under the terms of which EDF took over all the activities of the Dalkia group in France (including Citelum), whereas the activities of Dalkia International were taken over by Veolia Environnement; the changes to the amendment to the industrial partnership contract between EDF and the Exeltium consortium; the EDF equal access to employment and equal pay policy; the launch by ERDF of the programme for the rollout of the 1st wave of smart meters (Linky); the development by EDF Energy of a pilot project with a view to the rollout of smart meters in the United Kingdom; the acquisition of a 51% interest by EDF Norte Fluminense in Companhia Energetica SINOP (CES), the contractor of the concession contract for the construction of the 400MW hydraulic power plant in Mato Grosso (Brazil); the agreement for the restructuring of the Group's renewable activities in Italy between Edison, EDF Énergies Nouvelles and F2i; EDF Énergies Nouvelles development projects (Chile, United States).

The Board of Directors was also informed of the signing of the amendment to the Exeltium contract and a partnership between EDF and Amundi relating to the financing of the energy transition, the approval by the European Commission of the agreements on the nuclear reactor development project (Hinkley Point C) in the United Kingdom as well as the signing of the agreement for the acquisition by Gazprom of EDF International's 15% interest in South Stream Transport BV.

16.2.3 Board of Directors' Committees

To perform its duties, the Board of Directors has created five Committees to examine and prepare certain projects before they are presented to the whole Board. These specialised committees are: the Audit Committee, the Nuclear Commitments Monitoring Committee, the Strategy Committee, the Ethics Committee and the Appointments & Remunerations Committee.

The composition, functioning and duties of the Committees are governed by the internal rules of procedure of the Board of Directors.

Directors who are members of these Committees are appointed by the Board of Directors. The Committees include at least three Directors chosen by the Board of Directors, which appoints the Chair of each Committee. The Company's articles of association state that the Committees created by the Board include at least one Director representing the employees.

On the date of this document, the Chairs of the Board Committees were as follows:

- Mr. Jean-Bernard Lévy for the Strategy Committee;
- Mrs. Lepetit for the Audit Committee;
- Mr. Philippe Crouzet for the Nuclear Commitments Monitoring Committee;
- Mrs. Colette Lewiner for the Ethics Committee;
- Mr. Bruno Lafont for the Appointments & Remunerations Committee.

The composition of each Committee is described below.

The Government Commissioner and the Head of the French State General Economic and Financial Supervisory Mission to the Company attend the meetings of these Committees in a consultative capacity.

The work of the Committees is organised within a program prepared for the year. Meetings are recorded in the form of written minutes and reports, which are submitted by the Committee Chair to the Board of Directors. Their length allows for an in-depth review and discussion of the items on the agenda.

The Board's internal rules of procedure provide for a minimum of three working days between the meeting of the Board of Directors for which the agenda features examination of the items examined by a Committee and the meeting of said Committee, except for meetings of the Appointments and Remunerations Committee, which can be held at any time. It also states that each Committee may employ external experts as required.

16.2.3.1 Audit Committee

Functioning and members

The Committee exercises the duties allocated to it in accordance with Article L. 823-19 of the French Commercial Code. This article states in particular that at least one member of the Committee must have specific skills in financial or accounting matters and be independent based on the criteria defined and made public by the Board of Directors.

The Audit Committee is chaired by Mrs. Marie-Christine Lepetit, Director appointed by the Shareholders' Meeting. The other members of the Committee are Mrs. Colette Lewiner and Laurence Parisot and Mr. Philippe Crouzet, Directors appointed by the Shareholders' Meeting, as well as Mrs. Marie-Hélène Meyling and Messrs. Jacky Chorin, Christian Taxil and Maxime Villota, Directors elected by the employees. It therefore includes three independent Directors out of the four taken into account to calculate the proportion of independent Directors (therefore excluding Directors representing the employees), i.e. a proportion of three-quarters for a minimum of two-thirds recommended by the AFEP-MEDEF code.

This Committee does not include any Chairmen & Chief Executive Officers, in accordance with the recommendations of the AFEP-MEDEF code.

At the joint meeting of 10 December 2014, the Ethics Committee and the Appointments & Remunerations Committee examined the situation of Mrs. Colette Lewiner and Laurence Parisot and Mr. Philippe Crouzet and issued a notice to the Board of Directors. The Board of Directors, meeting on 10 December 2014, noted that Mrs. Colette Lewiner and Laurence Parisot and Mr. Philippe Crouzet have specific skills in financial and accounting matters according to the criteria recommended by the French Financial Markets Authority (AMF) in its report on the Audit Committee dated 22 July 2010. On 21 November 2014, the Board of Directors also classified as independent Directors Mrs. Colette Lewiner and Laurence Parisot and Mr. Philippe Crouzet. They therefore meet the criteria of both expertise and independence in accordance with the Article L. 823-19 of the French Commercial Code.

The Audit Committee met 6 times in 2014. The average attendance rate of its members was 89%. Board meetings lasted an average of two hours and twenty minutes, allowing for an in-depth review and discussion of the items on the agenda.

Duties

The Committee reviews and gives its opinion, before examination by the Board, on:

- the Company's financial position;
- the medium-term plan and the budget;

- the draft financial reports prepared by the Corporate Finance Division (Company financial statements and the Group's consolidated financial statements and management report);
- the monitoring of the Company's risks (specifically, the review every six months of the Group's risk mapping and risk management methods);
- auditing and internal control: organisation, deployment and evaluation of the system of internal controls, annual audit program, main findings and the resulting corrective actions, monitoring of their implementation, as well as the preliminary annual report by the Chairman of the Board of Directors on corporate governance, internal control and risk management procedures;
- insurance strategy;
- the choice of Statutory Auditors, ensuring their independence, and the fees paid to them;
- the financial aspects of external growth or disposal activities that are particularly significant (see section 16.2.1.5 ("Powers and duties of the Board of Directors"));
- changes to the analysts' perception of the Group;
- the Group energy market risk policy and counterparty default risk policy.

The examination of the financial statements by the Committee is accompanied by a presentation by the auditors underlining the basis for the preparation of the financial statements, the mandatorily-applicable accounting frame of reference, the audit approach implemented and the conclusions of their auditing work.

For the purposes of its work, the Committee regularly meets with the Statutory Auditors, Executive Management, Corporate Finance Management, Group Risk Management and Internal Audit Management.

Activity in 2014

In 2014, the Audit Committee, amongst other tasks, examined the half-yearly and annual financial statements as well as the related press releases, the presentation by the Statutory Auditors of the key points of the results of their work on the annual and half-yearly financial statements, press releases on quarterly sales, risk mapping, risk control methods, internal audit summaries and the audit programme. Furthermore, a presentation on off-balance sheet commitments was made to the Committee.

The Committee can employ external experts as required. It did not exercise this option during the 2014 fiscal year.

16.2.3.2 Nuclear Commitments Monitoring Committee

Functioning and members

The Nuclear Commitments Monitoring Committee (NCMC), created by Article 9 of the Decree of 23 February 2007, is chaired by Mr. Philippe Crouzet, an independent Director appointed by the Shareholders' Meeting. The other members of the Committee are Mrs. Marie-Christine Lepetit and Mr. Olivier Appert, Directors appointed by the Shareholders' Meeting, as well as Mrs. Marie-Hélène Meyling and Mr. Maxime Villota, Directors elected by the employees.

The Nuclear Commitments Monitoring Committee met five times in 2014. The average attendance rate of its members was 100%. The Committee's meetings lasted an average of one hour and forty minutes, allowing for an in-depth review and discussion of the items on the agenda.

Duties

The Nuclear Commitments Monitoring Committee is tasked with monitoring changes in nuclear provisions, issuing an opinion on issues relating to governance of dedicated assets, the rules for asset-liability matching and on strategic allocation, as well as ensuring the compliance of the management of the assets constituted by the Company in accordance with the policy for constituting and managing dedicated assets. For this purpose, it may be supported by the Nuclear Commitments Financial Expertise Committee (NCFEC) which is comprised of six independent¹ experts, whose duty it is to assist the Company and its corporate bodies in such matters.

Finally, the Committee issues an opinion prior to any investment in unlisted assets for any project exceeding a unit amount of €400 million as well as for any project (excl. real estate) exceeding a unit amount of €200 million resulting in full consolidation of the target investment by the Company. In case the Committee issues a negative opinion on an investment plan, the Board of Directors has sole authority to authorise the aforementioned plan.

Activity in 2014

In 2014, the Committee particularly examined changes to the framework of the policy on the constitution and management of dedicated assets and management of financial risks, the state of progress of the 1st generation nuclear power plant decommissioning programme and the industrial geological storage centre project (Cigéo) for long-life high- and medium-activity waste, the annual 2014 update letter of the three-yearly report on the securing of financing for long-term nuclear expenses, the nuclear commitments discount rate, as well as the decisions and prospects for investments in the non-listed assets class.

16.2.3.3 Strategy Committee

Functioning and members

The Strategy Committee is chaired by Mr. Jean-Bernard Lévy, Chairman and Chief Executive Officer. The other members are Mrs. Laurence Parisot and Messrs. Olivier Appert and Christian Masset, Directors appointed by the Shareholders' Meeting, Mr. Régis Turrini, Representative of the French state, as well as Mrs. Marie-Hélène Meyling and Messrs. Jacky Chorin, Jean-Paul Rignac and Christian Taxil, Directors elected by the employees.

The Chairman invites non-member Directors to meetings of the Strategy Committee, in order to increase the involvement of the Board of Directors in the strategic discussion.

The Strategy Committee met six times in 2014. The average attendance rate of its members was 89.3%. The Committee's meetings lasted an average of two hours and ten minutes, allowing for an in-depth review and discussion of the items on the agenda.

Duties

The Strategy Committee issues an opinion to the Board of Directors on the Company's major strategic decisions and, specifically, the strategic referencing system, industrial and commercial policy, the public service contract, strategic agreements, alliances and partnerships, research and development policy, and internal and external growth or disposals projects requiring approval from the Board of Directors.

Activity in 2014

In 2014, the Strategy Committee examined, amongst other items, the position of the markets and major firms in Europe, the nuclear fuel cycle strategy, the industrial project for the existing nuclear fleet in France, the Energy Services strategy for the B-to-B segment as well as the international strategy outside Europe.

1. Appointed on 26 November 2013 by the Board of Directors for three years.

16.2.3.4 Ethics Committee

Functioning and members

The Ethics Committee is chaired by Mrs. Colette Lewiner, an independent Director appointed by the Shareholders' Meeting. The other members are Messrs. Bruno Léchevin and Gérard Magnin, Directors appointed by the Shareholders' Meeting, as well as Mrs. Christine Chabauty and Marie-Hélène Meyling and Mr. Jacky Chorin, Directors elected by the employees.

The Ethics Committee met ten times in 2014. The average attendance rate of its members was 89.2%. The Committee's meetings lasted an average of one hour and ten minutes, allowing for an in-depth review and discussion of the items on the agenda.

Duties

The Ethics Committee ensures that ethical considerations are taken into account in the work of the Board of Directors and in the management of the Company. It reviews the reports from the Mediator, the Inspector General of Nuclear Safety and Radioprotection as well as the Inspector of Hydro Safety.

Moreover, each year the Ethics Committee conducts an assessment of the functioning of the Board and its Committees, and every three years oversees a formal assessment of the work of the Board and its Committees entrusted to a specialist external consultant (see section 16.2.1.7 ("Evaluation of the functioning of the Board of Directors") above).

Activity in 2014

In 2014, the Ethics Committee, amongst other items, examined the results of the customer satisfaction survey, the ethical reporting and commitments relating to the Group's corporate responsibility, the EDF's equal access to employment and equal pay policy and the Group's health and safety policy.

16.2.3.5 Appointments & Remunerations Committee

Functioning and members

The Appointments & Remunerations Committee is chaired by Mr. Bruno Lafont, an independent Director appointed by the Shareholders' Meeting. The other members of the Board are Mrs. Colette Lewiner, independent Director appointed by the Shareholders' Meeting, Mr. Régis Turrini, Representative of the French state, as well as Mr. Maxime Villota, Director elected by the employees. The Committee is chaired by an independent Director and is comprised of a majority of independent Directors as it includes two

independent Directors out of the three taken into account to calculate this proportion (excluding Directors representing the employees), in accordance with the recommendations of the AFEF-MEDEF code.

The Appointments & Remunerations Committee met seven times in 2014. The average attendance rate of its members was 92.9%. The Committee's meetings lasted an average of half an hour.

Duties

In accordance with the internal rules of procedure, the Appointments & Remunerations Committee submits recommendations to the Board of Directors regarding the appointment of Directors by the Shareholders' Meeting. It submits, for approval, to the Minister for the Economy and Finance and the Minister for Energy, an opinion on the compensation of the Chairman and Chief Executive Officer regarding the salary, variable portion (criteria for the setting of the variable portion and assessment of the results achieved in regard to the objectives set) and peripheral compensation of the Chairman and Chief Executive Officer. It also submits this opinion to the Board of Directors for deliberation and setting of this compensation. The Committee prepares its recommendations within the limits specified by Decree no. 2012-915 of 26 July 2012 relating to French state control of the compensation of the executives of state-owned companies, in accordance with which the Chairman & Chief Executive's annual compensation must not exceed the gross sum of €450,000.

The Committee examines, if applicable, the compensation of the Deputy Chief Executive Officers. It submits its recommendations and its opinion, for approval, to the Minister for the Economy and the Minister for Energy, and also submits it to the Board of Directors for deliberation and setting of this compensation.

The Committee submits to the Board of Directors its opinion on the terms and conditions for the setting of the compensation of the principal executives (fixed and variable portions, calculation method and indexing), as well as the amount and terms and conditions for the distribution of the Directors' fees. It ensures the existence of succession plan charts for Executive Committee positions.

Activity in 2014

In 2014, the Appointments & Remunerations Committee examined, amongst other items, the compensation policy for the Group's principal executives, the recommendations for appointment and re-appointment of Directors to be submitted to the Shareholders' Meeting and changes to the budget for Directors' fees to take account of the increase in the number of Directors receiving them as from the re-appointment of the Board of Directors on 23 November 2014. The Committee also examined the bonus criteria to determine the variable portion of the compensation of the Group's executives.

16.3 Bodies created by Executive Management

The Chairman and Chief Executive Officer is assisted by an Executive Committee which includes representatives of all the Group's lines of business.

This Committee is a body that makes decisions on, considers and discusses the Group's operational and strategic issues. It examines all the Group's significant underlying and current issues, tracks the operating objectives and results and contributes to the management and forecasting of the EDF group's major challenges. It reviews and authorises significant projects, specifically the Group's investment or disinvestment projects whose amounts exceed certain thresholds. The Executive Committee meets in principle each week.

In order to reinforce the examination and follow-up of projects, a Commitments Committee of the Executive Committee examines in-depth the most significant projects in terms of level of commitments or risks incurred

before the Executive Committee makes its decision. No investment project by the Company may be submitted for review by the Board of Directors without having first been approved by this Committee.

On the date of filing of this Reference Document, the Executive Committee had 12 members and a Secretary. The list of members and their personal information appears in section 14.2 ("Executive Committee").

The organisation of the Executive Management is supplemented by a Management Committee, a body of discussion and information, comprised of the members of the Executive Committee, as well as the Group's senior international executives and managers of the geographic regions, as well as the Company's operating officers.

16.4 Group Ethics Committee

The decision taken by the Group's Management to renew and adapt its ethical frame of reference led in 2012 to the joint drafting and adoption of the Group ethics code (henceforth referred to as "the Code"), by the

Group Executive Committee and the EDF Board of Directors. A Group Ethics Committee was also created in 2013 (see section 17.2.3.1 ("Ethics and transparency to stakeholders")).

16.5 Stock Exchange Ethics Code

In 2006, the EDF group adopted a set of principles and rules applicable to trading in shares in EDF or listed EDF group subsidiaries. These rules were compiled into an Ethics Code, updated in March 2011, in order to take account of the AMF recommendations of November 2010 and presented to EDF's Executive Committee on 4 April 2011. At the same time as this Code was distributed, awareness campaigns on stock exchange rules were launched for Group employees, specifically regarding precautions and obligations relating to the holding of inside information and the black-out

periods during which permanent insiders and Group staff with precise knowledge of the Company's financial statements prior to publication are required to abstain from trading Company securities.

The Code also notes the obligations imposed on executives to declare to the AMF and to the Company trades in EDF securities (see section 14.4 ("Shareholding by Directors and trading in EDF securities by corporate officers and executives")).

16.6 Report prepared by the Chairman of the Board of Directors in accordance with article L. 225-37 of the French Commercial Code

In accordance with the provisions of Article L. 225-37 of the French Commercial Code, the Chairman of the Board of Directors must describe, in a report appended to the management report, the composition, conditions of preparation and organisation of the work of the Board, as well as the internal control and risk management procedures set up by the Company. This report is provided in Appendix A of this Reference Document.

The Auditor's report drawn up in accordance with the final paragraph of article L. 225-235 of the French Commercial Code on the report prepared by the Chairman of the Board of Directors of EDF, regarding the internal control procedures for the preparation and treatment of accounting and financial information, is provided in Appendix B.

17

Environmental and societal information – Human Resources



EDF – Stéphanie Jayet ▲ Stephan Gladieu ▼



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This section includes information that the EDF group is required to publish in accordance with the provisions of Article L. 225-102-1 of the French Commercial Code and the Decree of 24 April 2012 implementing the

Grenelle 2 Law, which require companies to disclose how the social and environmental consequences of their activities are taken into account and report on their commitments in favour of sustainable development.

17.1 Corporate responsibility commitments

17.1.1 Materiality matrix: prioritising issues

In 2014, EDF carried out a Materiality¹ Analysis in order to identify risks and opportunities and guarantee that the Group is taking into account and reporting on all the most significant economic, social, societal and environmental issues; the analysis also serves to ensure that the Group keeps its sustainable development approach up to date with regard to the expectation of its key stakeholders.

Materiality Analysis

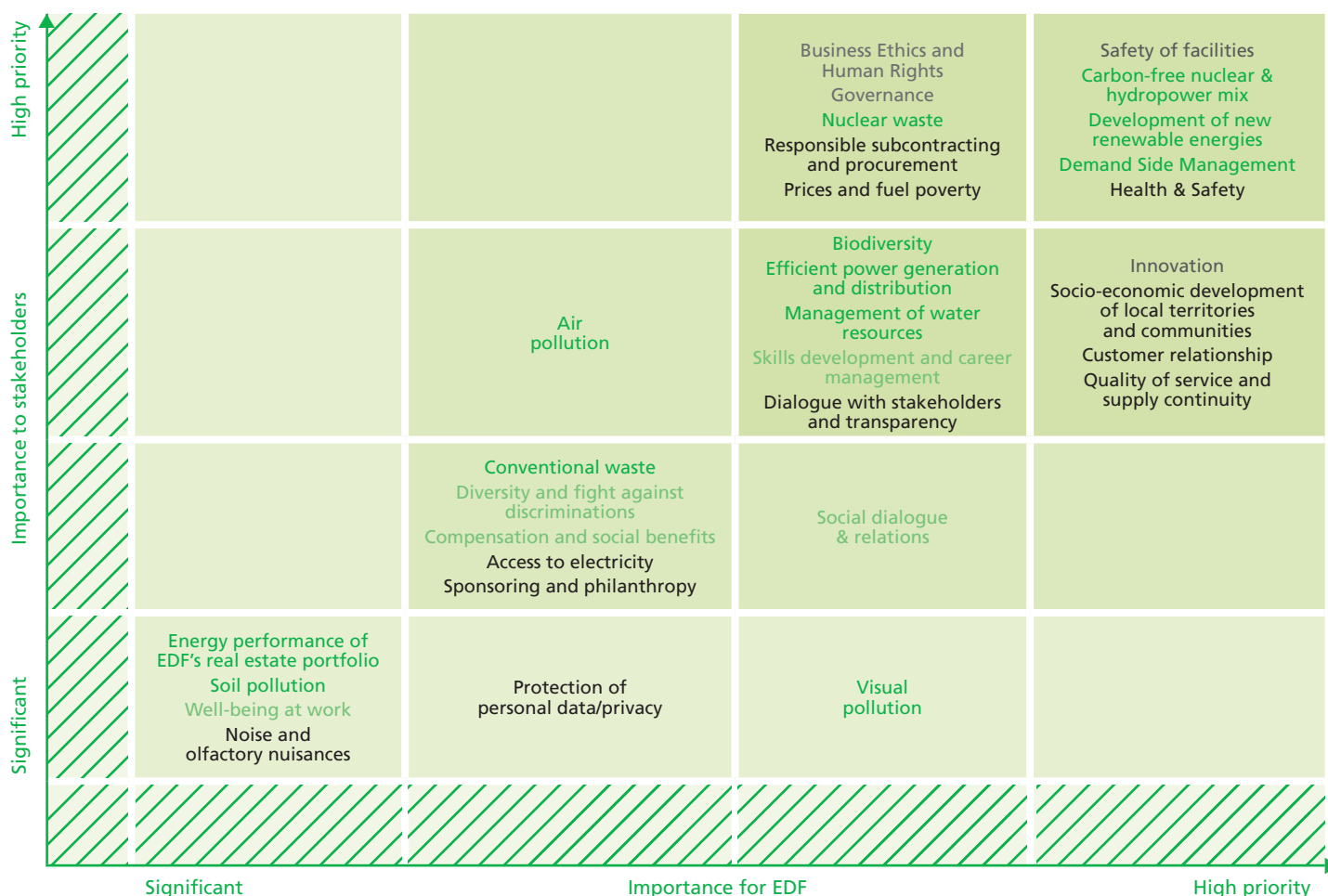
The analysis was performed with the methodological support of a specialist firm and was based on interviews with internal stakeholders (employees,

directors and managers representing all of the Group's divisions and the main countries in which it is present: France, United Kingdom, Italy, Poland, Belgium) and external stakeholders (members of the Stakeholder Advisory Panel and of the Sustainable Development Council and representatives of the Group's main shareholder, the French State). The surveys and internal barometers (customer satisfaction surveys, service provider barometers, general public surveys, etc.), and the sectoral analyses produced by non-financial rating agencies, also fed into this assessment.

The list of issues analysed was defined to cover all topics encompassed by the ISO 26000 standard related to the social responsibility of organisations. Thus, the fight against climate change was sub-divided into several issues, corresponding to EDF's levers for action: low-carbon nuclear and hydro mix, development of new renewable energies, energy efficiency of generation and distribution, control of energy demand.

Key results

The matrix below displays the results of the analysis.



1. In accordance with the definition of the principle of materiality, as it appears in Article 225 of the Grenelle 2 Law, the AA 1000 assurance standard, the GRI G4 guidelines, ISO 26000 standard and the International Integrated Reporting Council (IIRC) framework on integrated reporting.

The most important issues are plant safety, a low-carbon energy mix (nuclear and hydropower), the development of new renewable energies, the control of energy demand, and general health and safety.

The corporate responsibility commitments (see section 17.1.2 (“Corporate responsibility commitments: Group performance indicators”) below) cover the major issues identified by that review.

17.1.2 Corporate responsibility commitments: Group performance indicators

In every country in which it operates, the EDF group conducts its business with a focus on public interests, based on a constant concern for the safety of people, the security of its industrial facilities and the protection of the environment, whilst contributing to secure supplies of quality electricity at a competitive price.

Driven by its core values of respect, responsibility and solidarity, laid down in its Code of Ethics, the EDF group implements a corporate responsibility (CR) approach, in conjunction with its strategy to 2020. This approach is given shape and substance by the EDF group's corporate responsibility commitments, adopted in 2013. These commitments are intended to unite the EDF group companies around eleven shared goals, combined with measurement and monitoring indicators, to generate greater value and global performance.

They cover three key areas: responsible employer, responsible producer, responsible partner.

Various policies at Group level contribute to the corporate responsibility approach:

- the Group-wide sustainable development policy, signed in 2009 by the Group's main companies, focusing on three issues: (i) fighting against climate change and preserving biodiversity, (ii) facilitating access to energy and developing close links with the territories in which the Group operates, and (iii) contributing to debate through dialogue, information and communication;
- the Group's nuclear safety policy;
- a global approach concerning human resources and the social dimension, called “HR Vision 2020”; this is based on Group policies (diversity, gender equality, disability inclusion, etc.) and, through a worldwide Corporate Social Responsibility agreement signed with the trade union organisations of 16 Group companies.

Responsible producer

EDF's responsibility primarily concerns how it carries out its business, as producer and marketer of a specific commodity, electricity, which is essential for the human and economic development of our planet. As the world's leading nuclear operator, it carries out its activities with all due attention to safety, guided by a concern for public interests.

Targets/indicators	Unit	2014	2013 restated ⁽¹⁾
Maintain the highest level of safety in its installations			
Meet the international FTSE4Good criteria for nuclear safety		Renewal	Renewal
Remain the leading major energy provider in the development of low-carbon energies			
Keep the Group's direct CO ₂ emissions (for electricity and heat generation) within the 150g/kWh limit	g/kWh	102 ⁽²⁾	123 ⁽³⁾
Invest in renewable energies and increase their competitiveness			
Group's installed capacity for electricity generation using renewable energies			
Hydropower	MWe	21,889	21,902
Wind power	MWe	5,340	4,782
Solar power	MWe	536	562
Other renewables	MWe	500	456
Make a significant contribution to improving the energy efficiency of households			
Number of households supported by Group companies ⁽⁴⁾ in terms of energy efficiency			
EDF	Number	394,300	328,800
EDF Energy	Number	51,200	53,400
Électricité de Strasbourg	Number	2,780	1,960

(1) Consolidated Group figures restated for the impact of IFRS 10 & 11; Dalkia France fully consolidated for the entire year.

(2) Consolidated Group figures according to the IFRS rules applicable in 2014 (CENG, Sloe Centrale and Estag are considered to be joint ventures and are consolidated under the equity method from 1 January 2014); Dalkia France fully consolidated for the entire year.

(3) The data published in 2013 (not restated) was 116.3g/kWh.

(4) Companies in the Group consolidation scope selling energy to B2C consumers.

Responsible employer

On the strength of its 158,161 employees, the EDF group seeks to reinforce its position as a benchmark employer in priority areas such as recruitment, training, health and safety and employee benefits, and to develop an exemplary record with regard to diversity and standing against discrimination, by raising awareness throughout the Group and providing training for managers.

Targets/indicators	Unit	2014	2013
Reduce workplace accidents among employees and sub-contractors			
Halve, over 5 years, the frequency of accidents involving Group employees that result in lost-time (target for 2017: 2.2) ⁽¹⁾		3.1 ⁽²⁾	3.1
Maintain professional excellence and team performance through training and by promoting diversity			
More than 75% of Group employees receive at least one training session each year	%	85	85
Pool of future top executives to be 30% female in 2015	%	24	25
Zero-tolerance of any human rights violation, fraud or corruption in all Group companies and among suppliers			
13 companies to include an ethics/sustainable development clause in their purchasing contracts ⁽³⁾ in 2015	Number	13	8
13 companies to obtain the United Nations' Global Compact at advanced level in 2017	Number	2	2

(1) The previous 2017 target of 1.9 was adjusted in 2014 following the integration of Dalkia and Citelum, taking into account the specific features of those businesses.

(2) Consolidated Group figures according to IFRS rules applicable in 2014; Dalkia France and Citelum fully consolidated for the second half of the year.

(3) Excluding energy purchases on the spot market.

Responsible partner

Because energy matters concern everyone and because the electricity produced transforms people's lives and changes their environments, the EDF group is committed to maintaining a dialogue and working with its stakeholders at all levels.

Targets/indicators	Unit	2014	2013
Promote transparency and dialogue on sensitive issues			
8 companies to set up a formal space for dialogue with stakeholders in 2015	Number	3	3
Contribute to the development of territories through employment			
Number of direct jobs (actual Group employees) and indirect jobs (related to orders with suppliers and service providers) generated by EDF group activities			
Direct jobs ⁽¹⁾	Number	158,161	158,467
Indirect jobs ⁽²⁾	Number	475,545 (FTE)	475,498 (FTE)
Proactively fight energy poverty and promote access to electricity			
Number of actions undertaken ⁽³⁾ to support energy-poor customers, carried out by Group companies supplying energy			
EDF	Number	1,031,000	804,300
EDF Energy	Number	389,600	233,000
EDF Luminus	Number	31,240	39,207
EDF Démász	Number	2,600	1,870
Edison	Number	26,600	n.c.
Preserve water resources in all activities			
Publication, from 2015, of the Group's "water footprint"		(4)	(4)

n.c.: not collected. Edison consolidated for the first full year in 2014.

(1) Consolidated Group figures, calculated according to the IFRS rules applicable for each year. In 2014, the full-time equivalent (FTE) figures were 148,025, in line with international standards.

(2) Application of the same auditing method as in 2013.

In 2014, calculation of the indicator, excluding nuclear fuel cycle and uranium purchases, includes EDF, ERDF, EDF Energy, EDF Polska, Edison, EDF Luminus, EDF Énergies Nouvelles, Électricité de Strasbourg and TIRU. Full-time equivalent data shown.

(3) Energy guidance advice, negotiated payment plans, grant of financial aid, etc.

(4) Since 2013, EDF has led the development of a tool to assess the combined interactions of all energy sectors with water. This tool is intended for use worldwide and is being developed in conjunction with the scientific community and the international authorities representing the coal, nuclear, hydrocarbon and renewable energy sectors.

In 2014, methodology was finalized to be tested at twelve sites: eight EDF sites (four nuclear power plants in France, two thermal power plants, including one in Poland, and two hydropower plants), two thermal power plants belonging to GDF Suez (in the USA and Australia), and two hydropower plants owned by Hydro-Québec. The methodology was introduced at the World Water Forum, to be held in Daegu, South Korea, in April 2015. It will be implemented on priority sites of the Group in 2015.

17.2 Environmental and societal information

17.2.1 Managing sustainable development

17.2.1.1 Governance

Governance of sustainable development involves the following organisations, systems and management bodies:

- Group Sustainable Development Department, whose task is to coordinate and support actions taken by EDF departments and Group companies to meet the Group's commitments under the sustainable development policy and to report on those actions. The work of the sustainable development department is focused on three priority areas: dialogue with stakeholders, support for sustainable development in projects and management of sustainable development inside the Group;
- Group Sustainable Development Committee, comprising the heads of sustainable development for the Group's main subsidiaries and departments. While respecting the autonomy of each Group entity, the Committee's task is to ensure the implementation of the Group's sustainable development policy and coordinate actions associated with the Group's ISO 14001 certification, in addition to developing the exchange of experience and best practice among its entities. In 2014, the Committee met three times, primarily to learn the views of EDF's Commerce Division on new energy products and services for individual, business and municipal customers, to exchange information on the approach of Group companies towards actions to address energy poverty, and to discuss the challenges to nuclear business in the context of the Group's "Grand carénage" renovation programme and the French government's energy transition bill;
- an environmental management system (SME) that is used in all entities (see section 17.2.2.1.1 ("Environmental management system (SME)")).

In addition, the sustainable development department participates in the screening of projects presented to the Commitments Committee reporting to the Group Executive Committee. Prior to analysis by the Commitments Committee, the Group's most significant investment projects (greater than €50 million) are assessed from a sustainable development perspective and, specifically, in terms of their exposure to a risk of "non-fulfilment of sustainable development commitments".

17.2.1.2 Awareness and training in sustainable development for managers and employees

One of the objectives of the Group's sustainable development policy is to provide training and raise awareness among personnel on environmental issues.

Moreover, the ISO 14001 certification process followed by the Group over the last decade indicates the importance of maintaining and developing employee skills in environmental and sustainable development matters.

17.2.1.2.1 Raising sustainable development awareness in managers and employees

EDF and the Group companies are continuing their actions to raise awareness and develop an understanding of sustainable development issues among managers and employees. Essentially, these actions involve:

- the Group companies' intranets (the "Sustainable development community"), which are tools to raise awareness on environmental and societal challenges in the energy sector and on the expectations of the Group's stakeholders;
- creating and distributing magazines, guides or themed information packs, adapted to each company;
- providing awareness-raising modules for employees, particularly in the form of e-learning resources;
- holding regular competitions, challenges, or quizzes based on sustainable development themes. The main activities in 2014 were organised by: EDF (fourth "waste" competition), EDF Energy ("Better Energy Ambition" programme), EDF Luminus and BE ZRT;
- organisation of themed conferences with the support of external participants. In 2014, the main actions were undertaken by EDF ("sustainable cities" programme) and Edison (acculturation conference for senior and upper management, in partnership with the Unesco Chair for Energy and Sustainable Development at the Polytechnic University of Milan).

Of particular relevance for the purchasing segment, directly concerned with sustainable development issues:

- systematic awareness-raising, among purchasers, of the issue of social integration through economic activity;
- creation of a short film, screened for all buyers and prescribers, aimed at tackling pre-conceived ideas about firms operating in the protected and special work sectors, to increase the proportion of solidarity purchases at EDF.

Finally, and more specifically, as part of its variable compensation arrangements, EDF uses two sustainable development criteria for the calculation of employee profit-sharing, with 40% of the overall amount being linked to fulfilment of these criteria. The criteria for the period 2014-2016 are as follows: reduction of greenhouse gas emissions in tertiary buildings (-1,000 tonnes of equivalent CO₂ by end-2014, compared with 2013) and the proportion of employees who have undergone health and safety risk prevention training. For its part, as part of its Company Incentive Plan (CIP), EDF Energy includes employee profit-sharing criteria based on the degree to which the company's economic, environmental and social performance commitments are upheld.

17.2.1.2.2 Sustainable development training for managers and employees

EDF and the Group companies provide training in sustainable development; this may be dedicated instruction or an aspect of professional or specialist courses. Certain companies systematically include this training as part of their insertion programme for new arrivals and personnel newly hired for positions in: generation (nuclear, thermal and hydropower), nuclear engineering and purchasing, for EDF, EDF Energy (training which must be completed within three months of arrival), EDF Énergies Nouvelles (in France and numerous other countries with training undertaken during the first year), and Dalkia.

In France, since 2013, EDF has enriched the "Guidance on training and business" regulatory document with a "Sustainable Development" angle, to reinforce the inclusion of sustainable development in professional training plans.

In addition, a unique catalogue of training provision dedicated to sustainable development is offered to all units and departments. It addresses the main challenges defined by the Sustainable Development Department: dialogue with stakeholders, calculation of water footprint, biodiversity regulation, waste management and control of chemical risks to the environment. The training module “Developing and managing a project”, supported by the “Project Management” tool for local diagnostics and by the Durabilis¹ methodology, was organised ten times in 2014, in EDF entities and departments.

In 2014, EDF’s professional departments continued to enrich their sustainable development training provision:

- the Group’s property department has developed a training module on the use of green buildings, with the aim of raising awareness among participants about the use of energy-efficient buildings, to meet the requirements of environmental certification benchmarks and to understand how to perform an environmental quality assessment of buildings, and of practices, in accordance with those benchmarks;
- the purchasing department has developed an e-learning module, a prerequisite for its “purchasing and sustainable development” training;
- the nuclear engineering department has included training and an “Eco-k” tool to take environmental factors into account at the design stage.

At international level, each year BE Zrt in Hungary organises a mandatory e-learning session for its employees, dedicated to sustainable development and its operational aspects (waste sorting in particular).

17.2.1.3 R&D for sustainable development

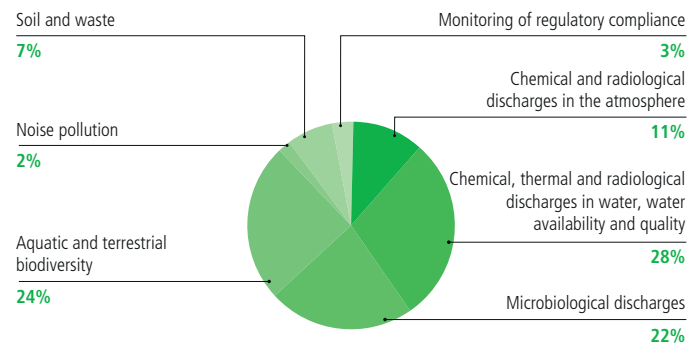
The EDF group’s R&D Department is preparing for the consequences of the Group’s medium- and long-term growth and is in charge of anticipating the major challenges that the Group will face as it grows, particularly:

- the use and depletion of fossil fuel resources and climate change, leading to questions on greenhouse gas emissions and corresponding regulations;
- water sharing, environmental management and biodiversity;
- the rapid development of emerging countries, which is altering the centre of gravity of global consumption;
- the development of new information technologies in the energy professions, providing new opportunities for those working in the electricity sector;
- customers, consumers and communities, which are also becoming energy producers and which will seek to optimise their consumption and live in more energy-independent cities.

In this context, the R&D Department has defined three research priorities (see also section 11.2 (“R&D priorities”)):

- consolidate and develop competitive, low-carbon electricity generation mixes;
- plan the electricity grid of tomorrow;
- develop and trial new energy services for customers.

In France, EDF is devoting more than 21% of its R&D budget to the environmental field. The “Generation Environment” programme, which deals with the environmental impacts of the entire generation fleet, marshalled €25 million in 2014 (€24.5 million in 2013) distributed as follows:



The R&D Department is also initiating other types of collaborative research, in particular with the Agency for Environment and Energy Management (*Agence de l'Environnement et de la Maîtrise de l'Énergie* or ADEME) and the Institute of Excellence in low-Carbon Energy (*Institut d'Excellence pour les Énergies Décarbonées* or IEED). It is also partnering with six venture capital funds in the field of clean technologies, including Electranova Capital, which has an investment capacity of around €90 million, of which €30 million is contributed by EDF, the only industrial investor (see section 11.1 (“R&D organisation and key figures”)). This partnership places EDF among the three main European Cleantech investors. Seven investments have been undertaken since the fund’s inception in mid-2012. In 2014, the fund carried out three new investments: in the German company Sunfire (designer of fuel cells and new generation electrolyzers), in the French company Leosphere (trialling floating lidar² sensors to accurately measure wind in offshore wind farms) and, finally, in the French company Techniwood (designer and manufacturer of innovative wood and insulation construction systems).

In terms of R&D, in 2014 the main areas of work in the field of sustainable development were as follows:

- climate change mitigation and adaptation: research on reinforcing the robustness of nuclear and thermal power station heat sinks in France, a CO₂ capture demonstrator in Le Havre, chemical-looping combustion with carbon capture, oxy-combustion of carbon as part of European projects, technological watch on geological sequestration of CO₂;
- the performance of a low-carbon generation fleet: tests on high performance materials for ultra-supercritical coal-fired power plants, solid biomass co-firing, hybridization of solar-thermal technology in combined-cycle gas plants, research to evaluate wind energy-yield in a light wind region, analysis of ageing of photovoltaic panels;
- energy efficiency: energy solutions for data centres, demand side management (DSM) diagnostic system for vehicle fleets, industrial heat pumps to recover waste heat, heating network modelling, development of low-cost hybrid or seawater heat pumps for low-consumption housing, smart thermostats for remote control of heating systems, bifacial photovoltaic panels to better match the energy demand curve of buildings;

1. A tool to help project managers to elaborate sustainable development action plans and encourage them to better identify the stakeholders concerned by their project, the project’s consequences on local employment and its impact on biodiversity.

2. Lidar: a technology which combines laser and radar technologies.

- controlling consumption: SCORE projects (better understanding of household consumption variations), OFFEX (a billing tool incorporating DSM features such as demand response or frequent price variations), Click'Conso (adaptation of services existing in metropolitan France for Overseas departments), ARCOS (a study of energy consumption behaviour and uptake of the technological innovations provided by the Linky meter or smart grids);
- the fight to tackle energy poverty (see section 17.2.3.3.1 ("Contributing to energy access and the fight against energy poverty"));
- the preservation of biodiversity (see section 17.2.2.10 ("Preserving of biodiversity"));
- renewable energies (see section 17.2.2.4.4 ("Research, future challenges for renewable energies"));
- sustainable cities: creation of an urban modelling platform, which incorporates and combines the inclusion of renewable energies in buildings, the management of energy networks, water management, soft mobility (see section 17.2.2.9 ("Sustainable cities and regions"));
- networks and smart grids: experiments with new materials offering reduced energy-loss or higher thermal resistance to reduce electricity line losses, adaptation of a low/medium-voltage grid for the inclusion of decentralised renewable energies from waste, full-scale experiments on electricity storage systems for customers in Corsica and the Overseas departments.

17.2.2 Environmental information

17.2.2.1 Control of environmental performance

17.2.2.1.1 Environmental management system (SME)

The environmental management system (SME) is organised, at the Group level, in such a way as to coordinate all initiatives, objectives and indicators according to the Group's environmental commitments in its sustainable development policy through coordination ensured by a Group Sustainable Development Committee, an Environmental Management Board for EDF and thematic groups.

The EDF group has been ISO 14001 certified since 2002. In 2014, the certified scope accounted for 98% of EDF and its subsidiaries' consolidated sales as well as its equity interests.

In May 2014, the ISO 14001 certification was renewed for the fourth time by the independent certification body, Afnor, for a three-year period. A new Group ISO 14001 certification was issued, including existing certificates for Group companies such as Edison, EDF Luminus, EDF Énergies Nouvelles Réparties (solar business) and the Réunion Plant-Est plant of the PEI group.

The Afnor audit noted, in particular, that the average level of maturity and environmental performance of the entities increased consistently overall in line with the Group's strategy and with commitments to corporate responsibility and to listening to stakeholders.

In France, the environmental management programme, updated annually and validated during the Environmental Management Board's SME review on 19 March 2014, materialised under the form of operational initiatives from objectives of the EDF sustainable development policy.

In 2014, the most significant initiatives from the programme were:

- to continue reducing the Group's CO₂ emissions by optimising nuclear generation, by adapting thermal generation and by developing renewables;
- to integrate new regulatory requirements into the business lines;
- to control incident-free Radioactive Waste Management and to optimise boric acid discharges;
- to continue creating biodiversity guides and preparing to integrate EDF into the "French National biodiversity" strategy (see section 17.2.2.10 ("Preserving of biodiversity"));
- to ensure that "water" is taken into account in processes and activities;
- to screen investment projects to develop and maintain industrial sites and facilities (projects for more than €50 million) against sustainable development criteria;
- to ensure that employees' skills are optimally maintained and renewed (communication and training);
- to continue raising service providers' awareness and strengthening control of the subcontracting chain.

At the Group level, during the annual review in June 2014, members of the Sustainable Development Committee defined the following major strategies:

- to continue working on the subject of water, which remains vital for EDF and its stakeholders;
- to continue integrating "Responsible purchasing" within international companies in order to increase the sharing of purchasing standards, results of supplier audits and supply chain knowledge;
- to study the relevance, for EDF, of joining the Sustainable Biomass Partnership¹ as part of achieving its Group policy on the sustainability of biomass;
- to adapt the Group's ISO 14001 certificate to the new 2015 version of the ISO 14001 standard.

17.2.2.1.2 Management and prevention of environmental risks

Risk Identification

Mapping and measuring the overall risk management level is a process conducted by the Group Risk Control Department based on analyses of the Group's subsidiaries and entities. EDF's environmental risks are included in its scope.

These risks are fully integrated into the SME and into the Group's internal control system, and are subject to action plans resulting from strategic directions in the Group's sustainable development policy.

The 2014 update confirms the risk analysis and does not highlight new environmental risks. However, the implementation of the Seveso 3 European Directive resulted in reclassifying more than ten of EDF's industrial sites in France into the high threshold, as well as reinforcing their associated risk management systems. This directive will enter into effect on 1 June 2015.

In 2014, as in 2013 and 2012, the most significant factors in terms of economic and financial challenges related to environmental risks pertain to the following subjects:

- roll-out of energy efficiency initiatives and obtaining related certificates;

1. An initiative from the industrial sector, created in 2013 by major European electricity providers, using biomass in the large thermal power plants, mainly in the form of wood pellets.

- impacts of EDF's business activities on the air, on water, on soil and on waste production;
- protection of biodiversity and services provided by ecosystems;
- water resource management;
- greenhouse gas emissions.

Preventing risks and pollution

In order to control risks of industrial incidents or accidents that could harm the natural environment or public health, EDF has implemented:

- a Group environmental management system that is constantly monitored and improved in the entities and on sites with external ISO 14001 certification audits;
- an active investment policy and an industrial asset decommissioning programme for assets no longer in operation, which include decontamination operations, if necessary¹;
- an employee training programme and a programme to raise awareness of all parties involved;
- inspections and audits of generation sites (see sections 17.2.2.2.1 ("Nuclear safety") and 17.2.2.2.2 ("Hydropower safety"));
- crisis response drills: in 2014, in France, in addition to periodic drills performed locally at each nuclear site, eleven national drills, including five with the French public authorities and three with international counterparts, were carried out at nineteen nuclear power plants. Internationally, companies regularly test their procedures through crisis response drills. In 2014, in the United Kingdom, EDF Energy conducted several similar drills at its eight nuclear power plants.

In order to reduce these risks, the Group has also implemented a programme to eliminate or substitute certain substances (PCBs, chemical products) with more environmentally-friendly products.

Locally, each of the Group's operational units and companies identify events that could have an environmental impact, manage emergency situations that could result from them, conduct corresponding crisis response drills, implement monitoring and communicate on environmental events under its responsibility.

During 2014, no high-risk environmental events took place². There were a few minor incidents without a major environmental or health impact, which concerned leaks or spillages of oil, hydrocarbons, or acid, or gas emissions (SF₆ or HFC). They were controlled according to the emergency procedures in effect.

Some of these events may be followed by litigation from complaints filed by NGOs or warnings from national regulatory authorities (French Nuclear Safety Authority (ASN), Prefecture, etc.). In 2014, two convictions were handed down against EDF in France for a total amount of approximately €25,000.

17.2.2.2 Safety of industrial equipment and safety of employees and third parties

As the world's leading nuclear operator and Europe's leading hydropower generator, the EDF group makes the safety of its industrial facilities its number one priority. The operational safety of nuclear and hydropower facilities ranks at the top of the list of the Group's corporate responsibility commitments (see section 17.1.2. ("Corporate responsibility commitments: Group performance indicators")).

17.2.2.2.1 Nuclear safety

The operational safety of nuclear facilities is taken into consideration from the initial design stage, and is regularly monitored, together with the implementation of an employee motivation policy and large-scale investment programmes. The Group's nuclear safety policy is incorporated into training for both EDF personnel and subcontractors.

Control and surveillance

Nuclear safety is subject to internal controls (annual reviews, internal control plans and nuclear inspection audits in France) and external controls (peer reviews between corporate members of WANO³ and OSART⁴ audits conducted by experts from the International Atomic Energy Agency (IAEA)).

In France, the safety of nuclear facilities is controlled by the ASN. Events are classified on a scale from 1 to 7, with 7 being the most serious (INES scale⁵). Incidents of no consequence for nuclear safety are classified as "deviations" or "level 0 events".

The ASN also approved the creation of an additional crisis management system, the Rapid Response Nuclear Task Force (FARN) following additional safety evaluations (ECS) carried out by EDF after the Fukushima accident.

To ensure that the nuclear fleet remains effective and safe after 40 years of operation, EDF is implementing a coherent industrial project. A key aim of this project is to improve safety performances, as required for the ASN, to receive permission to continue operation.

In the United Kingdom, the Office for Nuclear Regulation (ONR) is the independent watchdog authority for safety in the civil nuclear sector. It monitors compliance with safety rules, including for transportation of radioactive matter.

Results for 2014

As in 2013, no major safety or radiation protection event was recorded in France or in the United Kingdom in 2014, and for the second consecutive year, the EDF group did not experience a Significant Safety Event (ESS) classified at INES level 2 or higher.

The number of INES level 1 ESS events fell again (-4% compared to 2013) in France (1.14 per reactor, versus 1.19 in 2013). The number of automatic reactor trips (ART) reached 0.53 per reactor (0.59 in 2013), with 34 of the 58 reactors not experiencing an ART in 2014, reaching the all-time best level achieved in 2011-2012 and tied with the best international performances (very close to the fleet of 69 pressurised water reactors in the United States).

In 2014, further progress was made in fire safety, a major risk in nuclear facilities, with few fires started and no notable fire events (two in 2013). The French fleet also recorded very good levels of backup system availability, among the best in the world (outage rate of 0.04% for emergency water supply, 0.03% for emergency steam vapour supply and 0.02% for backup diesel generators). The outage rate for reactors remained at a low level (2.4%), identical to the PWR fleet in the United States.

Notably, the Corporate OSART led in 2014 by the IAEA on EDF's nuclear safety concluded that EDF is fully in compliance with the standards defined by the IAEA and, in particular, noted the implementation of FARN, the internal safety audit (by an independent safety reviewer) and the sustained training policy as best practices.

1. These decontamination operations may concern situations involving contamination and denaturing that date back to before EDF became the operator.

2. High-stake environmental event: an event causing serious environmental damage (areas, resources and natural environments, sites and landscaping, air quality, animal and plant species, biological diversity and balance) combined with extensive media coverage or a financial impact of more than €3 million. An event causing environmental damage and likely to affect human health falls within the scope of a high-stake environmental event for the EDF group.

3. World Association of Nuclear Operators.

4. Operational Safety Review Team.

5. International Nuclear Event Scale.

Improvements are expected concerning compliance with technical operating specifications (STE), with cases of STE non-compliance per reactor increasing from 1.34 in 2013 to 1.55 in 2014.

In the United Kingdom, the practices for declaring the number of ESS events classified as INES level 0 or 1 are different than practices in France, given the different requirements of each country's respective safety authorities. Not entirely comparable to EDF, the number of ESS events declared by EDF Energy fell to 2011-2012 levels (4.5 per reactor, versus 5.1 in 2013). The number of INES classified events, a more relevant comparison basis, decreased sharply from 0.80 per reactor in 2013 to 0.33 this year; all of them were level 1. However, an anomaly¹ detected during the shutdown of a unit in Reactor 1 of the Heysham¹ power plant was declared a Nuclear Reportable Event², and led to EDF Energy taking a precautionary measure of shutting down the three other reactors with the same design that could be affected by this anomaly. All of the reactors restarted in late 2014 and are running in January 2015. For AGR reactors, backup systems availability was good (outage rate of 0.23% for emergency water supply, 0.06% for emergency steam vapour supply and 0.30% for backup diesel generators); the outage rate of these systems was even zero for the Sizewell B PWR reactor. 2014 also confirmed the progress made over the two previous years as regards operation of the fuel handling machines in AGR reactors, following significant efforts to improve reliability. More than 90% of the recommendations formulated during WANO peer reviews were integrated, which made EDF Energy a benchmark within this independent organisation. However, after two years of stability, in 2014, the British fleet saw a significant increase in automatic trips and manual reactor shutdowns (1.79 per reactor) and in unplanned reactor outages (10.9%), with a notable heterogeneity between sites, which calls for the implementation of a suitable backup system to help the sites falling behind recover expected performance levels.

The detailed results on nuclear safety for 2014 are published in the annual report created by the General Inspector for Nuclear Safety and available on the Internet.

17.2.2.2.2 Hydropower safety

See section 6.2.1.1.4 ("Hydropower generation").

EDF operates 436 hydropower plants in France and manages the reservoirs of 239 large dams. The average age of the French hydropower fleet is around 70 years. Hydropower safety aims to control risks of the structures rupturing, risks associated with managing structures during flood periods, as well as risks associated with water flow and water level variations during operation. Like the nuclear safety policy, the hydropower safety policy aims for a high level of safety and continuous improvement.

In 2014, the hydropower safety of EDF's fleet remained at satisfactory levels. Only one hydropower safety incident (EISH) classified as "orange" (an incident that placed people in danger, within the meaning of the Decree dated 21 May 2010) took place, and no injuries were caused, and 19 EISHs classified as "yellow" (an incident reflecting non-compliance without putting anyone in danger) took place. The key indicators are still at good levels:

- proper detection of significant (non-serious) incidents (ESSH level 0) by local teams, with more than 3,100 detected;
- low percentage of incidents with external effects (ESSH level ≥ 1). 37 incidents took place;
- a reduction in the number of sites with high sensitivity to risks related to variations in water flow downstream of facilities, which fell from 114 in 2005 to 18 in 2014 (19 in 2013, 16 in 2012). There were no exceptional events in 2014 that were similar to the extreme weather events that took place in the Pyrenees in 2013. It was humid, however, and there was

excess rainfall and runoff accompanied by several, sometimes repetitive, floods. Nevertheless, the management of hydro-electric structures was properly controlled during these events.

Control of risks associated with the facilities ageing is a major concern in hydropower safety and has been strengthened, and the long-term maintenance policy was updated in 2012.

The "SuperHydro" hydropower facility renovation programme launched in 2007 for fleet safety and efficiency is 91% complete. It is being rolled out through a long-term maintenance programme designed to succeed it, and includes a section dedicated to hydropower safety: the IPHE-S programme, covering the safety aspects of hydropower engineering for plants in operation, which in 2014, accounted for more actions and more annual resources than SuperHydro.

Immediate maintenance actions were taken through this programme to ensure that the safety margins are clearly identified and countermeasures are active until the work is complete. At the end of 2014, 607 specific systems and measures were carried out and monitored in five priority facility groups: galleries, pipes, dams, penstocks and floodgates.

A total of more than €800 million will have been invested in safety over the period spanning from 2007 to 2015.

These two programmes were reinforced by the "RenouvEau" project whose goal is to improve safety as well as performance and competitiveness of the hydropower fleet. This programme is currently being rolled out to all major facilities in the hydropower fleet and is in the process of being ramped up for use.

The Decree dated 11 December 2007 established new regulatory requirements for dam owners or operators, including conducting exhaustive studies that contribute to safety: danger assessments for class A facilities (dams whose height is greater than or equal to 20 metres) and class B facilities (dams whose height is greater than 10 metres and whose volume exceeds a threshold set by regulations), and safety reviews for class A structures. EDF adheres to the expected timetable: the 240 first generation danger assessments were delivered to the Control Department of the French government. The safety review timetable is also well under way, with 106 reviews delivered in 2014 out of the 157 expected by 2017. They consolidate a satisfactory overview of the structures and associated countermeasures.

For further details, see the 2014 report of the Inspector of Hydropower Safety, available on EDF's website.

17.2.2.3 Climate change

17.2.2.3.1 Report on EDF's greenhouse gas emissions

Thanks to its low-carbon generation fleet, largely made up of nuclear (72,913MW, or 54%) and renewable energy, including hydropower (28,265MW, or 21%), the EDF group is committed to remaining the leading electricity operator in combating climate change and in reducing greenhouse gas emissions. It is participating in the European Union's objective of reducing emissions by at least 40% from 1990 to 2030, while respecting the diversity of local energy situations.

The Group is combating climate change by investing in low-carbon or carbon-free energy generation methods, including renewable energies (see section 17.2.2.4 ("Sustainable management of resources")) and nuclear power, and aims to produce 75% carbon-free energy by 2020 (for total installed capacity of around 160GW³).

1. A crack on a steam generator that could call into question the safety of nuclear units.

2. The highest level of event disclosure to the British authorities.

3. Integrating 100% capacities for fully-consolidated companies, and the capacity that amounts to the proportion of equity interest held for companies consolidated proportionately or for equity-accounted companies.

The Group also commits to reducing indirect emissions, such as the emissions of its office buildings, by appropriately managing buildings and through employee motivation.

EDF has published a report of its greenhouse gas emissions annually since 2011, which includes indirect emissions as well, surpassing its legal obligations (Article 75 of the Grenelle 2 Law). This report covers all of EDF's business activities, from fuel production to power generation all the way to day-to-day business operations.

Comparative report ⁽¹⁾ of EDF's emissions 2011-2013

<i>(in kilotonnes of CO₂-equivalent)</i>	2013	2012 ⁽³⁾	2011 ⁽³⁾
Scope 1 ⁽²⁾ – direct emissions	17,000	17,000	14,800
Scope 2 ⁽²⁾ – emissions related to energy consumption for the Company's day-to-day operations	29	29	28
Scope 3 ⁽²⁾ – indirect emissions	19,300	20,100	19,700

(1) 2014 data not available at the time of publication. The data will be published in the "2014 Performance" document accessible on the Internet.

(2) Scopes defined by the GHG Protocol, covering the six greenhouse gas emissions from the Kyoto Protocol (CO₂, CH₄, N₂O, HFC, PFC, SF₆).

(3) Values from 2011 and 2012 were recalculated to include changes in methodology made for 2013 in order to compare results.

The change in greenhouse gas emissions observed from 2011 to 2013 mostly correlates to changes in weather conditions.

Direct emissions from power plants (scope 1) remain the largest component, with a significant portion coming from IES. Additionally, on top of CO₂, EDF mainly emits low quantities of CH₄ from water reservoirs and SF₆ from transformers. The 23% rise in direct emissions from 2011 to 2012 is primarily due to 2012 being a colder year, which led to increased use of thermal power plants to generate electricity. The stability in direct emission levels from 2012 to 2013 masks contrasting trends between continental France and Island systems, which have nevertheless decreased 13% compared to 2010, a benchmark year chosen by EDF in accordance with the Grenelle 2 Law.

Scope 2 emissions, which correspond to purchases of electricity, heating and cooling for EDF's own needs, are very limited compared to the rest of the report. Significant energy efficiency efforts made by EDF in its buildings have stabilised emissions related to this line item, despite effects from the weather.

In terms of scope 3, emissions related to electricity purchases, and particularly purchasing requirements in continental France (mainly cogeneration), make up the largest item in this scope, even though EDF does not have any leeway to reduce it. The other large items pertain to upstream fossil and nuclear fuels (extraction, transportation, enrichment, etc.), to purchases of goods and services, to property, plant and equipment whose emissions are "amortised" every year in parallel with their accounting depreciation, to electricity transmission and distribution, and finally, to the combustion of gas sold to customers.

Lastly, in addition to its commitment to control direct emissions, EDF has committed to reducing its diffuse emissions (from office buildings, vehicles and business travel). The EDF group manages a substantial real estate portfolio (more than 4.5 million m² excluding electrical power plants). EDF seeks to reduce the environmental impact of its portfolio in both properties that it owns and rents. As part of its sustainable development strategy, EDF's Real Estate Department has set a goal of reducing the energy consumption of the buildings it manages by 8GWh per year, using the following levers:

- energy efficiency initiatives in facility operations;
- optimisation of surface occupation;

- renewal of the portfolio of directly-owned properties;
- use of the best technologies available, particularly in maintenance work;
- implementation of energy performance contracts for all locations whose operations are subcontracted.

In 2014, EDF has dedicated nearly €10 million to improving the energy performance of its real estate portfolio.

This commitment, supported by all company employees, is also reflected in the profit-sharing agreement, which includes a criterion on reducing greenhouse gas emissions in office buildings for the 2014-2016 period (-1,000 tonnes of CO₂ equivalent at the end of 2014 compared to 2013), which accounts for 20% of the total amount of the profit-sharing.

EDF is a member of the International Sustainability Alliance (ISA), an organisation whose primary goal is to contribute to the development of sustainable buildings in Europe and internationally. This development requires knowledge of the existing portfolio's actual performance, first and foremost, so members of the ISA have therefore joined forces with the Building Research Establishment¹ to create an environmental database for their portfolios, which already includes approximately 10,000 buildings.

17.2.2.3.2 Reducing the CO₂ emissions of industrial facilities

In 2014, the Group emitted 64.3 million tonnes of CO₂ worldwide, including 8 million tonnes of CO₂ in France, even if almost 98% of electricity generation does not emit CO₂.

In continental France, EDF's goal is to halve its CO₂ emissions by 2016 compared to 1990 levels, i.e. a 12 million tonne reduction of CO₂ and a substantial decrease in specific emissions (17g/kWh in 2014 for 67g/kWh in 1990).

At the European level, the latest PWC study² stressed that "the EDF group has made substantial contributions to maintaining Europe's average emission rate at relatively low levels" (the 2013 carbon factor excluding EDF amounted to 428kg of CO₂/MWh, but only 328kg of CO₂/MWh when EDF is included).

1. A parapublic English body responsible for defining building standards, qualifying construction materials and processes in terms of their thermal and mechanic characteristics.

2. PWC study from December 2014.

Total CO₂ emissions due to electricity and heat generation

(in g/kWh)	2014	2013 (restated)	2012
EDF group	102	123 ⁽¹⁾	117
EDF	17	35	35

(1) The data published in 2013 (not restated) was 116.3g/kWh.

These results are the product of the Group's voluntary and consistent industrial policy, which, in order to reduce and maintain its greenhouse gas emissions to one of the lowest levels in Europe, and below 150g/kWh (Corporate Responsibility Commitment), has several short- and long-term levers:

- integrating carbon criteria in the Group's industrial arbitrage between the different means of generation, for both their operations and long-term investments;
- modernising the thermal fleet;
- operating the carbon-free nuclear fleet;
- optimising hydropower generation by modernising generation methods;
- developing other renewable energies (wind power, solar), with the Group ranking 5th in Europe for these energies in 2013 (excluding hydropower) and number 1 in Europe for the development of solar power plants in 2013.

The Group's short- and long-term commitments towards reducing direct CO₂ emissions are as follows:

- internationally: maintain the Group's direct CO₂ emissions under 150g/kWh;
- in continental France: reduce its specific emissions 50% from 1990 to 2016;
- in island systems (Corsica and overseas departments): reduce absolute CO₂ emissions from 2005 to 2020, with the intermediate goal of 480g of CO₂/kWh by 2015;
- in the United Kingdom: reduce the carbon intensity of electricity generation to 250 g of CO₂/kWh by 2020, and to less than 100g of CO₂/kWh by 2030.

Optimising the environmental performance of the thermal fleet (THF)

The environmental performance of THF plants has been constantly improved to meet increasingly stringent regulatory requirements. Investment programmes include both requirements to improve air quality and reduce atmospheric emissions as well as regulations pertaining to greenhouse gases, while taking into consideration security of supply and the cost of fossil fuels.

Since the implementation of systems to reduce nitrogen oxide over the past few years, the Group's atmospheric emissions have decreased significantly.

In France, oil-fired units now use fuel with an ultra-low sulphur content (0.55% sulphur).

In Italy, the Edison thermal fleet is entirely made up of high-efficiency combined-cycle gas turbines with low CO₂ emissions. These high-performance thermal facilities, combined with hydroelectric facilities and renewable energies (wind farms in particular) make Edison one of the lowest emitting electric companies in Italy.

In Poland, the thermal power plants are especially challenged by pollutant emissions in the air. Most of EDF Polska's boilers are now equipped with low

NO_x emissions burners. In preparation for the European directive on industrial emissions to go into effect on 1 January 2016, which will limit SO_x and NO_x emissions to 200mg/Nm³, EDF Polska is fitting its Krakow, Kogeneracja and the Gdansk and Gdynia (formerly EDF Wybrzeże) cogeneration units with desulphurisation systems, and launched a denitrification programme for its facilities. Combined with using coal of the best environmental quality, this initiative is already paying off in 2014, with a 12% decrease in SO₂ emissions and 13% decrease in NO_x emissions compared to 2013.

The Group is also active in this field of research. In France, EDF is continuing its R&D on studies to reduce NO_x emissions through the "Sperone Q600" project (low-NO_x configuration studies to optimise boiler operation). In Poland, the R&D centre in Krakow, the Group's leading coal-fired and biomass co-firing research centre, is continuing the "Ecoalboiler" project (to improve the performance of boilers in coal-fired power plants).

Modernising the THF generation fleet

In France, the Group has commissioned three combined-cycle gas turbines (CCGT) since 2011, at the Blénod site (430MW) in 2011 and at the Martigues site in 2012 and 2013 (Martigues 5 and 6, 465MW each). In 2014, the programme continued with construction work on the CCGT in Bouchain in the Nord department (510MW), with commissioning scheduled in 2016. This new-generation CCGT will be equipped with "FlexEfficiency50" technology, which has the best technical performance (efficiency increased to 61%, +3 to 4% compared to a classic CCGT) and environmental performance (10% reduction in CO₂ emissions).

In 2014, the most polluting thermal units were shut down (see section 6.2.1.1.5.2 ("Issues relating to thermal generation")). Between 2012 and 2016, EDF will have closed and replaced 2,850MW of low-performance coal-fired power plants with combined-cycle gas turbines and combustion turbines. In total over the period, these actions will decrease the EDF thermal fleet's CO₂ emissions per kilowatt-hour generated in France by more than one third.

In the United Kingdom, the three new 1,300MW units in the new combined-cycle gas power plant in West Burton B have been operating since 2013. With 1.5 million customers served annually for 25 years (forecast operating lifetime), this power plant will help EDF Energy meet its 2020 goal of reducing its specific CO₂ emissions.

Furthermore, in Poland, EC Zielona Góra completed the modernisation of its power plant and replaced coal with gas as fuel in 2013. A similar programme is planned in 2017 for the Toruń power plant.

Lastly, in the area of carbon dioxide capture and storage (CCS) technology, the EDF group is participating in post-combustion and oxy-combustion capture projects with internal and external industrial partners as well as in studies concerning the transport and storage of CO₂. In 2013, the CO₂ capture prototype built on the Le Havre site in partnership with Alstom and Veolia Environnement, and with the support of the ADEME (Agency for Environment and Energy Management) was commissioned. The prototype operated 2,500 hours and captured 1,900 tonnes of CO₂. A comprehensive technical, economical and organisational report is in progress.

17.2.2.3.3 Demand side management (DSM)

EDF's sustainable development policy includes promoting energy efficiency to customers and is one of the primary levers in combating climate change. One major focus area concerns improving the insulation in homes occupied by people experiencing financial difficulties (see section 17.2.3.3.1 ("Contributing to energy access and the fight against energy poverty")). In response to their regulatory obligations, the Group's companies developed energy efficiency solutions adapted to their markets and, further to that, the Group created an Energy Services Department which brings together all of the energy services activities for customers, companies and authorities, mainly in Europe. This recent pan-European strategy meets the demands of the largest energy consumers for energy efficiency solutions: therefore, in 2014, the association of EDF Energy, EDF, Dalkia and EDF Fenice provided audits and solutions to the Jaguar, Land Rover and Total groups for their English sites. In France, the integration of Dalkia in 2014 brings the expertise of a leader in energy services, while internationally, EDF Fenice develops optimisation solutions for Italian, Spanish, Polish and Russian industrial customers.

In France, EDF offers a range of services to support its customers in terms of energy efficiency as well as to encourage energy demand management and to give priority to the lowest-carbon generation methods. This process made it possible for the Company to obtain energy savings certificates under the system that assigns customer energy saving obligations to every electricity and gas supplier (see section 6.5.6.1 ("Basic regulations applicable

to the environment, health, hygiene and safety" – "Energy Efficiency")). As the leading French energy savings certificate producer (25% of total volume), EDF fulfilled its obligations for the period from 1 January 2011 to 31 December 2014. In 2014, EDF carried out 14,300 building energy performance improvement operations with regional authorities and corporate customers as part of this programme. It handed out 165,000 financial incentives to residential customers to carry out energy renovation work, in addition to 168,000 incentives for social housing. Since the creation of the programme in 2006, EDF will have helped bring about 1.6 million energy renovations with residential customers and nearly one million in social housing. Dalkia in France structured its organisation around five focus areas:

- rolling out energy management services around the Dalkia Energy Saving Center;
- continuing the programme to renew cogeneration units generating less than 12MW following a Decree in October 2013 which provides more clarity on tariffs for purchase obligations;
- rolling out the Dalkia Energy Live solution: selecting the best-suited energy sources, methods for combating energy loss, raising users' awareness of environmentally-friendly behaviour;
- implementing energy performance contracts for building managers;
- supporting industrial customers in implementing contracts with an incentive clause.

2014 DSM and energy efficiency initiatives carried out by EDF in the residential customer, corporate and local authorities markets

In France

Energy saving promotion and training	<ul style="list-style-type: none"> ■ A website dedicated to energy saving, www.mamaisonbleuciel.fr for residential customers, which garnered 3.5 million visits and nearly 40,000 requests for quotes. ■ Financing energy savings training for employees and tradesmen in the building sector through the FEEBAT system, in order to develop these businesses' ability to respond to the thermal renovation market (60,000 professionals trained in 2014). ■ Grant of 45,000 subsidised loans for residential customers improving the energy efficiency of their home with EDF's Bleu Ciel partners. ■ Partnership with La Banque Postale in Corsica to promote 0% interest rate eco-loans and financing energy savings construction.
Awareness raising/information	<ul style="list-style-type: none"> ■ Organisation of informational campaigns on environmentally-friendly habits (several million leaflets, mobile apps, advertising, awareness raising kits, awareness raising meetings for employees of corporate customers). ■ Events on controlling energy consumption for companies, via the Club Business Entreprises. ■ Launch of a quarterly magazine for 100,000 public sector decision-makers to provide a forward-looking perspective on regional energy issues.
Energy efficient offers and advice	<ul style="list-style-type: none"> ■ 165,000 renovations completed by Bleu Ciel partners. ■ Sale of 8,000 "Diagnostic Habitat Bleu Ciel" offers: diagnostic tests conducted in the home by an energy saving expert, including a heating assessment, a simulation of potential energy savings, recommendations, estimation of work required and advice on financing. ■ Signing of 14 Energy Productivity Plans. Through these offers, EDF is committing to a goal of achieving energy savings (compensation from EDF to share the savings achieved over a multi-year period). ■ Signing of "Energy savings awareness" contracts, notably with 25 employment offices in the Champagnes Ardennes region. ■ Signing of a partnership with the Plastics Federation to develop new, higher-performance electric presses. ■ Signing of 21 Energy Management Systems (SME), an approach which aims to provide customers with a comprehensive view of their energy spending, allowing them to have better control and allows the company to obtain a 50001 certification. ■ Implementation of local energy solutions and services for a sustainable city, with more than 300 projects in progress. Implementation by Dalkia of an energy performance contract for Colombes Habitat Public, with the adoption of new energy sources (biomass, heat pump, geothermal), which decreases the quantity of energy necessary for heating 7,000 households by 17%.
Experiments	<ul style="list-style-type: none"> ■ EDF is testing out customised consumption monitoring programmes, particularly tests of "Mon Suivi Électricité" (My Electricity Monitoring) conducted with 25,000 customers as part of the Smart Electric Lyon programme and tests of the "Bilan Conso EDF&Moi" programme with 100,000 customers. ■ Demonstration of the profitability of the experiment on air-conditioning with sea water led by the CHU de Saint-Pierre in Réunion (electricity consumption reduced by almost 90%). ■ Recovery of heat produced by thermal diesel generators in Corsica and overseas in order to supply the heating and air conditioning needs of commercial facilities and local residential buildings.
Controlling consumption	<ul style="list-style-type: none"> ■ Signing of a partnership between EDF and Philips to offer residential customers LED light bulbs at competitive prices in several large retailers in order to encourage and help households renovate their household lighting, which accounts for an average of 9% of a house's electricity consumption (excluding heat, cooking and hot water). ■ Launch of the "Agir Plus" (Act More) offer in Corsica and overseas, a range of solutions for residential customers, to reduce their consumption and their CO₂ emissions (300,000 energy-saving light bulbs and 100,000 LEDs for sale). ■ 100,000MWh saved in the 14,500 facilities managed by Dalkia, with an incentive clause.

Internationally

Controlling consumption	<ul style="list-style-type: none"> ■ In the United Kingdom, launch of Heatsmart, a device which studies the behaviour of customers in their home then offers them advice to better manage their heating consumption. ■ Completion of 62,000 free housing insulation operations (cavity walls and attics) and replacement of boilers as part of a government programme called Energy Carbon Obligation (see section 6.3.1.4.1 ("Customer Business")), which, in particular, makes it mandatory to reduce domestic heating costs for disadvantaged customers or customers over 70 years old. ■ In Italy, the launch of the "Energy Control" offer, through which Edison offers residential customers an energy consumption management system coupled with a discussion forum and a place to submit feedback online (1,000 offers sold). ■ In Hungary, Démász is continuing its energy audit offers to companies and is implementing pre-payment meters for municipalities and social housing buildings.
Energy efficiency	<ul style="list-style-type: none"> ■ Energy performance contract won by EDF Energy for all of Iglo's industrial sites in the United Kingdom, in Germany and in Italy. ■ In Italy, launch of the "E-manager" offer in the hotel market, through which Edison assists customers in detecting energy losses and offers them an intervention plan. ■ Signing of a memorandum between EDF Fenice and Danone pertaining to energy efficiency and the environmental services for the food giant's business activities in Russia.

17.2.2.3.4 Adapting the Group's business to climate change

Climate change directly affects energy demand as well as the physical environment in which generation, distribution and transmission activities are carried out. Adapting to climate change primarily concerns structures with long life cycles: nuclear and thermal power plants, hydraulic dams, hydrocarbon platforms in the sea or networks. As wind and solar power plants are intended to be operated for a shorter period – around 20 years – they are relatively unaffected, especially as they are lightweight facilities with easy-to-replace equipment.

In France, EDF has implemented a strategy to adapt to climate change in an appropriate response to France's 2011-2015 National Climate Change Adaptation Plan. This strategy concerns industrial facilities (current and future), customer offers, generation/consumption optimisation and R&D themes. It is structured around the following principles:

- assessing the current and future impacts of climate change on facilities and business activities;
- adapting the facilities concerned to reduce their sensitivity to extreme weather conditions;
- taking into consideration future weather in the facilities' design;
- improving resilience to extreme changes and situations that are the most difficult to predict.

EDF has been tasked with managing action 3.3 of the National Climate Change Adaptation Plan: *"In the energy sector, improve performance in terms of water withdrawal and consumption by existing and future power plants"*. Within this context, EDF launched a research programme on the robustness of nuclear and thermal power plant heat sinks in operation, which includes results already obtained from assessing changes in water availability in the main French watersheds. In 2014, a study was also conducted on water output forecasts for large reservoirs, taking into account changes in trends observed over the last few years on filling large lakes.

Nuclear power plants have been designed to withstand extreme weather. Renovation work (nearly €400 million until 2019) is under way for 15 French power plants equipped with air cooling towers in order to improve their efficiency during hot weather.

According to the International Panel on climate change, sea levels are rising and could grow another 18 to 42 centimetres by 2100 due to climate change. This potential increase was included in the design of the Group's new EPR nuclear power plants. As a result, the EPR in Flamanville was built 4 metres above the maximum forecast rise in sea level.

In the United Kingdom, in addition to the Group's adaptation strategy, EDF Energy reassessed its risks, and particularly those associated with increased air and sea temperatures, and its climate change adaptation plan includes the United Kingdom's national plan. The Company continued its work within the JER (Japanese Earthquake Response) programme studying extreme weather events and strengthened its collaboration with the Met Office (The British national weather service) and several universities on long-term meteorological studies. Between 2012 and 2014, the Company invested more than £200 million to strengthen the resilience of its facilities.

Overseas, the four new diesel-fired power plants that EDF built incorporate risks related to climate change into their design: they include a sea wall that can withstand tsunami waves up to 13 metres in Réunion, and a flood wall in Martinique (flooding recurrence interval of 2,500 years). All of the industrial buildings' openings are protected against cyclone-force winds and special ponds are intended to collect water during major storms. Calculations for extreme floods were re-evaluated in 2014 for waterways in Corsica and in Réunion.

Weather risks

Faced with the recurrence of large-scale weather events, EDF and ERDF have drawn up a "Weather event" plan.

EDF has introduced measures to reinforce resilience to external weather effects (the aim being to withstand the initial exceptional event then return to normal as soon as possible). The lessons learned from the Fukushima accident have been integrated into these measures, and a rapid response nuclear task force (*Force d'Action Rapide du Nucléaire* – FARN) has existed since 1 January 2013 to intervene in an emergency (see section 4.2.2.1 ("Management of nuclear safety risk")).

ERDF's plan describes the measures taken to reduce network vulnerability (1.3 million km) and shorten the time to resupply customers in the event of a power cut. It also covers risks of flooding and summer heatwaves. The plan essentially consists of putting high-voltage overhead lines underground to avoid risks of falling trees, wind, snow and frost, beginning with the most exposed and significant facilities for customer connection. As part of this plan, from 2007 until the end of 2014, ERDF took down 32,400 kilometres of high-voltage overhead lines, including 14,400 with known weather risk. Furthermore, 98% of new high-voltage networks are underground and 80% of new low-voltage networks use more discreet, reliable techniques.

In addition to this investment programme, a Rapid Intervention Electricity Task Force (FIRE) has been created, which can mobilise up to 2,000 people, both in France and abroad. The task force was called in twice in 2014: in Brittany in February for storm Ulla, and in Martinique in July.

17.2.2.4 Sustainable management of resources

Objectives

The EDF group has set a target of achieving a 25% share of renewable energies in the energy mix by 2020 (installed capacities). The percentage of renewable energies in its mix amounted to 21% in 2014 (versus 19.9% in 2013) with 16% being hydropower.

Within this context, and with the aim of controlling its carbon footprint, the Group, the leading producer of renewable energies in Europe (25.2GW installed), is modernising and optimising its hydropower generation capacities, continuing its development in wind energy, solar power and biomass, and is contributing to the emergence of new technologies (marine energies, new generation solar energy). Thanks to these development efforts, it is reinforcing its position in the renewable energy market both in Europe and worldwide.

Backed by its continued investments, the EDF group is currently the European leader in the quantity of electricity produced using renewable energy¹.

17.2.2.4.1 Renewable energy in the EDF group

Hydropower

In France, EDF's hydropower fleet underwent a significant modernisation and maintenance programme. Through some 2,000 annual maintenance operations, EDF adapts its fleet to both performance and regulatory requirements, thereby protecting its hydropower generation potential. In 2014, investments for operation and maintenance increased to approximately €360 million. Hydroelectricity has also been a source of development in France, either through complete redesigns such as the Gavet power plants on the Romanche river, or by increasing the capacity of existing construction such as the La Coche site or the La Bathie in Isère, or even through technological innovations, such as the Paimpol-Bréhat tidal turbine prototype. In 2014, these development investments amounted to nearly €100 million, 40% of which was reserved for the Gavet site. Faced with climate change, programmes are also implemented to guarantee the maintenance of hydropower generation capability in France (see section 17.2.2.5 ("Impact on water")).

Outside Europe, the EDF group is interested in hydropower facility projects in areas where the hydroelectric potential could make reliable electricity available to populations and the local economy, in particular South America, Africa and South-east Asia. EDF's engineering has renowned skills and expertise in taking technical, environmental, social and societal aspects into consideration in projects, particularly following the completion of the Nam Theun dam in Laos, which integrated all aspects of sustainable development in conjunction with the local populations. As a result, through its Brazilian subsidiary EDF Norte Fluminense, EDF has acquired a 51% stake in Companhia Energética de Sinop (CES), which is responsible for the construction and future operation of Sinop's hydropower facilities. The construction of this dam began in spring 2014, after the Brazilian government approved management plans and environmental and social studies. The project does not impact any indigenous territory or protected area. Currently, no other commitment has been decided, notably for projects under study in Brazil and in Mozambique, and these programmes will only be launched if the Group's principles on respecting all social and environmental issues are fully complied with.

Wind power and Solar power

In order to develop its installed capacities in wind and solar power the Group is primarily relying on EDF Énergies Nouvelles, an international player in renewable energy operating in 18 countries and present throughout the entire renewable generation value chain. Its goal is to reach 20GW in gross capacity by 2020, i.e. double its net capacity, which should increase from 6 to 12GW. This goal is consistent with the global renewable energy growth forecasts, as the International Energy Agency (IEA) predicts total capacities to double from 2013 to 2020 and double again from 2020 to 2035. In Europe, like in the United States, support mechanisms for renewable energies (excluding hydropower) have declined. However, technological progress has made it possible to continue reducing generation costs, which should eventually offset the decline in public support on mature segments like onshore wind and solar power. In emerging countries, increased energy demand should support and encourage the development of renewable energies.

In addition, the French government has set the objective of developing 6GW of offshore wind power by 2020. Within this context, the Group aspires to participate in the emergence of a French offshore wind power industry. Therefore, EDF Énergies Nouvelles is the leader of the consortium selected by the authorities to complete and operate 1.5GW of offshore wind power. For offshore wind power to grow, one of the challenges will be to reduce generation costs, which the Group's teams are already working to overcome. The consortium's three projects represent the installation of more than 200 large wind turbines on the Brittany and Normandy coasts out of six projects under development.

Lastly, EDF Énergies Nouvelles made the strategic choice to develop industrial expertise internally to ensure the operation and maintenance of power plants that the Company manages itself and on other companies' behalf. This control of industrial assets optimises their generation and ensures a maximum lifespan of generation facilities. At the end of December 2014, EDF Énergies Nouvelles handled the operation and maintenance of more than 11.8GW (9.0GW in 2013).

Biomass and geothermal energies

With the acquisition of Dalkia, the Group has become a benchmark French player in biomass energy. In fact, the company operates 320 boilers that use biomass (out of 8,700 facilities). In 2014, in order to supply heat to its networks, Dalkia increased its use of biomass, which currently accounts for 59% of its power generation from renewable energies (57% in 2013), i.e. 13.8% of its energy mix (1.5% in 2009). In this respect, Dalkia's goal for 2020 is to achieve 20% of biomass its energy mix. By launching "Biomass Future" in 2020, Dalkia has developed this renewable energy in the communal buildings segment (hospitals, schools, office buildings and residential buildings), whereas before it was primarily dedicated to large industrial markets or individual heating. Since the beginning of 2015, the Group has deployed a biomass sustainability policy that aims to foster growth in the use of solid biomass for the production of electricity and heat, supporting and securing current and future investments in this domain. This policy is based on the principles of reducing greenhouse gases over the entire life cycle, preserving natural resources and biodiversity, and respecting human rights and collaboration with stakeholders.

In addition, Dalkia is developing geothermal energy, which is particularly well-suited for the specific characteristics of urban heating networks. Dalkia is currently the leader of communal geothermal energy in France, operating more than 16 facilities in Île-de-France. In five years, Dalkia's primary energy consumption increased from 6.5% of renewable energy to more than 20% in 2014.

1. Source: PWC study from December 2014, The European factor.

17.2.2.4.2 Investments in new forms of renewable energies

For the past four years, the Group has devoted the largest portion of its gross operating investments for development into new renewable energy, even more than for the development of the nuclear segment. In 2014, the percentage of renewable energy in the Group's gross operating investments for development totalled 37% (39% in 2013 and 41% in 2012).

In order to finance future renewable energy projects, in November 2013, the EDF group launched its first Green Bond, in euros, the first large corporate to do so. The funds raised (€1.4 billion) are exclusively dedicated to financing renewable energy projects undertaken by EDF Énergies Nouvelles. The projects selected must comply with the five eligibility criteria established in advance with the extra-financial rating agency, Vigeo¹: (i) respect for human rights and governance in countries where projects are developed,

(ii) management of environmental impacts, (iii) protection of employee health and safety, (iv) promotion of responsible relationships with suppliers and (v) dialogue with local stakeholders. To guarantee traceability, the firm Deloitte & Associés performs an ex-post audit to verify that selected projects comply with eligibility criteria and that funds have been managed and allocated as stated. In 2014, €1,175 million was invested in 13 projects in France, in the United States and in Canada, for a total combined capacity of 1.8GW (10 wind power projects, 2 solar power projects and 1 biomethane project).

Additionally, in October 2014, EDF and Amundi entered into a partnership to create a joint management company to raise funds from institutional and retail investors dedicated to renewable energy generation (wind power, solar power, small hydropower structures) and to manage funds intended to finance energy transition projects.

17.2.2.4.3 Achievements and developments in 2014

Main developments in the Group in 2014

Hydropower	■ Decision to build the Sinop dam (400MW) in Brazil, the commissioning of which is scheduled for late 2017.
Onshore wind	<ul style="list-style-type: none"> ■ Commissioning of the Blackspring Ridge wind farm (300MW; EDF EN 50%), the Le Granit and La Mitis wind farms (for a total of 50MW) and the Rivière-du-Moulin wind farm (150MW) in Canada. ■ Commissioning of the Spinning Spur 2 wind farm (161MW) and Hereford wind farm (200MW) in the United States. ■ Commissioning of the Geycek wind farm (150MW) in Turkey. ■ Commissioning of the Conilhac, Plaine de l'Orbieu and Vallée de l'Hérault wind farms (34.7MW) in southern France. ■ Commissioning of wind farms in Lummen, Olen and Bilzen, in Belgium (26MW). ■ Commissioning of the Basse Thiérache Sud wind farm (24MW; EDF EN 50%) in Picardie, northern France. ■ Commissioning of the Roade (7.2MW), M1 (7.2MW) and Burnfoot North (4.1MW) wind farms in the United Kingdom.
Offshore wind	<ul style="list-style-type: none"> ■ Projects in Courseulles-sur-Mer, Fécamp and Saint-Nazaire in France, for a total capacity of 1,400MW: continuation of environmental studies on the Fécamp site (understanding marine fauna), assessing the potential source of wind power (wind speed and direction) and oceanic-weather data (speed of current, wave height, water turbidity). ■ Finalisation of the public consultation stage of the Navitus Bay project (50/50 joint venture between EDF Energy and Eneco Wind UK Ltd.) in the United Kingdom and submitting a design file for an installed capacity of up to 970MW and a variant for 630MW. ■ Acquisition of development rights for the Blyth offshore prototype wind farm in Northumberland. Comprising 15 turbines, it will allow new offshore technology to be tested in real conditions before being brought to market. ■ Acquisition of a 50% stake in the Isle of Lewis project (130MW) by EDF Energy Renewables in the United Kingdom.
Solar power	<ul style="list-style-type: none"> ■ Commissioning of a solar power plant in Khilchipur, India (30MWp), the first solar power plant in the state of Madhya Pradesh. ■ Commissioning of seven solar power plants (39MWp) in Israel. ■ Commissioning of power plants in Lepomis and Lancaster (12MWp) in the United States.

Capacity under construction (non-exhaustive list)

Onshore wind	<ul style="list-style-type: none"> ■ Slate Creek wind farm (150MW) in Kansas, United States. The project also includes a 20-year electricity sales contract with Great Plains Energy. ■ Spinning Spur 3 (194MW) in the United States. ■ Catalan wind farm (96MW) in the eastern Pyrenees region of France (commissioning planned for 2015). It is equipped with the world's first "discreet" blades – and will be the largest wind farm in France. ■ Six new wind farms under construction in Belgium (Florette, Spy and Dendermonde sites). ■ Baselice wind farm (12MW) in Italy, by Edison. ■ Rhodders (12MW) and Barmoor (12MW) wind farms in the United Kingdom. ■ Construction of wind farms in Grassridge (60MW), Chaba (21MW) and Waainek (23MW), South Africa. ■ Wind power project in Roosevelt County (300MW), New Mexico, United States.
Solar power	<ul style="list-style-type: none"> ■ 60MW in Israel. ■ Five solar power plant projects (125MWp) in Rajasthan by ACME, of which EDF Énergies Nouvelles holds a 26% shareholding. ■ Construction of the Montjoly power plant (4.8MWp) in French Guiana by PEI. ■ Continuation of the Millener tests, with the roll out of 200 solar power installations linked to a storage battery in Corsica, Guadeloupe and Réunion.

1. European leader in ESG (Environmental, Social, Governance) ratings.

17.2.2.4.4 Research, future challenges for renewable energies

The EDF group pursues an ambitious R&D policy on renewable energies and dedicates more than €60 million to it every year. Research programmes are based on four objectives: reducing costs and improving performance of mature technologies, identifying high-status breakthrough technologies, helping the most promising technologies transition to an industrial scale and help integrate renewables in electricity grids.

In 2014, the main research subjects pertained to:

- storing electricity from renewable sources, enabling, in particular, the management of renewables intermittency (“Pégase-Toucan” a solar power programme integrating energy storage in Réunion);
- accurate forecasting of renewables generation (Lidar programme);
- improving the efficiency of solar cells;
- improving maintenance techniques of wind turbines;
- floating wind turbines, with the first prototype being tested onshore (“Provence Grand Large” project).

The Group also has to meet the challenge of integrating renewable energies that are intermittent in nature into the grids. ERDF is working to integrate these energies into the French public distribution grid, with the goal of absorbing 15 to 25GW of wind power and 15 to 20GW of additional solar PV power by 2030. The grid connection procedures have now been simplified and the grid accommodates more than 90% of this type of electricity generation facility. To facilitate the process, RTE and ERDF created a website together (www.capareseau.fr), which makes available to those interested the accommodation capacities of electricity generation facilities, whether or not from a Regional Renewable Energy Connection Schemes, as well as volumes from facilities in queue or connected. This data, available for each transport substation, are in compliance with the CRE’s expectations.

With the support of the Group’s R&D, ERDF is experimenting new solutions to smooth out fluctuations in electricity generation from wind turbines and manages the Ventea prototype with the ADEME in particular, which was launched in 2012. This prototype tests the sensors that measure the voltage of the power supplied by the wind turbines within 1% accuracy, in order to transmit their data to an automated regulator. ERDF also participates in

the European NiceGrid4EU prototype in Carros, close to Nice, which tests solutions that make it easier to integrate decentralised solar power into low voltage grids at a district-level, by optimising electricity generation, consumption and storage. The first residential storage system was installed in October 2014 for a residential customer. Managed remotely, the battery is going to enable surplus solar output to be stored on sunny days in order to use it during peak consumption periods. Around twenty similar batteries are going to be installed to give more weight to the experiment.

17.2.2.5 Impact on water

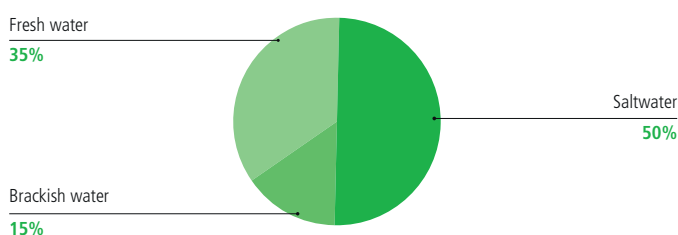
Water is essential for electricity generation: it is used for cooling nuclear and thermal power stations, and in operating dams and hydropower plants. At a time when the planet’s freshwater resources will soon be unable to cover the needs of populations, water is becoming an important economic issue for companies in the energy and electricity sectors. Worldwide, experts predict that by 2030, the demand for water will be 40% higher than the resources available¹. The emergence of water-related political and economic crises was one of the five major risks identified at the Davos Summit in 2014. The expected impact of climate change on water resources varies from one part of the globe to another: it could lead to flooding in some areas, while others may experience drought, a sharp drop in river levels, or more irregular rainfall. With operations that span four continents, the EDF group has factored “water risk” into its risk management policy. Each investment decision undergoes a detailed risk analysis, as well as an in-depth impact assessment. In France, a Water Strategy Committee has drawn up a water policy and oversees its implementation. This policy addresses four main issues: preparing for a future in which the sharing of resources is more complex; responding to regulatory and social change; contributing to multi-purpose water management and local economic development; optimising the operational management of water for production activities.

EDF group’s exposure to water stress

The risk of exposing the Group’s generation to water stress remains low, since its facilities are predominantly situated in Europe (accounting for over 93% of the Group’s total water withdrawal, of which 74% is in France and almost 16% in the United Kingdom), and its nuclear and thermal power stations tend to be in coastal locations.

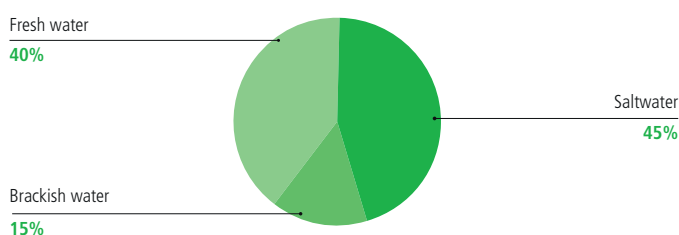
Distribution of water used for cooling the EDF group’s thermal power stations

Worldwide



Overall, 65% of the water withdrawn by the Group for cooling comes from marine or estuary environments, where resource availability is not an issue. In France, this figure is 60%. It rises to over 98% in the United Kingdom and more than 90% in Italy. These data have been found to be stable: annual variations in water withdrawn for cooling are very low (equivalent to the measurement uncertainty) and are dependent on production (see results

In France



below). France is witnessing a fall in the temperature sensitivity of its thermal plants, as old coal-fired plants near rivers are shut down. New thermal power stations are now built by the sea (Martigues combined cycle gas turbine (CCGT) plant), or equipped with air cooling (Blénod 5 and Bouchain CCGT plant, still under construction), which reduce their dependence on water.

1. Source: 2030 Water Resources Group (consortium of representatives of the United Nations, governments, businesses and NGOs, originally part of the World Economic Forum before being absorbed by the World Bank Group).

Volumes of water withdrawn and returned by the Group

<i>(in billions of m³)</i>	2014	2013 restated	2012
Cooling water withdrawn	49.8	50.8	54.8
<i>of which fresh water</i>	18.1	17.7	
<i>of which brackish (or estuary) water</i>	5.8	6.1	28.0
Cooling water returned	49.3	50.3	54.2
<i>of which fresh water</i>	17.6	17.4	
<i>of which brackish (or estuary) water</i>	5.8	6.1	27.5

Almost 99% of water withdrawn is returned to the environment. In accordance with local discharge regulations, the Group's companies take the necessary measures to comply with water quality and temperature requirements, and take immediate corrective action in the event of non-compliance.

Specific consumption of evaporated water per kilowatt-hour of electricity generated by the Group's thermal, gas and nuclear power plants

<i>(in litre/kWh)</i>	2014	2013 restated	2012
Water consumed/thermal generation	0.989	0.924	0.933

Reduction in water withdrawal and consumption

The Group is leveraging two aspects:

- the recycling of industrial process water to reduce withdrawal or consumption;
- the contribution of in-house and academic R&D programmes.

The recycling of process and cooling water is widespread throughout the Group: for example, the Krakow and Torun thermal power plants (Poland) now recycle 100% of their industrial water. In Hungary, this percentage is 34% for the Ujpest plant and 10% for the Kispest plant, where work has only recently begun. In Italy, the majority of EDF Fenice's cogeneration plants installed with customers also recycle process water; in 2014, new technological research was carried out at the Verrone and Cassino sites in partnership with universities with a view to increasing this usage. In Brazil, the EDF Norte Fluminense thermal power station, a pioneer in industrial leak detection and rainwater harvesting, is looking at the possibility of reusing effluents after treatment, by reinjecting them into the process and easing pressure on the aquatic environment.

In French overseas territories, where EDF is investing in new thermal power stations, R&D teams have designed dry air cooling for engine cooling systems, which reduces seawater withdrawal by 700,000 m³ per year. In addition, for their other cooling requirements, these new plants will substitute seawater withdrawal for normal groundwater withdrawal. Annual gains are estimated at 700,000 m³ per plant per year. In the same vein, Edison has fitted two combined cycle gas turbine plants with desalination units (more than 200 million m³ desalinated in 2014) to replace its freshwater withdrawal.

Water resource management

According to the French meteorological office, 2014 was the warmest year since the beginning of the 20th century. Without a heatwave, run-off conditions were still good (the second best year since 2001) and production plants did not face a water shortage. EDF was therefore able to meet all its commitments to stakeholders in terms of restored flow, low-water replenishment and agricultural support, as well as complying with water level requirements for tourism, while maintaining sufficient stocks at the start of winter 2014/2015. Production losses due to environmental flow or temperature constraints were lower than in 2013 due to a cool and wet summer.

In addition, renowned for its maturity in the sharing and multiple use of water, EDF is leading an international task force in a project examining multipurpose hydropower reservoirs, with the aim of reconciling the growing needs of stakeholders by sharing water resources held in reservoirs.

Tropical reservoirs

Like rivers and natural reservoirs, hydroelectric dams in tropical regions can emit greenhouse gases ("GHGs"), mainly in the form of carbon dioxide and methane. These emissions are due to the decomposition of biomass present during the impoundment of the reservoir, and organic matter carried into the reservoir by rivers. Depending on the weather and the local characteristics of the reservoir, GHG production can increase. Hence when commissioning its two tropical dams – Petit-Saut in French Guiana (1994) and Nam Theun II in Laos (2010) – EDF set up an aquatic environment laboratory to monitor the chemical composition of water upstream and downstream of the reservoirs.

For nearly 20 years, the Company has also funded research programmes on this subject through partnerships with the French National Centre for Scientific Research (CNRS) and international collaborations such as the International Hydropower Association (IHA), Unesco and the International Energy Agency (IEA). For the Petit-Saut reservoir, recent feedback from the scientific community has improved the water quality assessment process, with support for a new lake ecosystem and actions to reduce GHG emissions. For the Nam Theun reservoir, average net GHG emissions over 100 years is around 80g of CO₂ eq./kWh, well below those of a CCGT plant (between 410 and 650g of CO₂ eq./kWh¹). For EDF, these phenomena do not undermine the value of dams in tropical regions, compared with the GHG emissions of other basic production methods that could be installed in developing countries. This issue is factored into the decision-making process for all of the Group's investment choices.

Assessment of the “water footprint”

The EDF group is committed to preserving water in all its activities and to publishing its “water footprint” from 2015. Because the existing calculation methodologies are inappropriate for industrial companies, EDF is pioneering the development of a tool for assessing the impact on water of all energy sectors, which can be used anywhere in the world. The Water for Energy Framework programme is being implemented under an agreement with the World Water Council, in association with the scientific community and international representative bodies from the coal, nuclear, oil and renewable energy sectors. In addition, EDF's proposal for the definition, validation and implementation of this methodology is one of nine proposals selected by the European Commission in 2013 following a call for expressions of interest in contributing to European policy in this area.

In the spring of 2014, the first version of the evaluation methodology was validated by the various energy sectors. Since the summer, the methodology has been tested at twelve sites: eight EDF sites (four nuclear power plants in France, two thermal power plants, including one in Poland, and two hydropower plants), two thermal power plants belonging to GDF Suez (in the United States and Australia), and two hydropower plants owned by the electricity company Hydro-Québec. The methodology will be publicly unveiled at the World Water Forum in Daegu, in April 2015.

17.2.2.6 Soil use and protection

The Group's industrial activities can potentially lead to soil pollution. An action plan is in place across all of the Group's sites. This consists of four discrete steps:

- compiling a site inventory (this has been done for EDF, which owns or leases 41,000 hectares of land and 85,000 hectares of lake surface);
- identifying those sites that are potentially contaminated;
- analysing the soil at potentially contaminated sites (giving priority to sensitive areas);
- introducing a monitoring system for sources of pollution and drawing up a management plan, and considering possible remediation depending on future use and regulatory requirements.

Means of protection are in place at all sites, including:

- maintaining the integrity of means of protection to provide a barrier between circuits containing or carrying radioactive or chemical substances and the environment;
- maintaining structures such as sumps, retention systems, unloading areas, pipe seals, etc.;
- ensuring that the soil surface remains free from radiological and/or chemical contamination at industrial sites;

- monitoring the physico-chemical and/or radiological properties of groundwater directly beneath operating sites;
- building retention tanks at storage sites for materials that could pollute the soil;
- reinforcing safeguards when transporting fuel or waste.

To reduce the probability of pollution, the Group uses its considerable synergy to replace hazardous products with products that are less harmful to the environment and public health, where this is technically feasible. This already involves EDF, EDF Energy, EDF Luminus, EDF Norte Fluminense and BE ZRt, with enhanced coordination via the environmental management system (EMS).

In Italy, EDF Fenice has embarked on a research programme with the University of Rome to examine alternatives to chlorinated solvents. R&D efforts to improve characterisation techniques for contaminated soils have continued, such as the Innovasol partnership with University of Bordeaux and other industrial companies.

Pyralene

Directive no. 96/59/EC of 16 September 1996 requires an inventory of equipment contaminated with PCBs² and PCTs³ to be drawn up, as well as a national plan for decontamination and the gradual disposal of these substances, which are found in certain electricity transformers and condensers.

The decontamination of equipment identified as having more than 500 ppm was completed by the regulatory deadline of 31 December 2010 (70,000 transformers were disposed of between 2006 and 2010). Since then, in anticipation of the regulations, ERDF has begun the decontamination of transformers identified as having between 50 and 500 ppm. The company has set itself the target of complete elimination of PCBs by 2025. By 2019 – the halfway point – ERDF has a twofold objective: 50% of the programme completed, with 100% of substations without retention tanks. Of the 59,000 transformers concerned at the end of 2012, almost 6,000 transformers were treated in 2014 and 7,200 in 2013, on target for complete elimination by 2025.

Phytosanitary products

The Group's Real Estate Department surveyed the use of pesticides at all sites it manages in France.

In 2013, the initial results of the action plan to reduce phytosanitary products indicated a 7.3% fall in consumption from 2012 (21% compared with 2009). At the end of 2014, EDF had lowered its use of pesticides by 6% compared with 2013, and by 31% compared with 2009, the base year.

17.2.2.7 Raw materials consumption

17.2.2.7.1 Upstream fuel reduction

The Group has several ways it can reduce its consumption of natural resources:

- boosting the performance of facilities and limiting losses during generation, transport and distribution through more efficient technology, such as:
 - replacing old coal-fired power plants with the latest generation coal-fired plants (supercritical) or by combined cycle gas turbine plants,
 - developing the combined production of heat and electricity (cogeneration),

1. Source: Intergovernmental Panel on Climate Change (IPCC), 2014 study of 80, mostly young, reservoirs in tropical regions.

2. PCBs: polychlorinated biphenyls.

3. PCTs: polychlorinated terphenyls.

- using more efficient fossil fuels (coal, oil, gas) and fissile material (uranium),
- increasing the uranium yield by recycling (plutonium through MOX fuel) or breeding (ability of some nuclear reactors to produce more fissile material than they consume);
- developing renewables such as hydropower, onshore and offshore wind, solar power (particularly photovoltaics), biomass and marine energy (tidal turbines and tidal power stations) (see section 17.2.2.4 (“Sustainable management of resources”));
- building high-capacity pumping stations to meet demand during peak periods, without resorting to fossil fuels.

Nuclear fuel

In France, EDF applies a strategy of gradually increasing the performance of nuclear fuel. The objective is to raise nuclear energy output by increasing the combustion rate and optimising operating cycles to improve nuclear plant availability, while allowing for outage schedules in line with seasonal variance in demand.

EDF's current strategy for the nuclear fuel cycle, in agreement with the French state, is to process spent fuel and recycle the plutonium separated in this process in the form of MOX fuel. Currently 22 (of the total 34) 900MW nuclear units use this type of fuel, and two more units have been authorised to do so by the ASN from 2016 and 2017. The objective for future years is to load 120 tonnes of MOX per year. Since 2010, recycling capacities have processed close to 1,050 tonnes of spent fuel annually, of a total of some 1,200 tonnes of fuel used.

Fossil fuel

The consumption of fossil fuels is largely correlated with the demand for electricity among final consumers and the distribution between coal and gas at their relative prices.

The strategy for controlling the EDF group's consumption rests largely on increasing the efficiency of its production facilities and the effectiveness of pollution abatement systems. In France in particular, the repowering (the process of transforming an oil-fired plant into a gas-fired plant) of the Martigues plant has increased capacity, which is over 50% higher than conventional thermal power stations.

Results for EDF in France

	Unit	2014	2013	2012
Very Low-Level radioactive Waste (VLLW) from decommissioning	m ³	2,580	1,214	2,060
Low and Intermediate-Level radioactive Waste (LILW) from decommissioning	m ³	659	513	179
Very Low-Level solid radioactive Waste (VLLW)	m ³ /TWh	7.6	8.7	7.3
Short-Lived Low and Intermediate-Level radioactive Waste (LILW)	m ³ /TWh	15.4	19.0	20.7
Long-Lived High And Intermediate-Level (LLHL/LLIL) solid radioactive waste	m ³ /TWh	0.88	0.86	0.88
Transported spent nuclear fuel	t	1,124	1,099	1,075

The cost of removing and storing waste resulting from plant decommissioning is covered by a provision, and the charges related to operating waste are included in annual expenses.

EDF's provisions at 31 December 2014 are established in compliance with the law of 28 June 2006 and its implementing decrees, which were issued

17.2.2.7.2 Reduction in downstream consumption

Furthermore, since all energy management initiatives help to conserve resources, EDF develops and markets, for its customers, packages that combine energy-efficient equipment, the use of renewable energy in buildings, and incentives for energy-saving behaviour.

These initiatives are organised based on:

- a range of energy management services (see section 17.2.2.3.3 (“Demand side management (DSM)”)): insulation, building renovation, advice and thermal diagnostics;
- the development and integration of decentralised renewable energy in buildings to generate heat (heat pumps, solar water heaters, stoves, woodburners);
- management of the load curve to reduce or defer peak consumption and the resulting CO₂ emissions;
- the use of smart meters to optimise networks and perform remote metering and other services to reduce greenhouse gas emissions;
- the options available to customers to consume “green”, carbon-free energy, or to subscribe to carbon-offset schemes.

17.2.2.8 Waste management

17.2.2.8.1 Nuclear waste

In France, radioactive waste is classified by activity level and lifetime, following the classification used by the French national agency for radioactive waste management ANDRA (Agence nationale pour la gestion des déchets radioactifs). Waste is listed in an inventory stating its location, and the data are public and regularly updated by ANDRA.

Radioactive waste is managed according to four industrial principles: limiting quantities, sorting by nature, stable conditioning, isolation from humans and the environment. Limited quantities of radioactive waste are produced: 1MWh of nuclear electricity (equivalent to a month's consumption for two households) generates around 11 grams of radioactive waste, 90% of which is short-lived waste.

in 2007. These provisions amounted to €23,233 million for decommissioning and last cores and €21,087 million for the back-end nuclear cycle. The price per kilowatt-hour thus includes all expenses related to this obligation, i.e. the cost of managing long-lived waste and the cost of plant decommissioning and current waste conditioning.

In the United Kingdom, radioactive waste is categorised as high, intermediate or low-level and processed accordingly (see section 6.3.1.4.2 (“Generation business unit” – “Nuclear Generation”)). Low-level waste is stored at the

plant site until ready for shipment (for treatment or disposal). This undergoes regular inspections. Intermediate-Level Waste is stored on the plants’ sites in dedicated facilities, and inspected in compliance with safety requirements.

Results for EDF Energy

	Unit	2014	2013	2012
Uranium sent off site	t	193	177	216
Transported Low-Level radioactive Waste	m ³	452	655	698
Generated Intermediate-Level radioactive Waste	m ³	178	178	161

R&D for radioactive waste

Many of the EDF group’s in-house and partnership R&D projects focus on radioactive waste. These research programmes mainly concern transportation, temporary storage, reprocessing and final storage of spent fuel and the associated waste.

This work is mainly conducted under the aegis of the tripartite R&D nuclear partnership (CEA, EDF and Areva) formed in 2014, and relates in particular to the “transport and storage of spent fuel” and “conditioning and storage of radioactive waste” projects.

EDF’s R&D teams and ANDRA are also continuing to work together on the question of how packages of nuclear waste behave in geological storage, and on models simulating the behaviour of the host rock, particularly argillite.

As its UK nuclear facilities mostly use graphite-gas technology (advanced gas-cooled reactors, or AGR), EDF is part of the European “Carbowaste” project on management of the graphite resulting from decommissioning, alongside German research bodies, the CEA, Manchester University and ANDRA. This four-year project started in 2013.

17.2.2.8.2 Radioactive effluents

In France, the management of radioactive gas and liquid effluents from nuclear power plants is strictly regulated. Furthermore, the company is firmly committed to limiting the environmental and public-health impacts of its facilities. Plant performance in terms of radioactive discharges depends as much on the effectiveness of effluent processing systems as it does on operating practices.

Design and operational improvements meant that liquid radionuclides released from nuclear power plants (excluding tritium and carbon-14) reached a very low “floor” level several years ago, after falling by a factor of 100 in 15 years. This is the result of efforts made to collect, sort and

stream effluent at source, increase treatment through evaporation, introduce demineralisation processes and improve effluent recycling. Discharges of tritium and carbon-14 are the only radioactive discharges from nuclear power plants. With low radiotoxicity, their effect on radiation dosimetry is also very low (far below the annual regulatory limit of 1,000µSv/year for the public). Environmental measurements taken by the operator confirm the absence of any impact caused by plant operation.

Finally, samples and measurements taken by external laboratories and universities for the purposes of radioecological and hydrobiological monitoring confirm the absence of any long-term impact.

In the United Kingdom, radioactive effluents remain stable and within current regulatory limits, taking into account variations in electricity generation.

Indicators of discharges to water are available for each company in section 17.4.3.2 (“Environmental indicators”).

17.2.2.8.3 Industrial waste

As part of its sustainable development policy, the EDF group is committed to limiting the environmental impacts of its facilities and activities. Based on the ISO 14001 certified environmental management system (EMS), conventional waste management focuses on reduction at source, sorting, recovery (especially for construction waste) and upstream use of eco-friendly products.

Waste management and recovery

The Group’s entities and companies are committed to a process of continuous improvement according to the principle that the “best waste” is waste that is not produced. This approach is paying off: recovery rates are rising steadily, despite the absence of regulation or organised sectors in some countries.

EDF group result

(in tonnes)	2014	2013 restated	2012
Volume of conventional industrial waste recovered or transported for recovery	392,815	293,752	253,412

Waste recovery rate

(in %)	2014	2013 restated	2012
EDF group	79.9	75.1	65.6
EDF	92.6	88.9	86.8
EDF Energy	98.5	90.6	83.4

Impact of decommissioning and maintenance activities

In 2014, as in 2013, construction, decommissioning and maintenance activities increased, particularly in France, including island systems, but also in the United Kingdom and Hungary, impacting the overall volume of waste generated and recovered.

In France, within the nuclear engineering business, waste management schemes are now systematically implemented prior to any major construction, decommissioning and maintenance project, and accompanied by annual feedback from EDF's business units. This approach has been rolled out as a standard for major projects in the thermal and hydropower business units.

Reducing the volumes of waste generated

EDF's sustainable development policy has reinforced the objective of recovering all recoverable waste, increasing this from 75% in 2011 to 85% in 2012 and 2013, and 90% in 2014. The recovery rate for all conventional waste from production and engineering (excluding coal fly ash and gypsum, fully recovered) has climbed steadily in recent years, to reach 92.6% in 2014.

In overseas territories, where the isolation and absence of certain local waste disposal routes are obstacles to waste recycling and recovery, the recovery rate was 95% in 2014, against 92% in 2013 and 84% in 2012.

At the international level, EDF Energy has pledged to reduce its waste by 30% and to stop sending office waste to landfill by 2020. Work to identify alternative solutions is under way. The "waste plans" developed for each industrial site have helped to limit the amount of waste sent to landfill each month (less than 10%), with a projection of almost 95% of waste recovered.

In 2014, the Kogeneracja site in Poland took action to reduce the amount of non-recoverable waste produced. The target will be reached once all electronic and electrical waste and combustion waste is recovered, as well as 70% of office waste.

Waste as a driver of the circular economy

France is committed to the "European recycling society". This involves a successful transition from a linear economy to a circular economy, in which waste and used products, reinjected into value-creation circuits, become real resources for industry, agriculture or energy generation. Aside from the vital issue of worldwide sustainable management of natural resources, the aim is to make waste recycling and recovery the drivers of global economic development, by combining environmental protection and public health.

In France, coal ash and gypsum have been fully recovered for years. More recently, in EDF's fourth "waste competition", first prize went to the marcalina powder regeneration project. This dry powder extinguisher, stored at the Creys-Malville site to tackle sodium fires in the Superphenix fast-breeder reactor (which was shut down in 1998), will be reused by the French Alternative Energies and Atomic Energy Commission (CEA) in studies on fourth-generation reactors.

In Poland, EDF Wybrzeże has built ash silos to sell its fly ash and reduce the amount sent to landfill. In 2014, as in 2013, all slag and ash produced by EDF Polska companies (more than 1.4 million tonnes) was reused, either in construction, road infrastructure, filling in coal mines or land remediation. Since 2014, the Company has also recovered older stocks, with the aim of reducing its stocks by 50 kilotonnes per year.

In China, nearly 100% of fly ash and slag generated by the Figlec thermal power plant was sold in 2014, as in 2013, for applications such as road paving, cement or brick production.

17.2.2.9 Sustainable cities and regions

17.2.2.9.1 Sustainable cities

By 2050, cities will be home to three quarters of the world's population and will account for nearly three quarters of energy consumed worldwide¹. This trend means that cities and regions face new challenges: controlling urban sprawl, promoting environmental quality, ensuring access to essential services, improving transport links, and fostering solidarity within urban communities in times of crisis.

For the EDF group, the city of the future should be energy-efficient, low-carbon and green. It should maintain biodiversity while ensuring the wellbeing of its inhabitants. It should be inclusive and supportive of all members of society. Finally, its economy and amenities should make it an attractive place to live and work.

In response to the expectations of local communities for more sustainable cities, EDF offers a cross-cutting, three-step approach:

- upstream, an energy debate to identify and characterise local energy resources, both as they are now and looking ahead to 2030, as well as identifying priority areas for energy conservation. The options available will then be analysed, taking various parameters into account: energy consumption, fuel poverty and transport, with the ultimate aim of making the best energy choices for the region concerned;
- design and construction of energy infrastructure, together with operation and maintenance services. For new districts, EDF develops low-carbon solutions (recovery of waste energy from groundwater or seawater, biomass, solar power). For older districts, EDF helps local authorities to identify the most energy-intensive housing and to carry out the most appropriate work in view of the investment required and the expected benefits. Through its subsidiary Citelum, the company can redesign street lighting (which represents 30 to 40% of a city's energy budget). With the latest technological advances, this represents the best return on investment, which is recovered in less than ten years. The company maps the quality of the street lighting network and offers a solution for the "right lighting", using the appropriate technology. The sustainable city also incorporates a low-carbon, alternative transport element (electric buses, car-sharing, vehicle charging infrastructure);
- downstream, monitoring and measurement of the energy performance of facilities (energy management), accompanied by awareness-raising to educate users on energy conservation (behavioural change).

In 2014, EDF worked on 350 sustainable city projects, 60 more than in 2013.

Through its R&D, in 2014 EDF developed the tools to conduct studies into energy forecasting (tested in the Nice-Côte-d'Azur area), energy simulations for urban planning schemes (tested at Marne-la-Vallée), and local renewable energy potential (tested on the semi-public company Rhône Vallée in the French department of the Drôme). The results will be published in 2015.

1. Source: International Energy Agency.

In view of the importance of air quality, energy resources and reducing carbon emissions in urban areas, EDF's solution, being trialled in major cities around the world, consists of supporting local authorities from the urban planning stage, thanks to its expertise in urban energy and local energy management. This expertise is coupled with a modelling and digital simulation tool that assesses the impacts of the solutions offered by the EDF group. Singapore has become the first international benchmark in this regard. The tool developed by EDF for the Housing Development Board, the city's principal house-builder and housing manager, takes into account the energy efficiency of buildings, the integration of decentralised renewable energy, transport and, in partnership with Veolia Environnement, water and household waste treatment. Work carried out to redevelop Singapore's Yuhua district was an opportunity to build in more resilience to climate change and improve energy efficiency. Similar operations are under way in new districts of Shanghai, where EDF recently scooped first prize in a competition with a new low-carbon concept.

The Group firmly believes that local authorities are central to tackling climate change by developing localised, low-carbon solutions. It has partnered the NGO R20 Regions of Climate Action¹ since its inception, mindful of the benefits of trialling innovative solutions developed in association with local councils and residents. In eastern Morocco, it devised a project in 2012 where local stakeholders work together to improve energy efficiency, street lighting and the use of renewables at the local level. These programmes are accompanied, in partnership with the French Environment and Energy Management Agency (ADEME) and its Moroccan counterpart, ADEREE, by public awareness-raising initiatives on energy, climate change and lower energy bills. EDF has drawn up guidelines consistent with the country's new thermal regulation to design less energy-intensive buildings.

Electric mobility

Because transport accounts for most CO₂ emissions (36% of carbon emissions in France, 127 million tonnes of CO₂ in 2013²), the EDF group has developed expertise in electric mobility and intermodal transport. Its know-how ranges from on-board energy services (battery hire for electric buses, river shuttles, courier vans, etc.) to the design, installation and operation of electric vehicle charging infrastructure for car-sharing schemes. It also offers local authorities a holistic vision of the electrification of urban transport plans, vehicle fleets and public transport systems, to optimise the siting of vehicle charging stations.

Since 2014, EDF has been working alongside Grenoble city council, Toyota and Cité Lib in a unique pilot scheme for car-sharing on an unprecedented scale, trialling ultra-compact and 100% electric vehicles combined with urban transport networks.

EDF's subsidiary Sodelrel signed a partnership agreement with Vinci Park to provide, install and maintain infrastructure for self-service charging terminals. By the end of 2014, 50% of Vinci car parks in major cities had been fitted out. EDF, Sodelrel and its partners are also spearheading a project launched in 2014 which will see 200 rapid charging stations installed along major roads and motorways in 2015.

Finally, EDF has opened two car parks in Isère for its corporate fleet, equipped with charging terminals powered by photovoltaic panels, which also protect the vehicles from heat and bad weather (Ombriwatt system). Other schemes will be launched in 2015 to test prototypes for vehicle charging in residential car parks (locations to be confirmed).

17.2.2.9.2 Smart grids

The adaptation of the electricity grid to the new needs of society is a major strategic challenge.

Since electricity grids increasingly incorporate new information and communications technologies, they are encouraging a transition to a low-carbon energy economy:

- They will facilitate the integration of intermittent renewable energy sources and the adoption of new applications (heat pumps, electric vehicles, plug-in hybrid vehicles, etc.). This is a key issue for the future of distribution networks. The aim is to create meshed networks equipped with remote-controlled switches and software to identify damaged parts of the network and compensate for faults, optimising electricity deliveries. The Group's distributors are collaborating on these new networks. ERDF was involved in launching the association EDSO for Smart Grids, working with other European distributors to pool experience and develop a standard.
- This should also enable consumers to take ownership of their energy consumption, improving energy efficiency through interaction with the network.

In France, ERDF is developing the Linky system of smart meters, which represent a new generation of meters. The aim is to modernise its 35 million electricity meters in France. Following a successful trial validated by public authorities, nearly 300,000 Linky meters are now in service in Lyon and the Touraine region (see section 6.2.2.2.5 ("Future challenges (replacement, development, smart meters)")).

ERDF is also involved in 15 research programmes on smart grids, in France and elsewhere in Europe, where different protocols, standards, technologies and business models are tested. It is also coordinating the European project Grid4EU (Grid for You), one of six programmes funded by the European Commission. This is the largest smart grid project to be co-financed by the European Union (€25 million, with an overall cost of €54 million). The project is being led by six European Distribution System Operators (DSOs) covering more than 50% of the electricity supply in Europe.

The concept involves working together to achieve progress on:

- integrating decentralised renewables generation;
- automating and securing the electricity grid;
- giving customers an active role in managing their own consumption;
- supporting the development of electric vehicles and electricity storage solutions.

1. Non-governmental organisation founded in 2010 by Arnold Schwarzenegger, with the support of the United Nations. This is a coalition of sub-national governments, private companies, international organisations, NGOs and academic and financial institutions, whose main goal is to assist in the implementation of low-carbon projects.

2. Source: ADEME.

17.2.2.10 Preserving of biodiversity

17.2.2.10.1 Biodiversity policy of the EDF group (GRI4 DMA indicator)

The EDF group's industrial activities take place in sometimes remarkable natural areas. They interact with this biodiversity and benefit from the services of the ecosystems. Biodiversity is a strong economic consideration for the Group, as failure to respect it may lead to sites or plants being stopped, or result in a ban on new industrial programmes.

The Group's commitment is structured by its biodiversity policy (2009) which is built on three objectives in line with the Global Reporting Initiative (GRI4) indicators:

- developing knowledge of natural environments and potential impact of Group activities on these ecosystems;
- preserving biodiversity, while protecting or restoring natural spaces;
- informing employees and local residents, raising awareness, and dialogue with scientific communities and associations.

This policy is adjusted by the Group's companies and business lines, which implement strategies appropriate to their businesses and local regulations. This is part of the ISO 14001 certified Environmental Management System.

The Group's Sustainable Development Department directs and oversees, by liaising directly with the business units and subsidiaries, a biodiversity partnership policy to foster technical debate, support NGO-led projects and implement concrete programmes. In France, it mainly works with the company's longstanding NGO partners: the national museum of natural history (*Muséum national d'histoire naturelle*), the bird protection league (*Ligue pour la protection des oiseaux*), the coastal protection agency (*Conservatoire du littoral*), French nature reserves (*Réserves naturelles de France*), the French Committee of the International Union for Conservation of Nature (*Comité français de l'Union internationale pour la conservation de la nature*), and the national federation for fishing in France (*Fédération nationale pour la pêche en France* (see section 17.2.3.2.4 ("Redesigned sustainable development partnership strategy"))). The Group's companies operate according to the same principle. EDF Energy, which reviewed its biodiversity commitments in 2014 and set itself the target that all of its production sites should have signed up to the Wildlife Trusts' Biodiversity Benchmark by 2018, has formed long-term operational partnerships with Natural England and Butterfly Conservation.

Training

In France especially, staff training is carried out during specific sessions and through eight business guides, which describe the biodiversity issues specific to their operations, summarise regulatory changes, explain the reasons behind the company's chosen partnerships, and suggest reproducible actions¹. In 2014, two new guides were published ("Thermal generation" and a new cross-functional guide, "Species"). In 2015, the "Networks" and "Island electrical systems" guides will be published.

Research and development on biodiversity

An "environment R&D" programme provides the framework for the Group's research. This is organised around the following principles:

- understanding and reducing the impacts of generation on aquatic and terrestrial biodiversity (interference with ecological continuity, impact of thermal and chemical discharges, reservoir management);
- evaluating the concepts of environmental mitigation and ecosystem services;
- identifying solutions for restoring the sediment continuity of watercourses.

Main actions in 2014:

- improving fish ladders and identifying solutions to reduce the fish mortality rate;
- analysis of fish behaviour in the vicinity of nuclear power plants to understand the long-term impact of thermal discharges;
- benchmark tests for assessing the ecological quality of EDF's sites.

The "ETER" programme on the environmental impact of thermal generation has helped to improve the environmental performance of the Group's assets in China, including combustion quality and atmospheric emissions at the Laibin B and Sanmexia plants. It has also made it possible to reduce nitrogen oxide emissions from the Rybnik plant in Poland, on which additive tests are continuing to reduce soot emissions.

France's national biodiversity strategy 2011-2020

After signing up to the national biodiversity strategy in 2012, in 2014 EDF formalised its biodiversity commitment through an action plan for the period 2014-2017. The aim of the project is to contribute to slow down biodiversity erosion and to support local movements. This project was approved by the French Ministry of the Environment, Sustainable Development and Energy.

17.2.2.10.2 Sensitivity of generation sites to biodiversity (GRI4 indicators EN11 and EN14)

The Group is the de facto manager of natural habitats. For example, EDF manages 41,000 hectares of land in France. The vast majority of its generation facilities are located in or near protected sites (80% of hydropower plants are in or near a Natura 2000 site), protected from farming and urbanisation, and in the vicinity of watercourses, factors that encourage biodiversity. Thermal and nuclear power plants withdraw and release water from and into rivers or the sea. The company's land and facilities situated near protected sites or biodiversity-rich areas are a key priority in terms of biodiversity. It is essential therefore that the company has in-depth knowledge so that it can fully reconcile the protection of this biodiversity with its industrial activity.

1. A generic guide and thematic guides have already been published on "Hydropower", "Nuclear" and "Real Estate".

EDF's generation plants partially or entirely situated within protected sites and biodiversity-rich areas

IUCN ⁽¹⁾ categories	Number of industrial sites		
	Nuclear ⁽²⁾	Thermal ⁽³⁾	Hydropower
I National nature reserves	2		19
II National parks (inner zone)			18
III Classified and registered sites		2	53 classified and 114 registered
IV Biotope protection orders	1	2	39
Biological reserves (integral or managed)			4
National hunting and wildlife reserves	1	1	7
V Regional nature reserves	4	2	111
Marine parks	1		
Biodiversity-rich areas	15	14	458
Areas of special ecological interest, flora and fauna (ZNIEFF)			
Natura 2000 (Special Protection Areas (SPAs) and Sites of Community Importance (SCIs))	13 ⁽⁴⁾		85 SPAs 171 SCIs
Natura 2000 marine areas		5	1
TOTAL ⁽⁵⁾	21	16	514

(Source: EDF).

(1) International Union for the Conservation of Nature.

(2) Sites in operation and undergoing decommissioning.

(3) Sites in operation.

(4) Via outfall systems.

(5) Different from the direct sum of the columns due to the overlap between certain classifications in the same area.

Main actions carried out in 2014

EDF	<ul style="list-style-type: none"> ■ After a year of tests, completion of the methodology developed with the French National museum of natural history to assess the ecological value of the company's land and areas that could potentially be restored. ■ A study on adapted management of green spaces to reduce the use of pesticides at sites (30% of major sites have stopped using pesticides). ■ Mapping of protected species at overseas production sites.
EDF Energy	<ul style="list-style-type: none"> ■ Integration of biodiversity into nuclear site management plans, which now assess their degree of importance as a habitat for the species they shelter.
Edison	<ul style="list-style-type: none"> ■ Definition of a priority action plan for the restoration of biodiversity following the study "Evaluation of the value and vulnerability of biodiversity", completed in 2013.

17.2.2.10.3 Impact management and characterisation (GRI4 indicators EN12)

In general, the potential impacts of the EDF group's generation activities mainly concern:

- water and aquatic biodiversity, largely due to:
 - hydropower plants, which cause changes to biodiversity upstream of the plant where a reservoir has been built, and downstream due to fragmentation of spaces and flow restrictions or variations,
 - thermal facilities (thermal and nuclear), albeit to a lesser extent;
- terrestrial natural habitats as well as the flora and fauna they shelter, during the construction of new projects or maintenance;

- overhead transmission systems and wind turbines, which pose a threat to birds and bats.

However, some thermal or hydropower plants may also include areas for the protection or restoration of biodiversity.

For all large-scale projects, specific studies of the effects on biodiversity are conducted and documented as part of the environmental impact assessment (EIA). In particular, the EIA describes avoidance and mitigation measures for significant biodiversity impacts, according to the international principle of mitigation hierarchy¹. In France, this is translated by the "prevent, reduce and offset" approach adopted by the environment ministry, and any compensatory measures for residual impacts that could not be avoided.

1. Principle in accordance with IFC PF6: Performance Standard 6 of the framework of the International Finance Corporation (IFC, part of the World Bank, created in 1956), dedicated to biodiversity conservation and sustainable management of living natural resources.

Main actions carried out in 2014

EDF	<ul style="list-style-type: none"> ■ Launch of the “Ambitions 2014-2017” project for hydropower facilities, incorporating a strategy for ecological continuity of all watercourses where the company has production sites. ■ Rehabilitation of water flows under Article L. 214-18 of the French Environmental Code via the “Instream flows 2014” scheme. Altogether, 99.6% of EDF’s water intakes meet the new regulations. ■ Measurement of the environmental benefits following the reconfiguration of the Poutès-Monistrol dam (Allier), and scientific monitoring of the results. ■ Creation of 14 pilot sites for experimenting with new sediment management techniques. ■ Implementation of environmental management plans for hydropower dams in Basse Isère (inventories, recommendations and implementation of action plans).
Dunkirk LNG terminal	<ul style="list-style-type: none"> ■ Adaptation of the terminal construction schedule to take into account the nesting periods of the vulnerable species identified (little terns and plovers).
EDF Energy	<ul style="list-style-type: none"> ■ Work is under way on a biodiversity impact management plan at the future Hinkley Point EPR site.
ERDF	<ul style="list-style-type: none"> ■ Study on the impact of underground cables in fragile environments (Poitou marshland), which showed that flora was almost fully re-established after three years.
Edison	<ul style="list-style-type: none"> ■ Implementation of the “Mosselmonitor” project on the Rospo offshore oil platform (Adriatic Sea), in partnership with the Institute of Animal Health for the Abruzzo Region. The programme consists of using mussel beds as bio-indicators of water quality and the prevention of pollution. ■ Continuation of the “Bio Vega” programme, which analyses biodiversity around the Vega oil platform and will determine the monitoring criteria for marine fauna and flora.
EDF Polska	<ul style="list-style-type: none"> ■ Continuation of work on reservoir water quality at the Rybnik thermal power plant, in partnership with the Polish Academy of Sciences.
NTPC (Laos)	<ul style="list-style-type: none"> ■ Comprehensive study of the impact of the dam on the environment: monitoring of invasive species in the reservoir, management of fishing quotas, management of interactions between wild elephants and displaced populations.

17.2.2.10.4 Protection and restoration (GRI4 indicator EN13)

In order to give due consideration to biodiversity, the EDF group has had to assume the role of manager of natural sites, often in partnership with local organisations, either in establishing and managing compensatory measures, or proactively at its various sites.

The Group also supports public policy on biodiversity:

- both EDF and ERDF are involved in several national action plans to protect species such as the Pyrenean desman, black vulture, bearded vulture, European otter, apron and Bonelli’s eagle;
- EDF Energy is involved in schemes such as “A Biodiversity Strategy for England” and “2020 Challenge for Scotland’s Biodiversity”;
- EDF Démász is participating in the European “LIFE+” programme (the European Union’s funding instrument for the environment), by making 322 km of medium-voltage lines safe for birds;
- some of the Group’s sites contribute to the conservation goals of Natura 2000 areas;
- the Group is working on an internal policy to adopt recommendations to combat invasive alien species and prevent their geographical dispersion. In France, EDF was chosen by the Single Interministerial Fund (Fonds unique interministériel) to test new methods for the treatment of invasive species at pilot sites. The budget for the project is €500,000 over three years.

Main actions carried out in 2014

EDF	<ul style="list-style-type: none"> ■ Restoration of the banks of the Old Rhine through deliberate erosion, which is making certain sections of the river navigable again, and flooding of an old rehabilitated branch of the river to encourage the return and re-establishment of protected species. ■ Altering the route of the penstock at the Rabuons plant (Alpes-Maritimes) as part of a package of avoidance measures. ■ Operation to reintroduce the ibex in partnership with the Pyrénées Ariégeoises Natural Regional Park. ■ Creation of spawning grounds for salmonids near hydropower plants on the Maronne in the Massif Central region of France; hydropower plants can be detrimental to migratory species by causing variations in water levels downstream. ■ Moving a colony of Pyrenean rock lizards (protected species) during reinforcement works on the Aubert dam in the Pyrenees.
Dunkirk LNG terminal	<ul style="list-style-type: none"> ■ Monitoring of the gas terminal construction project by environmental officers; adaptation of site lighting to reduce the harmful effects on protected species; educating staff on how to identify protected species at the site. ■ Creation of a 20-hectare wetland for migratory birds, to compensate for the loss of a section of coastline.
Électricité de Strasbourg	<ul style="list-style-type: none"> ■ Construction of protected corridors for the European hamster (an endangered species) during work to relocate a high-voltage power line.
EDF Energy	<ul style="list-style-type: none"> ■ Hinkley Point C EPR project: operations to relocate protected species (crested newts, amphibians, reptiles, etc.) to designated habitat areas. ■ Dungeness B nuclear power station is on a Site of Special Scientific Interest (SSSI), while part of the site is also designated as being of European importance: after constructing flood defences, operations to re-establish plant species were affected, which in turn are home to protected insect populations.

17.2.2.10.5 Offsetting measures (GRI4 indicator EU13)

In France, EDF was selected by the French Ministry of the Environment, Sustainable Development and Energy in 2012 to be the biodiversity offset operator for the Combe Madame project in Isère. This experiment is one of the biodiversity offsets currently being tested. It consists of the ecological management, alongside local partners and NGOs, of 120 hectares belonging to EDF, to restore habitats and encourage the return of endangered Alpine species. The initiative will allow the region's planners to compensate for the impact of construction work on the environment.

In 2014, pasture rehabilitation operations were carried out in France to encourage the return of the black grouse, an endangered species. At the gas terminal construction site in Dunkirk, work was completed on the Hems Saint Pol nature reserve, and follow-up studies of the targeted species (common shelduck, sand martin, aquatic warbler) have confirmed the operation's success.

In the United Kingdom, EDF Energy has embarked on long-term programmes: restoring wetlands at the Sizewell nuclear site, and establishing grasslands to combat the disappearance of invertebrates in Somerset.

In Laos, following the recommendations of the World Bank and international experts, including the International Environmental and Social Panel of Experts, NTPC is involved in government proposals to restructure the agency in charge of environmental protection around the dam and its catchment area.

17.2.2.10.6 Sponsorship and participatory science

Through sponsorship and participatory science, EDF is involved in the campaign to protect biodiversity through concrete measures. EDF supports the IUCN Red List of Threatened Species (International Union for the Conservation of Nature).

In mainland France, EDF focuses its efforts on sponsoring the *Fête de la Nature*, as the festival's main sponsor since 2008. As part of the 2014 festival programme, EDF opened 28 of its sites to the public and received around 4,000 visitors, organising introductory wildlife talks and seminars with local NGOs. Through its Foundation, EDF is involved in a study on green turtles in Guadeloupe, in partnership with the national hunting and wildlife agency and the Kap Natirel association. In September, the first turtles were tagged with satellite tags. In Réunion, EDF supports the local society for the protection of birds with its conservation programme for the petrel, an indigenous species. In Alsace-Lorraine, Électricité de Strasbourg supports the association for the protection and reintroduction of storks.

In Hungary, BE ZRt financed the rehabilitation of the island of Hunyadi, a former military base on the Danube. In Brazil, EDF Norte Fluminense is continuing its work with the association Mico Leão Dourado, which works on creating forest corridors for the golden lion tamarin and which collects scientific data on this endangered species.

In 2014, the flagship initiative in terms of participatory science was "The Great EDF Energy Experiment", a programme launched by EDF Energy in partnership with the British Science Association. The aim is to identify and recruit young scientists to conduct studies involving the general public over a five-year period. This year the programme's theme was "climate change and bumble bees", with data collected by 10 million schoolchildren taking part in EDF Energy's sustainable development awareness programme entitled "The Pod" (see section 17.2.3.2.2 ("Raising the awareness of the general public to sustainable development")).

In France, ERDF works with the bird protection society LPO to monitor garden birds, and encourages its employees to set up hides at home to study the behaviour of around 50 species of birds.

17.2.3 Societal information

The EDF group's societal policy aims to create and develop ties and dialogue with all external stakeholders at all levels (worldwide (UN, NGOs), regional (European Union, etc.), national and local), to optimise and strengthen ties with vulnerable customers by helping to reduce energy poverty, and intensify intra-Group links.

This policy incorporates, supports and reinforces existing initiatives, ensuring their consistency within the Group. It complies with the United Nations Global Compact and is integrated in the EDF group's sustainable development policy, its CSR commitment and the public service contract.

17.2.3.1 Ethics and transparency to stakeholders

During the past decade, EDF identified the need for ethical guidelines in order to disseminate the values and commitments which must inspire and guide the actions of Group employees.

Ethical guidelines for a common frame of reference

In 2012, the Group Management's decision to renew and update its ethical guidelines led to the concerted drafting and adoption of the Group's Code of Ethics by the EDF group's Management Committee and Board of Directors.

Based on the Group's three core values (respect, solidarity and responsibility), this Code of Ethics describes the Group's ethical commitments and those of its employees. It complements on the national and international laws, rules and conventions applicable to Group companies, without claiming to cover all of the companies' specific ethical issues. It is accessible directly on the edf.com website, in French and in English, while local translations have been produced by the companies concerned (12 languages at 31 December 2014: Bulgarian, German, Dutch, Hebrew, Hungarian, Italian, Mandarin Chinese, Polish, Portuguese, Russian, Spanish and Vietnamese.) The main companies have either replaced their local ethical guidelines or brought them into line with the Group's Code of Ethics. Launched in 2013, the rollout of the Code of Ethics across Group departments and companies continued in 2014, covering around 88% of the workforce. At the end of October, the "My EDF" survey conducted with all Group employees revealed that 47% of them had benefited from a presentation of the Code of Ethics, i.e. 48% at EDF, 47% at Edison, 69% at EDF Energy, 74% at EDF Énergies Nouvelles, and 32% at ERDF¹. The differences in results from one company to another are mainly due to the company size. For ERDF, the change in the company's governance gave rise to an adjustment of the action plan and its rollout.

The Group has set up an organisational structure and procedures which ensure that all employees have access to:

- the required tools and information to guide their day-to-day decisions and actions;
- the dedicated staff (managers, Group Ethics Officer, and department/company ethics officers) who can help them;

1. "My EDF" survey conducted from 23 September to 21 October 2014 with 132,000 employees of the EDF group, excluding Dalkia.

2. Other significant results: Asia Pacific Division (85%), BE ZRt (80%), EDF Fenice (77%), EDF Polska (73%), EDF Démász (70%), PEI (64%), Électricité de Strasbourg (45%), EDF Norte Fluminense (41%), EDF Trading (40%), EDF Luminus (19%).

- a secure and confidential whistleblowing system for reporting issues to a manager, an interlocutor or, if necessary as a last resort, to the Group Ethics and Compliance Commission set up in 2013.

The Group Ethics and Compliance Commission – which is tasked with providing advice, consulting services and support – issues opinions and provides recommendations to the management on all topics related to Group ethics and its implementation. It also provides consultation services to all requesting internal or external entities and responds to all whistleblowing reports at Group level (known as “central” alerts). It receives the report of

the EDF Ethics Officer on central alerts and the reports of each company on local alerts and the implementation of the ethics guidelines. The Commission's Chairman reports to EDF's Chairman and CEO, as well as to the Ethics Committee of EDF's Board of Directors. In 2014, the Commission met twice and issued decisions on a number of matters (legal nature of the Code of Ethics, employees' freedom of expression, ethics officers' role, etc.).

It also examined the 75 ethical issues reported to the Commission in 2014. About two thirds of the issues reported by Group employees concerned the “respect for persons”, a situation which has remained stable for several years.

In 2014, EDF set up a reporting system within its companies for serious breaches of the Code of Ethics. Over its first incomplete year, 34 cases were detected by the companies, breaking down as follows:

	Number of cases detected during the year	Detection channels of serious breaches to the Code of Ethics						
		By the Group Ethics and Compliance Commission	By an employee	By Internal Control/ Audit/HR departments	By a customer	By a service provider	By a public authority	By another third party
Disrespect for persons	26	0	17	2	0	1	0	6
Fraud/Corruption	8	0	2	3	1	1	0	1
Violation of Human Rights	0	0	0	0	0	0	0	0
Breach of competition law	0	0	0	0	0	0	0	0
Damage to the environment	0	0	0	0	0	0	0	0

Issues of “disrespect for persons” are the most frequently encountered. They are subject to internal remedial measures (in 68% of cases) and disciplinary measures (in 32% of cases), including dismissal. Proven cases of fraud give rise to internal sanctions and may be referred to the judicial authorities if a complaint is filed.

Moreover, Group companies (excluding EDF), dealt with 24 cases of serious breaches to the Code of Ethics in 2014.

Fraud prevention

The Chairman and CEO's decision on anti-fraud action in the Group, with its basic principle of zero tolerance, has been applied since late 2010. To ensure its correct implementation, managers have prepared and adopted anti-fraud plans in the main entities.

In 2014, awareness-raising actions were conducted to boost the performance and effectiveness of anti-fraud measures. Group guidelines for handling fraud alerts were shared with the entities, providing all levels of management with a methodology and instruments to handle and manage potential fraud alerts. The “fight against fraud”, to which a specific chapter is devoted in the Group's internal control guide, has been supplemented with control requirements in keeping with the risks.

A Group-wide plan to establish a frame of reference over the 2014-2016 period was presented to the Executive Committee at the end of 2014. It aims to raise staff commitment in the fight against fraud by further increasing communication on whistleblowing rules, rights, duty and means, prioritise and better target fraud detection and control actions, increase the effectiveness of these control measures, facilitate the handling of fraud alerts and ensure its security.

Corruption prevention

Concerning the issue of corruption, procedures for the validation of intermediaries' contracts were reinforced through the implementation of the Chairman's decision of 31 May 2010 on consultancy and agency contracts. A control system for these contracts was put in place at the top level of the Group.

A programme to raise awareness of EDF's penal risk (Chairman's decision of 28 July 2011) was launched in response to the emergence of higher

exposure to this type of risk as the Group has expanded and diversified its establishments across the world. This higher exposure also stems from the tightening of anti-corruption laws in the US (Foreign Corrupt Practices Act) and the UK (Anti-Bribery Act), as the extraterritorial scope of these laws is contributing to the emergence of international repressive regulations.

EDF also launched a project for the prevention of all forms of corruption. Through a decision issued on 22 January 2014, the Chairman launched an anti-corruption compliance programme applicable to all EDF business units, departments and controlled subsidiaries. A working group is tasked with laying down a corruption prevention policy in 2015, organising advisory and support services for the entities, and training employees via an e-learning tool including specific sessions for the most exposed employees. Moreover, additional guidelines concerning the risks associated with business relations have been included in the Group's internal control guide.

Compliance with competition rules

Respecting competition rules is an absolute priority for the EDF group. To reduce the Group's exposure to the risks associated with the enforcement of competition law in a context of the opening up of the electricity market, the Group's internationalisation, and the intensification of sanctions, the Chairman decided on 22 December 2010, to launch a programme aimed at ensuring compliance with competition rules applicable to all departments and subsidiaries.

This programme involves a set of awareness-raising, training and control measures designed to instill a competition law culture across the Group, and make employees and partners more accountable in terms of compliance with competition rules. This programme particularly involves online and conventional training sessions for Group employees who are most exposed to competition risk. At 31 December 2014, over 5,200 employees had been trained through an e-learning programme developed in several languages, in France and other countries. In addition, good practices guides and regular updates on competition law are widely shared and are available on a dedicated intranet site. In addition to awareness raising measures, control actions have also been widely implemented since 2013, in order to audit the procedures set up within the Group.

The competition law compliance programme is subject to an annual report and to the Group's internal control procedures.

Human rights policy

The EDF group is committed to respecting human rights in all its activities and business relations, in accordance with the United Nations (UN) Guiding Principles on Business and Human Rights published in 2011.

On this basis, one of EDF's corporate social commitments (2013) consists in "no tolerating of any human rights violation, fraud or corruption, in all its companies and at all its suppliers". To this effect, the Group has set two objectives: that 13 of its companies reach the Advanced level of the UN Global Compact by 2017 (at the end of 2014, 13 companies had signed the Global Compact and 2 had reached the Advanced level – EDF and Edison); and that 13 companies have an ethics/sustainable development clause included in their long-term procurement contracts by 2015 (at the end of 2014, this objective had been achieved by 11 companies). As a reminder, EDF joined the UN Global Compact in 2001.

In its Code of Ethics, the EDF group also refers to the Universal Declaration on Human Rights, the Convention on the Elimination of All Forms of Discrimination against Women, the Convention on the Rights of the Child and the OECD Guidelines for Multinational companies. In its CSR agreement signed in 2009, EDF undertook to ensure compliance with the International Labour Organization's Fundamental Conventions in all the subsidiaries it controls.

All of these commitments have been taken up by the Group's companies, within the scope of their own CSR commitments. Certain companies have adopted additional measures. Edison, for example, has its own policy on human rights and has defined a procedure to assess and monitor compliance with human rights, applicable to all its locations. In 2013, EDF Energy strengthened its Code of Ethics with clauses on integrity and the prevention of discrimination and mental harassment.

EDF is also a founding member in France of *Entreprises pour les Droits de l'Homme* (EDH), an association of 10 companies striving to actively implement within their organisations the UN Guiding Principles on Business and Human Rights. In this regard, in 2015 EDF will share with all Group employees the e-learning programme on human rights developed by EDH. Moreover, EDF has decided to pay greater attention to impacts on human rights in its screening criteria for all its investment projects. At the international level, EDF is a member of the Global Compact's specific working group on human rights. It is also a member of the World Business Council for Sustainable Development and IPIECA¹.

The current human rights monitoring and verification measures appear sufficient for most Group companies. In addition to the standard points of contact (management, HR department, employee representatives), whistleblowing procedures have been put in place by most companies for employees facing difficulties (ethics officer, toll-free numbers, Ombudsmen, etc.).

17.2.3.2 Dialogue with stakeholders

The Group has invested in what it hopes will be more effective dialogue with stakeholders at all territory levels. In its CSR commitments, it promises to encourage transparency and dialogue on sensitive subjects, with a commitment for eight of its companies to have a formal space for dialogue with stakeholders by the end of 2015; this has already been achieved by EDF Energy through the Stakeholder Advisory Panel, and by EDF through the *Conseil Développement Durable France* (see section 17.2.3.2.3 ("Advice from independent panels")).

Each Group company engages in dialogue with its stakeholders using its own procedures, covering 5 common areas:

- local consultation concerning generation sites and proposed new industrial establishments;
- organised relations with customers, suppliers, sector partners, socio-professional organisations, local authorities and national and international institutions;
- operational partnerships with NGOs and the academic world;
- gatherings of experts and representative personalities in independent boards or panels (see section 17.2.3.2.3 ("Advice from independent panels")) to provide Group managers with external opinions;
- public information and education in energy and sustainable development issues, especially for young people.

17.2.3.2.1 Informing local populations near generation sites and consultation on industrial projects

Generation sites

In France, 38 local information commissions consisting of elected officials, State representatives, associations and professional bodies keep local residents informed of nuclear facility activities, as required by regulations. EDF works with these commissions at its power plants and provides them with the information they need to fulfil their missions. The stakeholders' expectations are taken into account in order to improve the relevance of the information provided: in the latest review, they mainly concerned the protection of populations and investments to increase nuclear safety in the wake of the Fukushima accident. Questions concerning emissions into the environment are also a topic of growing interest.

In addition to this regulatory system, EDF has set up a public information centre at each nuclear power plant to inform local populations of the plants' operations and impacts, energy-related issues, control of energy consumption and the activities that will provide jobs in the electricity sector in the future. Like in 2013, EDF's image with local populations remained broadly positive in 2014: 86% declared it has a good image, 82% thought nuclear power plants had a high level of operation (2% drop compared with 2013) and 79% acknowledged that there was a positive impact on economic activity (1% rise compared with 2013).

Concerning the decommissioning of the Brennilis nuclear plant in Brittany, discussions are under way with local authorities, the local population and the Chamber of Commerce on the future of the lake and land around the plant, as well as the type of economic activities that could develop there.

In the hydropower sector, the local residents' perception around the sites remains good: 68% of them have a "rather good" opinion of the level of safety and the quality of the information provided to them, while 20% have a "very good" opinion. 74% of them deem that the hydropower sites function well and 71% feel they have a positive impact on local economic activity. Moreover, EDF pursued its permanent information and safety campaigns to warn water users of the risks of variable water flow in the rivers. Hydroguides were again employed in the summer season for prevention purposes. Special relations were developed on local projects, such as that of the Poutès dam in Haute-Loire, through the set-up of a Project Monitoring Committee consisting of elected officials and representatives from State services, central government and associations. The site redevelopment project was approved by central government, local elected officials and

1. The global oil and gas industry association for environmental and social issues.

environment protection associations. A working group led by the Haut Allier Regional Park association focuses on the territorial integration of the project. Furthermore, EDF is working on a new governance model in the Aspe Valley (Pyrenees), where concessions have been renewed for 40 years. This new model will cover all aspects which link up the hydropower facilities with the surrounding territory. The consultation phase on the future governance method has been initiated with local authorities, in order to set up a first operational model in 2015, thereby anticipating the recommendations of the law on energy transition for green growth.

In the United Kingdom, EDF Energy organises regular meetings with local stakeholders (three to four times a year, depending on requests) covering matters related to its business activities and their impacts. Its nuclear tour programme allowed 40,000 local residents to visit nuclear power plants in 2014. The company set up a mobile information centre which enabled nearly 60,000 people to find out about its activities. Following the intrusion of environmental NGOs on the CCGT site of West Burton in 2013, efforts were undertaken by the Chairman of the panel of external stakeholders to reopen dialogue with the NGOs and avoid future intrusions that could endanger the lives of protesters. The recommendations adopted following this dialogue were integrated in EDF Energy's new commitments under its "Better Energy Ambitions" plan launched in 2014.

New industrial projects

In France, the implementation of the "Coal 2035" programme (extension of three 600MW coal-fired units while improving their technical and environmental performance), is taking place through upstream meetings with local residents to present the purpose of the work, its nature, its time frame, as well as the local businesses which will carry out the work. In particular, on the Bouchain site where construction of the CCGT has started, a dedicated newsletter is sent to local residents. In 2014, discussions mainly focused on biodiversity.

A regulatory public debate was held concerning the construction of the Dunkirk LNG terminal. In 2007, an early consultation led to amendments to the initial project, to avoid encroaching on a protected area with the risk of harming endangered bird and plant species, and to protect living

and leisure areas for families. Since the construction work began, local dialogue has continued and has led to jointly developed solutions with the various stakeholders: environmental compensation measures defined with a committee of experts and environment protection associations, social and economic development measures in coordination with local authorities and economic players, establishment of a concrete production unit on site and transport of part of the materials by barge, to reduce truck deliveries which were a point of anxiety for local residents. Visits to the building site increased, attracting nearly 5,000 local residents in 2014. The main topics discussed concerned the company's compliance with its commitments and the presence of non-national companies on the building site.

Concerning the development of EDF Énergies Nouvelles' three offshore wind power projects (Fécamp, Courseulles-sur-Mer and Saint-Nazaire), three public debates were held between March and July 2013 as required by the French Environmental Code for projects above €300 million. More than 5,000 people attended the debates. Their main concerns were respect for the environment, attention to uses of the sea, disturbances caused by the work, the visual impact of the facilities (visibility from the coast) and the economic consequences of the project. Further to the consultation process, EDF Énergies Nouvelles opened an information centre in Courseulles-sur-Mer where it holds meetings between local residents and project representatives.

17.2.3.2.2 Raising the awareness of the general public to sustainable development

In Europe, where sustainable development is now a hotly debated issue in the public sphere, the Group's companies continued and enhanced their programmes in 2014 to raise the awareness of the general public and young people on energy control and the stakes of sustainable development. In France, within the scope of its partnership with the Ministry of Education signed in 2002, EDF fully performs its public service missions by offering schools conferences on electricity, energy and sustainable development, and fostering interest for scientific and technical culture. The company also provides educational content to young people and teachers via two dedicated websites: "enseignants.edf.com" and "jeunes.edf.com".

Significant initiatives in 2014

EDF	<ul style="list-style-type: none"> Website www.mamaisonbleuciel.fr to raise the awareness of the general public on energy savings: 3.5 million visitors in 2014. Set-up of a phone line (3929) where energy savings experts provide advice to private customers. Expenditure for environmental innovation (digital customer relations on the topics of energy efficiency, demand response, electric mobility and sustainable territories): €65 million in 2014 (up 1.1% compared with 2013). 566,000 visits to the website dedicated to young people in 2014 (over 480,000 visits in 2013 and 197,000 in 2012). 4,800 talks on sustainable development issues given in secondary schools, in connection with the curriculum and at the request of teachers (more than 120,400 young people have attended). Production of a guide (<i>L'électricité, ça s'apprend</i>) aimed at raising the awareness of young people on the careful use of energy (in 2014, over 21,000 copies were distributed by EDF advisors in the outlets). Launch of a website dedicated to questions on the energy transition (900,000 visitors). Participation in the 2014 <i>Fête de la Nature</i> event, with the opening-up of 28 generation sites and conferences on biodiversity. With nearly 4,000 visitors, EDF accounted for nearly 10% of the total number of people partaking in this event organised under the aegis of the French Ministry of the Environment. Participation in the 4th <i>Journées de l'Industrie</i> (25,000 visitors), organised by the French Ministry of Industry.
EDF Energy	<ul style="list-style-type: none"> In collaboration with the MET Office and the University of Exeter, launch of "Climate & Us", a general-public information website which explains climate change and its expected impacts, and presents the initiatives undertaken by local authorities and companies in the UK to reduce the effects of climate change. Integration of "biodiversity" and "waste management" issues in the online educational programme "The Pod", in partnership with the European Eco-Schools programme and the British NGO Eden Project. Over 18,000 schools are registered with The Pod (60% of British schools) and over 10 million children have benefited from the programme since its launch in 2008 (initial target: 2.5 million).
Edison	<ul style="list-style-type: none"> Continuation of the "Eco Generation – School is the Climate's Friend" programme conducted with the NGO Legambiente in pilot schools (20 schools in 20 Italian towns), teaching pupils to assess their school's energy efficiency and helping them to look for ways to control energy consumption (over 5,000 children, 40 NGOs and 35 public administrations involved in 2013 and 2014).
EDF Luminus	<ul style="list-style-type: none"> Launch of an information campaign on wind power.
EDF Polska	<ul style="list-style-type: none"> Open Day held in all thermal power plants, with a debate on the stakes involved in sustainable development and the challenges for Polish thermal power plants.

17.2.3.2.3 Advice from independent panels

Several panels of experts provide their outside view to Group managers and companies. These panels include: the International Sustainable Development Panel, the Sustainable Development, Scientific and Medical Councils at EDF in France, and the Stakeholder Advisory Panel for EDF Energy.

The International Sustainable Development Panel is a channel for dialogue, made up of independent, global specialists in fields relating to the Group's activities or who represent the expectations and interests of civil society. It also includes, as automatic statutory members, the Chairmen of the Sustainable Development and Scientific Councils for France, as well as the Chairman of EDF Energy's Stakeholder Advisory Panel. The International Sustainable Development Panel provides advice and a critical assessment of the Group's sustainable development commitments and their implementation.

In 2014, the International Sustainable Development Panel met to examine the results of the Group's CSR commitments, one year after their introduction. It saluted the efforts initiated by the Group on all items but regretted the lack of ambition as regards the targets set. Every year, the Panel issues an opinion on the Group's sustainable development performance¹.

The Sustainable Development Council in France – whose members are also external personalities who are representative of the issues associated with the impact of EDF's facilities and businesses – challenges EDF managers and experts as upstream as possible over the company's proposed options regarding sustainable development.

In 2014, this council met twice to examine issues related to the Group's risk mapping process and the "Grand carénage" programme for the existing nuclear fleet.

Regarding Group risk mapping, the Council appreciated the quality of the method used, but suggested a better coverage of external risks. To boost the process, it suggested a more thorough transformation of the risks already identified into opportunities. It also prompted EDF to make better use of this material in the Group's strategy, its reporting and its communications.

Concerning the "Grand carénage" programme for the existing nuclear fleet, the members of the Council stressed the magnitude and exceptional nature of the works programme, involving for all nuclear plants new safety requirements and longer lifespans. It noted the significant efforts made by the company in terms of human organisation and logistics, as seen on the Paluel site, the 1st power plant to have launched the programme. The Council praised the anticipatory and comprehensive nature of the Grand carénage programme. However, it prompted EDF to divide the programme into clearer sub-units in order to adapt to the various scenarios that may be retained in view of the national or European political options.

EDF's Scientific Council is a consultative body that provides the company with eminent scientists' opinions and advice on the impact of scientific and technical developments on its business lines, and on its long and medium-term research activities. It examines specific topics, issuing detailed reports and recommendations to EDF's Chairman.

In 2014, the Council covered three topics:

- energy storage: the stationary storage of electricity for the electricity grid;
- new fields and new simulation methods: what are the new areas of application for digital simulation?
- EDF's R&D priorities: what are the scientific priorities for EDF's R&D?

EDF's Medical Council, composed of personalities from the medical world and university professors, is a channel for reflection and advice on a number of

current health topics connected to EDF's activities. Its Chairman is Professor André Aurengo, of the French Academy of Medicine.

In 2014, the Council examined three health and environmental issues: the generation sites' factoring of the recent classification of diesel exhaust² and air pollution as carcinogenic to humans; the impacts of the onset of new infection risks for Group employees; environmental intolerances such as hypersensitivity to chemical odours or electromagnetic fields.

The Stakeholder Advisory Panel advises EDF Energy's CEO and Executive Committee on corporate strategy and sustainable development. Composed of six independent members, it examined the Hinkley Point EPR project and the proposal filed with the European Commission. It saluted the innovation of EDF Energy's "Price Promise" in its pricing strategy, as well as the various scenarios concerning the company's personnel in view of the Scottish referendum on independence. It also examined EDF Energy's performance in terms of sustainable development and published a report to that effect (<http://www.edfenergy.com/about-us/annual-report/stakeholder-views.shtml>).

17.2.3.2.4 Redesigned sustainable development partnership strategy

For EDF, sustainable development partnerships are an essential means of dialogue with stakeholders on issues which have major implications for its activities. Their purpose is to provide the company with better understanding of stakeholder expectations, as well as new areas of expertise for Group companies and departments.

They cover three main aspects: strategic and research partnerships, biodiversity partnerships, and societal partnerships.

Strategic and research partnerships

Against the backdrop of the global debate on the energy transition towards less carbon-intensive economies, the Sustainable Development department continued its strategic partnerships in 2014 with the think tanks of the Institute for Sustainable Development and International Relations (IDDRI) and the Nicolas-Hulot Foundation for Nature and Mankind (FNH). With the IDDRI – a partner with a strong position in the preparation of international negotiations on climate – EDF took part in the debates of the "clubs" on climate, biodiversity and the city, attended by companies, public authority representatives and NGOs, and focusing on operational research projects and expertise. Discussions notably focused on the role of local communities in the experimental citizen's renewable energy projects conducted in Germany and Sweden, and on the interactions between urban density and energy. In 2014, EDF and the IDDRI also worked on the project of national decarbonisation pathways and its implementation conditions (technological solutions, public policies, etc.). This project is conducted under the aegis of the United Nations. With the FNH, EDF takes part in the think tank dedicated to the ecological transition, which brings together eminent academics, researchers and scientists. The partnership also gave rise to the creation and launch of a circular economy course for EDF managers.

In 2014, EDF entered into a research partnership with the US universities of Columbia and Arizona, focused on the creation of a pilot unit for the capture of airborne CO₂ in the United States. The climate research initiated with the MIT (Massachusetts Institute of Technology) and the Paris-Dauphine University continued. With the MIT, EDF launched a special study on the 2015 climate agreement in preparation for the Paris Climate Conference ("COP 21"), which simulates different scenarios on the impacts of a climate agreement, according to the countries' level of ambition and participation.

1. The Group's sustainable development report, published in the first half of 2014, exclusively online at: <http://rapport-dd-2013.edf.com/fr/avis-du-panel-des-parties-prenantes>.

2. Classification made by the International Agency for Research on Cancer.

Biodiversity partnerships

In view of the stiffening of European regulations and the emergence of new environmental governance, such as the creation of a biodiversity agency in France in 2015, biodiversity is more than ever a factor in the perpetuation and development of EDF's activities. The company's long-term partnership with the French National museum of natural history (*Muséum national d'histoire naturelle*), the International Union for the Conservation of Nature (IUCN), the Bird Protection League (*Ligue pour la protection des oiseaux*), the Coastal Protection Agency (Conservatoire du littoral), French Nature Reserves (*Réserves naturelles de France*), and the National Federation for Fishing in France (*Fédération nationale pour la pêche en France*) promote technical exchanges and dialogue between national NGOs and the company's various businesses.

The partners' biodiversity expertise is sought in four main areas:

- ecological quality and land management;
- the limitation of impacts;
- strategic support for the biodiversity initiative;
- training and raising the awareness of company employees and the general public.

In 2014, these partnerships gave rise to the launch of a research programme on terrestrial biodiversity with the French National museum of natural history, the writing of a report on the development of renewable marine energies with IUCN, support for the set-up of inventories and management plans for the Cordemais and Gravelines power plants with the Bird Protection League, and strategic support for the establishment of the company's 2014-2017 biodiversity roadmap with IUCN.

Societal partnerships

In 2013, EDF decided to redefine its societal partnership strategy in coordination with the business units concerned.

Priority topics had been identified, such as access to energy and the fight against energy poverty, social development in outlying areas, and social integration and education, with the objective of developing innovative solutions with multi-stakeholder economic partners, if possible at the international level.

As implementation proved more complex than anticipated, certain partnerships for the fight against energy poverty did not materialise in 2014. With the Action Tank set up by French business school HEC, EDF will conduct experimental projects in France aimed at reducing poverty and exclusion; a first pilot operation to provide support for the renovation of rundown housing estates was launched in Clichy-sous-Bois.

With the *Compagnons Bâtisseurs* master tradesmen's network, the partnership consists in providing training and support to vulnerable households to enable them to renovate their own homes. A first programme has started in Toulouse.

With the French national federation of victims of collective accidents and attacks (FENVAC), EDF has worked on the set-up of a partnership for industrial safety. The exchanges between the two parties aim to reinforce the prevention of collective accidents causing bodily harm, and the management of emergency situations. In 2015, the first initiatives will focus on water safety, following a series of meetings held with EDF's R&D concerning spillways.

17.2.3.3 Societal actions

The Group's societal policy is an integral part of its sustainable development policy, and complies with the principles of the UN Global Compact.

In keeping with the Group's CSR commitments, the three main strategies of its societal policy are the following:

- facilitate access to energy and energy eco-efficiency for vulnerable people;
- contribute to the economic and social development of the areas covered by EDF;
- contribute to the debate on sustainable development and EDF's activities by fostering local dialogue and knowledge of energy-related issues.

In this regard, the Sustainable Development Department coordinates a specific network of correspondents from the Group's various entities. The members of the network meet annually to discuss good practices and share the main actions initiated.

17.2.3.3.1 Contributing to energy access and the fight against energy poverty

Contributing to the fight against energy poverty

As the issue of poverty intensifies across Europe, the EDF group continued its actions to fight against energy poverty, going further than the regulatory obligations. This is reflected in the incorporation of this issue in the Group's CSR commitments¹, the reinforcement of existing programmes, and the implementation of new, country-specific solutions. The Group's chosen approach is to assist struggling customers through tailored aid, and wherever possible, more long-term upstream action to reduce the consumption costs of the most vulnerable households.

In France, the studies conducted by the *Observatoire national de la précarité énergétique* (National Energy Poverty Monitoring Centre) recommended that a set of indicators be put in place in 2014 to assess energy poverty. They include the new "BRDE" indicator inspired from Hills' Low Income High Costs indicator (see sub-section "In other Group companies" in this section). According to these studies, over 5 million households (i.e. over 11.5 million people) are in situations of energy poverty. In that context, EDF's action is based on three types of measures, in support of public schemes² and via voluntary actions:

- help with paying bills;
- assistance to customers in difficulty;
- preventive action.

Concerning help with paying bills, in continental France, EDF is the largest contributor to the housing solidarity fund (*Fonds de solidarité logement*, or FSL) managed by local authorities, contributing for €23 million in 2014, in line with the 2013 amount (€23.3 million). EDF's 380 social advisors handled nearly 550,000 applications and more than 194,000 disadvantaged households received financial aid to pay part of their energy bills, following local commission decisions. While the number of households having received financial aid from EDF dropped, the amount of the aid was higher than in previous years (€248 per customer versus €240 in 2013).

In Corsica and the French overseas departments, EDF's action in 2014 consisted in identifying the new beneficiaries of the Basic Necessity Tariff (190,000 beneficiaries in 2014 compared with 70,000 customers monitored in 2013). Moreover, contributions to the housing solidarity fund remained stable at €520,000 and 4,700 families received aid for the payment of their bills (€110 per customer on average).

Concerning assistance to customers in difficulty, EDF continued its alert campaigns for vulnerable customers as the winter approached (e-mailings, text messages and automatic phone calls), so that each customer would be able to keep its electricity supply. To avoid the accumulation of unpaid bills

1. Annual publication of the number of voluntary initiatives targeting vulnerable customers, undertaken by Group companies selling energy. See section 17.1 ("Corporate responsibility commitments") for 2014 results.

2. EDF provides social tariffs in France for electricity (Basic Necessity Tariff) and natural gas (Special Solidarity Tariff). It receives compensation for these tariffs through the Contribution to the Public Electricity Service (CSPE) and the Contribution to the Special Solidarity Tariff for Gas (CTSSG) respectively. The startup of electricity supply is free. In 2013 and 2014, under the Brottes Law, 2.6 million households benefited from the Basic Necessity Tariff in France, including 2.4 million EDF customers (8% of its private customers, up 5.4% compared with 2013).

over the winter, a specific campaign targeting around 20,000 customers with unpaid bills was conducted over the winter of 2013-2014, within the context of the winter truce granted by the Brottes law. In 2014, the company helped more than 513,000 struggling customers under its “Energy Assistance” initiative (500,000 in 2013 and 324,000 in 2012), working with them to find appropriate solutions to their situations: deadline extensions, putting them in touch with social services, providing advice on making energy savings.

EDF reinforced its territorial coverage by creating new multi-service information centres in Bordeaux, Valenciennes and Sevrin (there are now 180 customer reception points in metropolitan France). Furthermore, the company set up training sessions for social workers (13,180 people trained) and launched an internet portal to access solidarity services, “PASS’EDF”. This platform allows exchanges with EDF’s social advisors and enables social workers to easily file and keep track of financial aid requests submitted on behalf of persons undergoing financial difficulties. In general, the social services stated that they found EDF’s solidarity platform efficient: 71% of local authorities (BSM survey 2014) and 95% of social workers (IPSOS survey 2014) stated they were satisfied with them.

Concerning prevention, EDF develops long-term campaigns to improve energy efficiency in the homes of people in energy poverty. Until 2017, the company should continue its involvement in the *Habiter mieux* (Better living) programme managed by the ANAH national agency for home improvement. A first agreement signed over the 2011-2013 period, under the aegis of the Government and in response to the Grenelle 2 Environmental Law, made it possible to begin the renovation of 29,000 homes owned and occupied by persons in energy poverty, out of the 50,000 homes renovated under the programme. EDF’s contribution amounted to €29 million over a 3-year period, making it the biggest contributor to the programme. In 2014, the results of the programme were on the increase with some 50,000 renovations launched during the year. The renewal of the agreement for the 2014-2017 period, on the basis of 50,000 homes in 2014, and 45,000 homes in 2015, 2016 and 2017, implies a sharp rise in EDF’s financial contribution, i.e. €32 million in 2014, then €29 million per year for the next three years, amounting to a corporate contribution of 58% of the total contribution made by energy companies. EDF also works on identifying eligible households and offers studies to local authorities on energy poverty within their area. These studies are conducted with mapping tools and allow a better identification of the most vulnerable districts and population categories. In 2014, in-depth studies were conducted in the Landes department, the city of Limoges and the conurbations of Saint-Étienne and Durance-Luberon-Verdon.

This commitment adds to EDF’s voluntary contributions, for instance:

- the *Toits d’abord* operation in partnership with the Fondation Abbé Pierre, which allowed the renovation of 1,364 “very social” housing units out of the 2,000 targeted for the end of 2014. The partnership was renewed for 2015;
- the *Médiaterre* programme in partnership with Unis-Cité, wherein young volunteers do outreach work with residents in housing estates, to help them adjust their energy consumption behaviour. The operation covered 66 housing estates and provided support to 1,600 families in 2014 (9,800 households have received advice since the beginning of the operation);
- organising of “energy poverty forums” with local players to identify the new questions raised by energy poverty (3 meetings held in 2014 in Châlons-en-Champagne, Limoges and Saint-Denis).

In Corsica and the French overseas departments, the programme for the distribution of “Packécoc” and “HydroEko” kits to the prime beneficiaries of the Basic Necessity Tariff came to an end (270,900 kits distributed since 2012). It allowed those households to reduce their water bills by 30% and their electricity bills by 20%. In Guadeloupe, EDF set up training sessions for key players in the social sphere (municipal centres for social action

(CCAS), General Councils, etc.). With the CAF (family allowance office), it offers financial aid to the poorest households so they can buy A+++ rated household appliances that will enable them to reduce their electricity consumption by 40%.

Finally, EDF’s R&D teams have been developing a project focused on energy poverty (*Précarité énergétique*) since 2010, with a budget of around €1 million per year, with two objectives:

- understanding and analysing the context of energy poverty, and anticipating its development in order to best prepare the responses to be provided;
- developing innovations which directly help customers in energy poverty.

In 2014, the teams worked on the development of a model for the renovation of rundown housing estates, in partnership with HEC’s “Action Tank” and Bouygues Construction. The object is to supplement the financing of thermal renovation in housing estates through the integration and sale of additional built-up space, and to assist residents in recovering a virtuous circle of payment of the bills and maintenance of co-owned property. A pilot project will be rolled out in 2015 in Clichy-sous-Bois.

In other Group companies

In 2013, with the help of the design and engineering office Energies Demain, ERDF set up a decision-making tool called “PRECARITER” which enables local elected officials and services to get a better grasp of energy poverty in their constituency and thus define their energy policies accordingly. As it takes account of all mandatory household expenses, this tool avoids the pitfall of restricting the problem of energy poverty to the analysis of energy bills. In 2014, ERDF submitted 72 PRECARITER reports to local authorities. In addition, ERDF enters into partnerships with local organisations to ensure that the households in difficulty have contacted social services in order to avoid their disconnection for unpaid bills.

Dalkia offers an additional service to local authorities and apartment building managers for the detection of households in energy poverty, within the scope of its services for the detection of the least energy-efficient buildings. When it takes over the operation of a district heating network, the company can map out areas of heat loss through aerial thermography. When cross-referenced with economic and social data, this map makes it possible to detect households in energy poverty. These support plans thus have a social and economic component, which comprises financial aid via a solidarity fund, progressive pricing and energy coaching. The amount allocated to energy poverty programmes varies between 0.2 to 1% of the total contract, depending on the size of the district heating network and its turnover.

In Alsace, the amount allocated by the Électricité de Strasbourg group to voluntary programmes against energy poverty remained stable (€40,000, including €20,000 in the form of energy vouchers). To better identify vulnerable people, in particular single-parent families and isolated elderly persons, the Group conducts workshops in social food stores in its operating area and works with the “Crésus” association focused on combating over-indebtedness.

In the UK, where Hills’ Low Income High Costs indicator (2012) is now used, the number of households in energy poverty has dropped slightly but the level of difficulty tends to be increasing. In 2014, EDF Energy adopted a dedicated “Vulnerable Customer Strategy” to ensure the effectiveness of the measures it sets up for its vulnerable customers. The company meets the UK’s regulatory aid requirements through the following programmes:

- the Warm Home Discount programme renewed for the fourth time over the 2014-2015 period, with company contributions for 211,750,000 households in energy poverty, through a total annual discount of £29.6 million on their bills;

- the government ECO initiative (Energy Companies Obligation) introduced in early 2013 to reduce energy consumption in the United Kingdom and help households in energy poverty by funding measures to improve energy efficiency. EDF Energy's obligation for the 2013-2015 period concerns a total estimated amount of £490 million, including £150 million to priority-need customers (people on benefit, people aged over 70, and residents of rural or underprivileged areas). In November 2014, EDF Energy had already achieved the target set by the government programme, in particular through 39,200 home insulation projects in 2014. Discussions are under way with Ofgem to define the company's targets to March 2017.

Concerning its voluntary programmes, EDF Energy re-examined its support measures for vulnerable persons and reinforced its collaborative programmes with NGOs:

- with the Plymouth Citizens Advice Bureau, an independent organisation which helps EDF Energy customers in financial difficulty find solutions to their debt problems (advice provided to over 7,200 persons in 2014);
- with IncomeMAX, a Community Interest Company that assesses people's rights to benefits, helps them with claims and provides advice on energy use (over 1,300 households helped in 2014, for a total of over £73,000);
- support for the London Warm Zone programme, an NGO which helps vulnerable and low-income persons improve the energy efficiency of their homes and increase their income. In 2014, the heating systems of 523 homes in and around London were either replaced or improved. This represents savings of £8.2 million on domestic heating bills over the life cycle of the heating equipment, in accordance with the rules defined by the ECO programme;
- support for a National Energy Action programme aimed at identifying the most vulnerable households in the Yorkshire and Humber area, and the most difficult to reach via conventional means, to lighten the burden of their debts and help them manage their energy consumption (over 500 households already identified, 26 training sessions already provided on the control of energy consumption, and debt arrangements reached with 247 households);
- with the EDF Energy Trust Fund which helps struggling families and individuals find a sustainable solution to their energy debts. In 2014, out of the 10,144 requests received, 4,036 were approved, for a total of £2.75 million. Another £594,090 was dedicated to projects to combat energy poverty.

In Poland, where Group companies produce electricity and heat for local authorities but do not sell energy to residential customers, all actions to fight energy poverty are implemented voluntarily by EDF Polska through a policy of donations to town councils, distributors and NGOs. The funds allocated mainly target households in highly vulnerable situations, elderly persons and organisations in charge of sick or disabled children.

In Hungary, EDF Démász continued its partnership with Maltese Charity Service initiated in 2012, providing 6,500 vulnerable customers identified by the charity and having opted for a prepayment meter, financial aid of 50% of their electricity bills. Through this voluntary commitment, EDF Démász has helped over 10,000 customers, with financial aid totalling 272 million forints (around €890,000). The number of households receiving aid is diminishing every year and currently accounts for 1% of the company's individual customers.

Access to electricity

In 2015, the EDF group will develop a strategy and business models which promote access to electricity worldwide, in accordance with its sustainable development policy and with the United Nations' sustainable development objectives.

A multi-stakeholder approach will be favoured. EDF wishes to focus its actions on the electrification of rural areas (see section 6.3.3.4.4 ("Access to Energy Mission")), rapidly expanding urban areas and the areas surrounding its new industrial projects. Moreover, to drive development, EDF is continuing its electricity accessibility actions via the "EDF HELP" programme of the EDF Foundation (humanitarian initiatives, support for development, and handling of emergency situations).

17.2.3.3.2 Contributing to local economic and social development

In all the countries where the EDF group operates, its industrial activities (nuclear plants, thermal plants, hydropower plants, renewable energies, distribution networks) are part of local areas and generate direct and indirect local employment, local purchases and payment of taxes that support local development. In 2014, the Group's activities generated 158,161 direct jobs (158,467 in 2013) and 475,545 indirect jobs (475,498 in 2013) (see section 17.1.2 ("Corporate responsibility commitments: Group performance indicators")).

Through its capital investment policy, EDF is France's no. 1 investor in the country's economy and one of the leading investors in Europe. In 2014, EDF's net investments in France amounted to €8.7 billion (€8.8 billion in 2013). EDF is also the largest customer of France's small and medium-sized enterprises, placing orders worth €2.6 billion in 2014 with 26,500 SMEs. In view of the crisis that has been affecting Europe since 2009, and in response to demand from local authorities to develop local energy projects, EDF is taking action in several areas:

- preserving firms' competitiveness by offering them the cheapest possible energy and helping them to reduce their energy bills through lower, more efficient consumption;
- increasing the share of investment-related purchases (networks, new generation facilities, industrial maintenance) from regional businesses;
- becoming the leader of new industries that will generate jobs and local economic development, such as offshore wind farms with EDF Energies Nouvelles (more than 7,000 jobs are expected to be created directly and indirectly for the development of 1.5GW of offshore wind power capacity), and energy services with Dalkia (see section 6.4.1.3.1 ("Dalkia"));
- setting up innovative growth-driving partnerships with firms or local authorities to define local projects that will gradually integrate more local energy generation and local management of energy demand.

In 2014, in a difficult European economic environment, EDF made significant efforts to provide support to electro-intensive customers, who are highly sensitive to electricity prices, through two major operations:

- having acquired the aluminium production factory of Saint-Jean-de-Maurienne at the end of 2013, the consortium made up of the German manufacturer Trimet and EDF¹ undertook the restructuring of the site to preserve the 500 direct jobs and the 2,000 jobs associated with the valley's aluminium ecosystem. This acquisition gave rise to the creation of 60 additional jobs. Results are in line with forecasts and the two shareholders have decided to invest in the re-start of a production line, inaugurated in September 2014. The site's estimated consumption will rise from 1.6 to 2.1TWh, making it one of the biggest consumers of electricity in France;

1. EDF owns 35% of the new company.

- given the financial difficulties encountered by the Exeltium consortium of electro-intensive industries (27 companies in the chemical, steel, industrial gas and paper industries, representing 60,000 jobs including 28,000 direct jobs), Exeltium and EDF signed a rider to the industrial partnership agreement in October 2014 to boost the short and long-term competitiveness of the electro-intensive companies involved, while maintaining the general economic basis of the agreement: the rider initially provides for the lowering of the price paid as deliveries progress, to be compensated by a subsequent price increase, in accordance with the rise in the market price of electricity.

The ambition to extend the life span of nuclear power plants to beyond 40 years under optimal safety conditions implies the continuation of major maintenance work over the 2015-2025 period, possibly involving the

doubling of civil engineering activities. To this effect, EDF launched the “Grand carénage” programme (estimated at €55 billion) to implement an industrial strategy for each maintenance segment, and secure the industrial capacities of subcontractors for studies, construction, assembly and requalification work. This programme is backed by the construction of new buildings and car parks to accommodate all service providers. The first phase is set to start in 2015 on the Paluel site, which has entered into a partnership with Pôle Emploi to facilitate the recruitment of local skills, and has developed, with the Côte d’Albâtre municipalities, an approach to combine the power plant’s needs with those of the local authorities’ economic projects (e.g. harmonising expected housing needs for power plant workers with the construction of tourist accommodation within the scope of the development of the region’s green tourism, and new road layouts).

Main contributions to local development in 2014

In France	<ul style="list-style-type: none"> ■ Investments in distribution networks have risen by more than 25% over the last four years, to €3.2 billion in 2014 (to meet connection needs and improve supply quality). 30,000 jobs have been generated. In keeping with its new industrial policy, ERDF is balancing its purchases between large firms and SMEs. In 2014, 95% of work and services were ordered from French companies, 54% from small and medium-sized companies. ■ Dunkirk LNG terminal: at the end of 2014, 37% of this terminal’s 853 construction contracts were with firms on the Côte d’Opale and 22% with regional firms. Out of the 1,200 employment contracts signed for an average of six months, 94% were with workers from the Nord Pas-de-Calais region. A partnership was set up with the urban community of Dunkirk, the local university, local research laboratories and industrial firms to develop R&D activity on refrigeration. ■ Romanche-Gavet hydroelectric project: in addition to increasing production capacity (93MW compared with 85MW previously), access to the waterway will become open to other economic activities by reinforcing security on the new facilities. The town’s drinking water network will be improved through financial contributions and loans. The riverbanks are being rehabilitated to their natural state (six installations removed and replaced with a single dam). Construction of a low-energy building that will be transferred to the municipality on completion of the work. Incentives to use local companies (currently 24%). ■ Flamanville EPR: at the end of 2014, 44 of the 58 projects selected under the local economic support programme had been completed (€26 million). The main achievements of 2014 were: the construction of three schools (in Sotteville, Benoistville and Saint-Christophe) and the renovation of the Louis-Lumière workshop in Cherbourg. Fourteen other projects are under way. ■ ANDRA project in Bure: construction of a maintenance base in Saint-Dizier in Haute-Marne (€42 million, 50 permanent jobs and 200 service-provider jobs during the operating phase) and extension of the spare parts logistics centre of Velaines in Meuse (€25 million and 30 additional jobs from 2017). ■ Thermal plant of Bellefontaine in Martinique: 900 local jobs created, involvement of 200 external service providers including 88 local firms. ■ Energy Productivity Plans (PPEs) and Energy Management Systems (SMEs): 14 new PPEs and 21 new SMEs were signed and a service has been set up to increase the competitiveness of large French companies.
In Laos	<ul style="list-style-type: none"> ■ Continuation of economic support programmes by NTPC in connection with the Nam Theun hydropower plant. Development of farming and forestry activities through the transfer of 176 local plots of public land for this purpose by the end of 2014, something not seen before in Laos. The reservoir can be used for fishing. NTPC also runs a micro-credit system (via a fund of €750,000) for individual entrepreneurs (517 loans had been granted by the end of 2014, for a total of US\$170,000).
In South Africa	<ul style="list-style-type: none"> ■ Grassridge wind farm (EDF Énergies Nouvelles): a socio-economic programme was set up to improve the living standards of local communities, via the allocation of a significant part of the investment to South African firms, including cement for the foundations. 26% of the company’s capital is allocated to local communities via a dedicated fund. Part of the revenues generated are allocated to education, training and the set-up of local companies.
In the United Kingdom	<ul style="list-style-type: none"> ■ Launch of the “Inspire” training programme (investment of £3 million) to train young people from the Somerset area for the jobs generated by the construction of the Hinkley Point EPR. The project should generate 25,000 jobs throughout its construction phase. Nearly £16 million will be invested in the development of the local road network, the construction of accommodation and a training campus.

Contributing to social and local cohesion

Within its public service mission, EDF has always endeavoured to reduce territorial inequalities. The French national agreement “+ de services au public” signed in 2010, aims to develop access to services in rural areas. Along with the French government, it involves nine major operators with public service missions, including EDF. The operators pool their resources and know-how to enhance their service offerings to rural populations, via multi-service physical centres and online access to these services. In this connection, EDF has increased its participation in rural service information centres (Relais services publics) and its advice to people concerning ways of consuming less energy but more efficiently. EDF can thus assist needy customers in their administrative procedures, as well as people without internet access or those with comprehension difficulties.

In July 2013, the French interministerial committee tasked with modernising public actions (CIMAP) decided to mainstream this initiative, which was initially experimental (22 departments), across the whole country. The CIMAP also decided a national coordination of all pooled service centres. This is currently being set up by the Caisse des Dépôts et Consignations.

Moreover, EDF reasserted its commitment to the priority areas identified in municipal policies by signing the specific convention for the implementation of the “Entreprises & Quartiers” charter with the French Urban Affairs Minister for the 2014-2015 period. This charter focuses on five main aspects, each corresponding to an EDF priority:

- education / career guidance: offering educational presentations to teachers, pupils and their parents on the topics of energy and sustainable development;
- employment / integration / training: reinforcement of diversity, employability and access to company jobs via study programmes, the use of and support for organisations focused on integration through economic activity, and the development of integration clauses in procurement contracts;
- economic development: contribution to local development through direct and indirect jobs, by promoting the use of local manpower, local service providers and local products in the areas where EDF operates;
- closeness and accessibility: set-up of partnerships mainly dedicated to vulnerable customers, via social mediation and information/advice centres;
- support to local initiatives and solidarity patronage: support to local NGOs via the EDF Foundation.

EDF's regional representatives are the key contacts of prefects and other regional authorities to coordinate actions and guarantee the effective implementation of the initiatives. An assessment of the convention will be carried out each year and presented to the public, if possible jointly with other companies¹ who have signed similar conventions.

17.2.3.3.3 Relations with suppliers and responsible purchasing

The EDF group's outsourcing challenges are described in section 17.3.4.1 (“Responsible sub-contracting: a reality”).

Responsible purchasing

In order to preserve the interest of all stakeholders in a sustainable and balanced way, and to foster performance on the short, medium and long terms, EDF seeks to establish mutually beneficial relationships with its trade partners.

To this effect, The EDF group's Purchasing Department uses a “responsible purchasing” approach in all EDF activities and Group companies to incorporate the following criteria in all stages of the purchasing process:

- the impact of purchasing decisions on the environment;
- societal and social aspects of the supply chain;
- the economic impact of purchasing decisions on the company, its environment and its suppliers.

In the general terms and conditions of their purchasing contracts, EDF, ERDF, Électricité de Strasbourg, EDF Energy, EDF Luminus, EDF Norte Fluminense and EDF Démasz include a Sustainable Development Charter systematically signed by all contracting suppliers. In 2013, the EDF group made a commitment that 10 other companies would include an ethical/sustainable development clause in their purchasing contracts² by 2015. This objective is upheld by the Group's Purchasing Department, tasked with managing and implementing the project. At the end of 2014, the objective had been achieved (see section 17.1.2 (“Corporate responsibility commitments: Group performance indicators”)).

Dalkia and EDF Énergies Nouvelles (EDF EN) are mainstreaming the inclusion of similar clauses in their contracts (at the end of 2014, they were included in 60% of Dalkia contracts and over 50% of EDF EN contracts).

Moreover, Edison joined the TenP programme (Sustainable Supply Chain Self-Assessment Platform) of the Global Compact Network Italia, which makes it possible to share and set up a supplier monitoring tool, provides a system to measure supplier performance in terms of sustainable development and promotes good supplier practices with respect to human rights, labour law, environmental responsibility and professional ethics.

Within the scope of the “Responsible Purchasing – Group Synergies” programme, the Group Purchasing Department provides subsidiaries with the tools and associated contracts it has developed, in particular those concerning the assessment of the supplier's integration of sustainable development criteria. EDF, EDF Energy and EDF Luminus have already shared their supplier audit results.

In compliance with formal tendering procedures, EDF's Commerce Division has included a certified social policy requirement in its eligibility criteria. In this regard, new contracts for the 2014-2017 period are being signed with service providers having obtained the certification “Outsourced Customer Relations Centre³” (Centre de relations clients externalisés).

1. The “Entreprises et Quartiers” charter was signed in June 2013 by 40 companies including EDF, Coca Cola, La Poste, RATP, GDF Suez, Vinci, Carrefour and Accenture; it is then up to each company to implement this charter via a specific convention.
 2. Excluding energy purchases on the spot market.
 3. Created in 2004 under the aegis of the French Ministry of Employment, with the AFRC (Outsourced Customer Relations Association), the SP2C (Union of Call Centre Professionals) and trade unions, this certification is awarded for three years and recognises good social practices in customer relations firms.

Assessment of suppliers

In practice, respect of environmental and societal criteria by suppliers is assessed through auto-evaluation questionnaires and sustainable development and social responsibility audits at suppliers' premises, covering in particular:

- control of their risks, including risks related to their manufacturing equipment;
- the measurement of the carbon footprint of their manufacturing sites or services;
- a study concerning the impact of their activity on biodiversity;
- the implementation of innovation policies to develop environment-friendly substitute technologies or to save resources and reduce polluting emissions;
- the set-up of a waste reduction programme;
- the implementation of a proactive policy to foster the development of the local economic fabric.

In 2014, the EDF group's Purchasing Department conducted 129 "Sustainable Development / CSR" assessments (compared with 60 in 2013 and 57 in 2012), through 57 questionnaires and 72 audits, for an announced target of 90 assessments.

The audits revealed satisfactory results in 25% of cases, acceptable results with comments in 52% of cases, insufficient results in 22% of cases and unsatisfactory results in 1% of cases. They confirmed the previous years' experience: failings in terms of environmental and social impacts are generally minor and occasional in France, but are frequent in Asia. 50% of the suppliers audited are aware of EDF's sustainable development concern. The main areas for improvement concern the suppliers' subcontractors, to whom the suppliers do not transmit EDF's demands. For EDF, the areas for improvement are: local purchases, purchases from small- and medium-sized businesses, terms of payment, and the supplier audit process itself.

In Group companies, similar assessments are conducted.

EDF Luminus conducted nearly 25 interviews with its main suppliers and a dozen assessments with its contractors. In 2014, two on-site assessments resulted in the eviction of the supplier's subcontractor.

In 2013, Dalkia finalised the CSR¹ audit initiated in 2009 targeting its most strategic suppliers in terms of revenue, and assessing their performance in terms of business ethics, respect for the environment, responsible purchasing and social policies.

Contribution to occupational integration

Inclusion of social clauses in contracts

In some of its contracts put out to tender, EDF includes an occupational integration clause which requires that part of the working hours be reserved for the hiring of unemployed persons.

Such a clause was included in major projects such as the Flamanville 3 EPR, the combined-cycle gas plant of Bouchain (9,082 hours of induction training planned) and the development of the Romanche-Gavet hydropower facilities.

The company is working in partnership with local job centres (*Pôle Emploi*, employment and training centres, Chambers of Commerce and Industry, etc.).

The main beneficiaries of this policy are unskilled persons under the age of 26, long-term job seekers, young people who have never been employed, recipients of minimum welfare benefits and persons covered by the law of 2005 on disability.

Purchases from the sheltered employment sector

In certain purchasing segments, the Group's Purchasing Department is continuing to work on maintaining or expanding its purchases from the sheltered employment sector, in particular through the "Pas@Pas" NGO, of which it is a Board Member.

EDF's 2013-2015 agreement for "equal opportunity and occupational integration of disabled persons" intends to achieve, through purchasing, 500 "Beneficiary Units" or "job equivalents for disabled persons" in 2015, an increase of 15% compared to the previous agreement. Preference is given to the most labour-intensive categories of products/services purchased: cleaning of premises and maintenance of green spaces, laundry service (work clothes), typing service, electric meter reading, installation of signaling devices and maps.

In its sustainable development policy, EDF sets a target for purchases from the sheltered employment sector. In 2014, the annual purchase target was set at €1.5 million. The volume achieved was €1.4 million compared with €1.1 million in 2013 and €1.5 million in 2012.

For ERDF, the volume of these purchases was €6.71 million in 2014, excluding the maintenance of green spaces (around €1.5 million). These purchases mainly cover the recycling of meters, tree pruning and land clearing, laundry service for employee work clothes and document printing.

Coal supply chain

EDF is a founding member (2011) of Bettercoal², an initiative which currently brings together 11 energy companies and 3 European coal ports and terminals. This international initiative aims to improve corporate responsibility in the coal supply chain, particularly on mining sites, and ensure that fundamental rights (human rights, working conditions, workers' and community life, and environmental protection) are respected. A set of common standards for social, environmental and ethical principles was adopted in 2013 by all signatory companies, in line with existing international standards (issued by organisations such as the International Labour Organisation) and existing measures concerning the extractive industries (e.g. the Extractive Industries Initiative).

In 2014, the first mining site audit was conducted in Colombia, and 14 auto-evaluations were recorded in the Bettercoal system (a dedicated database managed by Bettercoal and shared by its members in compliance with antitrust rules). However, the deployment of the audit and auto-evaluation programme fell behind schedule. At the end of 2014, Bettercoal's Executive Committee adopted several measures aimed at easing its implementation and set an objective of 8 mining site audits and 60 auto-evaluations by the end of 2015.

1. Corporate Social Responsibility

2. Bettercoal is an international initiative made up of the following industrial operators: EDF, DONG Energy, Enell/Endesa, E.ON, GDF Suez/Electrabel, RWE, Vattenfall/Nuon and Fortum.

17.2.3.3.4 Consumer health and safety

The Group provides information to local residents on the activity of nuclear and thermal power plants and their public-health impacts (see section 17.2.3.2.1 (“Informing local populations near generation sites and consultation on industrial projects”)).

The companies that sell energy provide their customers with information on electrical safety:

Websites	<ul style="list-style-type: none"> ■ Électricité de Strasbourg provides information on the risks inherent in the use of electricity, gas and electrical equipment, in coordination with organisations such as Promotelec for the diagnostic of electrical installations in homes (http://particuliers.es-energies.fr/). ■ In Poland, customer information and advice is available online.
Target-specific communications	<ul style="list-style-type: none"> ■ In France, EDF develops a series of “little safety memos” for young people (available on the website http://kit-branche-toi-securite.edf.com), reminding them of various safety precautions inside and outside home. ■ In 2014, EDF launched a general-public information campaign on radioactivity⁽¹⁾, in addition to the conferences organised for health professionals under the aegis of EDF’s Scientific Council on Health and Energy. ■ Over recent years, ERDF and RTE have joined forces to provide precautionary advice to persons working or engaging in leisure activities near power lines. This prevention campaign, broadcast on local radio stations in 2014, is based on the following message: “Under power lines, prudence: keep your distance!” (dedicated website: www.sousleslignes-prudence.com). ■ In French Guiana, a special awareness-raising campaign was conducted with people living in rundown housing, where non-compliant electrical installations represent a real hazard. ■ In the UK, EDF Energy provides a freephone information service enabling customers to find out about energy efficiency solutions and safety principles (information at the back of the bills). ■ In Hungary, the annual newsletter of EDF Démasz reminds its customers of basic safety rules and gives them useful advice for home renovation and improvement.

(1) Radioactivité et santé, si on en parlait: four videos on the daily use of artificial radioactivity in medicine and industry, featuring interviews with health professionals and radioprotection specialists.

The companies also have supplementary service offerings. In France, EDF is updating its electrical safety diagnostic service for private customers, aimed at verifying the safety of their home installations.

17.3 Human resources

In a changing environment, the human dimension is more than ever at the heart of EDF’s strategic project, guaranteeing the Group’s performance.

To meet its industrial challenges, EDF must remain a socially-responsible and engaged employer, a leader in terms of the professionalism and involvement of its employees, by developing their skills and the diversity of their profiles. The Group also seeks to set an example in terms of social innovation by promoting a participative approach and making it easier to share good practice, to ensure long-term performance.

Everywhere that the Group operates, the health and safety of its own employees and its sub-contractors’ employees is an absolute priority. Both in France and internationally, EDF, as an integrated Group, acts in accordance with its values, by requiring all its staff to show integrity and respect for fundamental rights.

The “2020 HR Vision” project rolled out since 2013 drives this strong social ambition, based around four major principles in support of the Group’s industrial strategy:

- men and women playing a key role in the Group’s performance;
- being a flagship employer in terms of employee engagement and social performance;
- having both a strong local presence and an international profile;
- managing change smoothly and accountably.

The integration in 2014 of Dalkia and Citelum enriched the EDF group with new skills in the field of energy services and public lighting. These skills shall be highly valuable as regards the implementation of the draft bill on the energy transition for green growth, currently under review by Parliament.

2014 was also marked by the addition of two new CSR criteria in the profit-sharing agreement including a social criterion relating to employee health and safety training.

In 2014, the HR Division also confirmed its commitment to the e-transformation strategy launched by the company by developing, via the “Vivre EDF Online” social network, its range of tools and services aimed at simplifying employees’ digital adaptation.

The local digital service platform has been extended with new modules such as mobility offers or “my HR situation” (allowing quick access to the number of days of leave they have left or tracking of their business expenses) or applications optimising time management (shared calendar, translation engine, organisation of meetings, etc.) and reinforcing social ties (small ads, car sharing, etc.).

To meet business lines’ needs to promote employee entrepreneurship and in synergy with the EDF Pulse project, the HR Division contributed to the launch of a digital participative innovation platform. The aim of this platform is to organise the collection and tracking of innovations, encourage initiatives and promote “ideas people”.

17.3.1 Professional excellence: employment and skill development

17.3.1.1 Stabilisation of Group workforces in 2014

The EDF group's consolidated workforces totalled 158,161 staff on 31 December 2014, including 111,040 for EDF and ERDF¹ and 47,121 for the Group's other subsidiaries and shareholdings, which are included in the consolidation scope.

The application of the IFRS 5 and IFRS 10-11-12 standards led to a reduction in the workforces of approximately 15,000 on 1 January 2014.

Group workforces in France

Regarding the Group's two main companies in France (EDF and ERDF), workforces began to grow significantly from 2011 and this trend gathered pace in 2012 and 2013. In 2014, the increase was a little less. This increase in the workforces was supported by a high level of hiring, easily exceeding the number of retirements, with in 2014 more than 5,800 hirings on open-ended contracts and 4,137 retirements.

The integration of Dalkia and Citelum and the sale of Dalkia International (consolidated in 2013) led to an increase in the workforces of 1,151 employees in 2014.

The table, below, shows the breakdown of Group workforces in France over the last three fiscal years:

	2014	2013	2012
EDF – deregulated sector:	72,181	71,088	69,122
Generation and Engineering	41,545	40,268	38,417
Trading	11,543	11,731	11,685
Corporate	11,473	11,475	11,559
Island Energy Systems	3,005	3,086	3,177
CDI (open ended contract) and CDD (temporary contract) not employed under EGI status	4,615	4,528	4,284
ERDF – regulated sector	38,859	38,666	38,211
Other subsidiaries in France:	21,067	19,738	21,995
Électricité de Strasbourg, Tiru, EDF EN, SOCODEI, CHAM, EDF PEI and EDF Optimal Solutions (in 2012 and 2013)	6,860	6,682	6,031
Dalkia, Citelum	14,207	N/A	N/A
Dalkia International	N/A	13,056	15,964
TOTAL FRANCE	132,107	129,492	129,328

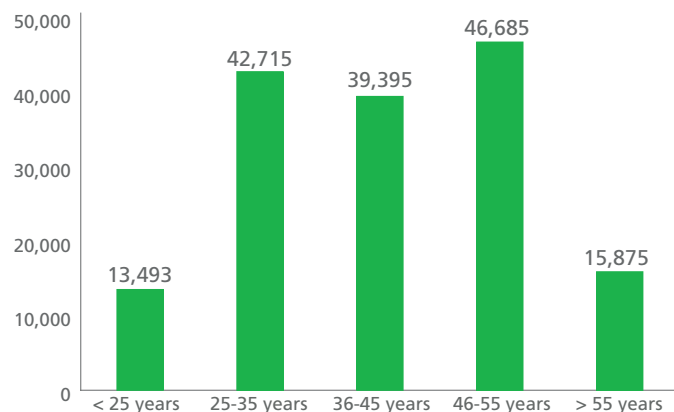
International Group workforces (consolidated subsidiaries)

The table, below, shows the breakdown of the workforces (Group share) of the international subsidiaries and shareholdings included in the consolidation scope over the last three fiscal years:

	2014	2013	2012
EDF Energy (United Kingdom)	14,716	15,162	15,153
EDF Trading (United Kingdom)	1,011	1,028	1,025
Edison (Italy)	3,101	3,240	3,248
Other foreign subsidiaries:	7,226	9,545	10,986
Eastern Europe	4,257	4,699	6,015
Western Europe and Mediterranean-Africa	2,804	3,350	3,450
Asia Pacific	76	74	75
Americas	89	1,422	1,446
INTERNATIONAL TOTAL	26,054	28,975	30,412

1. The workforces of EDF and ERDF include employees not employed under EGI status by EDF and ERDF. ERDF's workforces include, in addition to its own employees, those whose services are shared, including 100% electricity employees (35,102), and a proportion of employees assigned to combined gas and electricity activities (3,708), divided between electricity/gas on an approx. 76/24 basis.

The graph, below, shows the age pyramid in the Group in 2014 in France and outside France:



17.3.1.2 Enhanced occupational and skill forecasting

EDF's internal and external environment has been marked for several years by a wide range of significant changes: demographic, regulatory, technological, societal, etc. Accordingly, to deal with these changes and in a position to achieve strategic objectives, a methodological approach to occupational and skills forecasting has been developed in order to make the existing measures more flexible. This approach, known as "Horizon Compétences", shall be rolled out to all EDF's managerial entities by the end of 2016, in accordance with EDF's occupational and skills forecasting policy, signed on 13 September 2013.

Furthermore, via social dialogue, an employment and skills forecasting agreement for the period 2013-2015 was signed unanimously at EDF level by the four union organisations representing staff. In accordance with the commitments made in this agreement, for the first time in 2014, the "EDF Employment Prospects" report, presented to the Central Works Council, included quantified employment trends, linked to strategic objectives.

Outside EDF, the "Horizon Compétences" approach is currently being rolled out to other EDF group companies and subsidiaries, in France and abroad, particularly via specific training of HR managers.

17.3.1.3 Dynamic recruitment policy confirmed in 2014 in France

Following on from previous years, EDF should continue its ambitious hiring programme to meet two major challenges:

- renewal of skills in order to counteract forecasted mass retirements;
- recruitment of technical staff for ongoing projects.

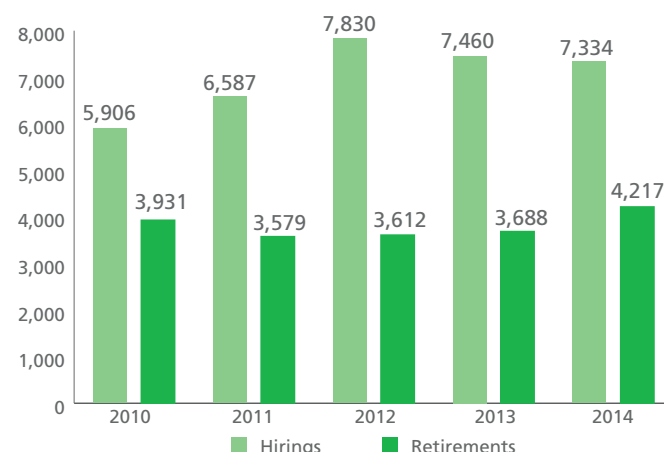
As business stabilises, recruitment will be reduced progressively.

In the technical field that accounts in 2014 on its own for 54% of workforces and 65% of the number of EDF recruitments, certain projects are in fact going to enter their finalisation phase. This includes taking on board the lessons learned from events in Fukushima. EDF will also have to close some of its thermal generation centres as a result of the new environmental standards. The preparation and implementation of the project to extend the life of nuclear power plants, as well as the growth in business linked to operating and maintenance activities due to the ageing of nuclear generation facilities will still require an increase in workforces in 2015, which should subsequently stabilise.

In other fields linked to commercial activity and support, workforces should fall. Indeed, in a fast-changing regulatory, competitive and technological context, EDF will have to adapt by reworking its business models and optimising its resources to improve performance.

In coming years, EDF's replacement rate, which was approximately 200% in 2013, should fall to around 100%. In 2014, it was still 170%. The highest number of hirings will be in occupational categories involved in nuclear facility operating and management activities.

The graph, below, presents the hirings made as well as retirements observed since 2010 by Group companies whose head-office is located in France (excluding Dalkia and Citelum).



The EDF group is an attractive employer

Against a backdrop of high recruitment, EDF's attractiveness remains a key advantage. Accordingly, the Group continued in 2014 its work to promote its lines of business and launched new schemes in order to consolidate its employer brand both in France and abroad.

Young graduates represent 70% of Group management recruitments and therefore form a high-priority group. This year, EDF maintained its very good positions in the employer rankings of future engineers, classed in 2nd place in the TNS Sofres table, 6th place for Universum and 3rd place for Trendence. It was also 1st in the Randstand Awards 2013 rankings for the energy sector for the 4th consecutive year. Measures have also been taken to have Universum rankings for Group companies in the United Kingdom, Italy, Belgium and Poland.

Among the measures that have been taken, EDF has maintained and reinforced its digital presence in particular via the careers site www.edfrecrute.com which was visited 4 million times and on which 615,000 applications were submitted online in 2014. The campaign started on social networks was ramped up in 2014: EDF is now present on both leading professional social networks, LinkedIn and Viadeo, the student social networks Jobteaser and Yupeek, as well as Twitter and Pinterest. There are plans for 2015 to introduce an EDF group-level contract with LinkedIn covering all the companies, both in France and internationally, which increasingly often use this professional social network. The mobile application that allows users to receive offers that interest them in real-time was also overhauled to improve its user-friendliness. Finally, as part of its public service mission and its commitment to improve the transparency of the employment market, EDF systematically proposes Group job offers on the www.poleemploi.fr website.

EDF has also developed long-term ties and partnerships with key schools and universities, particularly via the EDF Graduates Network, a network of Group employees who previously studied at these institutions. EDF also works to raise awareness of its lines of business and make them attractive to secondary-school leavers and students, as well as women, particularly in the technical field. The company works in partnerships with associations such as *Elles Bougent*, which promotes technical and scientific careers for female secondary-school pupils and students or “WIN France” with which it organises the Fem’Energia Prize, which promotes and recognises the careers of young female students or women involved in the nuclear industry each year.

Finally, EDF continued its efforts to get directly in touch with future young graduates. EDF group was accordingly present at 50 fairs and shows in France as well as several international fairs (Brussels, London, Milan and Madrid). On 6 November 2014, the 8th Energy Day allowed 1,700 final-year students looking for placements or jobs to meet more than 500 Group employees.

Organised and enhanced welcome and integration, appreciated by new employees

Integrating and developing the loyalty of new employees is an important issue for the EDF group, which has welcomed nearly 6,000 newly-hired employees per year since 2010. These significant numbers mean schemes have to be put in place to integrate essentially young people. Accordingly, a common integration scheme was introduced for newly-hired employees at Group level. The introduction of common tools is backed up, for management staff with 3 to 4 years of seniority, with a Group integration event focusing on strategic issues and promoting Group careers: 2days2gether. In France, the newly-hired employee integration and loyalty programme is organised over four years: integration into the unit (year 1), then at business line level (particularly via Skills Academies, year 2), followed by regional and multidisciplinary integration to promote openness to other professional environments (year 3) and finally internationally, for management staff, with 2days2gether (year 4). Each of the 14 Skills Academies is also responsible for defining the integration and professional training schemes for newly-hired employees within their scope. These schemes, which often combine skill transfers and networking, vary according to the entities and groups involved, and can even include several months of training, such as the “Common Knowledge” course, which focuses on the acquisition of nuclear culture.

17.3.1.4 Skill development: preparing for the future

In a fast-changing energy industry, adaptation and development of employee skills are key factors in the success of EDF’s industrial and social project. Training represents an investment that must contribute to three key issues for the Group’s future:

- forecasting and managing changes to the EDF group’s lines of business;
- making training a vector for Group performance (by making training a genuine vector for business excellence);
- preparing and managing the progress of employees in their current and future duties, and promoting their mobility and ability to take on a new job.

Accordingly, the EDF group invests heavily in the development of its employees’ skills: in 2014, 85% of Group employees attended at least one training course in the year, lasting an average of 66 hours. Access for all to training courses is a commitment the Group makes as a responsible company, with an objective of 75% of employees attending at least one training course every year.

In 2014, the Group allocated a significant budget of more than €685 million to training its employees. To implement its training programmes, EDF has a network of skills campuses or training sites and nearly 1,300 instructors and course planners in France.

The campus network features 35 sites, including one in the UK:

- three “corporate” campuses open to all the Group’s divisions and companies, based in Les Mureaux, Chatou and Lyon;
- “skills” campuses dedicated to training for electrical generation and distribution activities;
- a campus in the United Kingdom, which opened at the end of 2014 on the Cannington site, near Bristol, close to the future EPR reactor at Hinkley Point.

The current Les Mureaux Campus shall be transferred in 2016 to the new EDF site in Saclay. With investment of more than €380 million, this site will combine in one place the future EDF group Campus and its new EDF Lab Paris-Saclay R&D centre (see section 11.1 (“R&D organisation and key figures”). The site will be a key integration and networking tool for the Group’s 160,000 employees, from apprentices to managers, in all lines of business and of all nationalities, promoting the development of a common culture. It shall have a full-time staff of nearly 1,500 researchers and 20,000 trainees.

Its proximity to the new EDF R&D centre shall promote synergies between innovation and skills and between research and training and shall benefit from the latest technological innovations in terms of teaching. It shall also be able to offer resource-heavy technical courses using equipment specific to EDF’s lines of business:

- a next-generation power plant management simulator and on-site training for generation courses;
- operating and management simulators and above- and underground teaching grids for electrical distribution courses.

In addition to physical training sites, EDF also invests in distance-learning schemes: e-learning, MOOC¹, serious games², virtual simulators, etc.

The strong need for skill renewal leads EDF to take action in several areas:

- being present from initial training, by relying on work-study programmes and developing partnerships with *grandes écoles* and universities, both in France and internationally (19 university research chairs);
- guaranteeing the integration and assisting new staff with settling in with appropriate training for the Group’s specific lines of business (as is the case for nuclear facility management, which requires two to three years of training);
- providing continuous training courses all career long to perfect, improve or extend their skills portfolios (changes to line of business, proficiency in using new tools, etc.);
- developing skill transfer policies, particularly from staff nearing retirement to the youngest employees.

In France, the Training Challenge agreement, unanimously signed in 2010 with the union organisations represented at EDF, ERDF and RTE has contributed since its signing to bringing fresh impetus to the Group’s training policy.

In order to forecast and manage changes to lines of business and make training a vector for performance, the EDF group has created 14 technical and multi-disciplinary Skills Academies and a Group Management University (GMU), which embody the EDF group’s ambition in terms of development, renewal and creation of skills.

1. “Massive Open Online Courses”, enabling mass professional distance training, using social media, collaborative work and the possibility of validation of knowledge.

2. Software that combines a “serious” aim – education, information, training – with an element of fun.

Each Skills Academy provides professional training courses meeting insofar as possible the business lines' current and future needs.

The GMU, created in 2010, is intended to train 14,000 Group managers. It is one of the 17 major global group corporate universities with international CLIP (Corporate Learning Improvement Process) accreditation, which places it among the best corporate universities.

The GMU contributes to the EDF group's integration and internationalisation. It helps to develop the Group's managers' skills in terms of leadership, management, change management and strategic thinking using proven training courses, and modern teaching tools (e-learning, coaching, mentoring). Today, the GMU provides professional training for managers in practically all the geographical areas where the Group operates: Asia-Pacific, UK, Italy, France and Central Europe.

In 2014, the GMU extended access to the Group University e-learning programme with 20,186 managers eligible in France, Hungary, Italy, Belgium, Poland, China and the United Kingdom (EDF Energy managers in the United Kingdom were connected in May 2014). In 2014, this platform helped to provide 13,000 hours of training, up 31% on 2013. Other than e-learning, the GMU proposes 45 courses and trained 1,718 managers in 2014. In accordance with the objectives set by the Group, new training schemes have been developed with the Asia-Pacific Division and Edison. The GMU also proposes programmes aimed at Group talent and executives. In 2014, at least 250 managers and 400 talents attended these training courses. In line with the company's strategic changes and development needs, and in close conjunction with career management, the GMU prepares "talents" and future Group executives, and develops current executives with key leadership, strategy and innovation skills. Ten or so different programmes are proposed in partnership with internationally-renowned institutions and business schools. Every year, around 650 talents and executives, from all the Group's entities, benefit from these programmes.

Promotional training courses promote the "social elevator" at all levels

These genuine performance-boosting tools, which offer an original way to fast-track careers, were created in order to help employees to progress and change category. They promote career planning and increase EDF's attractiveness.

More than 40% of the EDF group's 35,000 current managers in France (EDF, ERDF) became managers over the course of their careers. The Training Challenge agreement has particularly helped to boost training-based internal promotions via several schemes:

- employee assistance making it easier for them to settle into a higher-category job (*Pass Cadre* and *Pass Maîtrise*). These training courses have been attended by more than 1,700 Group employees since 2010;
- promotion of long-term qualifying training schemes (2-4 years):
 - schemes (*Cap Initiative Cadre*, *Cap Initiative Maîtrise*) promoting equal opportunities and diversity within the Group;
 - a brand-new training scheme (*Cap Exécution Cadre*), designed to help employees occupying operating positions switch to management positions.

Since 2011, these "career boost" training schemes have overall assisted more than 600 employees.

Work-study programmes: a societal commitment and recruitment vector

EDF's has been committed for many years to work-study programmes, since the start of the 1990s, when EDF set up an Apprentice Training Centre (ATC) to boost learning within the company.

There are two major reasons for the development of work-study programmes within the Group:

- work-study programmes are an essential vector for recruitment for the Group in France, driving excellence and promoting the transfer of skills and diversity of experience and origins;
- work-study programmes are also a means for the Group to affirm, on top of its recruitment needs, its strong societal commitment to the qualification and occupational integration of young or unemployed people. The Group does so by monitoring work-study trainees that it does not hire after the end of their contract (for further details, see section 17.3.4.2 ("A significant contribution to local development via occupational integration" – "The Group's commitment in favour of occupational integration"))).

The number of EDF and ERDF work-study trainees has significantly increased since 2010

In France, the objectives EDF set itself in the 2010 Training Challenge agreement have been comfortably achieved:

- in 2014 EDF and ERDF had nearly 6,000 work-study trainees, i.e. 5.6% of the workforce, compared to 4,500 in 2010;
- as in 2013, more than 40% of work-study trainees were hired by the Group in France at the end of their contract in 2014;
- they represent a significant proportion of open-ended contract hirings (33% in the supervisory and operating categories and 11% for the management category);
- the Group strives to propose work-study offers at all levels of qualification, from vocational training certificates to postgraduate degrees;
- work-study trainees are taken on by all the Group's lines of business. Most of them are trained in generation, distribution and customer relations activities.

Nearly 5,000 tutors, qualified and trained in accordance with the "Group tutoring guidelines", work to assist work-study trainees. Specific measures have been introduced to facilitate their welcoming and integration, particularly compensation, transport or housing allowances exceeding the mandatory minimum requirements.

The EDF group also has an Apprentice Training Centre specific to its lines of business. Based in the Ile-de-France region, it makes it possible to both directly manage the quality of the training courses attended by nearly 200 work-study trainees, and to develop a close connection with the world of teaching.

17.3.1.5 Appropriate career management

Management of talent and executives

The EDF group has developed a flagship talent-spotting system. A Group policy was adopted in 2011 and has been rolled out throughout the entire Group. This policy has been reviewed by the Group's different subsidiaries.

Furthermore, the management of executives' career paths is organised with Group-level supervision. People reviews by line of business and by region are organised in order to ensure the career progress of executives and their appointment to appropriate positions. Supervisory bodies were created such as the Executives Committee which features the members of the Executive Committee and to which the main nominations, compensation principles and development programmes are submitted.

Employee career path management

The annual interviews held with 73% of Group employees in 2014 particularly enabled employees to discuss their career plans and training requirements with their managers.

In addition, for Group employees, the company continues its measures focusing on two main objectives:

- facilitating access to information on business lines and career paths;

- providing resources to assist employees with their plans.

In France, several schemes help to achieve these objectives: the “My career path” site, providing simplified access to mobility offers on the intranet, interviews proposed at different stages of employees’ careers, customised assistance with a career plan from “career path” advisors.

A Group “International Mobility” policy was also introduced in 2014. It clarifies the mobility process and accordingly contributes to promoting use of resources on international projects, developing employee skills and attracting and increasing the loyalty of talents.

In addition to the measures taken to accelerate career paths within the Group, EDF also assists its employees with plans to set up or take over a business: every year, between 40 and 80 employees becomes business owners, each of them creating an average of nearly 3 jobs.

In 2014, EDF extended its business set-up support scheme to work-study trainees ending their training. Accordingly, in 2014, 8 business set-up projects received specific assistance and financial support.

Age management

Significant demographic changes at EDF in France (mass arrival of young people, longer careers, higher average retirement age, etc.) led in 2012 to the setting up of an age management project. Its objectives are, firstly, to protect employees’ health, secondly, to maintain professional engagement and work-life balance all career long, and to ensure the renewal and transfer of professional skills.

The results of the 2013-2015 generational contract action plan involving 88 EDF group companies in France are in line with the objectives for the end of 2015 which include:

- recruiting 10,000 young people aged 28 or under on open-ended contracts over 3 years;
- recruiting 300 employees aged 50 or over on open-ended contracts;
- keeping 13,000 employees aged 55 or more in work.

Accordingly, several practical and operational measures were taken:

- an end-of-career interview scheme was developed with the Group’s subsidiaries in France;
- a tool to analyse the impact of working conditions on the company’s demographics developed by ANACT (the French national agency for improving working conditions) was customised and shall be implemented in 2015;
- a serious game developing awareness to age stereotypes was released on the intranet to employees as part of the European day of solidarity between generations;
- a guide to health and longer working life developed by the national health at work group was released by EDF;
- a guide on vulnerable or mentally-disabled people returning to or staying in work was released;
- musculoskeletal disorder prevention measures were taken in different industrial or tertiary environments;
- sharing of practices was organised between business lines on on-the-job professional training, promoting intergenerational apprenticeship schemes;
- an online learning tool was developed to distribute and share experienced employees’ professional practices via videos and digital forums;
- there was “age management” benchmarking at 27 companies or groups.

Most of these documents are available on the company’s intranet.

All these measures meet needs that were pinpointed and help over time to change the portrayal of cultures and well as human resources and managerial practices, based on the fundamentals of diversity and quality of life at work.

17.3.2 The health and safety of our employees: an absolute priority

17.3.2.1 Guaranteeing better health & safety conditions at work

Since 2010, the Group has shown its ambition to combine industrial, social and economic performance to become the leading electricity company in every country in which it operates. In this context, the health and safety of both the Group’s staff and its sub-contractors’ employees is an absolute priority (code of ethics, CSR agreement, corporate responsibility commitments).

In November 2013, EDF took the next step by introducing a Group-level health and safety policy

Jointly developed over 2013 with the Group’s main subsidiaries and discussed with union organisations via the European Works Council, the policy issued in January 2014 defines a common, consistent framework with which the policies and action plans of the Group’s different subsidiaries must comply. Implemented locally in each company and business line under supervision from management, it applies to all companies controlled by the EDF group in all the countries in which EDF operates, and concerns both its employees and its sub-contractors’ employees working on its facilities and premises.

With the target of zero accidents and zero impact on health, it is based around four guiding principles: responsibility, stakeholder engagement, continuous improvement and sharing of good practices and feedback. It sets out a management system, objectives to achieve and monitoring indicators.

A Group-level management system is organised via an annual review conducted by the Group HR Division based on consolidation of annual reviews conducted at each subsidiary and presented to the EDF Executive Committee. The standard template for this annual review was prepared by the health and safety experts group in order to be implemented for the 2014 annual results.

Every quarter, the Group’s health and safety results are included in the EDF Executive Committee’s dashboard.

The Chairman & Chief Executive Officer is immediately informed of any deaths at work.

Finally, bilateral reviews between the Group HR Division and each Group company are organised regularly.

Halving the rate of occurrence of occupational accidents between 2013 and 2017

Via this Group policy, EDF has committed to halving the rate of occurrence of occupational accidents involving its employees between 2013 and 2017 (Corporate Responsibility commitments).

Ten years of prevention and training efforts had already made it possible to significantly reduce the number of accidents in the work place that result in absence from work at both EDF and the Group’s subsidiaries. Furthermore, the 2014-2016 profit-sharing agreement contains a new social criterion: the proportion of employees that attended health, safety and risk prevention training courses.

The Group showed progressive improvement in the frequency rate (number of occupational accidents that led to an absence from work of more than one day, recorded over the current year and per million hours worked), which

fell from 4.5 in 2010 to 3.1 in 2013. In 2014, the frequency rate of Group employee accidents included the results of Dalkia France and Citelum for the last 6 months of the year and remained stable at 3.1 for 2014.

(Group Data)	2014	2013	2012	2011
Group employee frequency rate ⁽¹⁾	3.1 ⁽¹⁾	3.1	3.8	3.9

(1) the frequency rate for 2014 includes the results of Dalkia France and Citelum for the last 6 months of the year.

Regarding the severity rate (number of days absence from work following accidents at work per thousands of hours worked¹), EDF recorded a rate of 0.17 in 2014, compared with 0.16 in 2013, 0.16 in 2012, 0.14 in 2011 and 0.16 in 2010.

Deadly accidents

The three deadly accidents recorded by Citelum, which joined the Group in 2014, slowed the trend for regular decrease observed since 2011.

(Group Data)	2014	2013	2012	2011
Total number of employee and service provider deadly accidents	15	13	21	27
including number of employee deadly accidents	4	4	14	13
including number of service provider deadly accidents	11	9	7	14

At Group level, the first health and safety communication campaign was launched at the start of October 2014. Called "Life is beautiful", it focuses on the key rules that everyone must follow as they go about their work to prevent serious accidents and protect both themselves and those around them. These 10 key rules were selected by a workgroup featuring experts in the field from all the Group's companies based on analysis of deadly accidents at ERDF and EDF over the last 30 years. This campaign is rolled out Group-wide and includes a generic poster and a set of 10 themed posters for each of the chosen rules. For the campaign to be used preventively, communication tools were developed for the people responsible for its roll-out, an animated video clip, a range of visuals explaining the scheme, a set of cards describing what each of the 10 rules involves.

To continue to develop a "safety culture", the following measures were taken or continued in 2014: release to managers of an e-learning training tool designed by INRS, viewing of feedback videos following serious accidents (UK, Poland), creation of dedicated 2.0 communities (e.g. Doctors Group, etc.), viewing of a "safety" message at the start of meetings, etc. Finally, EDF by creating its "Group health and safety week" fully supported the campaign developed by the European health and safety agency (OSHA Week).

Service provider accidents

For the purposes of the roll-out of its new Group health and safety policy, all companies monitored accidents involving their service providers in 2014, except for Dalkia and Citelum, which didn't previously monitor them (prior to their integration in the Group).

The Group health and safety policy aims to improve results in terms of absenteeism for health reasons

Among the areas for improvement pinpointed, preventing stress and musculoskeletal disorders shall be addressed Group-wide in 2014 and 2015.

In 2014, preventing stress was the theme chosen for the Group health & safety week. Its preparation, via one of the Group's Health & Safety community work groups, provided the opportunity to add to the tools proposed by OSHA with materials from the Group's different companies.

Furthermore, as part of the "generational contract" scheme's action plan in France, a range of measures were introduced to take age into account in the overall process of improving health and working conditions. Accordingly, absenteeism indicators were developed at EDF and ERDF to understand the issue better and introduce targeted measures. Furthermore, musculoskeletal disorder (MSD) prevention schemes were successfully tested by various manual handling and maintenance business lines. The schemes and what we learn from them are shared with EDF's business lines and the Group's companies in France, and via the Group's HR network.

Finally, in order to better take account of health issues at work, a range of guides have been produced and distributed, on the theme of preventing addictive practices, improving health and extending working life, or mentally-vulnerable people returning to or remaining in work.

Health at work

In France, the EDF group employs staff specialised in health at work: 180 occupational physicians, 270 health-at-work nurses, doctors who are experts in toxicology, ergonomics, epidemiology and radiation protection. In addition to medical monitoring of employees, these healthcare workers are involved in setting up primary prevention programmes and are stakeholders on all the social dialogue bodies in the field of health at work. Furthermore, the data collected by these doctors contributes to research on health at work via their participation in health watch or epidemiological studies set up by the public authorities (SUMER, Quinzaine MCP). EDF is a stakeholder in EVREST (scientific interest group on Changes and Relations in Health at Work).

Occupational diseases

The annual data published by the Group's French companies (particularly EDF and ERDF) gives as the main causes of occupational diseases: asbestos (pleurisy, pleural plaques, primary cancer of the lung), movements and positions (shoulder condition, tendinitis, carpal canal), conditions caused by ionising radiation, silica (pneumoconiosis) and noise hazards (deafness).

1. Days of absence from work are linked to the year when they are taken even if the accident occurred the previous year.

Asbestos

In the past, the EDF group has used products, materials and facilities containing asbestos. In accordance with current regulations in France, the replacement of materials containing asbestos in EDF establishments and facilities began in the late 1980s, with all materials containing asbestos being treated, and EDF set up reporting measures and procedures to protect employees and third parties working at the company.

In July 1998, EDF signed an agreement, revised in June 2002, with all trade union federations, for the prevention of and compensation for exposure to asbestos. Following this agreement, EDF introduced an early retirement plan for workers who are duly recognised as suffering from an occupational disease associated with asbestos, established voluntary financial assistance and a pension supplement both financed by EDF and provided social assistance to sick workers and their families with information and support during the compensation process. See section 20.5 ("Legal proceedings and arbitration"), below, for a description of current procedures.

Ionising radiation

Work by field operatives has enabled continuous improvement of performance in terms of protection of employees against the effects of ionising radiation. In France, the average annual collective dose of all the workers, employees of EDF and external companies, working on reactors was halved in less than ten years, and in the United Kingdom, it was reduced, mainly thanks to optimised governance of maintenance and repair work. In France as in the United Kingdom, in 2013, no workers, employees or service providers exceeded the regulatory threshold (individual dose over 12 sliding months).

In France, in 2014, the average collective dose was 0.72 man-Sievert by reactor (0.79 man-Sievert by reactor in 2013). This very good result, exceeding objectives, was the result of the optimisation of sites, reduction of volumes of business and a significant reduction in extended stoppages.

In the UK, in 2013, the average collective dose was 0.386 man-Sievert for the EPR reactor (it was 0.037 in 2012 and 0.54 in 2011) and 0.034 man-Sievert per reactor for the AGR (0.063 in 2012 and 0.08 in 2011).

The current level is comparable to the average figures recorded by pressurized-water reactor operators. EDF is proactively implementing an ALARA (As Low as Reasonably Achievable) policy to limit the collective dose with a view to the workload involved in the industrial project on the fleet in operation over the coming years.

For the coming years, given the levels already reached, efforts should focus on reactors whose dosage results need reducing to the lowest possible levels.

17.3.2.2 Making health at work a subject of social dialogue

Considering that social dialogue in the field of health at work is a key factor for progress, the EDF group has the objective of simplifying the creation of specific common forums for social dialogue and work via the signing of agreements.

Accordingly in the Group, there is social dialogue on health at work at three levels, Europe, France and companies:

- at European level, the preventive measures are presented on an annual basis to the European Works Council Health & Safety workgroup. This Committee was consulted in 2014 on the Group's health and safety policy;
- at Group France level, in 2014, major health & safety issues such as health at work policy and key health at work figures were presented to the France Group Committee, which features representatives of the employees of the main French subsidiaries;

- at EDF level, a collective bargaining agreement on social dialogue on health at work signed in 2010 led to the creation in 2011 of a National Health at Work Group. This multidisciplinary group created four workgroups respectively devoted to reforming occupational medicine and its impact on the organisation of health services at work, the health of service providers, addictive practices and the link between health and longer working life. The work of these groups led to the issuing of recommendations to the company's departments.

The secretaries of the Health, Safety and Working Conditions Committee now meet on an annual basis in order to help make it easier to discuss the working of these bodies, training requirements, legal matters and topical issues (unique document, reform of occupational medicine, etc.). Since 2011, one meeting per year of the Central Works Council (CWC) has been exclusively devoted to the issue of health and safety, putting into practice the multi-disciplinary approach to health issues;

- ERDF also signed in 2014 an agreement setting up a national body for social dialogue on health at work.

In 2013, EDF Energy and union organisations reached agreement to work jointly on the implementation of the employee representative safety charter by developing and coordinating a set of key indicators. Joint work was also carried out in order to put in place a strategic plan on health and well-being at work.

In November 2013, EDF Energy and the GMB and Unite unions reached a major agreement for the employees set to work on the construction of the future Hinkley Point C nuclear power plant. These agreements contribute to EDF Energy's commitment to work with union organisations and contractors in order to create a favourable climate for an industry simultaneously concerned with safety, quality and productivity.

At Edison, dialogue between employees and management on health and safety issues is continuous: several meetings are scheduled over the year involving a large number of employees. This dialogue also resulted in a specific agreement on health and safety training, signed by the union organisations on 20 May 2013.

17.3.2.3 Providing the conditions for well-being: organisation and quality of working life

Quality of working life

Quality of Working Life (QWL) covers the organisation of work, relations at work, professional development, working environments and work-life balance. It is a factor in the joint improvement of the health of employees and the performance of organisations.

In order to go to the next level in taking account of all these vectors within the Group, a "National Quality of Working Life Monitoring Organization" was put in place, combining managers, union organisations, doctors and external experts. It monitors working conditions, orders studies and makes recommendations:

- set-up of a system of combined health/work indicators;
- promotion of working environments favouring professional development at all ages;
- corporate change management methods;
- more recently, recommendations on quality of life at work indicators and examination of conditions of autonomy at work in contemporary organisations.

At Group-level, measures taken to improve the quality of working life and health have included the introduction of feedback sessions, data comparison, studies and observation of practices at business lines or companies (Health and Safety Group community, learning expeditions in France, the UK, Poland and the Netherlands). Three studies conducted with the Group's

main subsidiaries made it possible to cast light on changes at work: one on links between organisation and absenteeism for health reasons, a second on work-life balance and its impact on performance and a third on use of collaborative tools. An Innovation for better work group reports on and shares good practices in terms of quality of working life.

Psychosocial risks

Given the transformation of work and people's changing expectations, work has been done with social partners, resulting in the introduction in France of measures or schemes to prevent or deal with situations of ill-being at work:

- appointment of ethics officers, and set-up of a national toll-free number accessible to all employees in case of serious difficulties at work; there was a new internal communication campaign on this toll-free number in 2014;
- organisation of full-time support from doctors specialised in management in case of traumatic events;
- in accordance with the "Preventing psychosocial risks and improving quality of life at work" agreement, 80 multidisciplinary groups (MDG) were created in all EDF's lines of business, creating a participative dynamic around the inclusion of psychosocial risks in the unique assessment document.

In 2013, EDF Energy added a new component based on well-being to its health & safety policy that takes account of the mental aspects of health. Edison, with its "Edison per te" programme has offered its employees comprehensive medicals on a voluntary basis since 2008.

Finally, EDF in Poland is holding discussions with union representatives to better prevent employee stress.

Organisation and working hours

Since 1 October 1999, the duration of the working week in France has been 35 hours, with services available for a minimum of 5 days.

In order to ensure the continuous operation of EDF and ERDF's facilities or to re-establish electricity supply in the shortest time possible in the event of a technical failure, a portion of EDF's personnel provides a continuous service 365 days-a-year and another portion is on call outside of regular working hours.

To face up to the industrial and commercial challenges and changes to the environment, the "Working performance and organisation" project launched in April 2013 is intended to improve collective performance by optimising working organisation, take account of technological changes and laws introducing fixed numbers of working days and acknowledge the autonomy of managers.

After an assessment phase, this process features two key components: actions plans by business line currently being implemented to adapt organisation and correct certain practices identified by the assessment and the negotiation of an amendment to the 1999 agreement that introduced fixed numbers of working days for managers.

Since September 2013, every phase of the project have been discussed with union organisations: sharing of the in-depth assessment, discussions on business line action plans, scope and content of negotiations on managers' organisation and working time. Negotiations on working time began on 5 February 2015.

17.3.3 Compensation and social welfare: an attractive employer

Total compensation is a key component in recognising the contribution of every staff member to the Group's performance. It contributes to employee engagement, increases the loyalty of talent and adds to the Group's attractiveness.

Accordingly, the Group is committed to offering its employees fair and competitive compensation, while paying great attention to the quality and level of social welfare it proposes, particularly in terms of cover against the major risks of life. The Group accordingly formally introduced a total compensation and fringe benefits policy in 2013. It covers all employees of the main companies controlled by the Group.

In 2014, the Group's main foreign companies' compensation and social welfare systems were reviewed based on this policy. For each review, an action plan was jointly drawn up with the subsidiary and its implementation shall be monitored during subsequent reviews. A network of Compensation and Fringe Benefits managers was set up to back up the scheme, particularly in order to share good practices.

17.3.3.1 A fair and competitive total compensation policy

The total compensation policy is guided by three principles:

- competitiveness with the external market;
- consistency and internal equity;
- financial sustainability,

It aims to recognise the level of responsibility and characteristics of the position occupied within the organisation, the employee's professionalism and the skills used to obtain results and individual and/or collective performance, with a balance set locally.

It is based on fixed compensation and individual and/or collective variable compensation which serves to recognise the achievement of objectives, connected to the companies' economic results. The priority is to establish a direct and visible link between the employee's contribution and the related compensation.

The Group's companies guarantee the meeting of the minimum legal or professional requirements in each country and the absence of discrimination. They report to employees on their rules and systems of compensation with the highest possible level of transparency in accordance with the aforementioned principles. Each EDF group employee must have visibility on their total compensation. Accordingly, in France, EDF and ERDF have offered each of their employees a full individual review of their annual compensation and its components. In 2014, a practical guide on the Group employee savings plan was produced and released to Group employees in France who are members of the EDF savings plans.

Variable compensation plans to boost performance

Within the Group, most employees have individual or collective performance-related variable compensation.

At EDF Démász (Hungary), all staff are eligible for individual performance-based variable compensation, recognising the meeting of objectives on three levels: company performance, employee entity performance, and individual performance.

At EDF Energy (United Kingdom), a similar system applies to the majority of staff.

At Edison (Italy), all employees excluding executives, benefit from collective performance-based compensation schemes, based on profitability and productivity criteria (*Premio di Risultato & Premio di Produttività*).

At EDF Luminus (Belgium), managers and most non-managers are eligible for individual and collective performance-based compensation schemes.

In 2014, the China Division also introduced performance-based individual variable compensation for employees based in Beijing, designed to stimulate and recognise collective performance.

At EDF, all management staff are eligible for individual performance-related compensation. With an average figure of 8% of annual salary per manager, the company is on a par with other major French companies. Furthermore, EDF decided to introduce an individual variable compensation scheme for all its non-management employees, which represented in 2014 approx. 2% of their annual salary.

EDF and ERDF pay special attention to the professional training of their managers on issues of compensation so that they fully understand the compensation policy.

In France, EDF and ERDF's employees benefit from a profit-sharing scheme, introduced more than 20 years ago in the case of EDF and for ERDF when it became a subsidiary. Most of the Group's European subsidiaries have similar schemes. EDF and ERDF employees can choose either to receive payment and/or to invest it into either the Group Corporate Savings Plan or the Group Collective Retirement Saving Plan (see below).

The EDF and ERDF profit-sharing agreements are three-yearly and require the profit-sharing amount payable to be set based on the meeting of national objectives reflecting the different components of the companies' performances (economic, business lines, social and environmental). In 2014, EDF signed a new profit-sharing agreement with its social partners, which includes the following five national performance criteria: progress of Group EBITDA, electrical generation, customer satisfaction, employee health & safety training and reduction of CO₂ emissions in tertiary buildings.

In 2014, these agreements saw the payment of €207 million to employees of EDF and ERDF for the 2013 fiscal year, i.e. €1,935 on average per beneficiary.

EDF and ERDF are not eligible for the shareholding scheme.

A comprehensive employee savings policy

The Group corporate savings plan

It is open to employees of EDF and of the Group's French companies in which EDF owns directly or indirectly at least 40% of the share capital and which have signed up for the Group Corporate Savings Plan.

Five varied mutual funds, including a socially-responsible investment fund, a solidarity mutual fund and the "EDF Share" fund, are open to subscriptions. In 2009, employees were able to subscribe to the bond issue launched by EDF via the 2014 Bond Fund created for this purpose. Following the reimbursement of the loan by EDF, this fund was merged with the Épargne Sécurité fund in July 2014.

The EDF group Corporate Savings Plan totalled €4.25 billion at the end of 2014.

Profit-sharing, as well as individual payments and transfers from the Time Savings Accounts that employees make to the Group Corporate Savings Plan, are matched by the company under conditions negotiated within each company.

Collective Retirement Savings Plan

The EDF group Collective Retirement Savings Plan is open to employees of EDF and the Group's French companies in which EDF owns directly or indirectly at least 40% of the share capital and which have signed up for the Group Collective Retirement Savings Plan.

Two mutual investment funds are offered to employees: a solidarity mutual fund and the "Cap Horizons" umbrella fund, offering targeted management of the savings invested depending on retirement age.

In 2014, the CAP 2014 sub-fund was merged with the CAP Défensif sub-fund. A new CAP 2034-2037 sub-fund was created for employees whose provisional retirement date is between 2034 and 2037.

The Collective Retirement Savings Plan totalled approximately €492.5 million for EDF and ERDF at the end of 2014. Profit-sharing, as well as individual

payments and transfers from the Time Savings Account that employees make to the Collective Retirement Savings Plan, are matched by the company under conditions negotiated within each company.

An employee savings guide was made for all Group employees.

Time Savings Account

Time Savings Account agreements have been signed within the Group's principal French subsidiaries, specifically EDF and ERDF.

On 31 December 2014, the total number of hours saved in the time savings account by employees of EDF and ERDF was valued at €671 million. This negotiated scheme enables employees who want to take leave to receive compensation corresponding to the saved time. It is also possible to monetise the time saved based on the current Time Savings Account agreement or make transfers to the Group Corporate Savings Account and the Collective Retirement Savings Plan.

Employee shareholding

In 2005, at the time of the Company's public offering in the framework of the Offering Reserved to Employees in accordance with Law no. 2004-803 of 9 August 2004 and Law no. 86-912 of 6 August 1986, 130,000 current and retired Group employees became shareholders of the Company.

In connection with the sale of 2.5% of EDF's capital on 3 December 2007, in accordance with the aforementioned laws, a new Offering Reserved to Current and Former Employees was proposed in 2008. There have been no new reserved offerings since 2008.

On 31 December 2014, current and former employees of the EDF group held a total of 31,965,255 EDF shares, i.e., 1.72% of share capital. This number includes, firstly, 27,443,950 shares (i.e. 1.47% of capital) based on the definition of employee shareholding in accordance with Article L. 225-102 of the French Commercial Code (shares held by employees and former employees of EDF via "EDF Share" mutual plans of the EDF group corporate savings plan and the EDF International group corporate savings plan). This number includes, secondly, nearly 4,521,305 million shares, i.e. 0.24% of capital, held directly or indirectly, without a non-transferability period or after the non-transferability periods, by current or former employee shareholders. Most of the shares held by employees are held via the Group Corporate Savings Plan.

The Company has not implemented any stock option plan.

A bonus share allocation plan implemented in August 2007, called "ACT 2007", involved the allocation of 2,883,183 shares to all Group¹ employees, with approximately 150,000 beneficiaries spread over 22 countries.

More than 2.7 million shares were issued to beneficiary employees on 31 August 2009. The registered shares became available on 30 August 2011. The shares held via the Group Corporate Savings Plan became available on 30 August 2014.

17.3.3.2 Social welfare policy

The Group fringe benefits policy is guided by three principles:

- a principle of responsibility, which covers three requirements:
 - guaranteed social cover, in terms of health, welfare and pensions: company cover tops up, if necessary, the level provided by social security if it is deemed insufficient. When such company coverage is put in place against the major risks of living, i.e. disease and death, it must be available to all employees,
 - non-discrimination: access to health cover must not be dependent on the employee's state of health; maternity cover contributes to gender equality at work,

1. With the exception of Edison and EnBW employees mainly.

- regulatory compliance: the fringe benefits policy complies with current local regulations, whether in terms of financing or implementation of compulsory schemes, or rules governing optional schemes;
- a balance between competitiveness and sustainability is sought:
 - the combined level of compensation and fringe benefits meets the need for the Group's companies to be attractive on their local markets;
 - fringe benefits must be able to be maintained over time and accordingly be financially sustainable in the long-term both for employees and the employer. A sustainable balance between income and expenditure must be addressed from the introduction of the coverage. The Group ensures cost control for social welfare commitments;
- a principle of appropriation by beneficiaries:
 - employees are informed of the content of the fringe benefits in order to make it easier for them to understand and actually receive them; sharing of information on fringe benefit schemes is organised each year at the CWC with employee representatives.

In 2014, an information booklet on social welfare was issued to all the Group's employees in France.

Status of employees in the Electricity & Gas Industries (EGI): a specific social welfare plan

In France, the vast majority of the Group's workforce are employed by companies descended from "historic operators" (EDF, ERDF, PEI) which have electricity and gas industry or "EGI" status. This is also the case, in particular, of part of the Tiru group and the main components of Électricité de Strasbourg.

Fringe benefits at these "historic operators" were mainly introduced by the law organising the monopoly on electrical generation and distribution electricity (Law of 8 April 1946) and the maintaining of a special social security plan linked to the professional status of employees in the EGI branch (Decree of 22 June 1946). Today still, the main fringe benefits that set EDF apart from other major groups are based on these legislative or regulatory texts: special pension plan, special health plan for, firstly, incapacity for work and, secondly, healthcare costs, including an additional mandatory part also covering retired employees, centralised social activities in the professional branch, financed by 1% of sales and managed independently by the unions.

In addition to these schemes, which have remained very stable over the last few decades, is a benefit in kind historically based on a company decision which covers gas and electricity supplied by historic operators to employees and is maintained for retired employees.

Significant changes have been made over the last decade:

- EDF's IPO and the application of international accounting standards required the valuation and provisioning of commitments to retired employees. The maintaining of the industry's special pension and healthcare cost plans faced with this requirement was made possible by the overhaul of their financing: affiliation with standard mandatory plans for pensions and strengthening of affiliation between current and retired employee plans for complementary health insurance cover;
- the special pension plan has also, like other public sector special pension plans, been increasingly affected by efforts to reform mandatory pension plans launched by successive governments. Except for the pension calculation method (specific rate, applied to a salary at the end of career, with a reduced base), the main parameters (retirement age, required contribution period, etc.) are currently being brought into line with the standard compulsory plan; a number of other less wide-ranging rules remain specific. The definition of active service, enabling earlier retirements, has also been revised and how it is taken into account significantly overhauled for newly-hired employees, via the creation of a Retirement Days Savings Account.

Finally, unlike other historic benefits, the level of employee health, disability and life cover appeared significantly less generous than that offered by other major groups, which led from 2008 to the introduction, in agreement with the professional branch, of complementary cover in these three areas.

The special pension plan and its recent changes

The EGI pension plan is a special social security plan, which has been managed by the *Caisse nationale des Industries électriques et gazières* (CNIÉG – French National Fund for the Electricity and Gas Industries) since 1 January 2005. The law of 9 August 2004, which created CNIÉG, provided for the financial affiliation of the special plan with CNAV and ARRCO-AGIRC:

- CNIÉG pays to CNAV and ARRCO-AGIRC the contributions that should be paid by employees and employers in the EGI branch in accordance with the regulations specific to these plans;
- in exchange, CNIÉG receives from CNAV and ARRCO-AGIRC the benefits that they would have paid to former employees of EGI companies if they had been affiliated with these plans;
- pension rights specific to the special pension plan are financed via the CTA levy (*Contribution Tarifaire d'Acheminement*, i.e. routing rate contribution) received from gas and electricity transmission and distribution services and the remainder, corresponding to specific rights acquired before 2005 for the deregulated sector (generation and distribution) and specific EGI pension rights acquired after 2005, is financed by employers.

The reform of the financing of pensions instituted by the Law of 9 August 2004 has had no effect at all on the standard mandatory plans, energy consumers or the French state budget. It is transparent for EGI retired employees, who benefit from a single payment of their pension rights based on the special plan rules by CNIÉG, which is their sole contact in terms of their pension.

The special pension plan was significantly overhauled over the last few years, as were all the pension plans:

- in 2008, with the transposition to the special pension plans of the main measures introduced by the Law of 21 August 2003 for the standard plan and public sector plan: progressive extension of the insurance period to obtain a full-rate pension and setting up of contribution reduction and increase systems. The 2008 reform also provided for revaluation of retirement pensions based on inflation rather than salaries, as was previously the case;
- as the 2008 reform abolished service credits for difficult working conditions for employees hired under a collective bargaining agreement from 1 January 2009, the way in which this issue is taken into account has changed. A sector-wide agreement signed on 16 April 2010 created for these newly-hired employees a Retirement Day Savings Account (CEJR – *compte épargne jours retraite*) provisioned with days of leave allocated for the periods worked by these employees in jobs classed as active service. The criteria and terms and conditions for the allocation of active services were also updated by Decree of 23 September 2011 via rules to take account of difficult working conditions linked to the characteristics of the positions held;
- the Decree of 18 March 2011, following on from the Law of 9 November 2010, increased by two years the ages for pension entitlement and cancellation of the contribution discount, with a calendar adapted from the standard plan and public sector plan (with a retirement entitlement age increased to 62 years old in 2024, the contribution discount cancellation age to 67 years old in 2029);
- the extension of retirement options aged 60, introduced by the Decree of 2 July 2012, shall apply to IEG pensions from 2017.

Finally, the Law of 20 January 2014 and the decree of 25 June 2014 adapting it to national EGI status particularly provided for extension to 43 years from the generation of 1973 of the period of insurance to obtain a full-rate pension and postponement from 1 April to 1 October of the annual pension revaluation date.

EGI special healthcare cost plan

The IEG healthcare cost plan is a legal and mandatory social security plan which covers current and retired employees. Its benefits include a base portion equivalent to the standard plan and a complementary portion and are managed by CAMIEG.

The complementary portion mainly covers the co-payment, a limited portion of excess fees and benefits generally not refunded by social security. The financing of this complementary portion was reformed in 2005 due to the impact of international accounting standards. This led to the introduction of two distinct and separate accounting sections for current and retired employees and the creation of a fixed solidarity contribution by current employees for the financing of the retired employee section. The rules on income and benefits covered are set by the public authorities. In 2014, current employee contributions to the complementary portion were revised downwards and the table of benefits, applicable to both current and retired employees, was improved (mainly for dental and optical care).

Supplemental social welfare (in addition to mandatory plans)

Since 2008, employees with EGI status working for the Group's companies in France have benefited from supplemental social welfare measures including:

- the disability supplement (EGI industry agreement of 24 April 2008), applicable since 1 July 2008;
- provident coverage: death and education allowances (EGI-wide agreement dated 27 November 2008), applicable since 1 January 2009; amendment, signed on 8 October 2013, taking account of the coverage balance, improved benefits from 1 January 2014 and reduced contributions with a view to the long-term balance of the plan;
- the supplemental pension plan (EGI agreement of 21 February 2008 and Group agreement of 12 December 2008), supplemented by company provisions, applicable since 1 January 2009 (for ERDF, 1 October 2010);
- supplemental health cover (EGI agreement of 4 June 2010), applicable since 1 January 2011, which supplements the special healthcare cost plan coverage. An amendment, signed on 8 April 2014 allowed employee contributions to be reduced, by increasing their coverage by the employer, and rights to be made portable.

Other Group employees' social welfare

The Group's other employees in France are covered by different collective bargaining agreements and can have fringe benefits provided by their own employer. Each employer must therefore ensure the consistency of the benefits offered with the Group policy presented above. This issue is regularly discussed with Group Human Resources.

Accordingly, welfare coverage at CHAM Group companies was analysed in 2013, enabling generalisation of death and disability coverage from 1 January 2014.

The same applies to Group companies based outside France, for which the regulatory context specific to each country should also be taken into account.

Central Social Activities Fund (*Caisse centrale d'activités sociales – CCAS*)

Unlike the common practice in French law, the management of social and cultural activities is delegated to specific organisations in the EGI sector.

The CCAS, CASs (mutual and social welfare funds) and CAS Coordination Committee are legal entities and are fully independent. The CCAS is administered exclusively by employee representatives and is supervised by the public authorities.

Upon request from the public authorities, employers in the EGI branch entered into discussions with social partners on the question of financing, supervision and governance of social activities and in April 2013 submitted their findings to the public authorities.

The law on the auditing of the financial statements of company committees (included in the law on training, employment and social democracy) must be transposed by decree to the branch's specific bodies.

17.3.4 An employer engaged alongside its stakeholders

The EDF group acts responsibly to promote diversity and respect for human rights alongside its stakeholders: employees, sub-contractors and employee representatives. Its work also affects the general population as a contributor to the development of the regions in which it operates.

17.3.4.1 Responsible sub-contracting: a reality

The EDF group's sub-contracting policy focuses on three major themes:

- providing service providers with visibility and having long-term supply partners;
- helping the Group improve its sub-contracting practices by defining criteria to support decision-making in terms of strategy, economics, skills and social impact;
- developing socially-responsible sub-contracting practices, including via the agreement signed on 19 October 2006 on socially-responsible sub-contracting at EDF, and the EDF group CSR agreement signed on 10 December 2008.

Group CSR agreement commitments

The EDF group's CSR agreement shows our commitment to ensuring that the sub-contractors that the companies employ do high-quality work in accordance with the law and current international standards (e.g. ban on child labour). They strive to enable sub-contractors and their employees to work on their account under the highest working and health & safety conditions in the industry and country in question.

The Group CSR agreement's commitments particularly focus on:

- abiding by the law;
- employee health and safety;
- ethical behaviour with clients, particularly respect for people and integrity;
- respect for the environment.

Appropriate sub-contractor selection and assessment procedures meeting these requirements have been put in place. In case of any serious breach, unresolved when the issue is raised, of legislation, employee health and safety rules, principles governing relations with clients, or current environmental regulations, relations with the sub-contractor can be suspended in accordance with the contractual obligations.

Furthermore, the sub-contractor must ensure the meeting by any sub-contractors with which it has signed an agreement, for the work in question, of the requirements that the EDF group has set it.

Areas of sub-contracting at EDF

In 2014, at EDF, the major areas in which work was sub-contracted included industrial and commercial activities, as well as Information Systems.

In the industrial field

The work begun in 2012 by the French National Nuclear Industry Strategy Committee (CSFN – *Comité stratégique de la filière nucléaire*), including civil nuclear operators, union organisations, professional organisations, administrative authorities and service providers, as well as the French Nuclear Safety Authority, as an observer, enabled the drafting of social specifications. These include transparent rules common to all the stakeholders in the nuclear industry. They consist of a set of coherent and fundamental measures that cover all the fields relating to the conditions for sub-contracting. 2014 saw increased application of the French National Nuclear Industry Strategy Committee's social specifications, with the implementation in the field of contracts awarded based on the 2013 invitations for bids in which they were included.

EDF's industrial project is presented to suppliers, in order to enable them to anticipate the company's needs. The nuclear service provider training course was also revised in order to better take account of actual operational situations. Finally, special attention is paid to the conditions under which service providers working on sites are welcomed. The measures taken regarding the EPR project in Flamanville are continuing, including training, integration and recruitment of employees in the Cotentin employment basin. A "Job & Skills Development Commitment" action plan introduced to prepare for life after the project's completion shall be extended for civil engineering employees until the end of 2015.

In the field of Information Systems

In order to have an *"efficient and forward-looking IS at the heart of both business strategy and employees' lives"*, efforts must be made to maintain control over the elements forming our core business and therefore the information systems that support them. The EDF group IS Division asks business lines and IS Departments to use a triple-pronged analysis method to determine whether it is worthwhile on their own or via a third party to:

- position the IS application to meet "strategic activity/specific need" objectives;
- define the maturity of the service offers available on the market and the criticality of the IS to business strategy and performance;
- defining the criticality of the application data.

During invitations to bid, special attention is paid to service provider training and turn-over conditions. These points now form an integral part of the criteria to analyse companies' technical bids. Service providers commit to taking account of individual situations, particularly during periods for the transfer of knowledge between the outgoing service provider and the incoming service provider, notably in order to guarantee the continuity of operations.

In the commercial field

Sub-contracting is used to meet increasing customer demand. The use of outsourcing for the Customer Division activities provides the flexibility required to meet variations in the level of customer demand, stabilise internal workload, cover the full hours during which domestic customers can contact customer service (particularly in the evening and on Saturdays) and help deal with any technical issues.

All EDF's customer relations centres, both internal and external, are located in mainland France. Special attention is paid to customer relations service providers being awarded and maintaining "socially-responsible company" status, as well as to their social performance indicators.

EDF "service provider" surveys

Service providers' view of EDF as an "instructing party" is measured regularly via surveys in certain business lines, in order to take into consideration the progress to be made in terms of the conditions for the provision of services. Accordingly, in technical business lines, surveys are used to assess service providers' employees' views on how they are welcomed, comfort of accommodation, catering, cleanliness of shared facilities on site, communication, disruption to work, losses of time, etc.

These surveys have been in place for several years in the nuclear and thermal generation field and are currently being overhauled in the commercial field. These are used to draw up highly-targeted action plans, such as, for instance, to provide additional parking spaces in Le Havre or set up a lunchtime snack bar in Bouchain.

Group health & safety policy

A new health & safety policy was signed for the Group at the end of 2013, with the notable aim of enabling service providers' employees to do their job under the best possible conditions in terms of both work and life at work, with a target of zero accidents and zero impact on health.

This policy is based on four principles: accountability, stakeholder engagement, continuous improvement and sharing of experience.

The roll-out of the policy is managed based on regular tracking and monitoring of results with quantified objectives regarding accidents. Each company is responsible for the implementation of this policy for its sub-contractors.

17.3.4.2 A significant contribution to local development via occupational integration

The Group's commitment in favour of occupational integration

As an industrial firm with close local links, the EDF group has made a long-term commitment to serving the public interest and has invested, over a number of years now, in occupational integration.

The Group's work in favour of occupational integration is based on four main factors:

- The Group maintains an ambitious work-study scheme, whose role as a "social elevator" is continuously underlined.

EDF considers work-study programmes as a key tool to develop the occupational integration of young or unemployed people, and to enable them to acquire or finish a qualification.

More than 100 work-study offers are specifically reserved each year for vocational work-study trainees, with the promise of hiring. Partnerships are formed with local and regional employment and training organisations (*missions locales*, *Écoles de la deuxième chance*, AFPA, *Compagnons du Devoir*, etc.) in order to encourage young people, particularly from deprived areas, to train for promising lines of business.

Certain work-study offers are specifically proposed to young people in major social difficulty, in conjunction with occupational integration organisations. These offers prepare them to obtain a qualification corresponding to at least the first level of occupational qualification.

EDF and ERDF also hire a significant proportion of the work-study trainees that they train and accompany the ones that are not hired, particularly via jobseeking workshops organised in partnership with Pôle Emploi (78 workshops were held in 2014, featuring more than 850 participants). They are also given the option of being put in touch with hiring partner companies. A survey is conducted six months after the work-study trainees leave, in order to track their progress and assess their access to employment: 90% of work-study trainees who left in 2013 are in a job or are continuing their training, a result which, given the current environment, really shows the value of committing to this kind of occupational integration scheme.

- EDF's *Fonds Agir pour l'emploi* (FAPE – “taking action on employment” fund) provides financial support for the integration of unemployed people by funding organisations supporting integration via economic activity (integration schemes, neighbourhood development centres, etc.) and by helping with the set-up of businesses by unemployed and/or young people in rural and/or deprived areas. It features among the foremost occupational integration firms in France

The EDF FAPE is a scheme jointly run by Group companies, the EDF Foundation and union organisations. It is jointly managed and financed initially via donations from more than 14,000 current and retired EDF group employees (these donations trigger a 200% contribution by the companies). 272 projects for the integration and employment of persons in difficulty were supported in 2014 (i.e. €1.9 million of grants, helping to create and consolidate nearly 3,000 jobs).

- As a regional industrial stakeholder, the EDF group supports local integration stakeholders.

EDF regularly favours using integration scheme staff for its projects, and develops partnerships to support organisations dedicated to occupational integration. EDF actively contributes to the development of the *Écoles de la deuxième chance* network, which helps young people who have left the school system without a diploma and without qualifications, in danger of social and occupational exclusion.

In the field of distribution, ERDF works with neighbourhood development centres to improve the local living environment (particularly via the renovation and improvement of the external appearance of public distribution substations), develop local services (by informing inhabitants about the electricity market and about preventing electrical accidents) and support the occupational integration of neighbourhood development centre employees.

- EDF encourages solidarity purchasing schemes, by including integration clauses in its contracts and purchasing from integration enterprises.

Integration clauses may be added to contracts signed with suppliers and sub-contractors, in order to develop with them measures enabling people with particular social or occupational difficulties to get into or back to work.

The Group also sets itself every year objectives for purchasing services from integration organisations, and accordingly contributes to increasing their sales by several million euros. This scheme promotes the integration of disabled people, and supports the sector helping the integration of the long-term unemployed. It is a major component of the EDF agreement for equal opportunities and occupational integration of disabled people, with an objective of 500 beneficiary units, equivalent to 500 external jobs by the end of 2015: for example, a contract has been signed with APF (*Association des paralysés de France* – French association for victims of paralysis) - this contract represents, via the purchase of supplies of remanufactured or adaptable laser printer consumables by EDF, 4 to 8 “job equivalents” varying from year to year.

This scheme is backed up by awareness campaigns aimed at purchasers and suppliers via training courses that introduce the principles mentioned above, the “Responsible Purchasing” guide, which encourages purchasers

to work with companies that employ only disabled people and provide them with special facilities and support, as well as a short film aiming to fight preconceptions about services provided by companies in this sector (see section 17.2.3.3.3 (“Relations with suppliers and responsible purchasing”)).

17.3.4.3 Promotion of and respect for all forms of diversity

The EDF group is committed to promoting diversity as a vector for performance in order to:

- better understand the diversity of clients and meet their expectations as best as possible;
- better reflect the society in which it operates;
- allow women and men to express their talents to the best of their ability.

To this end, the company has made commitments on this issue on several occasions, starting in 2005 with the Group Social Responsibility Agreement, which devotes several articles to the fight against discrimination, respect for diversity and promoting equal opportunities. This, along with the Ethics Code, is the main frame of reference for the Group's companies. Promoting diversity is one of the 11 Group Corporate Responsibility commitments published in 2013: “*maintaining the professional excellence and performance of its teams via diversity training and promotion*”. This commitment includes an objective: reaching a proportion of 30% women by 2015 in the future management talent category. In 2014, it was 23.9%.

The results of the “My EDF” Group-wide internal engagement survey (see section 17.3.4.5 (“High-quality social dialogue”)) showed in 2014 a level of positive responses of 64% to the question “*management acts in favour of diversity in the working environment*” (+4 points in three years).

At Group-level, the level and formalisation of more specific commitments locally vary depending on the applicable legal framework.

EDF Demász, for instance, has had an equal opportunities action plan since 2010.

Already holder of the Diversity Works for London Gold Standard, an English label that recognises its work in favour of equality and diversity, in 2014 EDF Energy applied for and was awarded the Gender Equality European & International Standard (GEEIS) and is committed to obtaining the National Equality Standard. The British subsidiary is accordingly pursuing its strategy and its work to promote inclusion (“*to create an environment in which employees share a sense of belonging, mutual respect, and support from others so that they can do their best work*”).

In 2013, EDF Fenice and EDF Polska respectively signed the Italian and Polish diversity charter, accordingly following in the footsteps of the French companies (EDF, ERDF, ES), which signed the diversity charter in 2006.

The Group has taken a range of measures, including the organisation of Diversity Day. Each year, the Group's companies work to organise events to promote diversity, increase awareness of stereotypes and accordingly contribute to preventing discrimination.

In France, EDF's commitments on diversity have led to the creation of several training programs for managers, HR managers and employees on the images and stereotypes linked to diversity. More than 7,000 staff have been trained since 2007.

Work by French companies has focused strongly on gender equality, disability and age diversity agreements.

Other companies, such as EDF Energy, have also set up training schemes for management (400 managers trained) and stereotype awareness campaigns for employees. In 2014, EDF Polska produced a practical guide on managing diversity for its managers.

To reduce the risk of discrimination, EDF regularly conducts surveys. In 2013 in France, EDF accordingly supported a multi-company “Stereotypes and Origins” survey conducted by the Institut du Mécénat de Solidarité. EDF also conducted tests on recruiting work-study trainees and a survey on employees’ views of equal opportunities.

The Group international diversity community, launched in 2012, continued in 2014 the exchanges intended to facilitate the implementation of actions in favour of diversity and to share good practices between Group companies.

EDF also formalised its partnership with the “L’Autre Cercle” association, which fights against discrimination based on sexual orientation and homophobia at work: self-diagnosis, specific communication for the International Day Against Homophobia, training for occupational physicians and management, etc. A workgroup was put in place in 2014 in order to work on an internal awareness tool on respect for sexual orientations at work.

Promoting diversity also involves supporting schemes organised by employee networks. EDF Energy also promotes its different networks, which are regularly highlighted in its internal memos: ethnic minority network, women’s network, disabled network, and gay & lesbian network. More than 3,200 employees are involved in these networks. The ethnic minority employee network was recognised for its mentoring work in 2013. A new network, the Working Parents Network, was launched in 2014.

These networks, which are particularly active, continued to provide new opportunities for discussion and training regarding these issues in 2014, with some of them also developing mentoring schemes.

In France, the women’s network *Energies de Femmes* and *Energay*, the LGBT association for EDF and the Electricity & Gas Industries, have received financial and logistical support from EDF since 2012.

Gender equality

Equal access to employment for men and women is a powerful tool for organisations to change and modernise. It’s a key component of the Group’s diversity policy. In 2014, several Group companies began the process to gain European recognition regarding equal access to employment: EDF, EDF Energy and EDF Polska were accordingly awarded the Gender Equality European Standard.

EDF and ERDF extended their agreements on equal access to employment for men and women in 2012, signed unanimously by the union organisations representing its employees. These company agreements mark a switch towards setting target results rather than just target methods and monitoring measures. EDF’s business line divisions were tasked with drawing up and implementing 56 action plans, which also provided the opportunity to enrich social dialogue and share best practices at the different levels of the company.

Overall, equal pay is in place for main pay and performance-related pay and EDF still has the Equality Label, awarded in 2006 and again in 2008, then 2011.

EDF is now also recognised outside the Group as a company committed to equal access to employment. Upon request from the Ministry for Women’s Rights, EDF signed, with other companies, a framework agreement in April 2013, in which it committed to contributing to experiments to make it easier to take account of equal access to employment in VSEs and SMEs.

Based on the parenthood charter signed by EDF, measures have been taken to make it easier to establish a good work-life balance with the issuing of a concierge service guide, a nursery place framework agreement and the tailoring of training programmes to better meet personal and family requirements.

Furthermore, a new gender-based Group indicator was introduced in 2014 in order to make it possible to monitor the rate of occurrence of occupational accidents and their variation for men and women.

EDF Énergies Nouvelles introduced an action plan aiming to promote diversity in all lines of business, to maintain equal pay for men and women with equivalent skills, particularly focused on working conditions.

Edison monitors indicators on the diversity of its workforces and the wage differential between men and women with equivalent responsibilities. They are published in its sustainable development report.

The Group also acts in favour of diversity of business lines by taking pre-recruitment measures (for further details, see section 17.3.1.3 (“Dynamic recruitment policy confirmed in 2014 in France”)).

For its part, EDF Energy organises targeted recruitment campaigns to attract more young female engineers and trainees to its lines of business. EDF Polska introduced a new requirement for diversity of applications submitted in recruitment firm specifications.

In 2013 and 2014, the Asia Pacific Division and EDF Polska created their women’s network, following in the footsteps of the French and British networks. EDF Luminus organises events for female managers as part of International Women’s Day.

Measures taken in favour of the occupational integration of disabled people

EDF and ERDF extended their disability agreement in 2013, signed unanimously by the union organisations representing their employees. This agreement includes ambitious and meaningful objectives on integration and assistance of more than 3,200 EDF and ERDF employees who are recognised as disabled workers.

At the half-way point, the results of the ERDF 2013-2016 disability agreement are encouraging. Indeed, this agreement provides for a 1 point increase in the rate of employment with the objective of increasing it to 5.09% by the end of 2016; it was already 4.96% at the end of 2014. Disabled employees are placed at the heart of the scheme set out in the agreement, focusing on accessibility to the company’s different lines of business, the training courses it proposes and dynamic career paths.

Several practical and innovative measures are ongoing, including some on stakeholder training (managers, Union Organisations, Health, Safety & Working Conditions Committee, etc.). Large-scale information campaigns have been launched, particularly focusing on the assistance available for disabled persons as well as purchasing from companies that employ only disabled people and provide them with special facilities and support. Disabled Employment Week was also an opportunity to present an innovation supported by ERDF, the “gyrolift”. It is a 2-wheeled means of transport that allows people with reduced mobility to move from a sitting to a standing position and enjoy greater mobility.

The EDF 2013-2015 agreement particularly insists on the creation of conditions apt to promote equal opportunities at all stages of employees’ careers. It also focuses on helping to change mentalities, communication to simplify access to rights and professional training of stakeholders. It sets ambitious objectives regarding hiring, work-study trainee numbers and purchasing from companies that employ only disabled people and provide them with special facilities and support and aims to achieve an employment rate of 4.4% by the end of 2015 (this rate was 4.26% at the end of 2014, higher than in 2013).

Accordingly, in line with the “facilitating access to employment” section of the EDF agreement, a number of initiatives were implemented in 2014, both nationally and regionally, in order to promote encounters with applicants.

New tools were proposed to stakeholders in line with the objectives of the agreement: a “Difference means competence” brochure explains the process of purchasing from companies that employ only disabled people and provide them with special facilities and support, films including one short film on unity which, via examples of famous people in a wide range of fields, demonstrates that disability does not prevent competence or performance, and another “path to recognition”, which shows company employees talking about what this scheme means to them. These two films were recognised at the 2014 “Regards croisés” film festival.

In accordance with its 2013-2015 disability agreement, the Electricité de Strasbourg group achieved a proportion of 8.2% in 2014 of disabled workers. The 2014 results should be along similar lines. Electricité de Strasbourg group was also awarded the “Économie et handicap” (i.e. business and disability) trophy by the Bas-Rhin Chamber of Commerce and Industry in 2014.

The Group's companies introduce disability awareness schemes for employees that come into contact with customers, sign local partnerships with associations working in favour of disabled people and are committed to making premises and work stations accessible.

EDF Luminus produced a practical guide on welcoming and integrating disabled people, which was recognised as good practice by the associations.

17.3.4.4 Organised forecasting and management of reorganisation and restructuring

The Group, which is aware of the need for organisations to adapt to changes in the economic and social environment, both in France and abroad, signed an agreement in 2005 (renewed in 2009) on Corporate Social Responsibility. In addition, 2020 HR Vision, published in 2013, confirmed that the issue of managing change is one of the Group's key challenges. The involvement of management and the special focus placed on Dialogue with employees and their representatives are key. These principles were respected during the Group's restructuring and reorganisation operations in 2014. For example, negotiations were held on a new collective bargaining agreement for the Group's companies in Poland following their consolidation.

17.3.4.5 High-quality social dialogue

Social dialogue with employee representatives and union organisations is a key component of EDF's human resources policy. One of EDF's priorities is to continue to observe a long tradition of social dialogue and consultation, managing the company's industrial changes and contributing to the development of its employees.

In France

Throughout EDF, there are currently 56 works councils, one Central Works Council (CWC) and 104 employee representative councils.

Central Works Council

EDF's CWC held 17 meetings in 2014, at which sixty or so items and projects were presented. In-depth and constructive discussions were held on the most significant projects, such as the Dalkia project, which was unanimously approved.

The CWC's committees are very active, particularly the Economic Committee, the Central Employment & Training Committee and the Health & Safety Committee. In 2014, the unique database was set up in accordance with the Law on the securing of employment of 14 June 2013.

As the employee representatives' terms of office last three years in the Electricity & Gas Industries branch, they were re-elected on 21 November 2013.

In 2014, social dialogue at company level was marked by discussions with union organisations on the organisation of the elections of the directors representing the employees on EDF's Board of Directors and the negotiation of 3 collective bargaining agreements, signed on 13 June 2014 by three union organisations representing its employees:

- the new EDF 2014-2016 three-year profit-sharing agreement;
- the agreement on EDF's contribution to the Group Collective Retirement Savings Plan for the period 2015-2017;

- amendment 16 to the agreement of 29 November 2004 governing the EDF group Corporate Savings Plan.

Further issues were examined via social dialogue in certain EDF lines of business: at the Nuclear Engineering Division, a framework agreement on organisation and quality of life at work for the success of industrial projects (*Grand carénage*, EPR, etc.) was signed on 18 July 2014 by two union organisations.

The main agreement signed at ERDF in 2014 was the 2014-2016 three-year profit-sharing agreement combined with a new employer contribution policy.

France Group Committee

An agreement on the creation of the France Group Committee, a forum for discussion at France-level featuring 28 elected representatives of the Group's main subsidiaries (EDF, ERDF, Tiru, CHAM, etc.), was unanimously signed on 1 September 2008. The France Group Committee met three times in 2014.

Other than the statutory themes on which it is regularly informed, the France Group Committee discusses matters of professional training and health at work.

International

European Works Council

At the end of 2001, the Group created a European Works Council (“EWC”), which is consulted on the Group's major policies. Through its workgroups, the EWC initiated numerous discussions on human resources policies at an international level, notably concerning health and safety within the Group's different companies in Europe or covering the opening of negotiations on the EDF group's social responsibility agreement.

The EDF group's EWC is informed of the Group's economic, financial and social strategies. As stated in the agreement, the members of the EWC elected a new secretary to the committee in June 2014. The EWC met twice over the past fiscal year. During these meetings, the following themes were particularly examined: the Group's industrial development strategy in the United Kingdom and the growth of the Group's activities in the field of energy services. The European Works Council was also consulted on the Group's health & safety policy.

Dialogue Committee on the Group's Social Responsibility (DCSR)

The DCSR was created in accordance with the CSR framework agreement signed in 2005 by all the employee representatives and union organisations of the Group's principal companies, as well as the international trade union federations for the industry. The commitments made at the time were reinforced by signing a new agreement in 2009.

These agreements govern social dialogue on the issue of CSR. They have enabled the Group to put in place a set of basic shared commitments and common objectives that contribute to the renewal and extension of social dialogue issues.

In order to reinforce the governance of the monitoring of this agreement, the signatories entered into discussions to revise the agreement, reinforcing representation of employee representatives on the monitoring bodies.

Social dialogue issues at Group companies internationally

At the Group's main companies outside France, social dialogue mainly focused on:

- the conditions for the transfer of the employees at the Laibin B power plant (China) following the end of the concession contract awarded by the government of Guangxi;

- the negotiations for the probable signing in 2015 of a common collective bargaining agreement for the EDF group's companies in Poland;
- negotiations with union organisations on employee reassignment measures (EDF Fenice, Edison, EDF Polska);
- changes to the organisation of EDF Energy's commercial and generation activities.

17.3.4.6 Employees' view: "My EDF" engagement survey

At the end of the first "My EDF" internal engagement survey conducted in November 2012 involving all Group employees, a plan to issue results to employees was implemented and companies drew up action plans to increase or introduce improvement measures based on the results observed within their scope. This process was repeated in 2013 and 2014.

The survey was organised for the third time in September and October 2014. A significant internal communication campaign was organised to encourage employees to give their opinion (videos, posters and communication kit).

Employee participation (73%), clearly up on the first year (63.8%), demonstrates Group employees' interest in this survey. It allows them to express their level of support for the Group's strategic objectives in general, their appreciation of managerial practices and their opinions on numerous aspects of their professional situation, particularly regarding their career path and training, compensation and quality of life at work. It also enables Management to measure the level of engagement of its employees and to analyse the factors that influence this.

The results of the third survey show clear progress in how human resources policies are viewed: +5 points over two years in the implementation of the annual assessment process, +4 points on knowledge of career paths, +4 points on promoting diversity. Employee engagement remains satisfactory at 70% at Group-level. The study shows confidence in local management is a real strong point (73%), as is sense of belonging (73% globally and +15 points in two years in the Group's companies outside France). Globally, 72% of employees declare themselves satisfied with the content of their work. Finally, more employees consider that the attention we pay to innovation in their company is satisfactory (+6 points in two years).

17.4 Social and environmental performance and report of the Statutory Auditors, an independent third-party body, on the 2014 consolidated social, environmental and societal information

17.4.1 Reporting system

Reporting uses the non-financial indicators defined in the Global Reporting Initiative. It complies with France's NRE (New Economic Regulations) Law and Article 225 of the Grenelle 2 Law (implementing Decree of 24 April 2012) and is consistent with the international commitments of the Global Compact to which the EDF group was one of the earliest signatories.

The form and content of the Group's reporting are continuously reviewed for improvement, going beyond the requirements of French law.

In 2013 the Group made a commitment that 13 of the Group's companies adhere to and will attain Global Compact advanced level by 2017. This is earned through detailed reporting on four items: human rights, working conditions, environment and the fight against corruption. Thirteen Group companies were members of the Global Compact at 31 December 2014, and two were already at the advanced level: EDF and Edison.

The Group is also engaged in a progressive process to have the reliability of its social, environmental and societal indicators and information verified by the Statutory Auditors, initially on a volunteer basis since 2007 and since 2013 in compliance with Article L. 225-102-1 of the French Commercial Code.

For the 2014 data, the EDF group's Statutory Auditors have issued a report certifying the presence and fair presentation of the 42 required themes, in compliance with the decision of 13 May 2013.

Moreover, in keeping with the Group's commitment to transparent communication, the Statutory Auditors issued "unreserved assurance" on the reasonableness of the "CO₂ emissions (for electricity and heat generation)" and "total workforce at year-end" indicators, by gender and age (see section 17.4.4 ("Assurance report of the Statutory Auditors")).

The sustainable development information published by the Group is based on evaluations by ratings agencies or non-financial analysis departments acting on behalf of investors.

17.4.2 Non-financial ratings

Evaluations by the primary specialised rating agencies and managers of ethical funds indicate the Group's CSR performance, in its benchmark sector. The evaluations and assessments underscore the outside recognition of the Group's sustainable development performance.

Ethical market indices and evaluations by non-financial rating agencies

At the end of 2014, the EDF group maintained its inclusion in the ethical market index targeted by its corporate responsibility commitments (FTSE4Good), including all Vigeo indices and its grade improved in the DJSI and CDP indices.

FTSE4Good Index

In March 2012, the EDF group was admitted to the FTSE4Good Index. This admission is reviewed every six months, and EDF's acceptability has been confirmed at every review since it first joined the index. In 2014, its grade was 4.3 out of 5, up compared to 2013 (3.7 in 2013), classing the EDF group among the best performing 4% of companies.

Euronext Vigeo Indices

In November 2012, Euronext and Vigeo jointly launched a range of indices distinguishing listed companies demonstrating the best performance in social responsibility. The indices are updated twice annually, in May and November.

At the end of 2014, EDF belonged to all Vigeo indices to which it could lay claim: World 120, Europe 120, Eurozone 120 and France 20. In the most recent rating in 2014, EDF scored higher, obtaining the grade of 58/100, compared to 55 at the end of 2012. It is ranked ninth among equals of the 43 Electric & Gas Utilities companies.

Social and environmental performance and report of the Statutory Auditors, an independent third-party body, on the 2014 consolidated social, environmental and societal information

Down Jones Sustainability Indexes (DJSI)

EDF obtained a very good score of 79 out of 100 in 2014, up by 13 points compared to 2013 (66 out of 100), or 23 points higher than average in the Utilities sector (56 in 2014). In its 2015 annual report (Sustainability Yearbook), RobecoSam recognised the EDF group for the first time by including it in the "Bronze class", for performance within 10% of that of the sector leader, and awarding it the "Industry Mover" title, for the best progress in its business sector.

Carbon Disclosure Project (CDP)

EDF belongs to the Carbon Disclosure Leadership Index (CDLI) France.

For the year 2014, EDF's transparency score was 98 out of 100 (up by 3 points from 2013) and its performance grade was B (on a scale from A to F).

Sustainalytics

In 2014, EDF obtained a score of 76 out of 100, up 5 points compared to 2013 and was ranked 14th out of the 224 companies in the utilities sector. EDF belongs to the STOXX ESG Leaders Index.

OEKOM

EDF obtained the grade of C+, showing improvement (C in 2013 on a scale from D- to A+).

GLOBAL 100 Most Sustainable Corporations in the World

In 2014, for its first time, EDF received this classification that evaluates the performances of very large world companies that have more than US\$2 billion in market capitalisation (approximately 4,609 eligible companies) for 100 awarded this year. Ranked 40th in this classification, EDF is one of 12 French companies present in this index and is the only one in the Utilities sector.

Morgan Stanley Capital International (MSCI)

In 2014, EDF obtained the advanced level with a grade of A, up compared to the previous year (BBB in 2013, on a scale from CCC to AAA).

EcoVadis

EDF obtained a score of 67 out of 100 and the Advanced level.

Distinctions

- CAC40 Enjeux les Échos ranking: in this classification carried out for the first time in 2014 on the CAC40 companies committed to CSR, EDF obtained a score of 83 out of 96 points and was ranked 14th.
- PAP50 Entreprises: in this 2013 study conducted by WWF France, on the evaluation of the paper policy of the 50 largest French companies, EDF obtained a score of 52 out of 100, up by 11 points compared to the previous survey conducted in 2010 and was ranked 20th overall.
- Recognitions as part of the Green Bonds market: in 2014, EDF received several awards for the Green Bond issued in November 2013 from *Environmental Finance* ("Bond of the Year prize") and *Global Capital* ("Best SRI or Green Bond Issuer prize").
- National prizes: in France in 2014, EDF was awarded a "Winning Partnership" prize from the Pacte PME; The French customer relations association (AFRC) awarded the "special jury prize" to EDF for its programme entitled "Engagements EDF & Moi", highlighting the innovativeness that promotes EDF's dialogue and responsiveness with its customers.

17.4.3 Summary of environmental and social indicators

17.4.3.1 Economic indicators

	Unit	Scope ⁽¹⁾			Ref. GRI ⁽²⁾		
		2014	2013	2012			
Economic indicators							
Amounts paid or to be paid following a court ruling on an environmental matter	€ thousands	30	8.1	6.9	1	1	
Management							
Expenditure for environmental protection		3,043	2,924	3,465			
<i>of which provisions</i>	€ millions	1,996	1,901	2,465	1	1	1
Environmental management (% of the Group's consolidated sales covered by an ISO 14001 certification)	%	98 ⁽³⁾	95 ⁽³⁾	98 ⁽³⁾	2	2	2

(1) Scope 1: EDF.

Scope 2: EDF group.

(2) GRI: Global Reporting Initiative, version 3.

(3) Including companies not integrated in the Group certificate.

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17.4.3.2 Environmental indicators

Scope ⁽²⁾							Ref. GRI ⁽³⁾		
Unit	2014	2013 restated ⁽¹⁾	2013	2012	2014	2013	2012		
Fuels & raw materials – fuel consumption									
Nuclear fuel loaded in reactors	t	1,272	n/a	1,205	1,096	1	1	1	EN1
Coal	kt	18,151	23,644	25,314	24,277	2	2	2	EN1
Heavy fuel oil	kt	833	870	885	1,098	2	2	2	EN1
Domestic fuel oil	kt	345	372	329	317	2	2	2	EN1
Natural gas ⁽³⁾	10 ⁶ m³/GWh	95,340	103,131	8,842	9,290	2	2	2	EN1
Industrial gas ⁽³⁾	10 ⁶ m³/GWh	474	8,018	797	842	2	2	2	EN1
Water⁽⁴⁾ – raw materials consumed originating from sources outside the company									
Cooling water withdrawn	10 ⁹ m³	49.8	50.8	53.9	54.8	2	2	2	EN8
<i>of which fresh water</i>	10 ⁹ m³	18.1	17.7	18.3	28.0	2	2	2	EN8
<i>of which brackish (or estuary) water</i>	10 ⁹ m³	5.8	6.1	8.4		2	2	2	
Cooling water returned	10 ⁹ m³	49.3	50.3	53.4	54.2	2	2	2	EN21
<i>of which fresh water</i>	10 ⁹ m³	17.6	17.4	18.0	27.5	2	2	2	EN21
<i>of which brackish (or estuary) water</i>	10 ⁹ m³	5.8	6.1	8.4		2	2	2	
Air – gas emissions									
Total CO ₂ , emissions due to electricity and heat generation (including the facilities not subject to quotas) *	Mt	64.3	79.3	80.6	79.8	2	2	2	EN16
SO ₂ emissions	kt	82.5	113.6	134.3	137.8	2	2	2	EN20
NO _x emissions	kt	117.6	169.9	171.7	182.2	2	2	2	EN20
Dust	t	5,205	7,761	7,246	6,968	2	2	2	EN20
Particulates (PM ₁₀) – EDF	t	1,189	n/a	2,602	1,745	1	1	1a	EN21
Particulates (PM ₁₀) – Group	t	3,374	n/p	n/p	n/p	2	n/p	n/p	EN21
Mercury – EDF	t	0.07	n/a	0.16	0.16	1	1	1a	EN21
Mercury – Group	t	0.27	n/p	n/p	n/p	2	n/p	n/p	EN21
CH ₄ emissions	kt CO ₂ eq.	32.3	34.4	38.2	40.5	2	2	2	EN16
N ₂ O emissions	kt CO ₂ eq.	274.3	313.1	349.0	329.8	2	2	2	EN16
SF ₆ emissions – EDF	kt CO ₂ eq.	64.2	n/a	71.6	83.8	1	1	1	EN16
SF ₆ emissions – EDF + ERDF	kt CO ₂ eq.	72.5	n/a	78.9	93.3	1b	1b	1b	EN16
SF ₆ emissions – Group	kt CO ₂ eq.	82.1	94.1	95.2	109.8	2	2	n/p	EN16
Conventional waste									
Hazardous waste	t	82,504	63,978	68,443	64,598	2	2	2	EN22
Non-hazardous waste	t	409,245	326,975	354,554	321,789	2	2	2	EN22
Conventional industrial waste recycled or transported for recycling	t	392,815	293,752	294,378	253,412	2	2	2	EN22
Ash produced	kt	3,062	3,859	3,860	3,816	2	2	2	EN22
Energy									
Renewable energy: quantity of electricity or heat generated using renewable energies (excluding hydropower)	GWh	18,811	17,692	17,198	15,583	2	2	2	EN6
Direct energy consumption, by primary source									
Internal consumption, pumping electricity	TWh	8.0	n/a	7.0	6.7	1	1	1	EN3
Internal consumption, electricity	TWh	22.1	n/a	22.1	22.5	1	1	1	EN3

n/p: not provided. n/a: not applicable.

(1) 2014 restated proforma Group data (see section 17.4.5.1 ("Reporting scope")).

(2) Scope 1: EDF.

Scope 1a: EDF mainland France.

Scope 1b: EDF + ERDF.

Scope 2: EDF group.

(3) In 2012 and 2013, data published in 10⁶ m³; for 2014 and 2013 restated data, published in GWh PCI.

(4) In 2012, brackish (estuary) water is included in fresh water.

Nuclear indicators – EDF

	Unit	2014	2013	2012	Ref. GRI
Radioactive emissions to water⁽¹⁾					
Carbon-14	GBq/react.	12.8	12.5	12.6	EN 21
Tritium	TBq/react.	17.5	18.6	19.0	EN 21
Radioactive emissions to air⁽¹⁾					
Carbon-14	TBq/react.	0.17	0.17	0.17	EN 20
Tritium	TBq/react.	0.50	0.49	0.59	EN 20
Fuel					
Transported spent nuclear fuel	t	1,124	1,099	1,075	EN 24
Decommissioning nuclear waste					
Very Low-Level radioactive Waste (VLLW)	m ³	2,580	1,214	2,060	EN 24
Low- and Intermediate-Level radioactive Waste (LLW and ILW)	m ³	659	513	179	EN 24
Nuclear waste from operations					
Very Low-Level solid radioactive Waste	m ³ /TWh	7.6	8.7	7.3	EN 24
Short-Lived Low- and Intermediate-Level solid radioactive Waste	m ³ /TWh	15.4	19.0	20.7	EN 24
Long-Lived High- and Intermediate-Level solid radioactive Waste	m ³ /TWh	0.88	0.86	0.88	EN 24

(1) Radioactive emissions to water and air are subject to on-going measures.

The published data correspond to:

- measured data for tritium, over the period from December N-1 to November N;
- calculated data from generation, for Carbon 14, from December N-1 to November N.

Nuclear indicators – EDF Energy

	Unit	2014	2013	2012	Ref. GRI
Radioactive emissions to water					
Tritium – AGR reactor (Advanced Gas-cooled Reactor)	TBq/react.	129	150	135.7	EN21
Tritium – PWR reactor (Pressurised Water Reactor)	TBq/react.	67	41	44	EN21
Radioactive emissions to air					
Carbon-14 – AGR reactor	TBq/react.	0.64	0.67	0.71	EN20
Carbon-14 – PWR reactor	TBq/react.	0.26	0.20	0.30	EN20
Tritium – AGR reactor	TBq/react.	0.66	0.59	0.68	EN20
Tritium – PWR reactor	TBq/react.	0.92	0.80	0.80	EN20
Fuel					
Uranium sent off site	t	193	177	216	EN24
Nuclear waste					
Transported Low Level radioactive Waste	m ³	452	655	698	EN24
Generated Intermediate-Level radioactive Waste	m ³	178	178	161	EN24

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17.4.3.3 Social indicators

EDF group	Unit	2014	2013	2012	Ref. GRI
Workforce at 31 December 2013 & breakdown ⁽¹⁾					
EDF + ERDF	Number	111,040	109,754	107,333	LA1
Total EDF group *	Number	158,161	158,467	159,740	LA1
Employees by age					
Under 25 years *	%	9	8	8	
From 25 to 35 years *	%	27	25	23	
From 36 to 45 years *	%	25	25	25	
From 46 to 55 years *	%	30	32	34	
56 years and older *	%	10	10	10	
Employees by geographic area (per head office location)					
France	Number	132,107	129,492	129,328	
<i>Of which Dalkia ⁽²⁾</i>	Number	14,207	13,056	15,964	
United Kingdom	Number	15,727	16,190	16,178	
Italy	Number	4,955	5,175	5,210	
Rest of Europe	Number	5,207	6,114	7,503	
Rest of the world	Number	165	1,496	1,521	
Managers	Number	44,539	42,327	40,355	LA1
Women at managerial level	%	28.65	25.7	25.0	LA13
Non-management employees	Number	113,622	116,140	119,385	LA13
Gender equality					
Male workforce *	Number	116,582	116,928	118,512	LA13
Female workforce *	Number	41,579	41,539	41,228	LA13
Male managers	Number	32,626	31,468	30,286	LA13
Female managers	Number	11,913	10,859	10,069	LA13
Hires/departures					
Hires	Number	10,385	10,945	12,577	LA2
Other arrivals ⁽¹⁾	Number	6,628	8,027	7,499	LA2
Retirement departures/inactive employees	Number	4,665	4,321	4,185	LA2
Resignations ⁽³⁾	Number	1,727	1,768	2,355	LA2
Redundancies, dismissals, people made inactive	Number	815	824	1,739	LA2
Other departures ⁽¹⁾	Number	7,963	8,424	9,304	LA2
Compensation					
Total gross compensation	€ million	Note RG 10.1	7,494	7,400	
Part-time employees	Number	11,977	12,943	14,690	LA1
Absenteeism					
Average number of days lost through illness and accidents	Number	9.1	8.8	9.0	
Health and safety conditions					
Fatal accidents	Number	4	4	14	LA7
Frequency rate		3.1	3.1	3.8	LA7
Workplace accidents involving at least one lost day	Number	694	750	921	LA7
Severity rate		0.17	0.16	0.16	
Employee relations					
Employees covered by collective bargaining agreements	%	91	89	88	LA4
Training					
Hours of training provided	Number	8,915,338	8,636,882	7,631,618	
Number of employees benefiting from training	Number	135,040	134,910	131,311	LA10
Employment and integration of employees with disabilities					
Number of employees with disabilities ⁽⁴⁾	Number	5,086	4,645	4,519	LA13

(1) Entries and exits from scope are accounted for under "Other arrivals" and "Other departures" respectively.

(2) Dalkia International for 2012 and 2013.

Dalkia France and Citelum for 2014.

(3) Special contracts (including student-apprentice positions), regardless of the outcome and departures occurring in trial periods are included in "Other departures".

(4) These data are declarative at EDF Energy.

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EDF	Unit	2014	2013	2012	Ref. GRI
Workforce at 31 December 2013 & breakdown					
Employees covered by collective bargaining agreements (at 31 December 2013)	Number	67,567	66,561	64,838	LA1
Employees under unlimited-term contracts (CDI) not covered by collective bargaining agreement	Number	461	434	433	LA1
Employees under fixed-term contracts (CDD) not covered by collective bargaining agreement	Number	4,153	4,094	3,851	LA1
Total not covered by collective bargaining agreements	Number	4,614	4,528	4,284	LA1
Total workforce	Number	72,181	71,088	69,122	LA1
<i>Managers</i>	<i>Number</i>	<i>30,701</i>	<i>29,595</i>	<i>28,230</i>	<i>LA1</i>
Women at managerial level	%	27.8	26.8	26.0	LA13
<i>Non-management employees</i>	<i>Number</i>	<i>41,480</i>	<i>41,493</i>	<i>40,892</i>	<i>LA13</i>
Technicians and supervisory staff	Number	33,531	33,410	33,084	LA13
Operatives	Number	7,949	8,084	7,808	LA13
Gender equality					
Male workforce	Number	49,524	48,991	47,852	LA13
Female workforce	Number	22,657	22,097	21,270	LA13
Male managers	Number	22,175	21,650	20,884	LA13
Female managers	Number	8,526	7,945	7,346	LA13
Hires/departures					
Hires	Number	4,236	4,433	4,452	LA2
Integration & rehiring	Number	230	249	261	LA2
Other arrivals ⁽¹⁾	Number	3,022	3,598	3,194	LA2
Retirement departures/inactive employees	Number	2,499	2,134	2,061	LA2
Resignations	Number	107	109	114	LA2
Redundancies – dismissals – people made inactive	Number	9	16	6	LA2
Deaths	Number	68	81	82	LA2
Other departures ⁽¹⁾	Number	3,713	3,725	3,709	LA2
Overtime					
Overtime worked hours	Thousands	2,770	2,847	2,831	
Outside contractors					
Monthly average of temporary employees ⁽²⁾	Number	n/a	1,948	1,837	LA1
Organization of working hours					
Full-time employees	Number	64,534	62,990	60,612	LA1
Part-time employees	Number	7,647	8,098	8,510	LA1
Employees working shifts	Number	6,955	6,917	6,882	LA1
Absenteeism					
Absenteeism	%	3.7	3.8	3.8	LA7
Hours of maternity or paternity leave/hours worked	%	0.8	0.8	0.7	LA7

n/a: not available

(1) Excluding arrivals and departures on seasonal short-term contracts

(2) The 2014 figure is not available at the time of publication.

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EDF	Unit	2014	2013	2012	Ref. GRI
Health and safety conditions					
Work-related illnesses reported in the year to Social Security		51	53	13	
Fatal accidents	Number	2	0	6	LA7
Frequency rate		2.8	2.7	3.4	LA7
Severity rate		0.14	0.14	0.15	LA7
Workplace accidents involving at least one lost day	Number	284	273	333	LA7
Compensation/social security payments/profit-sharing					
Main monthly compensation					
Managers	euros	4,334	4,327	4,308	EC 1
Technicians and supervisory staff	euros	2,608	2,615	2,612	EC 1
Operatives	euros	1,864	1,870	1,877	EC 1
Personnel expenses	€ million	6,408	6,366	6,113	EC 1
Average amount of profit-sharing per employee	euros	1,980	1,820	1,820	EC 1
Employee relations					
Collective bargaining agreements signed in France	Number	3	8	8	HR5
Employees covered by collective bargaining agreements ⁽³⁾	%	93	93	94	LA4
Training					
Employees benefiting from training	Number	63,252	62,074	58,899	LA10
Employment and integration of employees with disabilities					
Employees with disabilities	Number	2,093	1,946	1,842	LA13
Number of employees hired with disabilities	Number	112	110	124	LA13
Charitable works					
Committee budgets (fulfilling 1% requirement)	€ million	199	205	196	

(3) EDF employees are not covered by a legally-defined collective agreement but benefit from the status of the electricity and gas industry.

17.4.4 Assurance report of one of the Statutory Auditors

Report of one of the Statutory Auditors, appointed as independent third-party, on the consolidated social, environmental and societal information published in the management report included in the Reference Document.

This is a free translation into English of the original report issued in French and is provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

Year ended 31 December 2014

To the Shareholders,

In our capacity as Statutory Auditor of Électricité de France SA, and appointed as independent third-party, for whom the certification request has been approved by the French National Accreditation Body (COFRAC) under the number 3-1048¹, we hereby present you with our report on the social, environmental and societal information prepared for the year ended 31 December 2014 (hereinafter the “CSR Information”), presented in the management report included in section 17 of the “Reference Document” pursuant to Article L.225-102-1 of the French Commercial Code (*Code de commerce*).

Responsibility of the Company

The Board of Directors of Électricité de France SA is responsible for preparing a management report including CSR Information in accordance with the provisions of Article R. 225-105-1 of the French Commercial Code, prepared in accordance with the reporting protocols and guidelines used by Électricité de France SA (hereafter the “Reporting Guidelines”), for which a summary is presented in the management report included in the “Reference Document” in the section entitled “Methodological elements on the social and environmental data”.

Independence and quality control

Our independence is defined by regulatory texts, the profession’s Code of Ethics as well as by the provisions set forth in Article L. 822-11 of the French Commercial Code. Furthermore, we have set up a quality control system that includes the documented policies and procedures designed to ensure compliance with rules of ethics, professional auditing standards and the applicable legal texts and regulations.

Responsibility of the Statutory Auditor

Based on our work, our responsibility is:

- to attest that the required CSR Information is presented in the management report or, in the event of omission, is explained pursuant to the third paragraph of Article R. 225-105 of the French Commercial Code (Attestation of completeness of CSR information);
- to express limited assurance on the fact that, taken as a whole, CSR Information is presented fairly, in all material aspects, in accordance with the adopted Reporting Guidelines (Formed opinion on the fair presentation of CSR Information);
- to express, at the Company’s request, a reasonable assurance on the fact that the information selected by the company and identified by the sign * in chapter 17 of the Reference Document was prepared, in all material respects, in accordance with the Reporting Guidelines.

Our work was carried out by a team of fourteen people between October 2014 and February 2015 for an estimated duration of fifteen weeks. To assist us in conducting our work, we referred to our corporate responsibility experts.

We conducted the following procedures in accordance with professional auditing standards applicable in France, with the order of 13 May 2013

determining the methodology according to which the independent third party entity conducts its assignment and, concerning the formed opinion on the fair presentation of CSR Information and the reasonable assurance report, with the international standard ISAE 3000².

1. Attestation of completeness of CSR Information

Based on interviews with management, we familiarized ourselves with the Company’s sustainable development strategy, with regard to the social and environmental impacts of the Company’s business and its societal commitments and, where appropriate, any resulting actions or programs.

We compared the CSR Information presented in the management report included in the “Reference Document” with the list set forth in Article R. 225-105-1 of the French Commercial Code.

In the event of omission of certain consolidated information, we verified that explanations were provided in accordance with the third paragraph of the Article R. 225-105 of the French Commercial Code.

We verified that the CSR Information covered the consolidated scope, i.e., the Company and its subsidiaries within the meaning of Article L. 233-1 of the French Commercial Code and the companies that it controls within the meaning of Article L. 233-3 of the French Commercial Code, subject to the limitations presented in the methodological note on methods in section 17.4.5 of the “Reference Document”.

Based on these procedures and considering the limitations mentioned above, we attest that the required CSR information is presented in the management report included in the “Reference Document”.

2. Formed opinion on the fair presentation of CSR Information

Nature and scope of procedures

We conducted around hundred interviews with the people responsible for preparing the CSR Information in the departments in charge of data collection process and, when appropriate, those responsible for internal control and risk management procedures, in order to:

- assess the suitability of the Reporting Guidelines with respect to their relevance, completeness, reliability, neutrality and understandability, taking into consideration, when relevant, the sector’s best practices;
- verify that a data-collection, compilation, processing and control procedure has been implemented to ensure the completeness and consistency of the CSR Information and review the internal control and risk management procedures used to prepare the CSR Information.

We determined the nature and scope of the tests and controls according to the nature and significance of the CSR Information with regard to the company’s characteristics, the social and environmental challenges of its activities, its sustainable development strategies and the sector’s best practices.

1. The scope of which is available on the website www.cofrac.fr.

2. ISAE 3000 – Assurance engagements other than audits or reviews of historical financial information.

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Concerning the CSR Information that we have considered to be most important¹:

- for the consolidating entity, we consulted the documentary sources and conducted interviews to corroborate the qualitative information (organization, policies, actions), we performed analytical procedures on the quantitative information and verified, using sampling techniques, the calculations and the data consolidation, and we verified their consistency with the other information presented in the management report;
- for a representative sample of entities that we have selected² according to their activity, their contribution to the consolidated indicators, their location and a risk analysis, we held interviews to verify the correct application of the procedures and performed substantive tests using sampling techniques, consisting in verifying the calculations made and reconciling the data with supporting evidence. The selected sample represented 69% of the headcount and between 17% and 100% of the environmental quantitative information.

Regarding the other consolidated CSR information, we have assessed its consistency in relation to our understanding of the Company.

Lastly, we assessed the relevance of the explanations relating to, where necessary, the total or partial omission of certain information.

We believe that the sampling methods and sizes of the samples we have used in exercising our professional judgment enable us to express limited assurance; a higher level of assurance would have required more in-depth verifications. Due to the use of sampling techniques and the other limits inherent to the operations of any information and internal control system, the risk that a material anomaly be identified in the CSR Information cannot be totally eliminated.

Conclusion

Based on our work, we did not identify any material anomaly likely to call into question the fact that the CSR Information, taken as a whole, is presented fairly, in accordance with the Reporting Guidelines.

3. Reasonable assurance report on a selection of CSR information

Nature and scope of our procedures

For the information selected by the Company³ and identified by the sign *, our procedures were of the same kind yet more intensive than those described in paragraph 2 above for the CSR information considered as the most significant, and in particular concerning the number of tests.

The selected sample therefore represented 69% of the workforce and 51% of the environmental information identified by the sign *.

We believe that these procedures enable us to express a reasonable assurance on the information selected by the company and identified by the sign *.

Conclusion

In our opinion, the information selected by the company and identified by the sign * has been prepared, in all material aspects, in accordance with the Reporting Guidelines.

Neuilly-sur-Seine, 18 March 2015

French original signed by one of the statutory auditors:

Deloitte & Associés

Patrick E. Suissa

Partner, Audit

Florence Didier-Noaro

Partner, Sustainability Services

1. Refer to Annex 1 to this report.

2. Refer to Annex 2 to this report.

3. Refer to the CSR information list under reasonable assurance in the Annex 1 of this report.

Annex 1 CSR information considered to be most important

Quantitative social data under reasonable assurance

- Total EDF group workforce at 31 December 2014
- Employee breakdown by age
- Male workforce
- Female workforce

Quantitative social data under limited assurance

- Male managers
- Female managers
- Women at managerial level
- Hires
- Other arrivals
- Retirement departures/inactive employees
- Resignations
- Redundancies, dismissals, people made inactive
- Other departures
- Absenteeism: Average number of days lost through illness and accidents
- Fatal accidents
- Accident frequency rate
- Workplace accidents involving at least one lost day
- Accident severity rate
- Hours of training provided
- Number of employees benefiting from training
- Number of employees with disabilities

Quantitative environmental data under reasonable assurance

- Total CO₂ emissions due to electricity and heat generation (including facilities not subject to quotas)

Quantitative environmental data under limited assurance

- Fuel and raw materials – fuel consumption:
 - Coal
- Water – raw materials consumed originating from sources outside the company:
 - Cooling water withdrawn
 - Cooling water withdrawn, of which freshwater
 - Cooling water returned
 - Cooling water returned, of which freshwater
- Air – gas emissions:
 - SO₂ emissions
 - NO_x emissions
 - Dust
 - SF₆ emissions

- Conventional waste:
 - Hazardous waste
 - Non-hazardous waste
 - Conventional industrial waste recycled or transported for recycling
 - Ash produced
- Energy:
 - Renewable energy: quantity of electricity and heat generated using renewable energy sources (excluding hydropower)
- Nuclear indicators – EDF:
 - Radioactive emissions to air – Carbon-14
 - Radioactive emissions to air – Tritium
 - Radioactive emissions to water – Carbon-14
 - Radioactive emissions to water – Tritium
 - Transported spent nuclear fuel
 - Decommissioning nuclear waste:
 - Very Low-Level radioactive Waste
 - Low and Intermediate-Level radioactive Waste
 - Nuclear waste from operations:
 - Very Low-Level solid radioactive Waste
 - Short-Lived Low- and Intermediate-Level solid radioactive Waste
 - Long-Lived High and Intermediate-Level solid radioactive Waste
- Nuclear indicators – EDF Energy:
 - Radioactive emissions to water – Tritium – AGR (Advanced Gas-cooled Reactor)
 - Radioactive emissions to water – Tritium – PWR (Pressurised Water Reactor)
 - Radioactive emissions to air – Carbon-14 – AGR
 - Radioactive emissions to air – Carbon-14 – PWR
 - Radioactive emissions to air – Tritium – AGR
 - Radioactive emissions to air – Tritium – PWR
 - Uranium sent off site
 - Transported Low-Level radioactive Waste
 - Generated Intermediate-Level radioactive Waste

Qualitative social information reviewed at Group level

- Paragraph “Guaranteeing better health & safety conditions at work”
- Paragraph “Skill development: preparing for the future”
- Paragraph “Awareness and training in sustainable development for managers and employees”
- Paragraph “Compensation and social welfare: an attractive employer”

Social and environmental performance and report of the Statutory Auditors, an independent third-party body, on the 2014 consolidated social, environmental and societal information

Qualitative environmental information reviewed at Group level

- Paragraph "Management and prevention of environmental risks"
- Paragraph "R&D for sustainable development"
- Paragraph "Investments in new forms of renewable energies"
- Paragraph "Research, future challenges for renewable energies"
- Paragraph "Adapting the Group's business to climate change"
- Paragraph "Sustainable cities and regions"
- Paragraph "Protection of biodiversity"
- Paragraph "Biodiversity partnerships"
- Paragraph "Impact on water"

Qualitative societal information reviewed at Group level

- Paragraph "Materiality matrix: prioritising issues"
- Paragraph "Governance" in the paragraph on "Managing sustainable development"
- Paragraph "Dialogue with stakeholders"
- Paragraph "Contributing to local economic and social development"
- Paragraph "A significant contribution to local development via occupational integration"
- Paragraph "Relations with suppliers and responsible purchasing"
- Paragraph "Responsible sub-contracting: a reality"
- Paragraph "Corruption prevention" within the paragraph "Ethics and transparency to stakeholders"

Annex 2 Selected entities

Selected entities for EDF

- Nantes HR agency
- Toulouse HR agency
- Guadeloupe HR agency
- Belleville Nuclear Electricity Generation Centre
- Golfech Nuclear Electricity Generation Centre
- Gravelines Nuclear Electricity Generation Centre
- Chinon A plant in decommissioning
- Vitry thermal power plant
- La Maxe thermal power plant
- Cordemais thermal power plant
- Jarry Nord thermal power plant
- Hydroelectric Engineering and Production Division (DPIH)
- Nuclear Production division – Exploitation engineering unit (DPN - UNIE)
- Nuclear Fuel division (DCN)
- Nuclear Production division – operational technical unit (DPN - UTO)
- Nuclear Engineering division – Decommissioning engineering and environment center (DIN - CIDEN)

Selected entities for ERDF

- Operational Training Unit
- Auvergne electricity network unit
- Bretagne electricity network unit
- Normandie electricity network unit
- Agence Manche - Mer du Nord

Selected entity for EDF Polska

- ERSa site

Selected entities for EDF Energy

- Combined Cycle Gas Turbine of West Burton
- Coal fired power plant of West Burton
- Nuclear power plant of Torness
- Nuclear power plant of Hunterston B
- HR center of Crawley

Selected entity for TIRU

- TIRU Canada

Selected entities for EDF Energies Nouvelles

- EDF Renewable Energy
- Bioenergia

Selected entities for Dalkia

- Évry site
- Enerlis site

Social and environmental performance and report of the Statutory Auditors, an independent third-party body, on the 2014 consolidated social, environmental and societal information

17.4.5 Methodological elements on the social and environmental data

17.4.5.1 Reporting scope

Principles

The scope covered by the reporting process (economic, environmental and social indicators) includes the entire EDF group as defined by the financial consolidation. More precisely, this scope includes EDF and the comprehensively integrated subsidiaries (integration of 100% of the value of the social and environmental indicators). Subsidiaries accounted for using the equity method are excluded from the field of collection.

The scope covered by the reporting procedure is defined on the basis of:

- the consolidation scope established by the Financial Department;
- the criteria linked to relevance of the subsidiaries' activities in terms of environmental and social impact.

For the environmental data, some subsidiaries included in the financial scope may not appear in the sustainable development scope due to their activity or their small size with respect to the environmental challenges. The selection criteria are the following:

- industrial activities (production, distribution and transport) significant in terms of environmental impacts;
- entities acquired for more than one year;
- entities still present in the scope of consolidation at 31 December 2014.

For the social data, the selection criteria are the following:

- companies whose workforce is significant in terms of human resources (greater than 50);
- companies acquired for more than six months (except for China Holding exceptionally integrated in 2014 whose workforce at 31 December 2014 included 120 employees).

For 2014, differences between the reporting scopes of social and environmental indicators are the following:

- subsidiaries taken into account in the reporting of environmental indicators and not by the reporting of social indicators: EDF Belgium (Belgium), Figlec (China);
- subsidiaries taken into account in the reporting of social indicators and not by the reporting of environmental indicators: CHAM and Citelum (France), EDF Optima Solutions (France), EDF Paliwa (Poland).

For 2013, the differences between the scopes of reporting of social and environmental indicators are the following:

- subsidiaries included in the reporting of environmental indicators and not in the reporting of social indicators: Dalkia Investissement (France), EDF Belgium (Belgium), Figlec (China) Sloe Centrale (Netherlands);
- subsidiaries taken into account in the reporting of social indicators and not in the reporting of environmental indicators: CHAM (France), EDF Optima Solutions (France), EDF Paliwa (Poland).

Taking into consideration any collection difficulties, the reporting scope may vary depending on the indicators. This is specified for each indicator provided in the summary table.

Changes in scopes

The main changes in the 2014 scope are the following:

- exclusion of the companies Sloe Centrale, Estag, CENG, accounted for using the equity method pursuant to IFRS 11;
- inclusion of Dalkia in France (100%), starting from 1 January 2014 for environmental data and starting from 1 July for the social data;
- deconsolidation of Dalkia International and Dalkia Investissement.

The main changes in the 2013 scope are the following:

- deconsolidation of SSE;
- inclusion of EDF Trading and EDF PEI in the environmental reporting;
- inclusion of Dalkia International for the whole year 2013 (close of financial statements at 28 October 2013).

Social and environmental performance and report of the Statutory Auditors, an independent third-party body, on the 2014 consolidated social, environmental and societal information

Entities present in the consolidation scope at 31 December 2014:

		Scope of environmental indicators	Scope of social indicators
France	Électricité de France	X	X
	ERDF	X	X
	EDF PEI	X	X
Other activities	Électricité de Strasbourg	X	X
	TIRU	X	X
	Socodei	X	X
	EDF Énergies Nouvelles	X	X
	Dalkia	X	X
	Citelum		X
	EDF Trading	X	X
	CHAM		X
	EDF Optimal Solutions		X
United Kingdom	EDF Energy	X	X
Italy	Edison	X	X
	Fenice	X	X
Other International	EDF Luminus (Belgium)	X	X
	EDF Belgium (Belgium)	X	
	EDF Polska (Poland)	X	X
	Kogeneracja (Poland)	X	X
	Zielona Gorá (Poland)	X	X
	EDF Paliwa (Poland)		X
	EDF Démász (Hungary)	X	X
	BE ZRt (Hungary)	X	X
	EDF Norte Fluminense (Brazil)	X	X
	Figlec (China)	X	
	Meco (Vietnam)	X	X

Restatement of historical data

To facilitate the analysis of differences between 2013 and 2014, the 2013 environmental data are published as proforma data, using the following method:

- exclusion of 2014 companies accounted for using the equity method pursuant to IFRS 11;
- exclusion of 2013 Dalkia International and Dalkia Investissement data;
- 100% inclusion of the 2013 Dalkia France data.

17.4.5.2 Further details on the environmental data

The environmental data in this report are based on descriptive and methodological sheets. This is the Group's standard for reporting in force in 2014. All of the indicators relating to consumption and to emissions are linked to the electricity and heat generation data and to hydrocarbon activities.

Further details on the indicators relating to water withdrawn and water returned

Indicators on cooling water include water withdrawn and water returned to rivers, the sea and water tables. For nuclear power electricity plants located on coastlines and for thermal power plants, the amounts of cooling water withdrawn and water returned are calculated on the basis of the operating time and nominal debit of pumps.

This indicator is not collected by EDF RE, a subsidiary of EDF Énergies Nouvelles in the United States and some EDF Fenice sites.

Further details on air emissions

CO₂, SO₂, N₂O, NO_x and CH₄ emissions from thermal power plants of the EDF group are measured or calculated on the basis of analyses of the fuels or based on standard emissions factors. They cover all phases of electricity generation, including the phases of starting and shutting down units. The CO₂ and CH₄ from dams are not included in the calculation of the indicator.

The Group's SF₆ emissions are calculated, in priority on the basis of a mass balance of the bottles of SF₆ or otherwise by a rate of a maximum annual nominal leakage equal to 2% of the volume of SF₆ contained in the equipment.

MECO does not collect all of its atmospheric emissions, and they are without impact at Group scale.

Further details on conventional waste

The conventional waste data were obtained on the basis of data available on the closing date for the quantities removed and the disposal channels. The reported data do not include:

- all of the conventional industrial waste of Dalkia and EDF Énergies Nouvelles and of certain operating sites of EDF Fenice;
- the share of quantities of recycled conventional industrial waste in the Polish subsidiaries and of the Asia-Pacific region.

The wastes from construction and decommissioning sites are taken into account in this report when they are managed by the EDF group.

On the other hand, wastes managed by service providers are not accounted for. In the case of construction, for example, construction site waste is generally the responsibility of the contractor (shipping packaging, product drops, paint cans, etc.).

Concerning ERDF, reporting on waste is carried out from year to year, from 1 November N-1 to 31 October N. Wood posts are now included in reporting. Concrete posts are excluded since the current organisation of the report does not allow adequate tracking. An action plan is in progress to strengthen the exhaustiveness of data collection.

Further details on nuclear waste

Concerning EDF

Indicators relating to “Very Low-Level radioactive Waste from decommissioning” and to “Very Low-Level waste from operations” include:

- the real volume of waste sent directly to the Cires industrial centre for consolidation, temporary storage and storage;
- the volume of waste sent to the Centraco melting unit weighted by an estimated ratio, calculated annually on the basis of feedback from Socodei over several years, to obtain the portion of VLL waste finally sent to the Cires.

Since the shutdown of the melting plant in 2011, however, only waste directly sent to the Cires is reported.

The Short-Lived Low- and Intermediate-Level waste (Low- and Intermediate-Level Waste from decommissioning and Low- and Intermediate-Level Waste from operations) are the volumes of waste eventually stored at the Aube centre (after any processing, compacting of barrels, incineration, melting, etc.). The volume of waste created by reprocessing of waste produced and packaged during prior exercises has not been included.

The indicator “Short-Lived Low- and Intermediate-Level solid Waste from operations” does not include the waste during exceptional maintenance (vessel lids, steam generators).

For the indicator “Long-Lived High- and Intermediate-Level solid radioactive Waste”, the packaging of the waste is taken into account in the calculation.

Taking into consideration the technical constraints linked to processing operations, the packages are produced approximately 10 years after the fuel has effectively generated waste. The indicator is thus an estimate that relies on the long existence of current practices of packaging of Long-Lived waste that projects the current packaging ratio into the near future (number of packages effectively created following the processing of one tonne of fuel). This ratio essentially depends on the mixtures used to optimise the operations and is a combination:

- for waste coming directly from spent fuel: of factors coming from the national inventory of radioactive materials and waste created by the national agency for the management of radioactive waste (ANDRA);
- for waste not coming directly from fuel (control clusters, etc.) for which an average life time of 10 years is assumed: on the basis of feedback.

Concerning EDF Energy

The data relating to the indicator “Intermediate-Level radioactive Waste” of nuclear activities of EDF Energy, are founded on the inventory of radioactive waste produced during the year, established by the Nuclear Decommissioning Authority. This is an estimate of the annual volume of waste that will be considered and classified as Intermediate-Level radioactive Waste at the end-of-life of the nuclear generation sites. These estimates include packaging necessary to allow the transport of wastes off site. All of the Intermediate-Level radioactive Waste is temporarily stored at the nuclear generation sites while waiting for a national decision on their final processing.

“Low-Level radioactive Waste” include desiccants that are sent for processing in the form of Intermediate-Level Waste in compliance with applicable regulations.

Further details on operational releases

EDF operational releases into air and water are subject to on-going measures. The published data correspond to:

- measured data for tritium, for the period from December N-1 to November N;
- calculated data from generation, for Carbon-14, for the period from December N-1 to November N.

Further details on the quantity of electricity and heat generated from renewable energies

For Dalkia, the shares of electricity and heat generated from renewable energies are estimated on a prorated basis from the quantities of electricity and heat generated.

Further details on environmental expenditure

Expenditure for environmental protection is based on the expenditure reported by different entities of EDF.

The definition adopted for expenditure for environmental protection is based on the recommendations made by the French National Accounting Council (*Conseil national de la comptabilité*) on 21 October 2003 (itself based on the European recommendation of 30 May 2001). Environmental expenditure is the additional identifiable expenditure aimed at preventing, reducing or repairing any environmental damage effectively or potentially caused by the company's activities.

These costs are linked, for example, to:

- the elimination of waste and efforts to reduce its quantity;
- the fight against ground pollution, as well as surface water and underground water;
- the preservation of the quality of the air and the climate;
- the reduction of noise emissions;
- the protection of biodiversity and the natural landscape;
- the decommissioning of plants.

The assessment covers the costs, excluding taxes, broken down into the following three main categories:

- operating expenditure (including studies related to operating costs), excluding the expenditure that had previously been provisioned;
- investment expenditure (including the related studies);
- provisions, including discount expenses.

17.4.5.3 Further details on the social data

Since 2011, the population considered in data collection is all employees who have a non-suspended employment contract with one of the Group's companies.

Further details on calculating the workforce and movements

The workforce includes employees shared between EDF and GDF Suez. An employee working 50% for EDF is counted for 0.5 in the published workforce.

Changes in the scope of consolidated entities are not completely taken into account in the arrivals/departures by the subsidiaries of the Group, which is the main reason for the difference between the 2014 reported workforce and the workforce recalculated from the 2013 workforce and the arrivals/departures.

The indicators "Other arrivals" and "Other departures" include:

- movements between companies of the Group;
- movements of workers in the electricity and gas industry, in compliance with industry-based agreement (IEG status);
- movements of certain categories of employees, in particular those with rotating shifts, doctors and personnel made available by outside entities.

These movements are thus not recognised in hires, resignations or redundancies.

The indicator "Other arrivals" published in 2013, includes the workers from the Polish subsidiaries that were merged during the year, in EDF Polska.

Further details on calculating absenteeism

In its calculation of absenteeism, EDF includes absences for the following reasons: absences due to sickness, work and travel-related injuries as well as absences due to other reasons such as unpaid leave and unjustified absences. Absences related to company and union activities, pre-retirement leave and maternity absences are not included. The number of hours worked used in the calculation of the absenteeism rate is the number of hours theoretically worked.

At the Group level, the "average number of absences" is the sum of absences due to sickness, counted in days worked in proportion to time worked by employees and absences due to work-related accidents, counted in calendar days.

In 2014, the number of days of absence is compared to the physical workforce at 31 December 2014 for all subsidiaries except Dalkia and Citelum, present six months in 2014, for which the average paid workforce was used.

Further details on the accident indicators

For EDF and ERDF, the data related to the number of accidents occurring over the year and the number of lost work days due to work-related accidents are extracted from the human resources information system tool (Sprint) or otherwise by the safety information system (Ariane Web). In the case of a difference reported in the number of accidents or the number of lost work days recognised under Sprint and under Ariane Web, the rule followed by the Group is to use the most penalising data of the two systems.

The frequency rate does not include the accidents occurring in transit between home and work. Road accidents may be taken into account when local laws consider them as work-related accidents. The number of fatal accidents takes into account work-related accidents and employee transit accidents. It does not include fatal accidents of subcontractors.

Further details on the training indicators

The trainings for which supporting documentation are not received on the date of closure of the report are not taken into account.

The training data on professionalisation contracts are not systematically taken into account.

Further details on the indicators on tracking employees with disabilities

In countries in which regulations do not impose any mandatory declaration of the number of employees with disabilities, the reported data is provided on the basis of voluntary statements of employees.



18 Major Shareholders

18.1 Breakdown of share capital and voting rights

During the last three fiscal years, the breakdown of EDF's share capital as of 31 December was as follows:

	Position as of 31/12/2014			Position as of 31/12/2013			Position as of 31/12/2012		
	Number of shares	% of share capital	% voting rights	Number of shares	% of share capital	% voting rights	Number of shares	% of share capital	% voting rights
French State	1,571,433,448	84.49	84.56	1,571,433,448	84.49	84.56	1,561,222,705	84.44	84.54
Institutions and individuals	254,927,584	13.70	13.72	253,337,995	13.62	13.64	251,350,774	13.59	13.61
Employee	31,965,255 ⁽¹⁾	1.72	1.72	33,493,009 ⁽²⁾	1.80	1.80	34,131,850 ⁽³⁾	1.85	1.85
Treasury shares	1,682,181	0.09	–	1,744,016	0.09	–	2,161,333	0.12	–
TOTAL	1,860,008,468	100.00	100.00	1,860,008,468	100.00	100.00	1,848,866,662	100.00	100.00

(1) This figure includes 27,443,950 shares (representing 1.48% of capital) on the basis of the definition of employee share ownership as defined by Article L. 225-102 of the French Commercial Code (including shares owned by EDF's current and former employees through the "Actions EDF" FCPE of the EDF group savings plan and EDF International group savings plan). This figure also includes 4.5 million shares representing 0.24% of the capital held in direct registered form or administered, without a lock-in period or after lock-in periods, by current employee shareholders and former employees.

(2) This figure includes 28,430,375 shares (representing 1.53% of capital) on the basis of the definition of employee share ownership as defined by Article L. 225-102 of the French Commercial Code (including shares owned by EDF's current and former employees through the "Actions EDF" FCPE of the EDF group savings plan and EDF International group savings plan). This figure also includes 5.1 million shares representing 0.27% of the capital held in direct registered form or administered, without a lock-in period or after lock-in periods, by current employee shareholders and former employees.

(3) This figure includes 29,042,964 shares (representing 1.57% of capital) on the basis of the definition of employee share ownership as defined by Article L. 225-102 of the French Commercial Code (including shares owned by EDF's current and former employees through the "Actions EDF" FCPE of the EDF group savings plan and EDF International group savings plan). This figure also includes 5.1 million shares representing 0.28% of the capital held in direct registered form or administered, without a lock-in period or after lock-in periods, by current employee shareholders and former employees.

To EDF's knowledge, no shareholder other than the French State holds directly or indirectly more than 5% of a capital and voting rights.

The Company has completed a study on the identifiable holders of bearer shares as of 31 December 2014, which has been used to analyse the distribution of the share capital and its breakdown by geographical area. The table, below, shows this repartition at 31 December 2014 and at 31 December 2013:

	31 December 2014		31 December 2013	
	Number of shares held	% of capital	Number of shares held	% of capital
French government	1,571,433,448	84.49	1,571,433,448	84.49
Institutional investors Europe excluding France	70,207,583	3.77	78,132,604	4.20
Institutional investors rest of the world	75,741,836	4.07	67,789,555	3.64
Institutional investors France	56,328,678	3.03	54,033,528	2.91
Retail investors	52,649,487	2.83	53,382,308	2.87
Employee shareholding	31,965,255	1.72	33,493,009	1.80
Treasury shares	1,682,181	0.09	1,744,016	0.09
TOTAL	1,860,008,468	100.00	1,860,008,468	100.00

18.2 Agreements which could lead to a change of control

To EDF's knowledge, there is no agreement which could subsequently lead to a change of control.

In accordance with Article L. 111-67 of the French Energy Code, the French State cannot hold less than 70% in EDF.



19

Related party transactions

In addition to the information set out below, the details of the transactions concluded by the Company with related parties, as defined by the IFRS, in respect of the 2014 financial year, are contained in notes 23 and 48 to the consolidated financial statements for the financial year ended 31 December 2014.

The information on the regulated agreements and commitments referred to in Article L. 225-38 of the French Commercial Code is contained in the Statutory Auditors' special report, which is reproduced in Appendix C to this Reference Document.

Relations with the French State

As of 31 December 2014, the French State held 84.49% of the share capital and 84.56% of the voting rights in EDF. Pursuant to the Article L. 111-67 of the French Energy Code, the state must remain the owner of at least 70% of its capital. The French State thus has the option, as the majority shareholder, of reviewing corporate decisions that require the approval of the shareholders and, in particular, of determining the result of the shareholders' vote for all issues over which General Meetings have authority.

The regulations applicable to EDF, as a result of its majority ownership by the French State, are described in section 6.5 ("Legislative and regulatory environment").

The relations with the French State are also described in note 48 to the consolidated financial statements for the financial year ended 31 December 2014.

Relations with GDF Suez

The missions of the common service shared by the two subsidiaries of the EDF and Gaz de France groups, which are respectively in charge of the distribution of electricity and gas, ERDF et GrDF, as defined by article L. 111-71 of the French Energy code, are in the electricity and gas distribution

sector: construction of structures, project management work, operation and maintenance of networks, and counting operations. It does not have legal personality. The organisational and functional rules are described in section 6.2.2.2.4 ("Service shared by ERDF and GrDF").

Relations with public sector companies

Relations with public sector companies mainly concern the AREVA group. Transactions with AREVA concern upstream of the nuclear fuel cycle, the end of the cycle and the maintenance of plants and equipment purchase. These relations are primarily described in sections 4.3 ("Dependency factors"), 6.2.1.1.3.4 ("The nuclear fuel cycle and related issues"), 6.2.1.1.3.5

("Preparing for the future of the nuclear fleet in France" – "Operating life of the EDF's PWR fleet" and "Progress report on the Flamanville EPR (European Pressurized water Reactor) project"), 6.2.1.1.3.6 ("Decommissioning of nuclear power plants") and in note 48 to the consolidated financial statements for the financial year ended 31 December 2014.

20

Financial information concerning the net worth, financial position and performance of the issuer



EDF – Georges Blonski ▲ Marc Didier ▼



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20.1 Historical financial information

Pursuant to article 28 of the European Commission Regulation no. 809/2004, the following information is included by reference in this Reference Document:

- the consolidated financial statements of the EDF group for the year ended 31 December 2013 (prepared in accordance with international accounting standards), as well as the associated Statutory Auditors' reports, set forth respectively in chapter 20, section 20.1 (pages 281 to 386) and section 20.2 (pages 387 and 388) of the EDF group's 2013 Reference Document;
- the consolidated financial statements of the EDF group for the year ended 31 December 2012 (prepared in accordance with international accounting standards), as well as the associated Statutory Auditors' reports, set forth respectively in chapter 20, section 20.1 (pages 267 to 365) and section 20.2 (pages 366 and 367) of the EDF group's 2012 Reference Document.

The consolidated financial statements at 31 December 2014, established under IAS-IFRS standards, are set forth below. These financial statements will be submitted for approval by the Shareholders' Meeting of 19 May 2015.

Consolidated financial statements at 31 December 2014

Consolidated income statements

<i>(in millions of Euros)</i>	Notes	2014	2013 ⁽¹⁾
Sales	7	72,874	71,916
Fuel and energy purchases	8	(36,704)	(38,116)
Other external expenses	9	(9,181)	(8,287)
Personnel expenses	10	(11,785)	(11,291)
Taxes other than income taxes	11	(3,593)	(3,481)
Other operating income and expenses	12	5,668	5,358
Operating profit before depreciation and amortisation		17,279	16,099
Net changes in fair value on Energy and Commodity derivatives, excluding trading activities		203	14
Net depreciation and amortisation		(7,940)	(7,154)
Net increases in provisions for renewal of property, plant and equipment operated under concessions		(157)	(227)
(Impairment)/reversals	13	(1,189)	(617)
Other income and expenses	14	(212)	219
Operating profit		7,984	8,334
Cost of gross financial indebtedness	15.1	(2,243)	(2,262)
Discount effect	15.2	(2,996)	(2,931)
Other financial income and expenses	15.3	2,688	2,251
Financial result	15	(2,551)	(2,942)
Income before taxes of consolidated companies		5,433	5,392
Income taxes	16	(1,839)	(1,896)
Share in net income of associates and joint ventures	23	179	262
GROUP NET INCOME		3,773	3,758
EDF net income		3,701	3,517
Net income attributable to non-controlling interests		72	241
Earnings per share (EDF share) in Euros:	17		
Earnings per share		1.78	1.84
Diluted earnings per share		1.78	1.84

(1) Figures for 2013 have been restated for the impact of retrospective application of IFRS 10 and IFRS 11 (see note 2).

Statements of net income and gains and losses recorded directly in equity

	2014			2013 ⁽¹⁾		
	EDF net income	Net income attributable to non-controlling interests	Total	EDF net income	Net income attributable to non-controlling interests	Total
<i>(in millions of Euros)</i>						
Group net income	3,701	72	3,773	3,517	241	3,758
Gross change in fair value of available-for-sale financial assets ⁽²⁾	535	–	535	656	–	656
Related tax effect	(160)	–	(160)	(228)	–	(228)
Associates' and joint ventures' share of fair value of available-for-sale financial assets	3	–	3	87	–	87
Change in fair value of available-for-sale financial assets	378	–	378	515	–	515
Gross change in fair value of hedging instruments ⁽²⁾	(1,984)	(19)	(2,003)	810	4	814
Related tax effect	427	5	432	(197)	–	(197)
Associates' and joint ventures' share of fair value of hedging instruments	(27)	–	(27)	43	–	43
Change in fair value of hedging instruments	(1,584)	(14)	(1,598)	656	4	660
Translation adjustments – controlled entities	1,395	187	1,582	(548)	(78)	(626)
Translation adjustments – associates and joint ventures	482	–	482	(198)	–	(198)
Translation adjustments	1,877	187	2,064	(746)	(78)	(824)
Gains and losses recorded directly in equity that will be reclassified subsequently to profit or loss	671	173	844	425	(74)	351
Gross change in actuarial gains and losses on post-employment benefits	(4,629)	18	(4,611)	93	(17)	76
Related tax effect	245	(4)	241	(58)	3	(55)
Associates' and joint ventures' share of change in actuarial gains and losses on post-employment benefits	(177)	–	(177)	18	–	18
Actuarial gains and losses on post-employment benefits	(4,561)	14	(4,547)	53	(14)	39
Gains and losses recorded directly in equity that will not be reclassified subsequently to profit or loss	(4,561)	14	(4,547)	53	(14)	39
Total gains and losses recorded directly in equity	(3,890)	187	(3,703)	478	(88)	390
NET INCOME AND GAINS AND LOSSES RECORDED DIRECTLY IN EQUITY	(189)	259	70	3,995	153	4,148

(1) The figures published for 2013 have been restated for the impact of retrospective application of IFRS 10 and IFRS 11 (see note 2).

(2) Gross changes in fair value transferred to income in respect of available-for-sale financial assets and hedging instruments are presented in notes 36.2.2 and 41.4 respectively.

Consolidated balance sheets

ASSETS

(in millions of Euros)	Notes	31/12/14	31/12/13 ⁽¹⁾
Goodwill	18	9,694	9,081
Other intangible assets	19	8,884	7,860
Property, plant and equipment operated under French public electricity distribution concessions	20	50,257	48,796
Property, plant and equipment operated under concessions for other activities	21	7,851	7,450
Property, plant and equipment used in generation and other tangible assets owned by the Group	22	69,392	64,561
Investments in associates and joint ventures	23	10,989	11,479
Non-current financial assets	36	33,485	29,611
Other non-current receivables	26	2,024	1,924
Deferred tax assets	16.3	2,626	2,171
Non-current assets		195,202	182,933
Inventories	24	14,747	14,204
Trade receivables	25	23,176	21,892
Current financial assets	36	20,752	17,847
Current tax assets		600	554
Other current receivables	26	8,793	7,239
Cash and cash equivalents	37	4,701	5,096
Current assets		72,769	66,832
Assets classified as held for sale	46	18	1,154
TOTAL ASSETS		267,989	250,919

(1) The figures published for 2013 have been restated for the impact of retrospective application of IFRS 10 and IFRS 11 and the revised current/non-current classification for other liabilities and other receivables (see note 2).

EQUITY AND LIABILITIES

<i>(in millions of Euros)</i>	Notes	31/12/14	31/12/13 ⁽¹⁾
Capital	27	930	930
EDF net income and consolidated reserves		34,261	33,277
Equity (EDF share)		35,191	34,207
Equity (non-controlling interests)	27.5	5,419	4,998
Total equity	27	40,610	39,205
Provisions related to nuclear generation - Back-end of the nuclear cycle, plant decommissioning and last cores	29	42,398	40,427
Provisions for decommissioning of non-nuclear facilities	30	1,297	1,182
Provisions for employee benefits	31	23,060	18,381
Other provisions	32	1,841	1,480
Non-current provisions	28	68,596	61,470
Special French public electricity distribution concession liabilities	33	44,346	43,454
Non-current financial liabilities	38	47,274	41,413
Other non-current liabilities	35	4,956	5,001
Deferred tax liabilities	16.3	4,315	4,242
Non-current liabilities		169,487	155,580
Current provisions	28	5,254	4,834
Trade payables	34	14,864	14,157
Current financial liabilities	38	14,184	14,647
Current tax liabilities		441	1,340
Other current liabilities	35	23,149	21,156
Current liabilities		57,892	56,134
Liabilities related to assets classified as held for sale	46	–	–
TOTAL EQUITY AND LIABILITIES		267,989	250,919

(1) The figures published for 2013 have been restated for the impact of retrospective application of IFRS 10 and IFRS 11 and the revised current/non-current classification for other liabilities and other receivables (see note 2).

Consolidated cash flow statements

(in millions of Euros)	Notes	2014	2013 ⁽¹⁾
Operating activities:			
Income before taxes of consolidated companies		5,433	5,392
Impairment/(reversals)		1,189	617
Accumulated depreciation and amortisation, provisions and changes in fair value		8,981	9,245
Financial income and expenses		1,068	1,488
Dividends received from associates and joint ventures		672	369
Capital gains/losses		(1,311)	(880)
Change in working capital	43.1	(1,041)	(1,711)
Net cash flow from operations		14,991	14,520
Net financial expenses disbursed		(1,752)	(1,719)
Income taxes paid		(2,614)	(1,936)
Net cash flow from operating activities		10,625	10,865
Investing activities:			
Acquisitions/disposals of equity investments, net of cash (acquired/transferred)		1,308	749
Investments in intangible assets and property, plant and equipment	43.2	(13,721)	(13,042)
Net proceeds from sale of intangible assets and property, plant and equipment		314	229
Changes in financial assets		(294)	357
Net cash flow used in investing activities		(12,393)	(11,707)
Financing activities:			
Transactions with non-controlling interests ⁽²⁾		355	162
Dividends paid by parent company	27.3	(2,327)	(2,144)
Dividends paid to non-controlling interests		(229)	(301)
Purchases/sales of treasury shares		2	4
Cash flows with shareholders		(2,199)	(2,279)
Issuance of borrowings		6,894	5,158
Repayment of borrowings		(7,470)	(8,263)
Issuance of perpetual subordinated bonds	27.4	3,970	6,125
Payments to bearers of perpetual subordinated bonds	27.4	(388)	(103)
Funding contributions received for assets operated under concessions		177	171
Investment subsidies		239	87
Other cash flows from financing activities		3,422	3,175
Net cash flow from financing activities		1,223	896
Net increase/(decrease) in cash and cash equivalents		(545)	54
CASH AND CASH EQUIVALENTS - OPENING BALANCE		5,096	5,035
Net increase/(decrease) in cash and cash equivalents		(545)	54
Effect of currency fluctuations		113	14
Financial income on cash and cash equivalents		17	16
Effect of reclassifications		20	(23)
CASH AND CASH EQUIVALENTS - CLOSING BALANCE	37	4,701	5,096

(1) The figures published for 2013 have been restated for the impact of retrospective application of IFRS 10 and IFRS 11 (see note 2).

(2) Contributions via capital increases or reductions and acquisitions of additional interests in controlled companies.

Changes in consolidated equity

	Capital	Treasury shares	Translation adjustments	Impact of fair value adjustment of financial instruments ⁽²⁾	Other consolidated reserves and net income	Equity (EDF share)	Equity (non-controlling interests)	Total equity
<i>(in millions of Euros)</i>								
Equity at 31/12/2012	924	(33)	1,593	(1,109)	24,882	26,257	4,854	31,111
Restatements due to change of accounting method ⁽¹⁾	–	–	–	–	–	–	262	262
Equity at 31/12/2012 (restated) ⁽¹⁾	924	(33)	1,593	(1,109)	24,882	26,257	5,116	31,373
Gains and losses recorded directly in equity	–	–	(746)	1,171	53	478	(88)	390
Net income	–	–	–	–	3,517	3,517	241	3,758
Net income and gains and losses recorded directly in equity	–	–	(746)	1,171	3,570	3,995	153	4,148
Issuance of perpetual subordinated bonds	–	–	–	–	6,125	6,125	–	6,125
Payments on perpetual subordinated bonds	–	–	–	–	(103)	(103)	–	(103)
Dividends paid	–	–	–	–	(2,315)	(2,315)	(297)	(2,612)
Purchases/sales of treasury shares	–	(14)	–	–	–	(14)	–	(14)
Capital increase by EDF ⁽⁴⁾	6	–	–	–	165	171	–	171
Other changes	–	–	–	–	91	91	26	117
Equity at 31/12/2013 (restated) ⁽¹⁾	930	(47)	847	62	32,415	34,207	4,998	39,205
Gains and losses recorded directly in equity	–	–	1,877	(1,206)	(4,561)	(3,890)	187	(3,703)
Net income	–	–	–	–	3,701	3,701	72	3,773
Net income and gains and losses recorded directly in equity	–	–	1,877	(1,206)	(860)	(189)	259	70
Issuance of perpetual subordinated bonds ⁽³⁾	–	–	–	–	3,970	3,970	–	3,970
Payments on perpetual subordinated bonds	–	–	–	–	(388)	(388)	–	(388)
Dividends paid	–	–	–	–	(2,327)	(2,327)	(221)	(2,548)
Purchases/sales of treasury shares	–	6	–	–	–	6	–	6
Other changes	–	–	–	–	(88)	(88)	383	295
EQUITY AT 31/12/2014	930	(41)	2,724	(1,144)	32,722	35,191	5,419	40,610

(1) Figures at 31 December 2012 and 31 December 2013 have been restated for the impact of retrospective application of IFRS 10 and IFRS 11 (see note 2).

(2) These changes correspond to the effects of fair value adjustment of available-for-sale financial assets, amounts transferred to income following changes in their fair value, the effects of fair value adjustment of financial instruments hedging cash flows and net foreign investments, and amounts transferred to income in respect of terminated contracts. For details see the statement of net income and gains and losses recorded directly in equity.

(3) In January 2014 the Group issued perpetual subordinated bonds totalling €3,970 million net of transaction costs (see note 3.5).

(4) In 2013, the capital increase and issue premium, totalling €171 million, relate to the payment in shares of part of the balance of 2012 dividends.

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Notes to the consolidated financial statements

Électricité de France (EDF or the “Company”) is a French *société anonyme* governed by French law, and registered in France.

The Company's consolidated financial statements include the accounts of:

- companies directly or indirectly controlled by the Company, which are fully consolidated;
- its shares of the assets, liabilities, income and expenses of joint arrangements classified as joint operations;
- its investments in associates and joint ventures, which are accounted for under the equity method.

All these economic entities are collectively referred to as the “Group”.

The Group is an integrated energy operator engaged in all aspects of the energy business: generation, transmission, distribution, supply and trading of energies.

The Group's consolidated financial statements at 31 December 2014 were prepared under the responsibility of the Board of Directors and approved by the Directors at the Board meeting held on 11 February 2015. They will become final after approval at the General Shareholders' Meeting to be held on 19 May 2015.

➤ Note 1 Group accounting standards

1.1 Declaration of conformity and Group accounting policies

Pursuant to European Regulation 1606/2002 of 19 July 2002 on the adoption of international accounting standards, the EDF group's consolidated financial statements for the year ended 31 December 2014 are prepared under the international accounting standards published by the IASB and approved by the European Union for application at 31 December 2014. These international standards are IAS (International Accounting Standards), IFRS (International Financial Reporting Standards), and SIC and IFRIC interpretations.

The comparative figures for 2013 presented in the notes to these consolidated financial statements have been restated for the impact of retrospective application of IFRS 10 and IFRS 11 (see note 2).

1.2 Changes in accounting methods at 31 December 2014

Apart from the changes indicated below, the accounting and valuation methods applied by the Group in the consolidated financial statements for the year ended 31 December 2014 are identical to those used in the consolidated financial statements for the year ended 31 December 2013.

1.2.1 Accounting changes introduced in the consolidated financial statements at 31 December 2014

1.2.1.1 Change in accounting method – first application of IFRS 10, IFRS 11 and IFRS 12

The new standards IFRS 10 "Consolidated financial statements", IFRS 11 "Joint arrangements", and IFRS 12 "Disclosure of interests in other entities" were published in May 2011, and endorsed by the European Union on 29 December 2012.

These standards were also supplemented by the following:

- amendments to the existing standards IAS 27 (2011) "Consolidated and separate financial statements" and IAS 28 (2011) "Investments in associates and joint ventures";
- "Transition guidance" for IFRS 10, IFRS 11 and IFRS 12;
- amendments to IFRS 10, IFRS 12 and IFRS 27 concerning exemption from consolidation for "Investment entities".

Application of all of these standards and amendments is mandatory for financial years beginning on or after 1 January 2014. They are applied retrospectively, in compliance with IAS 8. The resulting impacts on the Group's consolidated financial statements are presented in note 2.

IFRS 10 "Consolidated financial statements"

IFRS 10 replaces the rules for consolidated financial statements set out in IAS 27 "Consolidated and separate financial statements", and interpretation SIC 12 "Consolidation - special purpose entities".

IFRS 10 introduces a new, single model of control: the Group is considered to have control when it is exposed, or has rights, to variable returns from its involvement with an entity and has the ability to affect those returns through its power over the entity.

IFRS 11 "Joint arrangements"

IFRS 11 replaces IAS 31 "Interests in joint ventures" and interpretation SIC 13 "Jointly controlled entities - non-monetary contributions by venturers". The new standard defines the treatment for a joint arrangement through which at least two parties exercise joint control.

Under IFRS 11, only two types of joint arrangement exist: joint ventures and joint operations.

A joint venture is a joint arrangement in which the parties (joint venturers) that have joint control of the arrangement have rights to the net assets of the arrangement.

A joint operation is a joint arrangement in which the parties (joint operators) have direct rights to the entity's assets, and obligations for its liabilities.

In application of IFRS 11, joint arrangements classified as joint ventures must be accounted for under the equity method (proportional consolidation is no longer allowed). Each of the joint operators in a joint operation must account for the assets and liabilities and income and expenses related to its interests line by line.

IFRS 12 "Disclosure of interests in other entities"

IFRS 12 specifies the required disclosures concerning investments in subsidiaries, joint arrangements, associates and/or unconsolidated structured entities.

1.2.1.2 Other standards and interpretations

The EDF group's consolidated financial statements are not impacted by the following amendments, which became mandatory from 1 January 2014:

- amendments to IAS 32 entitled "Offsetting financial assets and financial liabilities";
- amendments to IAS 39 entitled "Novation of derivatives and continuation of hedge accounting";
- amendments to IAS 36 entitled "Recoverable amount disclosures for non-financial assets".

1.2.2 Standards and amendments adopted by the European Union but not yet mandatory in 2014 and not applied early by the Group

The Group has decided against early application of the following amendment and interpretation which have been adopted by the European Union but were not mandatory in 2014:

- amendments to IAS 19 "Defined benefit plans – Employee contributions";
- IFRIC 21 "Levies".

The Group considers that future application of the amendments to IAS 19 will not have a significant impact on the annual consolidated financial statements.

The interpretation IFRIC 21 was published in May 2013 by the IFRS Interpretations Committee (IFRS IC) to clarify the triggering event for recognising a provision for any levies (duties and taxes other than income taxes). This interpretation was adopted by the European Union on 13 June 2014 and will be applied by the EDF group from 1 January 2015, with retrospective application to the consolidated financial statements published for 2014.

This interpretation changes existing practices for annual taxes that become due because an entity is in operation at a specified date or because it reaches a certain threshold in its activity. There is currently some debate concerning the nature of the accounting for the debit side of these tax liabilities, as the interpretation refers to other standards to determine whether it should be an expense or an asset. One view is that the tax should be booked as an expense when it is recognised in the liabilities under IFRIC 21, because it is an administrative cost. An alternative view is that these taxes constitute a production cost under IAS 2, and should therefore be included in the cost of sales over a period of no more than one year, in coherence with the principle of matching revenues and expenses laid down in IAS 18, "Revenue".

The Group requested guidance from the IFRS IC regarding the diversity of approaches concerning the debit side of liabilities recognised in application of IFRIC 21 for certain levies assessed on assets which are necessary to produce services (this particularly concerned energy-related taxes and real estate tax in France). The IFRS IC decided not to settle this question, which only affects the half-year financial statements and has no impact on the annual financial statements.

Based on the analyses conducted to date, the Group considers that future application of IFRIC 21 will not have a significant impact on the annual consolidated financial statements. However, in the half-year consolidated financial statements, it is likely to lead to recognition of a significant net liability due to the change in accounting method for certain tax receivables and liabilities.

1.2.3 Other standards and amendments published by the IASB but not yet approved by the European Union

The following IASB publications related to the accounting principles applied specifically by the Group have not yet been approved by the European Union:

- IFRS 15 "Revenue from contracts with customers";
- IFRS 9 "Financial instruments";
- amendments to IAS 16 and IAS 38 entitled "Clarification of acceptable methods of depreciation and amortisation";
- amendments to IFRS 11 entitled "Accounting for acquisitions of interests in a joint operations";
- amendments to IFRS 10 and IAS 28 entitled "Sale or contribution of assets between an Investor and its Associate or joint venture".

Subject to approval by the European Union, application of IFRS 15 will be mandatory for financial years beginning on or after 1 January 2017. The Group is currently reviewing all significant contracts with its customers in order to be able to determine the potential impact of the new standard on recognition of sales revenues (in terms of valuation and timing of revenue recognition).

The Group's revenues essentially consist of income from contracts for sales of energy and related services (sometimes in the form of combined offerings).

The Group's ongoing review involves:

- analysing energy and service sales contracts by major category in view of the performance obligations identified in the contracts, valued and recognised in compliance with IFRS 15;
- individually analysing other significant sales contracts that do not belong to a specific category, especially in the light of the criteria laid down by IFRS 15 for identification of performance obligations and allocation of the transaction price.

Subject to approval by the European Union, application of IFRS 9 will be mandatory for financial years beginning on or after 1 January 2018. IFRS 9 introduces a new classification approach for all financial assets, which will modify the classification and valuation rules currently applied by the Group in compliance with IAS 39 "Financial Instruments: Recognition and Measurement".

The potential impact of other standards and amendments is currently being evaluated by the Group.

1.3 Summary of the principal accounting and valuation methods

The following accounting methods have been applied consistently through all the periods presented in the consolidated financial statements.

1.3.1 Valuation

The consolidated financial statements are based on historical cost valuation, with the exception of assets acquired and liabilities assumed through business combinations, and of certain financial instruments, which are stated at fair value.

1.3.2 Management judgments and estimates

The preparation of the financial statements requires the use of judgments, best estimates and assumptions in determining the value of assets and liabilities, income and expenses recorded for the period, considering positive and negative contingencies existing at year-end. The figures in the Group's future financial statements could differ significantly from current estimates due to changes in these assumptions or economic conditions.

In the specific case of useful life, the EDF group's industrial strategy is to continue operation of the French nuclear power plants beyond their current accounting depreciation period of 40 years, in optimum conditions as regards safety and efficiency.

The Group has been making preparations for extending the useful life of its power plants for several years, and is now making the necessary investments under the industrial programme called "*Grand carénage*".

Adjustment of the useful life of French nuclear power plants to bring it into line with this industrial strategy will be reflected in the Group's consolidated financial statements as soon as all the required technical, economic and governance conditions are in place.

The other principal sensitive accounting methods involving use of estimates and judgments are described below. In a context characterised by financial market volatility, the parameters used to prepare estimates are based on macro-economic assumptions appropriate to the very long-term cycle of Group assets.

1.3.2.1 Nuclear provisions

The measurement of provisions for the back-end of the nuclear cycle, decommissioning and last cores is sensitive to assumptions concerning costs, inflation rate, long-term discount rate, and disbursement schedules. A revised estimate is therefore established at each closing date to ensure that the amounts accrued correspond to the best estimate of the costs eventually to be borne by the Group. Any significant differences resulting from these revised estimates could entail changes in the amounts accrued.

The main assumptions and sensitivity analyses are presented in note 29.1.5.2.

1.3.2.2 Pensions and other long-term and post-employment benefits

The value of pensions and other long-term and post-employment benefit obligations is based on actuarial valuations that are sensitive to all the actuarial assumptions used, particularly concerning discount rates, inflation rates and wage increase rates.

The principal actuarial assumptions used to calculate these post-employment and long-term benefits at 31 December 2014 are presented in note 31. These assumptions are updated annually. The Group considers the actuarial assumptions used at 31 December 2014 appropriate and well-founded, but future changes in these assumptions could have a significant effect on the amount of the obligations and the Group's equity and net income. Sensitivity analyses are therefore presented in note 31.

1.3.2.3 Impairment of goodwill and long-term assets

Impairment tests on goodwill and long-term assets are sensitive to the macro-economic and segment assumptions used - particularly concerning energy price movements - and medium-term financial forecasts. The Group therefore revises the underlying estimates and assumptions based on regularly updated information.

These assumptions, which are specific to Group companies, are presented in note 13.

1.3.2.4 Financial instruments

In measuring the fair value of unlisted financial instruments (essentially energy contracts), the Group uses valuation models based on a certain number of assumptions subject to unforeseeable developments.

1.3.2.5 Energy supplied but not yet measured and billed

As explained in note 1.3.7, the quantities of energy supplied but not yet measured and billed are calculated at the reporting date based on consumption statistics and selling price estimates. Determination of the unbilled portion of sales revenues at the year-end is sensitive to the assumptions used to prepare these statistics and estimates.

1.3.2.6 Obligations concerning French public distribution concession assets to be replaced

In view of the specific nature of French public electricity distribution concessions, the Group has opted to present its obligation to replace concession assets in the balance sheet at a value based on the amount of contractual commitments as calculated and disclosed to the grantors in the annual business reports (see note 1.3.13.2.1). An alternative approach would be to value the obligations based on the present value of future payments necessary to replace these assets at the end of their industrial useful life. The impacts this alternative approach would have had on the accounts are shown in note 1.3.24 for information. Whatever valuation method is used, measurement of the concession liability concerning assets to be replaced is notably subject to unforeseeable developments in terms of costs, useful life and disbursement dates.

1.3.2.7 Deferred tax assets

The use of estimates and assumptions over recovery horizons is particularly important in the recognition of deferred tax assets.

1.3.2.8 Interests in other entities

For the application of IFRS 10 and IFRS 11, the Group uses judgment to assess control or qualify the type of partnership arrangement represented by a jointly-controlled entity.

1.3.2.9 Other judgments

When there is no standard or interpretation applicable to a specific transaction, the Group exercises judgment to define and apply accounting methods that supply relevant and reliable information for preparation of its financial statements.

1.3.3 Consolidation methods

A list of the main subsidiaries, associates and joint ventures is presented in note 51.

1.3.3.1 Controlled entities

Subsidiaries are companies in which the Group exercises exclusive control and are fully consolidated. The Group controls an entity when the three following conditions are fulfilled:

- it holds power over the entity;
- it is exposed, or has rights, to variable returns from its involvement with the entity;
- it has the ability to use its power to influence the amount to affect the investor's returns.

The Group considers all facts and circumstances when assessing control. All substantive potential voting rights exercisable, including by another party, are also taken into consideration.

1.3.3.2 Investments in associates and joint ventures

An associate is an entity in which the Group exercises significant influence on financial and operational policies without having exclusive or joint control. Significant influence is presumed to exist when the Group's investment is at least 20%.

A joint venture is a partnership in which the parties (joint venturers) that exercise joint control over the entity have rights to the entity's net assets. Joint control is the contractually agreed sharing of control of an entity operated jointly by a limited number of partners or shareholders, such that the financial and operational policies result from unanimous consent of the parties.

Investments in associates and joint ventures are accounted for by the equity method. They are carried in the balance sheet at historical cost, adjusted for the share in net assets generated after the acquisition, less any impairment. The share in the net income for the period is reported in "Share in net income of associates and joint ventures" in the income statement.

1.3.3.3 Investments in joint operations

A joint operation is a joint arrangement in which the parties (joint operators) that exercise joint control over the entity have direct rights to its assets, and obligations for its liabilities. The Group, as an operator in a joint operation, reports the assets and liabilities and income and expenses related to its investment line by line.

1.3.4 Financial statement presentation rules

Assets and liabilities of dissimilar natures or functions are disclosed separately.

Assets and liabilities contributing to working capital used in the entity's normal operating cycle are classified as current in the consolidated balance sheet. Other assets and liabilities are classified as current if they mature within one year of the closing date, and non-current if they mature more than one year after the closing date.

Commitments given by the Group to purchase minority interests in Group-controlled companies are included in liabilities. For commitments of this kind given since 1 January 2010, the date of the Group's first application of IAS 27 (amended) and IFRS 3 (revised), the differential between the value of the non-controlling interests and the liability corresponding to the commitment is recorded in equity.

The income statement presents items by nature. The heading "Other income and expenses" presented below the operating profit before depreciation and amortisation comprises items of an unusual nature or amount.

In the cash flow statements, cash flows related to operating activities are presented under the indirect method.

1.3.5 Translation methods

1.3.5.1 Reporting currency

The parent company's functional currency is the Euro. The Group's financial statements are presented in millions of Euros.

1.3.5.2 Functional currency

An entity's functional currency is the currency of the economic environment in which it primarily operates. In most cases, the local currency is the functional currency. But for some entities, a functional currency other than the local currency may be used when it reflects the currency used in the principal transactions.

1.3.5.3 Translation of the financial statements of foreign companies whose functional currency is not the Euro

The financial statements of foreign companies whose functional currency is not the Euro are translated as follows:

- balance sheets are translated into Euros at the closing rate;
- income statements and cash flows are translated at the average rate for the period;

- resulting differences are recognised in equity under the heading "Translation adjustments".

Translation adjustments affecting a monetary item that is an integral part of the Group's net investment in a consolidated foreign company are included in consolidated equity until the disposal or liquidation of the net investment, at which date they are recognised as income or expenses in the income statement, in the same way as other exchange differences concerning the company.

1.3.5.4 Translation of transactions in foreign currencies

In application of IAS 21, transactions expressed in foreign currencies are initially translated and recorded in the functional currency of the entity concerned, using the rate in force at the transaction date.

At each reporting date, monetary assets and liabilities expressed in foreign currencies are translated at the closing rate. The resulting foreign exchange differences are taken to the income statement.

1.3.6 Related parties

Related parties include the French State, companies in which the State holds majority ownership and certain of their subsidiaries, and companies in which the EDF group exercises joint control or significant influence. They also include members of the Group's management and governance bodies.

1.3.7 Sales

Sales essentially comprise income from energy sales (to final customers and as part of trading activities), connections and other services, which mainly include energy transmission and distribution, and capacity and interconnection auctions.

The Group accounts for sales when:

- there is a proven contractual relationship;
- delivery has taken place (or the service has been completed);
- a quantifiable price has been established or can be determined;
- and the receivables are likely to be recovered.

Delivery takes place when the risks and benefits associated with ownership are transferred to the buyer.

Energy supplied but not yet measured and billed is calculated based on consumption statistics and selling price estimates.

Sales of goods and revenues on services not completed at the balance sheet date are valued by reference to the stage of completion at that date.

Energy trading operations are recognised net of purchases.

1.3.8 Income taxes

Income taxes include the current tax expense (income) and the deferred tax expense (income), calculated under the tax legislation in force in the countries where earnings are taxable.

In compliance with IAS 12, current and deferred taxes are generally recorded in the income statement or in equity symmetrically to the underlying operation.

Under IAS 32, the tax effects of distribution to holders of capital instruments (notably dividends and the remuneration paid to holders of perpetual subordinated bonds) must be recognised in accordance with this general principle. The Group considers that these distributions are paid out of previous years' accumulated profits and as a result the associated tax effects are included in the net income for the period.

The current tax expense (income) is the estimated amount of tax due on the taxable income for the period, calculated using the tax rates adopted at the year-end.

Deferred taxes result from temporary differences between the book value of assets and liabilities and their tax basis. No deferred taxes are recognised for temporary differences generated by:

- goodwill which is not tax deductible;
- the initial recognition of an asset or liability in a transaction which is not a business combination and does not affect the accounting profit or taxable profit (tax loss) at the transaction date;
- investments in subsidiaries and associates, investments in branches and interests in joint arrangements, when the Group controls the timing of reversal of the temporary differences, and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets and liabilities are valued at the expected tax rate for the period in which the asset will be realised or the liability extinguished, based on tax rates adopted at the year-end. If the tax rate changes, deferred taxes are adjusted to the new rate and the adjustment is recorded in the income statement, unless it relates to an underlying for which changes in value are recorded in equity, for example in accounting for actuarial gains and losses or fair value on hedging instruments and available-for-sale financial assets.

Deferred taxes are reviewed at each closing date, to take into account changes in tax legislation and the prospects for recovery of deductible temporary differences. Deferred tax assets are only recognised when it is probable that the Group will have sufficient taxable profit to utilise the benefit of the asset in the foreseeable future, or beyond that horizon, if there are deferred tax liabilities with the same maturity.

1.3.9 Earnings per share and diluted earnings per share

Earnings per share is calculated by dividing the Group's share of net income by the weighted average number of shares outstanding over the period. This weighted average number of shares outstanding is the number of ordinary shares at the start of the year, adjusted by the number of shares redeemed or issued during the year.

This number, and the earnings per share, are adjusted whenever necessary to reflect the impact of translation or exercise of dilutive potential shares (options, subscription warrants and convertible bonds issued, etc.).

In compliance with IAS 33, earnings per share and diluted earnings per share are based on the net income after deduction of payments to bearers of perpetual subordinated bonds.

1.3.10 Business combinations

In application of IFRS 3 business combinations arising since 1 January 2010 are measured and recognised under the following principles.

At the date of acquisition, the identifiable assets acquired and liabilities assumed, measured at fair value, and any non-controlling interests in the company acquired (minority interests) are recorded separately from goodwill.

Non-controlling interests may be valued either at fair value (total goodwill method) or their share in the fair value of the net assets of the acquired company (partial goodwill method). The decision is made individually for each transaction.

In application of IFRS 10, any acquisition or disposal of an investment that does not affect control is considered as a transaction between shareholders and must be recorded directly in equity.

If additional interests are acquired in a joint venture, joint operation or associate without resulting in acquisition of control, the value of the previously-acquired assets and liabilities remains unchanged in the consolidated financial statements.

If control is acquired in stages, the cost of the business combination includes the fair value, at the date control is acquired, of the purchaser's previously-held interest in the acquired company.

Related costs directly attributable to an acquisition leading to control are treated as expenses for the periods in which they were incurred, except for issuance costs for debt securities or equity instruments, which must be recorded in compliance with IAS 32 and IAS 39.

IFRS 3 does not apply to common control business combinations, which are examined on a case-by-case basis to determine the appropriate accounting treatment.

1.3.11 Goodwill and other intangible assets

1.3.11.1 Goodwill

1.3.11.1.1 Determination of goodwill

In application of IFRS 3, "Business combinations", goodwill is the difference between:

- the sum of the following items:
 - the acquisition-date fair value of the price paid to acquire control,
 - the value of non-controlling interests in the entity acquired, and
 - for acquisitions achieved in stages, the acquisition-date fair value of the Group's share in the acquired entity before it acquired control;
- and the net value of the assets acquired and liabilities assumed, measured at fair value at the acquisition date.

When this difference is negative it is immediately included in net income.

The fair values of assets and liabilities and the resulting goodwill are finalised within twelve months of the acquisition.

1.3.11.1.2 Measurement and presentation of goodwill

Goodwill on acquisition of subsidiaries is disclosed separately in the balance sheet. Impairment on this goodwill is reported under the heading "Impairment" in the income statement.

Goodwill on acquisition of associates and joint ventures is included in the investment's net book value. Impairment on this goodwill is included under the heading "Share in income of associates and joint ventures".

Goodwill is not amortised, but impairment tests are carried out as soon as there is an indication of possible loss of value, and at least annually, as described in note 1.3.15.

After initial recognition, goodwill is carried at cost less any impairment recognised.

1.3.11.2 Other intangible assets

1.3.11.2.1 Research and development expenses

Research expenses are recognised as expenses in the financial period incurred.

Project development expenses are capitalised when the Group can demonstrate:

- the technical feasibility of making the intangible asset ready for commissioning or sale;
- its intention to complete the intangible asset and use or sell it;
- its ability to use or sell the intangible asset;
- how the intangible asset will generate likely future economic benefits;
- the availability of the appropriate resources (technical, financial or other) to complete development and use or sell the intangible asset;
- and its ability to provide a reliable estimate of expenses attributable to the intangible asset during its development.

Capitalised development costs are amortised on a straight-line basis over their foreseeable useful life.

1.3.11.2.2 Other self-produced or purchased intangible assets

Other intangible assets mainly comprise:

- software, which is amortised on a straight-line basis over its useful life;
- purchased brands with an indefinite useful life, or amortised on a straight-line basis over their useful life;
- operating or usage rights for power plants, which are amortised on a straight-line basis over the useful life of the underlying asset;
- rights or licenses relating to hydrocarbon concessions, which are amortised under the Unit of Production (UOP) method, and exploration expenses amortised over the year (see note 1.3.11.2.3);
- intangible assets related to environmental regulations (greenhouse gas emission rights and renewable energy certificates acquired for a consideration – see note 1.3.27);
- the positive value of energy purchase/sale contracts stated at fair value as part of a business combination governed by IFRS 3: this value is amortised as the contractual deliveries take place;
- assets related to concession contracts governed by IFRIC 12, under the “intangible model” (see note 1.3.13.2.4).

1.3.11.2.3 Hydrocarbon prospecting, exploration and generation

The Group applies IFRS 6, “Exploration for and Evaluation of Mineral Resources”.

Prospection and exploration costs and costs incurred in connection with geological surveys, exploration tests, geological and geophysical mapping and exploratory drilling are recognised as intangible assets and fully amortised in the year they are incurred.

Development costs related to commercially viable mineral wells and investments in facilities to extract and store hydrocarbons are recognised as “Property, plant and equipment used in generation and other tangible assets owned by the Group” or “Property, plant and equipment operated under concessions for other activities” as appropriate.

They are amortised under the Unit of Production (UOP) method.

1.3.12 Concession assets, generation assets and other property, plant and equipment

The Group's property, plant and equipment is reported under three balance sheet headings, as appropriate to the business and contractual circumstances of their use:

- property, plant and equipment operated under French public electricity distribution concessions;
- property, plant and equipment operated under concessions for other activities;
- property, plant and equipment used in generation and other tangible assets owned by the Group.

1.3.12.1 Initial measurement

Property, plant and equipment is recorded at acquisition or production cost.

The cost of facilities developed in-house includes all labour and materials costs, and all other production costs attributable to the construction of the asset.

The Group capitalises safety expenses incurred as a result of legal and regulatory obligations sanctioning non-compliance by an administrative ban from operation.

The cost of property, plant and equipment also includes decommissioning costs for generation plants, and last core costs for nuclear facilities. These assets are associated with the provisions recorded to cover these obligations. At the date of commissioning, they are measured and recorded in the same way as the corresponding provision (see note 1.3.21).

When some of the decommissioning costs for a plant are to be borne by a partner, the expected reimbursement is recognised as accrued income in the assets. The difference between the provision and the accrued income is recorded as a tangible asset, and subsequent payments by the partner are deducted from the accrued income.

The following components are thus included in the balance sheet value of property, plant and equipment:

- the discounted cost of decommissioning the facilities;
- and for nuclear facilities, the discounted cost of last core nuclear fuel, including:
 - the cost of the loss on reactor fuel that will not be fully irradiated when production shuts down and cannot be reused because of technical and regulatory constraints,
 - the cost of processing this fuel,
 - and the cost of removing and storing waste resulting from these operations.

Strategic safety spare parts for production facilities are treated as property, plant and equipment, and depreciated over the residual useful life of the installations.

When a part of an asset has a different useful life from the overall asset's useful life, it is identified as an asset component and depreciated over a specific period.

This mainly concerns the costs of major inspections, which are amortised over a period corresponding to the time elapsing between two inspections.

Borrowing costs attributable to the financing of an asset incurred during the construction period are included in the value of the asset provided it is a qualifying asset as defined by IAS 23 “Borrowing costs”.

1.3.12.2 Depreciation

Items of property, plant and equipment are depreciated on a straight-line basis over their useful life, defined as the period during which the Group expects to draw future economic benefits from their use.

Depending on each country's specific regulations and contractual arrangements, the expected useful lives for the main facilities are as follows:

- hydroelectric dams: 75 years
- electromechanical equipment used in hydropower plants: 50 years
- thermal power plants: 25 to 45 years
- nuclear generation facilities:
 - in France: 40 years
 - outside France: 35 to 60 years
- transmission and distribution installations (lines, substations): 20 to 50 years
- wind farm and photovoltaic facilities: 20 to 25 years

1.3.13 Concession agreements

1.3.13.1 Accounting treatment

The accounting treatment of public and private agreements depends on the nature of the agreements and their specific contractual features.

For most of its concessions, other than concessions for heat generation and distribution, the Group considers that in substance the grantors do not have the characteristic features of control over infrastructures as defined in IFRIC 12.

1.3.13.2 French concessions

In France, the Group is the operator for four types of public service concessions:

- public electricity distribution concessions in which the grantors are local authorities (municipalities or syndicated municipalities);
- hydropower concessions with the State as grantor;
- the public transmission network operated under concession from the State;
- concessions from public grantors for heat generation and distribution.

1.3.13.2.1 Public electricity distribution concessions

General background

Since the enactment of the French Law of 8 April 1946, the EDF group has by law been the sole operator for the main public distribution concessions in France.

The accounting treatment of concessions is based on the concession agreements, with particular reference to their special clauses. It takes into consideration the possibility that the EDF group may one day lose its status as the sole authorised State concession operator.

These agreements generally cover terms of between 20 and 30 years, and use standard concession rules deriving from the 1992 Framework Contract (updated in 2007) negotiated with the National Federation of Licensing Authorities (*Fédération nationale des collectivités concédantes et régies* – "FNCCR") and approved by the public authorities.

Recognition of assets as property, plant and equipment operated under French public electricity distribution concessions

All assets used by the EDF group in public electricity distribution concessions in France, whether they are owned by the grantor or the operator, are reported together on a specific line in the balance sheet assets at acquisition cost, or their estimated value at the transfer date when supplied by the grantor.

1.3.13.2.2 Hydropower concessions

Hydropower concessions in France follow standard rules approved by decree. Assets attributed to the hydropower concessions comprise hydropower generation equipment (dams, pipes, turbines, etc) and, in the case of recently-renewed concessions, electricity generation and switching facilities (alternators, etc).

Assets used in these concessions are recorded under "Property, plant and equipment operated under concessions for other activities" at acquisition cost. As a result of changes in the regulations following removal of the outgoing operator's preferential right when a concession is renewed, the Group has shortened the depreciation periods used for certain assets.

1.3.13.2.3 Public transmission concession

Under French law, assets assigned to the public transmission concession belong to RTE Réseau de Transport d'Électricité (RTE). Following the Group's loss of control over RTE from 31 December 2010, these assets are included in calculating the equity value of RTE in the consolidated balance sheet.

1.3.13.2.4 Heat generation and distribution concessions

Heat generation and distribution concession agreements signed by Dalkia with public authorities confer the right to operate facilities remitted by or constructed at the request of those authorities for a limited period, under the grantor's supervision.

These agreements set the terms for remuneration and transfer of the facilities to the grantor or another succeeding operator at the end of the agreement.

The assets are recorded as intangible assets, in accordance with IFRIC 12 "Service concession agreements".

1.3.13.3 Foreign concessions

Foreign concessions are governed by a range of contracts and national laws. Most assets operated under foreign concessions are recorded under "Property, plant and equipment operated under concessions for other activities". Foreign concessions essentially concern Edison in Italy, which operates hydrocarbon generation sites, gas storage sites, local gas distribution networks and hydropower generating plants under concessions. Edison owns all the assets except for some items of property, plant and equipment on the hydropower generation sites, which will be returned to the grantor for nil consideration or with an indemnity when the concession ends. In compliance with IFRIC 12, certain concession agreements are recorded as intangible assets.

Hydropower generation assets which will be returned for nil consideration at the end of the concession are depreciated over the duration of the concession. Hydrocarbon generation sites are recorded in compliance with the rules applicable to the sector (see note 1.3.11.2).

1.3.14 Leases

In the course of its business the Group uses assets made available to it, or makes assets available to lessees, under lease contracts. These contracts are analysed in the light of the situations described and indicators supplied in IAS 17 in order to determine whether they are finance leases or operating leases.

1.3.14.1 Finance leases

Contracts that effectively transfer substantially to the lessee all risks and benefits inherent to ownership of the leased item are classified as finance leases. The main criteria examined in determining whether substantially all the risks and benefits are transferred by an agreement are the following:

- the ratio of the duration of the lease to the leased asset's useful life;

- total discounted future payments as a ratio of the fair value of the financed asset;
- whether ownership is transferred at the end of the lease;
- whether the purchase option is attractive;
- the features specific to the leased asset.

Assets used under finance leases are derecognised from the lessor's balance sheet and included in the relevant category of property, plant and equipment in the lessee's accounts. Such assets are depreciated over their useful life, or the term of the lease contract when this is shorter.

A corresponding financial liability is booked by the lessee, and a financial asset by the lessor.

If the Group performs a sale and leaseback operation resulting in a finance lease agreement, this is recognised in accordance with the principles described above. If the transfer price is higher than the asset's book value, the surplus is deferred and recognised as income progressively over the term of the lease.

1.3.14.2 Operating leases

Lease agreements that do not qualify as finance leases are classified and recognised as operating leases. Rental charges are spread over the duration of the lease agreement on a straight-line basis.

1.3.14.3 Arrangements containing a lease

In compliance with IFRIC 4, the Group identifies arrangements that do not have the legal form of a lease contract but nonetheless convey the right to control the use of an asset or group of specific assets to the purchaser.

Such arrangements are treated as leases, and analysed with reference to IAS 17 for classification as either finance or operating leases.

1.3.15 Impairment of goodwill, intangible assets and property, plant and equipment

At the year-end and at each interim reporting date, in application of IAS 36, the Group assesses whether there is an indication that an asset could have been significantly impaired. An impairment test is also carried out at least once a year on cash-generating units (CGUs) or groups of CGUs including goodwill or any intangible asset with an indefinite useful life.

For CGUs including goodwill or another non-amortisable intangible asset, or when there is evidence of loss of value, an impairment test is carried out as follows:

- The Group measures any long-term asset impairment by comparing the carrying value of these assets and goodwill, grouped into CGUs where necessary, and their recoverable amount.
- CGUs are groups of homogeneous assets that generate identifiable independent cash flows. The Group's CGUs are subgroups or legal entities, broken down where necessary by activity (generation and supply, distribution, transmission, other). Goodwill is allocated to the CGUs that benefit from synergies resulting from the acquisition.
- The recoverable value of these units is the higher of fair value net of disposal costs, and value in use. When this recoverable value is lower than the carrying amount in the balance sheet, an amount equal to the difference is booked under the heading "Impairment". The loss is allocated first to goodwill, and any surplus to the other assets of the CGU concerned.

- Value in use is calculated based on projected future cash flows:
 - over a horizon that is coherent with the asset's useful life and/or operating life;
 - excluding development projects other than those that have been decided at the valuation date;
 - and discounted at a rate that reflects the risk profile of the asset or CGU.
- Market value (or fair value) is calculated as the asset's potential sale price less the costs necessary for its sale.
- The discount rates used are based on the weighted average cost of capital (WACC) for each asset or group of assets concerned, determined by Geographical area and by business segment under the CAPM. WACC is calculated after taxes.
- Future cash flows are calculated on the basis of the best available information at the valuation date:
 - for the first few years, the flows correspond to the Medium-Term Plan (MTP) approved by the Management. Over the MTP horizon, energy prices are determined based on available forward prices;
 - beyond the MTP horizon, flows are estimated based on long-term assumptions prepared by the Management for each country and each energy.

These calculations may be influenced by several variables:

- changes in tariff regulations and market prices;
- changes in interest rates and market risk premiums;
- market levels and the Group's market share;
- the useful lives of facilities, and the plan for concession renewal;
- the growth rates used beyond the medium-term plans and the terminal values taken into consideration.

Impairment of goodwill is irreversible.

1.3.16 Financial assets and liabilities

Financial assets include available-for-sale assets (non-consolidated investments, investment securities and certain dedicated assets), loans and receivables at amortised cost, including trade receivables, and the positive fair value of derivatives.

Available-for-sale securities allocated to dedicated assets are presented in note 47.

Financial liabilities comprise loans and other financial liabilities, trade payables, bank credit and the negative fair value of financial derivatives.

Financial assets and liabilities are recorded in the balance sheet as current if they mature within one year and non-current if they mature after one year, apart from derivatives held for trading, which are all classified as current.

Operating debts and receivables, and cash and cash equivalents, are governed by IAS 39 and reported separately in the balance sheet.

1.3.16.1 Classification and valuation methods for financial assets and liabilities

Financial instruments are classified as follows under IFRS 7:

- financial assets and liabilities carried at fair value with changes in fair value included in income;
- held-to-maturity financial assets;
- loans and financial receivables;
- available-for-sale financial assets;

- trade receivables;
- cash and cash equivalents;
- financial debts and operating debts;
- derivatives.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction on the principal or the most advantageous market at the measurement date.

In application of IFRS 13, the hierarchy of fair values reflecting the importance of data used in valuations comprises the following levels:

- level 1 (unadjusted quoted prices): prices accessible to the entity at the measurement date on active markets, for identical assets or liabilities;
- level 2 (observable data): data concerning the asset or liability, other than the market prices included in initial level 1 input, which are directly observable (such as a price) or indirectly observable (i.e. deducted from observable prices);
- level 3 (non-observable data): data that are not observable on a market, including observable data that have been significantly adjusted (e.g. extrapolation of interest rate curves over long non-observable periods). In the EDF group this chiefly concerns certain non-consolidated investments.

1.3.16.1.1 Financial assets and liabilities carried at fair value with changes in fair value included in income

Financial assets carried at fair value with changes in fair value included in the income statement are classified as such at the inception of the operation if:

- they were acquired from the outset with the intention of resale in the short term;
- they are derivatives not classified as hedges (derivatives held for trading);
- the Group has elected to include them in this category under the option allowed by IAS 39.

These assets are recorded at the transaction date at fair value, which is generally equal to the amount of cash paid out. Transaction costs directly attributable to the acquisition are recorded in the income statement. At each subsequent reporting date they are adjusted to fair value, based on quoted prices available from external sources for listed financial instruments, or using recognised valuation techniques such as the discounted cash flow method or reference to external sources for other financial instruments.

Changes in fair value other than those concerning commodity contracts are recorded in the income statement under the heading "Other financial income and expenses".

Dividends and interest received on assets carried at fair value are recorded in the income statement under "Other financial income".

Changes in the fair value of commodity trading contracts are recorded in the income statement under "Sales".

Changes in the fair value of non-trading commodity transactions are reported separately on a specific line of the income statement, "Net changes in fair value on Energy and Commodity derivatives, excluding trading activities" below the operating profit before depreciation and amortisation. These are transactions that come under the scope of IAS 39, which for accounting purposes are not eligible for hedge accounting or the IAS 39 "own use" exemption (see note 1.3.16.1.6).

Regarding the fair value option, the Group classifies an asset or liability "at fair value with changes in fair value included in income" in the three following circumstances:

- when using fair value eliminates or significantly reduces an inconsistency in the measurement of assets and liabilities;
- when the performance of a group of financial assets or financial liabilities is managed on a fair value basis, in accordance with documented strategies and the reporting to management;
- when a contract contains one or more embedded derivatives. In such cases the fair value option may be applied to the hybrid instrument, unless:
 - the embedded derivative does not substantially affect the cash flows of the contract,
 - analysis of the host contract and the embedded derivative does not lead to separation of this embedded derivative.

1.3.16.1.2 Held-to-maturity financial assets

This category covers fixed-term investments which the Group acquires with the intent and ability to hold to maturity. They are recorded at amortised cost at the transaction date. Interest is calculated at the effective interest rate and recorded in the income statement under the heading "Other financial income and expenses".

1.3.16.1.3 Loans and financial receivables

Loans and financial receivables are valued and recorded at the transaction date, at amortised cost less any impairment.

Interest is calculated at the effective interest rate and recorded in the income statement under the heading "Other financial income and expenses".

1.3.16.1.4 Available-for-sale financial assets

Available-for-sale financial assets comprise non-consolidated investments, investment securities, reserved funds and certain dedicated assets.

On initial recognition, available-for-sale financial assets are recorded at fair value plus transaction costs attributable to their acquisition. They are subsequently readjusted to fair value at each reporting date.

Fair value measurement is based on quoted prices available from external sources for financial instruments listed on an active market, and on the discounted cash flow method for other financial instruments. Shares not listed on an active market for which fair value cannot be reliably estimated are recorded at acquisition cost.

Unrealised gains or losses on these assets are recorded in equity, unless there is evidence of a realised loss, in which case impairment is recognised in the financial result (see note 1.3.16.2.2).

For available-for-sale financial assets represented by debt securities, interest income is calculated at the effective interest rate and credited to the income statement under the heading "Other financial income and expenses".

1.3.16.1.5 Financial liabilities

Financial liabilities are recorded at amortised cost, with separation of embedded derivatives where applicable. Interest expenses are calculated at the effective interest rate and recorded in the income statement under the heading "Cost of gross financial indebtedness" over the duration of the financial liability.

1.3.16.1.6 **Derivatives****Scope**

The scope of derivatives applied by the Group corresponds to the principles set out in IAS 39.

In particular, forward purchases and sales for physical delivery of energy or commodities are considered to fall outside the scope of application of IAS 39 when the contract concerned is considered to have been entered into as part of the Group's normal business activity ("own use"). This is demonstrated to be the case when all the following conditions are fulfilled:

- a physical delivery takes place under all such contracts;
- the volumes purchased or sold under the contracts correspond to the Group's operating requirements;
- the contracts cannot be considered as options as defined by the standard. In the specific case of electricity sale contracts, the contract is equivalent to a firm forward sale or can be considered as a capacity sale.

The Group considers that transactions negotiated with a view to balancing the volumes between electricity purchase and sale commitments are part of its business as an integrated electricity operator, and are outside the scope of IAS 39.

In compliance with IAS 39, the Group analyses all its contracts, of both a financial and non-financial nature, to identify the existence of any "embedded" derivatives. Any component of a contract that affects the cash flows of that contract in the same way as a stand-alone derivative corresponds to the definition of an embedded derivative. If they meet the conditions set out by IAS 39, embedded derivatives are accounted for separately from the host contract at inception date.

Measurement and recognition

Derivatives are initially recorded at fair value, based on quoted prices and market data available from external sources. If no quoted prices are available, the Group may refer to recent comparable transactions or if no such transactions exist base its valuation on internal models that are recognised by market participants, giving priority to information directly derived from observable data, such as over-the-counter listings.

Changes in the fair value of these derivatives are recorded in the income statement, unless they are designated as hedges for a cash flow or net investment. Changes in the fair value of such hedging instruments are recorded directly in equity, excluding the ineffective portion of the hedge.

In the specific case of financial instruments entered into as part of the trading business, realised and unrealised gains and losses are reported net under the heading "Sales".

In application of IFRS 13, the fair value of derivatives incorporates the counterparty credit risk for derivative assets and the own credit risk for derivative liabilities. The probabilities of default used to calculate these credit risks are based on historical data.

Derivatives classified as hedges

The EDF group uses derivatives to hedge its foreign exchange and interest rate risks, as well as risks related to certain commodity contracts.

The Group applies the criteria defined by IAS 39 in classifying derivatives as hedges:

- the instrument must hedge changes in fair value or cash flows attributable to the risk hedged, and the effectiveness of the hedge (i.e. the degree to which changes in the value of the hedging instrument offset changes in the value of the hedged item or future transaction) must be between 80% and 125%;

- in the case of cash flow hedges, the future transaction being hedged must be highly probable;
- reliable measurement of the effectiveness of the hedge must be possible;
- the hedge must be supported by appropriate documentation from its inception.

The hedging relationship ends when:

- a derivative ceases to be an effective hedging instrument;
- a derivative expires, or is sold, terminated or exercised;
- the hedged item expires, is sold or redeemed;
- a future transaction ceases to be considered as highly probable.

Only derivatives external to the Group, and internal derivatives that are matched with similar transactions external to the Group, qualify for hedge accounting.

The Group uses the following categories for hedges:

(A) Fair value hedges

These instruments hedge the exposure to changes in the fair value of an asset or liability recorded in the balance sheet, or a firm commitment to purchase or sell an asset. Changes in the fair value of the hedged item attributable to the hedged component of that item are recorded in the income statement and offset by corresponding variations in the fair value of the hedging instrument. Only the ineffective portion of the hedge has an impact on income.

(B) Cash flow hedges

These instruments hedge highly probable future transactions: the variability in cash flows generated by the hedged transaction is offset by changes in the value of the hedging instrument.

The effective portion of accumulated changes in the hedge's fair value is recorded in equity, and the ineffective portion (i.e. changes in the fair value of the hedging instrument in excess of changes in the fair value of the hedged item) is recorded in the income statement.

When the hedged cash flows materialise, the amounts previously recognised in equity are transferred to the income statement in the same way as for the hedged item.

(C) Hedges of a net investment

These instruments hedge exposure to the foreign exchange risk related to a net investment in an entity which does not have the same functional currency as the Group. The effective portion of accumulated changes in the hedge's fair value is recorded in equity until the disposal or liquidation of the net investment, when it is included in the gain or loss on disposal. The ineffective portion (defined in the same way as for cash flow hedges) is recorded directly in the income statement.

The change in fair value resulting from the foreign exchange effect and interest rate effect of derivatives hedging a net investment in a foreign operation is recorded in equity.

1.3.16.2 **Impairment of financial assets**

At the year-end and at each interim reporting date, the Group assesses whether there is any objective evidence that an asset could have been significantly impaired. If so, the Group estimates the asset's recoverable value and records any necessary impairment as appropriate for the category of asset concerned.

1.3.16.2.1 Impairment of financial assets recorded at amortised cost

Impairment is equal to the difference between the asset's net book value and the discounted value of expected future cash flows, using the original effective interest rate of the financial instrument. The impairment is included in the income statement under the heading "Other financial income and expenses". If the impairment loss decreases in a subsequent period, the amount of the decrease is reversed and transferred to the income statement.

1.3.16.2.2 Impairment of available-for-sale financial assets

If there is a substantial, long-term decline in the fair value of available-for-sale assets, the unrealised loss is reclassified from equity to income. For debt instruments, impairment is only recorded in income when there is an indication of impairment associated with the counterparty. If the fair value of an available-for-sale financial asset rises in a subsequent period, the increase in value is included in equity when it concerns equity instruments, and leads to a reversal from previously-recorded impairment when it concerns debt instruments.

Different criteria for impairment apply to different types of available-for-sale financial assets.

For available-for-sale financial assets (other than dedicated assets) held by controlled companies, the Group generally uses the following criteria to assess impairment:

- 3 years as the threshold for assessment of long-term loss of value;
- a 50% decline from historical cost as indication of a significant loss of value.

For available-for-sale financial assets held as part of EDF's dedicated asset portfolio, the Group uses the following criteria to assess impairment:

- a 5-year period as the threshold for assessment of a long-term loss of value;
- a 40% decline from historical portfolio value as indication of a significant loss of value.

In assessing impairment of dedicated assets, the Group takes into consideration factors specific to their nature: legal and regulatory obligations associated with the funds concerned, the timing of the payments they are to finance, and long-term management of the funds.

1.3.16.3 Derecognition of financial assets and liabilities

The Group derecognises a financial asset when:

- the contractual rights to the cash flows generated by the asset expire; or
- the Group transfers the rights to receive contractual cash flows related to the financial asset through the transfer of substantially all of the risks and benefits associated with ownership of the asset.

Any interest created or retained by the Group in transferred financial assets is recorded as a separate asset or liability.

The Group derecognises a financial liability when its contractual obligations are extinguished, cancelled or expire. When a debt is renegotiated with a lender on substantially different terms, a new liability is recognised.

1.3.16.4 Securitisation operations

When it can be demonstrated that the Group has transferred substantially all the risks and benefits related to transfers of receivables, particularly the credit risk, the items concerned are derecognised.

Otherwise, the operation is considered as a financing operation, and the receivables remain in the balance sheet assets, with recognition of a corresponding financial liability.

1.3.16.5 Offsetting financial assets and liabilities

The Group offsets financial assets and liabilities when:

- there is a legally enforceable right to set off the recognised amounts; and
- the intent is either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

In application of IFRS 7, disclosures are provided in the notes to the consolidated financial statements to indicate the actual or potential impact of the offsetting agreement.

1.3.17 Inventories

Inventories are recognised at the lower of acquisition cost or net realisable value, except for inventories held for trading activities, which are carried at market value. Inventories consumed are generally valued by the weighted average unit cost method.

Cost includes all direct material costs, labour costs, and a share of indirect production costs.

1.3.17.1 Nuclear fuel and materials

Inventory accounts include:

- nuclear materials, whatever their form during the fuel production cycle;
- fuel components in the warehouse or in the reactor.

The stated value of nuclear fuel and materials and work-in-progress is determined based on direct processing costs including materials, labour and subcontracted services (e.g. fluorination, enrichment, production, etc.).

In accordance with regulatory obligations specific to each country, inventories of fuel (new or not entirely consumed) may also comprise expenses for spent fuel management and long-term radioactive waste management, with corresponding provisions or debts in the liabilities, or full and final payments made when the fuel is loaded.

In compliance with IAS 23, interest expenses incurred in financing inventories of nuclear fuels are charged to expenses for the period provided these inventories are manufactured in large quantities on a repetitive basis.

Nuclear fuel consumption is determined as a proportion of the expected output when the fuel is loaded in the reactor. These quantities are valued at weighted average cost of inventories. Inventories are periodically corrected in view of forecast spent quantities based on neutronic measurements and physical inventories.

1.3.17.2 Other operating inventories

Other operating inventories comprise:

- fossil fuels required for operation of thermal power plants;
- operating materials and equipment such as spare parts supplied under a maintenance programme (excluding capitalised strategic safety spare parts);
- certificates issued under the various environmental schemes (see note 1.3.27);
- goods and services in progress, particularly relating to the businesses of EDF Énergies Nouvelles and Dalkia;
- gas stocks.

Other non-trading operating inventories are generally valued at weighted average cost including direct and indirect purchasing costs.

Impairment of spare parts depends on the turnover of these parts.

Inventories held for trading purposes are stated at market value.

1.3.18 Trade receivables

Trade receivables are initially recognised at the fair value of the consideration received or receivable. Impairment is recorded when, based on the probability of recovery assessed according to the type of receivable, their carrying amount falls below their book value. Depending on the nature of the receivable, the risk associated with doubtful receivables is assessed individually or by experience-based statistical methods.

Trade receivables also include the value of unbilled receivables for energy already supplied.

1.3.19 Cash and cash equivalents

Cash and cash equivalents comprise very liquid assets and very short-term investments, usually maturing within three months or less of the acquisition date, and with negligible risk of fluctuation in value.

Securities held short-term and classified as "Cash equivalents" are recorded at fair value, with changes in fair value included in the heading "Other financial income and expenses".

1.3.20 Equity

1.3.20.1 Fair value adjustment of financial instruments

The fair value adjustment of financial instruments results from the restatement to fair value of available-for-sale financial assets and certain hedging instruments.

1.3.20.2 Share issue expenses

Share issue expenses correspond exclusively to external costs expressly related to the capital increase. They are charged against the issue premium at their net-of-tax value.

Other expenses are classified as expenses of the period.

1.3.20.3 Treasury shares

Treasury shares are shares issued by EDF and held either by that company or by other entities in the consolidated Group. They are valued at acquisition cost and deducted from equity until the date of disposal. Net gains or losses on disposals of treasury shares are directly included in equity and do not affect net income.

1.3.20.4 Perpetual subordinated bonds

Perpetual subordinated bonds in Euros and other currencies are recorded in compliance with IAS 32 as appropriate to their specific characteristics. They are recorded in equity at historical cost when there is an unconditional right to avoid paying cash or another financial asset in the form of a capital reimbursement or interest.

1.3.21 Provisions other than employee benefit provisions

The Group recognises provisions if the following three conditions are met:

- the Group has a present obligation (legal or constructive) towards a third party that arises from an event prior to the closing date;
- it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation;
- the obligation amount can be estimated reliably.

Provisions are determined based on the Group's estimate of the expected cost necessary to settle the obligation. Estimates are based on management data from the information system, assumptions adopted by the Group, and if necessary experience of similar transactions, or in some cases based on independent expert reports or contractor quotes. The various assumptions are reviewed for each closing of the accounts.

The relevant expenses are estimated based on year-end economic conditions, then spread over a forecast disbursement schedule and adjusted to Euros of the year of payment through application of a forecast long-term inflation rate. To determine the provisions, these amounts are discounted to present value using a nominal discount rate.

Provisions to cover back-end nuclear cycle expenses, expenses related to the decommissioning of power plants and last cores, and onerous contracts are estimated based on discounted future cash flows.

The rate of inflation and the discount rate are based on the economic and regulatory parameters of the country where the economic entity is located, considering the long operating cycle of Group assets and the maturities of commitments.

The discount effect generated at each closing to reflect the passage of time is recorded under "Discount effect" in financial expenses.

If it is anticipated that all or part of the expenses covered by a provision will be reimbursed, the reimbursement is recognised under receivables if and only if the Group is virtually certain of receiving it.

In extremely rare situations, a provision cannot be booked due to lack of a reliable estimate. In such cases, the obligation is mentioned in the notes as a contingent liability, unless there is little likelihood of an outflow of resources.

1.3.21.1 Provisions related to nuclear generation

Provisions related to nuclear generation mainly cover the following:

- back-end nuclear cycle expenses: provisions for spent fuel management and long-term radioactive waste management are established in accordance with the obligations and final contributions specific to each country;
- costs for decommissioning power plants and losses relating to fuel in the reactor when the reactor is shut down (provision for last cores).

Changes in provisions resulting from a change in discount rates, a change in the disbursement schedule or a change in contractor quote are recorded:

- as an increase or decrease in the corresponding assets, up to the net book value, if the provision was initially covered by balance sheet assets (decommissioning of plants still in operation, long-term management of the radioactive waste resulting from such decommissioning, and last cores);
- in the income statement in all other cases.

Detailed information on the principles for determining provisions related to nuclear generation in France and the United Kingdom is given in note 29.

1.3.21.2 Other provisions

Other provisions primarily concern:

- contingencies related to investments;
- tax liabilities;
- litigation;
- onerous contracts;
- environmental schemes.

Provisions for onerous contracts primarily relate to multi-year agreements for the purchase and sale of energy:

- losses on energy purchase agreements are measured by comparing the acquisition cost under the contractual terms with the forecast market price;
- losses on energy sale agreements are measured by comparing the estimated income under the contractual terms with the cost of the energy to be supplied.

Provisions for environmental schemes are established to cover the shortfall in greenhouse gas emission quotas and renewable energy certificates compared to the assigned targets (see note 1.3.27).

In extremely rare cases, description of a specific litigation covered by a provision may be omitted from the notes to the financial statements if such disclosure could cause serious prejudice to the Group.

1.3.22 Provisions for employee benefits

The Group grants its employees post-employment benefits (pension plans, retirement indemnities, etc) and other long-term benefits (e.g. long-service awards) in compliance with the specific laws and measures in force in each country where it does business.

1.3.22.1 Calculation and recognition of employee benefits

Obligations under defined-benefit plans are calculated by the projected unit credit method, which determines the present value of entitlements earned by employees at year-end under all types of plan, taking into consideration the prospects for wage increases and each country's specific economic conditions.

Post-employment benefit obligations are valued mainly using the following methods and assumptions:

- retirement age, determined on the basis of the applicable rules for each plan, and the requirements to qualify for a full pension;
- career-end salary levels, with reference to employee seniority, projected salary levels at the time of retirement based on the expected effects of career advancement, and estimated trends in pension levels;
- forecast numbers of pensioners, determined based on employee turnover rates and mortality data available in each country;
- reversion pensions where relevant, taking into account both the life expectancy of the employee and his/her spouse and the marriage rate;

- a discount rate that depends on the geographical zone and the duration of the obligations, determined at the year-end date by reference to the market yield on high-quality corporate bonds or the rate on government bonds whose duration is coherent with EDF group's commitments to employees.

The amount of the provision corresponds to the value of obligations less the fair value of the fund assets that cover those obligations.

The net expense booked during the year for employee benefit obligations includes:

- in the income statement:
 - the current service cost, corresponding to additional benefit entitlements earned during the year,
 - the net interest expense, corresponding to interest on obligations net of the return on fund assets, which is calculated using the same discount rate as for the obligations,
 - the past service cost, including the income or expense related to amendments or settlements of benefit plans or introduction of new plans,
 - the actuarial gains and losses relating to long-term benefits;
- in the statement of net income and gains and losses recorded directly in equity:
 - the actuarial gains and losses relating to post-employment benefits,
 - the effect of the limitation to the asset ceiling if any.

1.3.22.2 Post-employment benefit obligations

When they retire, Group employees benefit from pensions determined under local rules. They may also be entitled to benefits directly paid by the companies, and additional benefits prescribed by the relevant regulations.

1.3.22.2.1 French entities covered by the IEG system

Entities belonging to the specific IEG (electricity and gas) sector system, namely EDF, ERDF, RTE, Électricité de Strasbourg, PEI, Dunkerque LNG and certain subsidiaries of the TIRU subgroup, are Group companies where almost all employees benefit from the IEG statutes, including the special pension system and other statutory benefits.

Since the financing reform for the IEG sector system took effect on 1 January 2005, the CNIEG (*Caisse nationale des IEG*, the sector's specific pension body) has managed not only the special IEG pension system, but also the industrial accident, invalidity and death insurance system for the sector.

The CNIEG is a social security body governed by private law, formed by the Law of 9 August 2004. It has legal entity status and reports to the French government, operating under the joint supervision of France's ministers for the Budget, Social Security and Energy.

Under the funding arrangements introduced by the law, IEG companies establish pension provisions to cover entitlements not funded by France's standard systems (CNAV, AGIRC and ARRCO), to which the IEG system is affiliated, or by the CTA (*Contribution Tarifaire d'Acheminement*) levy on gas and electricity transmission and distribution services.

As a result of this funding mechanism, any change (whether favourable or unfavourable to employees) in the standard French pension system that is not passed on to the IEG pension system is likely to cause a variation in the amount of the provisions recorded by the Group to cover its obligations.

The obligations concerned by the pensions and for which a provision is recorded thus include:

- specific benefits of employees in the deregulated or competitive activities;
- specific benefits earned by employees from 1 January 2005 for the regulated activities (transmission and distribution) (benefits earned prior to that date are financed by the CTA levy).

In addition to pensions, other benefits are granted to IEG status former employees (not currently in active service), as detailed below:

- benefits in kind: Article 28 of the IEG national statutes entitles such employees and current employees to benefits in kind in the form of supplies of electricity or gas at preferential prices. The obligation for supplies of energy to employees of the EDF group and GDF Suez corresponds to the probable present value of kWh to be supplied to beneficiaries or their dependants during their retirement, valued on the basis of the unit cost. It also includes the payment made under the energy exchange agreement with GDF Suez;
- retirement gratuities: these are paid upon retirement to employees due to receive the statutory old-age pension, or to their dependants if the employee dies before reaching retirement. These obligations are almost totally covered by an insurance policy;
- bereavement benefit: this is paid out upon the death of an inactive or disabled employee, in order to provide financial assistance for the expenses incurred at such a time (Article 26, § 5 of the National Statutes). It is paid to the deceased's principal dependants (statutory indemnity equal to three months' pension) or to a third party that has paid funeral costs (discretionary indemnity equal to the costs incurred);
- bonus pre-retirement paid leave: all employees eligible to benefit immediately from the statutory old-age pension and aged at least 55 at their retirement date are entitled to 18 days of bonus paid leave during the last twelve months of their employment;
- other benefits include help with the cost of studies, time banking for pre-retirement leave, and pensions for personnel sent on secondment to subsidiaries not covered by the IEG system.

1.3.22.2.2 French and foreign subsidiaries not covered by the special IEG system

Pension obligations principally relate to the British companies and are mostly covered by defined-benefit plans.

In the United Kingdom, EDF Energy has two principal defined-benefit pension plans:

- the British Energy Generation Group (BEGG) plan affiliated to the Electricity Supply Pension Scheme (ESPS), of which the majority of members are employees in Nuclear Generation. The BEGG plan was closed to new members in August 2012;
- the EDF Energy Generation and Supply Group (EEGSG) plan, also affiliated to the ESPS, which was established in December 2010 for the employees remaining with EDF Energy following the transfer of the former Group plan to UK Power Networks as part of the sale of the Networks. The EEGSG plan is closed to new members.

New employees hired by EDF Energy join the EEPS (EDF Energy Pension Scheme) plan. This third plan (which is currently less significant) was established in March 2004 and includes a number of legacy pension schemes from London Electricity and Seeboard. Membership of EEPS is open to all employees.

Each pension plan is financially independent of the others. The BEGG and EEGSG plans are part of the industry-wide ESPS which is one of the largest private-sector pension schemes in the United Kingdom.

The plans affiliated to the ESPS are externally managed by separate trusts whose trustees are appointed by the firm and the plan participants to manage the funds in their exclusive interests. The trustees carry out an actuarial review of plan management every three years, defining the funding level, the necessary employer and employee contributions and the payment schedules. The trustees are responsible for defining the plans' investment strategy, in agreement with the firm.

1.3.22.3 Other long-term benefit obligations

These benefits concern employees currently in service, and are earned according to local regulations, particularly the statutory regulations for the electricity and gas sector for EDF and French subsidiaries covered by the IEG regime. They include:

- annuities following incapacity, invalidity, industrial accident or work-related illness; like their counterparts in the general national system, IEG employees are entitled to financial support in the event of industrial accident or work-related illness, and invalidity and incapacity annuities and benefits. The obligation is measured as the probable present value of future benefits payable to current beneficiaries, including any possible reversions;
- long-service awards;
- specific benefits for employees who have been in contact with asbestos.

1.3.23 Share-based payments

Under existing legislation in France, employees of a company or a group may benefit from capital increases reserved for them. Their company may also implement free share plans.

In the light of IFRS 2, these benefits granted to employees and former employees must be treated by the company as personnel expenses in the same way as additional remuneration, and recognised as such with a corresponding adjustment in equity.

Valuation of the benefit granted through a share offer reserved for current and former employees is based on the difference between the share subscription price and the share price at the grant date, with actuarial valuation of the impact, if any, of the payment terms, the minimum holding period, and the fact that no dividends were received during the vesting period for the free shares.

In the case of free shares, the value of the benefit is based on the share price at the grant date, depending on the number of shares granted and the fact that no dividends were received during the vesting period. The expense is spread over the vesting period.

1.3.24 Special concession liabilities

These liabilities represent the contractual obligations specific to the concession rules for public electricity distribution concessions in France, recognised in the liabilities as:

- rights in existing assets: these correspond to the grantor's right to recover all assets for nil consideration. This right comprises the value in kind of the facilities - the net book value of assets operated under concession - less any as yet unamortised financing provided by the operator;

- rights in assets to be replaced: these correspond to the operator's obligation to contribute to the financing of assets due for replacement. These non-financial liabilities comprise:

- depreciation recorded on the portion of assets financed by the grantor,
- the provision for renewal, exclusively for assets due for renewal before the end of the concession.

When assets are replaced, the provision and amortisation of the grantor's financing recorded in respect of the replaced item are eliminated and transferred to the rights in existing assets, since they are considered as the grantor's financing for the new asset. Any excess provision is taken to income.

During the concession, the grantor's rights in assets to be replaced are thus transferred upon the asset's renewal to become the grantor's rights in existing assets, with no outflow of cash to the benefit of the grantor.

In general, the value of special concession liabilities is determined as follows:

- the grantor's rights in existing assets, representing the share deemed to be held by the grantor in the concession assets, are valued on the basis of the assets recorded in the balance sheet;
- the obligations relating to assets to be replaced are valued on the basis of the estimated value of the relevant assets, measured at each year-end taking into consideration wear and tear on the asset at that date:
 - based on the difference between the asset's replacement value as assessed at year-end and the historical cost for calculation of the provision for renewal. Annual allocations to the provision are based on this difference, less any existing provisions, with the net amount spread over the residual useful life of the assets. Consequently, the expenses recognised for a given item increase over time,
 - based on the share of the asset's historical cost financed by the grantor for amortisation of the grantor's financing.

The Group considers that the obligations related to assets to be replaced are to be valued on the basis of the special clauses contained in the concession agreements. Under this approach, these obligations are stated at the value of the contractual obligations as calculated and reported annually in the reports to the grantors. This contractual value also reflects the possibility that the EDF group may one day lose its status as the concession operator.

If no such clauses existed, an alternative approach would be to state contractual obligations at the present value of future payments required for replacement of assets operated under concession at the end of their industrial useful life.

For information, the Group reports below the impacts of this alternative approach, i.e. the discounting of the future obligation to contribute to financing of assets to be replaced.

The principal assumptions used in preparing this simulation are as follows:

- the basis for calculation of the provision for renewal is the estimated replacement value at the end of the asset's useful life, applying a forecast annual inflation rate of 1.7%, less the asset's historical value. This amount is based on the wear and tear on the asset and discounted at a rate of 4.4%;
- amortisation of the grantor's financing is also discounted at the rate of 4.4%.

The following table shows the impacts of this simulation for EDF and ERDF in 2014:

- Impacts on the income statement

<i>(in millions of Euros and before taxes)</i>	2014
Operating profit	605
Financial result	(525)
Income before taxes of consolidated companies	80

- Impacts on the balance sheet - equity

<i>(in millions of Euros and before taxes)</i>	2014
At opening date	2,015
At closing date	2,095

Valuation of concession liabilities under this method is subject to uncertainty over costs and disbursements, and is also sensitive to inflation and discount rates.

1.3.25 Investment subsidies

Investment subsidies received by Group companies are included in liabilities under the heading "Other liabilities" and transferred to income as and when the economic benefits of the corresponding assets are utilised.

1.3.26 Assets classified as held for sale and related liabilities, and discontinued operations

Assets that qualify as held for sale and related liabilities are disclosed separately from other assets and liabilities in the balance sheet.

All income from discontinued operations is disclosed in a single net amount after taxes in the income statement. In the cash flow statement, net changes in cash and cash equivalents of discontinued activities are also reported separately on a specific line.

Impairment is booked when the realisable value is lower than the net book value.

1.3.27 Environment

1.3.27.1 Greenhouse gas emission rights

The third phase of the Kyoto protocol began on 1 January 2013, introducing changes to the methods for allocation of greenhouse gas emission rights which in some countries (including France) put an end to free allocation of emission rights for electricity generating companies.

The accounting treatment of emission rights depends on the holding intention. There are two economic models, both of which coexist in the EDF group.

Rights held under the "Trading" model are included in inventories at fair value. The change in fair value observed over the year is recorded in the income statement.

Rights held to comply with regulatory requirements on greenhouse gas emissions (the "Generation" model) are recorded in intangible assets:

- at acquisition cost when purchased on the market;
- at nil value when allocated free of charge (in countries that still have a free allocation system).

When the estimated emissions by a Group entity over a given period are higher than the rights allocated for the period less any allocated rights sold on the spot or forward market, a provision is established to cover the excess emissions. This provision is equal to the shortfall in rights held (difference between actual emissions and allocated rights held at the closing date).

If no emission rights are allocated free of charge, a provision is systematically recorded equivalent to the actual emissions at the closing date.

In either case, the provision is measured on the basis of the acquisition cost up to the amount of rights acquired on the spot or forward markets, and on market prices for the balance. It is cancelled when the rights are surrendered to the State.

At the closing date, the portfolio of emission rights and the obligation to surrender rights for the emissions of the year are presented gross, without netting.

If the number of purchased emission rights recorded as intangible assets at the end of the year and not subject to forward sale is higher than the number of purchased rights that will be surrendered to the State for the year's emissions, an impairment test must be applied to the excess. If there is a significant negative differential on the purchased rights held, impairment is booked, or partly or totally reversed where relevant.

1.3.27.2 Renewable energy certificates

In application of EU Directive 2009/28/EC (amending and repealing Directive 2001/77/EC) on the promotion of the use of energy from renewable sources, every EU member state has set national targets for consumption of electricity from renewable sources.

There are two ways for States to meet these targets:

- incorporating the costs of generating such electricity into the sale price for electricity (this is the approach taken in France);
- introducing a renewable energy certificate system (as is the case in the United Kingdom, Italy, Poland and Belgium).

The renewable energy certificates system may apply to:

- non-obligated electricity producers when the obligation applies to energy sales (Poland, EDF Énergies Nouvelles);
- obligated electricity producers when the obligation applies to generation;
- producers who are also sellers of electricity when the obligation applies to energy sales (EDF Energy, Edison, EDF Luminus, Fenice).

The EDF group applies the following accounting treatments:

- for non-obligated electricity producers, certificates obtained based on generation output are recorded in «Other inventories» until they are sold on to suppliers;
- for obligated producers and an entity that both produces and supplies energy and is under an obligation to sell a specified quantity of renewable energy, the Group uses the following accounting treatments for certificates obtained based on generation output:
 - up to the level of the obligation, these certificates are not recognised,
 - certificates in excess of the obligation are recorded in "Other inventories",

- in the specific situation when an entity is not in a position to meet its obligation at the year-end, the Group applies the following accounting treatment:

- certificates acquired for a consideration in order to meet the obligation are recorded in intangible assets at acquisition cost, and
- a provision is established equivalent to the shortfall in certificates compared to the obligation at the year-end. The value of this provision is based on the acquisition price of certificates already purchased on the spot or forward market, and market prices or penalty prices for the balance. The provision is cancelled when the certificates are surrendered to the State.

Forward purchases/sales of certificates related to trading activities are recorded in accordance with IAS 39, stated at fair value in the balance sheet date. The change in fair value is recorded in the income statement.

1.3.27.3 Energy savings certificates

In application of EU Directive 2012/27/EC on energy efficiency, EU Member States are required to meet energy savings targets by 2020. This target can be met through a system of energy savings certificates, similar to the system introduced by the French Law of 13 July 2005.

The EDF group fulfils its obligations either by taking measures regarding its assets or actions with its final customers in order to receive energy savings certificates from the State, or by purchasing energy savings certificates directly.

Expenses incurred to meet the cumulative energy savings obligation are treated as:

- property, plant and equipment if the action taken by the entity concerns its own assets and the expenses qualify for recognition as an asset;
- expenses for the year incurred, if they do not meet the requirements for capitalisation or if the action taken is to encourage third parties to save energy.

Expenses incurred in excess of the accumulated obligation at year-end are included in inventories until they are used to cover the obligation.

1.3.27.4 Environmental expenses

Environmental expenses are identifiable expenses incurred to prevent, reduce or repair damage to the environment that has been or may be caused by the Group as a result of its activities. These expenses are treated as follows:

- they are capitalised if they are incurred to prevent or reduce future damage or protect resources;
- they are booked as environmental liabilities and increases to provisions for environmental risks if they correspond to an obligation that exists at the year-end and it is probable or certain at the reporting date that they will lead to an outflow of resources;
- they are recognised as expenses if they are operating expenses for the bodies in charge of environmental concerns, environmental supervision, environmental duties and taxes, processing of liquid and gas effluents and non-radioactive waste, or research unrelated to an investment.

➤ Note 2 Comparability

2.1 Changes in accounting methods

Standards IFRS 10, IFRS 11 and IFRS 12 became mandatory on 1 January 2014 and are applied retrospectively, in compliance with IAS 8.

2.1.1 Application of IFRS 10

The Group's scope of consolidation is not significantly affected by the new definition of control provided by IFRS 10.

For an overall analysis of its interests in other entities, the Group mainly exercised judgment to assess the situation of the following entities in particular:

- The EDF group owns 100% of the capital of RTE, but EDF has no longer exercised control (exclusive or joint) over RTE since 2010 when its governance was brought into line with EU Directive 2009/72 (13 July 2009) as transposed into French law. However, the Group has significant influence over RTE since it appoints one third of Supervisory Board members. RTE is therefore an associate for the EDF group, and is accounted for by the equity method in accordance with the instructions of IAS 28 (revised).
- The Group considers that it does not have control, as defined by IFRS 10, over the investment funds set up to enable EDF to allocate some of the funds to finance expenses for nuclear plant decommissioning and long-term radioactive waste storage. This conclusion is based on these funds' characteristics, the prerogatives exercised by their managers and the procedures for defining the management strategies applicable to them. These funds are consequently treated as available-for-sale financial assets, in application of IAS 39.
- Through its subsidiary Edison, the Group holds a 30% investment in Edens, following a transaction completed on 6 November 2014 with F2i (see note 3.2.2). The governance arrangements and contractual

agreements introduced for Edens in connection with this transaction give Edison exclusive control over Edens although it only has a minority holding. In application of IFRS 10, Edens is therefore fully consolidated (via Edison) in the Group's consolidated financial statements.

2.1.2 Application of IFRS 11

As a result of application of IFRS 11, the EDF group's joint arrangements are considered as joint ventures and accounted for by the equity method, except for some non-significant entities which are considered as joint operations (leading to line-by-line consolidation of assets, liabilities, income and expenses related to the interests held).

The principal entities concerned by the change to the equity method are Dalkia International (which was sold on 25 July 2014), CENG, Estag, SSE (which was sold on 27 November 2013) and certain subsidiaries of EDF Énergies Nouvelles and Edison.

To determine the appropriate joint arrangement classification for each jointly-controlled entity, the Group examined whether the partners benefit from substantially all economic benefits of the assets and are substantially continuously responsible for settlement of liabilities. A joint arrangement is classified as a joint operation when both these conditions are fulfilled, and as a joint venture otherwise.

2.1.3 Application of IFRS 12

Application of IFRS 12 requires additional disclosures in the notes to the consolidated financial statements, especially concerning investments in associates and joint ventures (see note 23), non-controlling interests (see note 27.5), structured entities (RTE, listed and unlisted investment funds – see note 2.1.3.1), and restrictions that may limit the Group's ability to access or use its assets or settle its liabilities (see note 2.1.3.2).

2.1.3.1 Structured entities - Investment funds

The investment funds held by the Group are located in France and owned by EDF. The Group has not given these funds any financial support.

The summary financial information for the main investment funds are as follows:

Nature of risks		Value of fund assets at 31/12/2014
<i>(in millions of Euros)</i>		
Star Capitol America	Exposed to US equities	323
MLAD Europe	Exposed to European equities	74
CDC AD Europe	Exposed to European equities	77
CAPITAL AD Europe	Exposed to European equities	73
AGF PIMCO AD Global Bonds	Exposed to international bonds, foreign exchange risk hedged	56
Aberdeen AD Interbonds	Exposed to international bonds, foreign exchange risk hedged	54
Casablanca	Exposed to international bonds, foreign exchange risk hedged	151
Other	Exposed to international equities	37
Listed investment funds		845
Unlisted investment funds		52
TOTAL		897

2.1.3.2 Nature and extent of restrictions on the Group's ability to access and use assets or settle liabilities

The main restrictions that may limit the Group's ability to access or use its assets or settle its liabilities concern the following items:

- assets held to fund employee benefits (principally in France and the United Kingdom – see note 1.3.22) – and expenses related to nuclear liabilities (principally in France – see note 47 – and the United Kingdom – see note 29.2);
- tangible and intangible assets and the related liabilities associated with concession agreements, whether or not they are subject to regulatory mechanisms (obligations to supply energy or energy-related services, rules governing investments, an obligation to return concession facilities at the end of the contract, amounts payable at the end of the contract, tariff constraints, etc). These restrictions mainly apply to assets of this type in France (EDF, ERDF, RTE and Dalkia), and to a lesser extent Italy, Poland, and Hungary (see notes 1.3.13 and 1.3.24);
- the sale of Group investments in certain subsidiaries requires authorisations from State bodies, particularly when they exercise a regulated activity or operate nuclear power plants (this is the case for EDF Nuclear Generation Ltd. in the United Kingdom, Taishan (TNPJVC) in China and CENG in the United States).

Certain shareholder agreements concerning companies controlled by the Group include clauses to protect minority shareholders, requiring approval from minority shareholders for certain particularly important decisions.

Finally, certain financing loans granted to Group entities contain early repayment clauses (see note 38.2.6).

2.2 Change in the current/ non-current classification of other receivables and other liabilities

At 31 December 2013, a €1,924 million reclassification from “Other current receivables” to “Other non-current receivables” was booked, with no impact on the total balance sheet assets. This amount mainly corresponds to the share of other operating receivables and prepaid expenses maturing in more than one year.

A €1,084 million reclassification from “Other current liabilities” to “Other non-current liabilities” was also booked at the same date, with no impact on the balance sheet total for equity and liabilities. This amount mainly corresponds to the share of investment subsidies reported under “Other liabilities” maturing in more than one year.

2.3 Impact on the income statement for 2013

<i>(in millions of Euros)</i>	2013 as published	Impacts of IFRS 10 and IFRS 11	2013 restated
Sales	75,594	(3,678)	71,916
Fuel and energy purchases	(39,683)	1,567	(38,116)
Other external expenses	(9,027)	740	(8,287)
Personnel expenses	(11,879)	588	(11,291)
Taxes other than income taxes	(3,533)	52	(3,481)
Other operating income and expenses	5,293	65	5,358
Operating profit before depreciation and amortisation	16,765	(666)	16,099
Net changes in fair value on Energy and Commodity derivatives, excluding trading activities	14	–	14
Net depreciation and amortisation	(7,516)	362	(7,154)
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(228)	1	(227)
(Impairment)/reversals	(1,012)	395	(617)
Other income and expenses	388	(169)	219
Operating profit	8,411	(77)	8,334
Cost of gross financial indebtedness	(2,403)	141	(2,262)
Discount effect	(2,982)	51	(2,931)
Other financial income and expenses	2,296	(45)	2,251
Financial result	(3,089)	147	(2,942)
Income before taxes of consolidated companies	5,322	70	5,392
Income taxes	(1,942)	46	(1,896)
Share in net income of associates and joint ventures	375	(113)	262
GROUP NET INCOME	3,755	3	3,758
EDF net income	3,517	–	3,517
Net income attributable to non-controlling interests	238	3	241

2.4 Impact on the statement of net income and gains and losses recorded directly in equity for 2013

<i>(in millions of Euros)</i>	2013 as published	Impacts of IFRS 10 and IFRS 11	2013 restated
Group net income	3,755	3	3,758
Change in fair value of available-for-sale financial assets	515	–	515
Change in fair value of hedging instruments	662	(2)	660
Translation adjustments	(829)	5	(824)
Gains and losses recorded directly in equity that will be reclassified subsequently to profit or loss	348	3	351
Actuarial gains and losses on post-employment benefits	39	–	39
Gains and losses recorded directly in equity that will not be reclassified subsequently to profit or loss	39	–	39
Total gains and losses recorded directly in equity	387	3	390
NET INCOME AND GAINS AND LOSSES RECORDED DIRECTLY IN EQUITY	4,142	6	4,148

2.5 Impact on the balance sheet at 31 december 2013

ASSETS

<i>(in millions of Euros)</i>	31/12/2013 as published	Impacts of IFRS 10 and IFRS 11	Impacts of "Other receivables" and "Other liabilities"	31/12/2013 restated
Goodwill	9,206	(125)	–	9,081
Other intangible assets	7,976	(116)	–	7,860
Property, plant and equipment operated under French public electricity distribution concessions	48,796	–	–	48,796
Property, plant and equipment operated under concessions for other activities	7,518	(68)	–	7,450
Property, plant and equipment used in generation and other tangible assets owned by the Group	69,013	(4,452)	–	64,561
Investments in associates and joint ventures	7,813	3,666	–	11,479
Non-current financial assets	30,324	(713)	–	29,611
Other non-current receivables	–	–	1,924	1,924
Deferred tax assets	2,839	(668)	–	2,171
Non-current assets	183,485	(2,476)	1,924	182,933
Inventories	14,550	(346)	–	14,204
Trade receivables	22,137	(245)	–	21,892
Current financial assets	17,770	77	–	17,847
Current tax assets	560	(6)	–	554
Other current receivables	9,221	(58)	(1,924)	7,239
Cash and cash equivalents	5,459	(363)	–	5,096
Current assets	69,697	(941)	(1,924)	66,832
Assets classified as held for sale	3,619	(2,465)	–	1,154
TOTAL ASSETS	256,801	(5,882)	–	250,919

EQUITY AND LIABILITIES

<i>(in millions of Euros)</i>	31/12/2013 as published	Impacts of IFRS 10 and IFRS 11	Impacts of "Other receivables" and "Other liabilities"	31/12/2013 restated
Capital	930	–	–	930
EDF net income and consolidated reserves	33,277	–	–	33,277
Equity (EDF share)	34,207	–	–	34,207
Equity (non-controlling interests)	4,663	335	–	4,998
Total equity	38,870	335	–	39,205
Provisions related to nuclear generation – Back-end of the nuclear cycle, plant decommissioning and last cores	40,985	(558)	–	40,427
Provisions for decommissioning of non-nuclear facilities	1,193	(11)	–	1,182
Provisions for employee benefits	18,542	(161)	–	18,381
Other provisions	1,755	(275)	–	1,480
Non-current provisions	62,475	(1,005)	–	61,470
Special French public electricity distribution concession liabilities	43,454	–	–	43,454
Non-current financial liabilities	42,877	(1,464)	–	41,413
Other non-current liabilities	3,955	(38)	1,084	5,001
Deferred tax liabilities	5,004	(762)	–	4,242
Non-current liabilities	157,765	(3,269)	1,084	155,580
Current provisions	4,848	(14)	–	4,834
Trade payables	14,312	(155)	–	14,157
Current financial liabilities	14,912	(265)	–	14,647
Current tax liabilities	1,348	(8)	–	1,340
Other current liabilities	22,457	(217)	(1,084)	21,156
Current liabilities	57,877	(659)	(1,084)	56,134
Liabilities related to assets classified as held for sale	2,289	(2,289)	–	–
TOTAL EQUITY AND LIABILITIES	256,801	(5,882)	–	250,919

2.6 Impact on the balance sheet at 31 december 2012

ASSETS

<i>(in millions of Euros)</i>	31/12/2012 as published ⁽¹⁾	Impacts of IFRS 10 and IFRS 11	Impacts of "Other receivables" and "Other liabilities"	31/12/2012 restated
Goodwill	10,412	(1,012)	–	9,400
Other intangible assets	7,625	(292)	–	7,333
Property, plant and equipment operated under French public electricity distribution concessions	47,222	–	–	47,222
Property, plant and equipment operated under concessions for other activities	7,182	(40)	–	7,142
Property, plant and equipment used in generation and other tangible assets owned by the Group	67,838	(6,420)	–	61,418
Investments in associates and joint ventures	7,587	5,384	–	12,971
Non-current financial assets	30,471	(937)	–	29,534
Other non-current receivables	–	–	1,551	1,551
Deferred tax assets	3,421	(782)	–	2,639
Non-current assets	181,758	(4,099)	1,551	179,210
Inventories	14,213	(542)	–	13,671
Trade receivables	22,497	(1,045)	–	21,452
Current financial assets	16,433	196	–	16,629
Current tax assets	582	(29)	–	553
Other current receivables	8,486	(221)	(1,551)	6,714
Cash and cash equivalents	5,874	(839)	–	5,035
Current assets	68,085	(2,480)	(1,551)	64,054
Assets classified as held for sale	241	–	–	241
TOTAL ASSETS	250,084	(6,579)	–	243,505

(1) Figures published in 2013, corresponding to published figures for 2012 restated for the impact of retrospective application of IAS 19 (revised).

EQUITY AND LIABILITIES

<i>(in millions of Euros)</i>	31/12/2012 as published ⁽¹⁾	Impacts of IFRS 10 and IFRS 11	Impacts of "Other receivables" and "Other liabilities"	31/12/2012 restated
Capital	924	–	–	924
EDF net income and consolidated reserves	25,333	–	–	25,333
Equity (EDF share)	26,257	–	–	26,257
Equity (non-controlling interests)	4,854	262	–	5,116
Total equity	31,111	262	–	31,373
Provisions related to nuclear generation – Back-end of the nuclear cycle, plant decommissioning and last cores	39,185	(546)	–	38,639
Provisions for decommissioning of non-nuclear facilities	1,090	(12)	–	1,078
Provisions for employee benefits	19,119	(283)	–	18,836
Other provisions	1,873	(521)	–	1,352
Non-current provisions	61,267	(1,362)	–	59,905
Special French public electricity distribution concession liabilities	42,551	–	–	42,551
Non-current financial liabilities	46,980	(1,767)	–	45,213
Other non-current liabilities	4,218	(55)	1,134	5,297
Deferred tax liabilities	5,601	(892)	–	4,709
Non-current liabilities	160,617	(4,076)	1,134	157,675
Current provisions	3,882	(55)	–	3,827
Trade payables	14,643	(757)	–	13,886
Current financial liabilities	17,521	(1,299)	–	16,222
Current tax liabilities	1,224	(21)	–	1,203
Other current liabilities	21,037	(633)	(1,134)	19,270
Current liabilities	58,307	(2,765)	(1,134)	54,408
Liabilities related to assets classified as held for sale	49	–	–	49
TOTAL EQUITY AND LIABILITIES	250,084	(6,579)	–	243,505

(1) Figures published in 2013, corresponding to published figures for 2012 restated for the impact of retrospective application of IAS 19 (revised).

2.7 Impact on the statement of cash flows for 2013

(in millions of Euros)	2013 as published	Impacts of IFRS 10 and IFRS 11	2013 restated
Operating activities:			
Income before taxes of consolidated companies	5,322	70	5,392
Impairment/(reversals)	1,012	(395)	617
Accumulated depreciation and amortisation, provisions and change in fair value	9,445	(200)	9,245
Financial income and expenses	1,587	(99)	1,488
Dividends received from associates and joint ventures	266	103	369
Capital gains/losses	(882)	2	(880)
Change in working capital	(1,783)	72	(1,711)
Net cash flow from operations	14,967	(447)	14,520
Net financial expenses disbursed	(1,799)	80	(1,719)
Income taxes paid	(1,979)	43	(1,936)
Net cash flow from operating activities	11,189	(324)	10,865
Investing activities:			
Acquisitions/disposals of equity investments, net of cash (acquired/transferred)	648	101	749
Investments in intangible assets and property, plant and equipment	(13,327)	285	(13,042)
Net proceeds from sale of intangible assets and property, plant and equipment	240	(11)	229
Changes in financial assets	164	193	357
Net cash flow used in investing activities	(12,275)	568	(11,707)
Financing activities:			
Transactions with non-controlling interests	95	67	162
Dividends paid by parent company	(2,144)	–	(2,144)
Dividends paid to non-controlling interests	(318)	17	(301)
Purchases/sales of treasury shares	4	–	4
Cash flows with shareholders	(2,363)	84	(2,279)
Issuance of borrowings	5,746	(588)	5,158
Repayment of borrowings	(8,654)	391	(8,263)
Issuance of perpetual subordinated bonds	6,125	–	6,125
Payments to bearers of perpetual subordinated bonds	(103)	–	(103)
Funding contributions received for assets operated under concessions	171	–	171
Investment subsidies	89	(2)	87
Other cash flows from financing activities	3,374	(199)	3,175
Net cash flow used in financing activities	1,011	(115)	896
Net increase (decrease) in cash and cash equivalents	(75)	129	54
CASH AND CASH EQUIVALENTS – OPENING BALANCE	5,874	(839)	5,035
Net increase/(decrease) in cash and cash equivalents	(75)	129	54
Effect of currency fluctuations	4	10	14
Financial income on cash and cash equivalents	23	(7)	16
Effect of reclassifications	(367)	344	(23)
CASH AND CASH EQUIVALENTS – CLOSING BALANCE	5,459	(363)	5,096

➤ Note 3 Significant events and transactions

3.1 Dalkia

3.1.1 History

On 25 March 2014 EDF and Veolia Environnement (VE) announced that they had finalised the discussions begun in October 2013 and signed an agreement regarding their joint subsidiary Dalkia. Under the terms of this agreement, the EDF group was to take over all the Dalkia group's activities in France (including Citelum), while Dalkia International's activities were taken over by VE, and VE paid the EDF group a net amount of €661 million in compensation for the difference in value between the stakes owned by the two shareholders in the various Dalkia entities. This payment, initially valued at €550 million, was adjusted based on the final scope concerned by the transaction, with no significant financial impact compared to original structure of the operation.

Following European Commission approval and fulfilment of the other conditions, the Group finalised the operation with VE on 25 July 2014, on the terms laid down in the agreement of 25 March 2014.

This operation will enable the Group to develop its involvement in energy services.

3.1.2 Dalkia's activities in France

Dalkia is France's leading company in the energy efficiency services market for local authorities and industrial customers, developing services in three fields of business: heat and cold networks, industrial utilities, and energy services for buildings. Dalkia's activities employ over 12,000 people (excluding Citelum).

The Citelum subgroup is also included in Dalkia's French activities that have been taken over by the EDF group. Citelum markets solutions for urban electric facilities in and outside France (urban lighting, traffic management, security equipment and communication facilities for public spaces).

3.1.3 Accounting treatment in the EDF consolidated financial statements

The sale of the EDF group's investment in Dalkia International took place on 25 July 2014, when all the conditions were fulfilled and the offers were declared fully unconditional. A gain on the sale is recorded in "Other income and expenses".

The acquisition of exclusive control over Dalkia's activities in France and Citelum (collectively referred to as "Dalkia") took place at the same time, and full consolidation of these entities is applied in the EDF group's consolidated financial statements from 25 July 2014. In application of IFRS 3, the identifiable assets and liabilities of Dalkia are carried at their fair value at that date. These values are provisional and the Group has 12 months to finalise allocation of the acquisition price.

The acquisition of Dalkia is reflected in the following items in the Group's consolidated financial statements:

- a gain on sale resulting from a new fair value measurement of the investment in Dalkia previously held, recorded in "Other income and expenses";
- recognition of provisional goodwill of €392 million.

3.1.4 Dalkia - Determination of the gain on sale

The proceeds on the sale generated by operations connected with the Group's investment in Dalkia have two components:

- a gain on the sale of Dalkia International corresponding to the difference between the sale price and the consolidated value of the net assets sold;
- a gain on sale corresponding to the difference between the net consolidated value and the fair value of the Group's investment in Dalkia at the date control was acquired, in application of IFRS 3.

The fair value is the price paid by the EDF group to VE to take over control of Dalkia.

This gain on sale is included in "Other income and products" in 2014, and was determined as follows:

(in millions of Euros)

(A) Sale price for Dalkia International	1,407
(B) Fair value of Dalkia	382
(C) Net book value of the assets sold (Dalkia International)	1,200
Net book value of the investment	
(D) previously held (Dalkia)	412
Effect of transferring gains and losses	
(E) recorded directly in equity	40
(A+B-C-D+E) GAIN ON SALE	217

3.1.5 Items of Dalkia's opening balance sheet in the EDF group's consolidated financial statements and determination of goodwill

3.1.5.1 Determination of the provisional opening balance sheet

The fair value of Dalkia's identifiable assets and liabilities is the Group's best estimate to date. It was determined based on Dalkia's available forecast data, under commonly used valuation methods.

After including the fair values of assets acquired and liabilities assumed, the provisional opening balance sheet for Dalkia at 25 July 2014 (100% basis) is as follows:

ASSETS

<i>(in millions of Euros)</i>	Historical values	Fair value adjustments	Provisional opening values
Goodwill	112	(112)	–
Other intangible assets	558	206	764
Tangible assets	630	–	630
Investments in associates and joint ventures	50	–	50
Financial assets	255	(11)	244
Deferred tax assets	129	20	149
Inventories	221	51	272
Trade receivables	755	–	755
Current tax assets	25	–	25
Other receivables	470	–	470
Cash and cash equivalents	214	–	214
TOTAL ASSETS	3,419	154	3,573

EQUITY AND LIABILITIES

<i>(in millions of Euros)</i>	Historical values	Fair value adjustments	Provisional opening values
Capital	220	–	220
Consolidated reserves	539	(23)	516
Equity	759	(23)	736
Non-controlling interests	7	–	7
Total equity	766	(23)	743
Provisions	272	81	353
Financial liabilities	795	6	801
Deferred tax liabilities	124	90	214
Trade payables	578	–	578
Current tax liabilities	24	–	24
Other liabilities	860	–	860
TOTAL EQUITY AND LIABILITIES	3,419	154	3,573

The main adjustments resulting from fair value measurement of the assets acquired and the liabilities assumed concern the following items:

- Cancellation of historical goodwill: €(112) million.
- Fair value adjustment of intangible assets: €206 million, comprising:
 - creation of an intangible asset representing the Dalkia brand: €130 million.

The brand was valued under the relief-from-royalty method. Due to the Dalkia brand's reputation in France and the Group's intention to continue to use it in the long term, its useful life is considered to be indefinite;

 - revaluation of customer contracts associated with heat generation and distribution concessions: €68 million.

The fair value of Dalkia's customer contracts was determined by the discounted future cash flows method using historical and forecast

data. The revaluation concerned a selection of significant contracts accounting for approximately 60% of the total business margin and the net consolidated value of the associated assets. The fair value adjustments involved no assumption regarding renewal of customer contracts, mainly because of the systematic calls for tender in a highly competitive environment and the distant time horizon (the contracts valued have a residual term of 12-13 years).

- Net deferred taxes: €(70) million.
- Revaluation of deferred taxes only concerned the tax effects associated with fair value adjustments applied for the purposes of determining the opening balance sheet.
- Other fair value adjustments.
- Other fair value adjustments mainly concerned revaluation of Dalkia's inventories of work-in-progress and fair value adjustments of Citelum's assets and liabilities.

The main assumptions to which these opening balance sheet assets and liabilities are sensitive are:

- the royalty rate used to value the Dalkia brand;
- the financial terms of the concession agreements for heat generation and distribution;
- the discount rate applied.

In compliance with the provisions of IFRS 3, the values of the assets acquired and liabilities assumed are provisional, as the Group has 12 months from the date of the transaction to finalise allocation of the acquisition price.

3.1.5.2 Determination of provisional goodwill

The provisional goodwill recorded in the operation is determined as follows:

(in millions of Euros)

Fair value of previously-held shares	382
Acquisition price for the investment	746
Consideration transferred at 25 July 2014 (A)	1,128
Fair value of the Dalkia assets acquired	736
Fair value of assets acquired and liabilities assumed (B)	736
PROVISIONAL GOODWILL (A)-(B)	392

3.1.6 Impact of the operation on the Group's net income and net indebtedness

Dalkia and Citelum's contribution to the Group's operating profit before depreciation and amortisation from the acquisition date of 25 July 2014 until 31 December 2014 amounted to €18 million.

The impacts of the operation on the Group's net indebtedness at 31 December 2014 are as follows:

(in millions of Euros)

Acquisition price for Dalkia	746
Sale price for Dalkia International	(1,407)
Net amount received	(661)
Redemption of the perpetual subordinated bonds subscribed by Dalkia International from EDF	(144)
Total received	(805)
Consolidation of Dalkia's net indebtedness	571
Effect of the change in scope of consolidation	571
INCREASE/(DECREASE) IN NET INDEBTEDNESS	(234)

3.1.7 Effects of the takeover of Dalkia on the Group's main income statement indicators for 2014

If the takeover of Dalkia had taken place at 1 January 2014, the impacts on the Group's main income statement indicators would have been as follows:

(in millions of Euros)	2014 as published	2014 restated ⁽¹⁾	Variation
Sales	72,874	74,318	1,444
Operating profit before depreciation and amortisation	17,279	17,384	105
Net income	3,701	3,737	36

(1) 2014 figures including full consolidation of Dalkia from 1 January 2014 (from 25 July 2014 for the figures as published).

3.2 Edison

3.2.1 Renegotiation of long-term gas supply contracts

On 29 August 2014 the Chamber of Commerce tribunal in Stockholm notified Edison and Promgas of its decision to review gas prices with Russia. This decision had a positive impact of €80 million on the Group's operating profit before depreciation and amortisation for 2014 (including compensation received for previous years).

The arbitrations and agreements reached in 2013 concerning the long-term gas supply contracts with Rasgas (Qatar) and Sonatrach (Algeria) had a positive €813 million impact on the Group's operating profit before depreciation and amortisation for 2013 (including compensation received for previous years).

3.2.2 Agreement between Edison, EDF Énergies Nouvelles and F2i for creation of a new renewable energy hub

On 6 November 2014, Edison, EDF Énergies Nouvelles and F2i finalised their agreements for creation of the third-largest Italian operator in the renewable energy sector, controlling a capacity of 600MW (mainly wind power) after combination of the units operated by Edison Energie Speciali (Edens) and certain units operated by EDF Énergies Nouvelles Italia.

This new player in renewable energy will draw on both Edison's skills in management and optimisation of electricity generation, and EDF Énergies Nouvelles' skills in operation and maintenance. The new entity's capacity and financial skills will be strengthened by the involvement of a strategic partner like F2i, a long-term investor with longstanding experience in the energy sector.

The shareholders of the newly formed company are F2i, with a 70% interest, and a holding company owned by Edison and EDF Énergies Nouvelles, with the remaining 30%.

Under the applicable accounting principles, the defined governance system and associated contractual agreements allow Edison to fully consolidate the new company.

3.3 Agreement with Exelon concerning CENG

After receiving the approval of the US Nuclear Regulatory Commission (NRC), on 1 April 2014 EDF finalised the agreement signed with Exelon on 29 July 2013 concerning Constellation Energy Nuclear Group (CENG).

Under the terms of this agreement, EDF delegates operational management of the five nuclear reactors owned by CENG (located in three sites in the United States, with total power of 4.2GW) to Exelon, the United States' leading nuclear operator.

CENG has also paid the Group a special dividend of US\$400 million (€290 million), funded by a loan to CENG from Exelon. CENG has given a commitment that once this loan is fully repaid, it will pay Exelon a dividend of present value equivalent to US\$400 million. EDF has also been granted an option to sell its holding in CENG to Exelon at fair value, which can be exercised between January 2016 and June 2022.

Following this operation, CENG is still owned 49.99% by EDF and 50.01% by Exelon, and its Board of Directors has equal numbers of directors appointed by Exelon and EDF. Nonetheless, in the light of the analysis criteria defined by the new standards IFRS 10 and IFRS 11, examination of the clauses of the new agreement leads to the conclusion that CENG should be considered as an associate for the EDF group from 1 April 2014 (it was previously classified as a joint venture). CENG is thus accounted for under the equity method.

3.4 EDF Energy: construction of two EPRs at Hinkley Point

On 8 October 2014 the European Commission approved the main terms of the agreements between the EDF group and the UK Government to build a new nuclear power station at Hinkley Point C in Somerset in south-west England. This decision was given after a 12-month-long rigorously detailed examination of the agreements by the European Commission, required by European Union rules on State aid. Approval by the European Commission marked a further milestone for the project, after the issuance of planning permission and nuclear site licences, approval of the EPR reactor design by the UK regulator, and the agreement reached in October 2013 on the project's key commercial terms, particularly the Contract for Difference (CfD) strike price over a duration of 35 years from the plant's date of commissioning, and confirmation of the project's eligibility for the UK Government's infrastructure funding guarantee programme ("Infrastructure UK").

The next steps required before a final investment decision is made include the conclusion of agreements with strategic and financial partners for the project, approval by the European Commission and the British government of the waste transfer contract arrangements, implementation of the funding guarantee through the "Infrastructure UK" programme, and finalisation of the CfD and contracts with the principal suppliers.

3.5 Issuance of perpetual subordinated bonds

On 15 January 2014 EDF launched several tranches of a perpetual subordinated bond in Euros, US dollars and sterling (a "hybrid" bond):

- US\$1,500 million at 5.625% coupon with a 10-year first call date;
- €1,000 million at 4.125% coupon with an 8-year first call date;
- €1,000 million at 5% coupon with a 12-year first call date;
- £750 million at 5.875% coupon with a 15-year first call date.

These bonds are redeemable at the initiative of EDF after a minimum period that depends on the currency (between 8 and 15 years), then at every interest payment date, or in the event of certain very specific circumstances (such as a change in IFRSs or tax regime).

The annual yield is fixed and revalued on the basis of contractual clauses that differ according to the currency. There is no obligation for EDF to make any payment, due to the existence of contractual clauses allowing deferral of payment. However, those clauses stipulate that deferred payments must be made if it is decided to pay a dividend to EDF shareholders.

All these features give EDF an unconditional right to avoid paying out cash or another financial asset in reimbursement or interest on the principal. Consequently, in compliance with IAS 32, this issue is recorded in equity from reception of funds at the amount of €3,970 million.

This bond is the second issue in the financing programme launched in January 2013 with the aim of building up an amount of subordinated instruments coherent with the portfolio of industrial assets in development.

3.6 Agreement between EDF and Exeltium

On 27 October 2014 the Exeltium consortium and EDF signed an agreement to adjust Exeltium's electricity supply contract and restore competitiveness to the electro-intensive companies concerned, following the significant unexpected drop in market prices.

Under this agreement, the price paid for electricity supplies will be decreased initially, before a subsequent adjustment based on changes in the market price for electricity. The whole mechanism thus makes the contract more flexible while retaining its overall economic balance.

The other contractual parameters (delivery volumes, opt-out options and industrial risk sharing) are unchanged. The contract's philosophy, approved at the outset by the European Commission, remains the same: offering long-term visibility to the companies belonging to the consortium and ensuring competitive prices over the whole period, while allowing EDF to share part of its generation costs in the long run.

3.7 Significant events and transactions of 2013

3.7.1 Sales of the Group's investment in SSE

On 24 May 2013, the EDF group received an irrevocable offer from the Czech energy company Energetický a Průmyslový Holding, a.s. (EPH), which is a leading player in central and eastern Europe, for the acquisition of EDF's 49% minority stake in Stredoslovenska Energetika a.s. (SSE), Slovakia's number two electricity distributor and supplier.

The transaction was completed on 27 November 2013 after authorisation by the competition authorities, based on valuation of the Group's investment in SSE at approximately €400 million. A pre-tax gain of €54 million on the sale was recorded in "Other operating income and expenses".

3.7.2 Acquisition of Centrica's investment in Nuclear New Build Holdings

On 4 February 2013, Centrica announced its decision to end its partnership with EDF for the construction of EPRs in the United Kingdom, by exercising its option to sell EDF Energy its 20% investment in Nuclear New Build Holdings (NNBH), a company formed as a vehicle for "Nuclear New Build" projects in the UK. Since EDF already owned 80% of NNBH via EDF Energy, it held 100% of the company after this transaction.

The acquisition of Centrica's holding generated a positive impact of €228 million on equity (EDF share) in 2013, resulting from the positive difference between the share of assets received and the price paid after the option was exercised.

Centrica continues to work with EDF through its 20% interest in existing nuclear facilities in the United Kingdom, and retained its commercial electricity purchase contracts with the EDF group.

➤ Note 4 Regulatory events in France

4.1 Regulated tariffs

4.1.1 Cancellation of regulated sales tariffs by the Council of State

In a decision of 11 April 2014, France's Council of State partly cancelled the regulated electricity sales tariffs for the period 23 July 2012 to 31 July 2013, following a petition for cancellation brought by the ANODE (French association of energy retail operators). It had decided that the rises in the "yellow" and "blue" tariffs for the period, which were limited to 2% by the ministerial decision of 20 July 2012, were insufficient to cover EDF's electricity generation costs, and also too low in view of the legislator's aim to bring tariffs into line with supply costs for electricity distributed at market prices by 31 December 2015. The corrected 2012 sales tariffs were published in the *Journal officiel* on 31 July 2014.

Based on those corrections, an additional €921 million of sales revenues (€908 million of which relate to EDF) was recorded in 2014 in the Group's consolidated income statement. After inclusion of various costs associated with this retroactive tariff adjustment, the impact on the Group's operating profit before depreciation and amortisation for 2014 amounts to €744 million.

4.1.2 Regulated electricity sales tariffs in France

The tariff decision of 26 July 2013 provided for an average 5% rise in the "blue" regulated sales tariffs from 1 August 2014. On 4 July 2014, the French government announced that this rise was to be cancelled, and a decision to this end was published.

The government also decided to amend Decree 2009-975 of 12 August 2009 in order to introduce before 31 December 2015 a method for constructing regulated sales tariffs by "stacking" or adding up the price of regulated access to nuclear energy, the cost of the electricity supply complement

which includes the capacity guarantee, electricity delivery costs and selling costs, and a normal level of return. The new decree was published on 28 October 2014. On this basis, an official decision set the new tariff scales as of 1 November 2014. The tariff rises were lower than the 5% announced in 2013, at 2.5% for the "blue" tariff for residential customers, 3.7% for the "green" tariff, and 2.5% for the "yellow" tariff. The "blue" tariff for non-residential customers was reduced by an average 0.7%.

4.2 TURPE 4 network access tariffs

The decision of 12 December 2013 by the French Energy Regulation Commission (CRE) setting the distribution tariffs from 1 January 2014 was published in France's *Journal officiel* on 20 December 2013. These tariffs were raised by an average 3.6% at 1 January 2014 then reduced by 1.3% from 1 August 2014. The reduction reflects the clearance of the income and expenses adjustment account (CRCP) (2%, offset by a 0.7% inflation effect).

The government also announced in a letter of 12 November 2013 to the President of the CRE that it intended shortly to propose a law laying down a secure legal framework for setting the TURPE network access tariff, so that a normative economic regulation method can be implemented. This point is addressed in an article of the proposed law on the energy transition, which was adopted at its first reading by the National Assembly on 14 October 2014.

Transmission tariffs were also reduced by 1.3% from 1 August 2014, again corresponding to 2% for the clearance of the income and expenses adjustment account (CRCP), offset by 0.7% inflation. On 27 May 2014, the CRE decided to apply an exceptional 50% reduction to the electricity transmission bills of industrial sites that are large electricity consumers. This measure applies from 1 August 2014 to 31 July 2015, for a total amount in the region of €60 million. This loss of income for RTE will automatically become a tariff-related receivable through the CRCP system, to be compensated through the tariff changes of 1 August 2015 and 2016.

4.3 Start of the “Linky” smart meter rollout

The rollout of smart meters complies with European and French regulations on electricity metering systems, and follows a 300,000-meter pilot scheme conducted by ERDF from 2009 to 2011. After carrying out an assessment of this scheme, the French energy regulator CRE recommended generalising the smart meter system in its decision of 7 July 2011. At the initiative of France's Minister for Ecology, Sustainable Development and Energy, a working party with representatives of all stakeholders was formed in late 2012. The work done during 2013 led the Prime Minister to announce on 9 July 2013 that ERDF would install 3 million smart meters by 2016.

ERDF therefore launched a call for tenders in October 2013 for supply of the first meters. Contracts were awarded in early August 2014 to six industrial firms, which will supply the first meters by the end of 2015. ERDF has also issued calls for tenders for the installation of millions of meters. The first household meters are due to be installed from autumn 2015.

Following the public consultation that opened on 30 April 2014, the CRE's deliberations of 17 July 2014 on the tariff regulation framework for the Linky project were published in France's *Journal officiel* on 30 July 2014. Given the unusually large scale of this industrial project (€5 billion will be invested between 2014 and 2021 to install 35 million meters), a specific rate of return on assets has been set for a 20-year period.

4.4 The NOME Law and the ARENH system

Supplies of electricity to EDF's competitors under the ARENH scheme for regulated access to nuclear power supplies concerned a volume of 71.3TWh for 2014 (36.8TWh of which were for the first half-year). The annual volume sold under this scheme cannot exceed 100TWh, plus a progressive increase from 1 January 2014 by the amounts sold to network operators to compensate for their power losses, according to a timetable set by government decision. Applications by suppliers in November 2014 to benefit from the ARENH tariff for the first half of 2015 (15.8TWh) were down substantially compared to first-half 2014, principally because wholesale market prices had fallen and became a more attractive source of energy supplies.

The ARENH price was set at €42/MWh from 1 January 2012, and is subsequently intended to reflect the economic conditions of generation by the existing nuclear fleet. The draft decree stipulating the valuation method for costs making up the ARENH price was examined by France's Higher Energy Board (CSE) on 19 June 2014, and has also been examined by France's Competition Authority and the CRE. It is currently under examination by the European Commission, which must approve the price formula. The French government has announced that this formula will apply from 1 July 2015. On 15 October 2014 the CRE stated in its report on regulated electricity sales tariffs that based on the information in its possession at that date, application of that formula would result in a rise of approximately €2/MWh in 2015.

4.5 Energy transition bill

On 14 October 2014, the French National Assembly adopted the bill of law on the energy transition for green growth, on its first reading. This bill sets medium and long-term objectives.

The main objectives are to reduce greenhouse gas emissions from their 1990 levels by 40% by 2030 and 75% by 2050, and to halve final energy consumption by 2050, with an intermediate target of a 20% reduction by 2030.

The bill also aims to bring about changes in the French energy mix, reducing the share of nuclear electricity production from its current 75% to 50% by 2025, cutting primary consumption of fossil-based energy by 30% between 2012 and 2030, and increasing the share of renewable energies in final consumption to 32% by 2030.

Regarding nuclear power, the bill proposes to limit total nuclear generation capacity to 63.2GW, which is equivalent to the production capacity of the nuclear power plants currently in operation.

The bill also introduces a new governance structure for climate and energy policies. EDF would be required to prepare a strategic corporate plan compatible with the multi-year energy programme, giving the government commissioner the power to oppose investment decisions that are not compatible with the strategic plan.

The other key points of the bill include a reform of the support system for renewable energies and a reform to the governance of the CSPE (Contribution to the Public Electricity Service) system.

The legislative process is now continuing with the Senate's review of the bill in early 2015.

4.6 Pension reforms - Law of 20 January 2014

The French Law of 20 January 2014 amended the regulations governing pensions in France. The two principal measures introduced by the law apply to the special pension system for companies in the electricity and gas sector (IEG). The contribution period required to qualify for a full pension will be progressively extended to 43 years starting with employees born in 1973. This is the rule for France's standard national pension system and public sector pension system, and was transposed to the IEG pension system by Decree 2014-698 of 25 June 2014. Also, the date for the annual review of pension values is deferred from 1 April to 1 October as of the 2014 financial year.

Since the bill for this law was adopted by Parliament on 18 December 2013, its impact has been taken into account in valuing the Group's pension obligations from 31 December 2013.

➤ **Note 5 Changes in the scope of consolidation**

Apart from the Group's takeover of Dalkia group activities and the sale of the activities of Dalkia International described in note 3.1, the main changes in the scope of consolidation during 2014 concern the following entities.

5.1 EDF Norte Fluminense

5.1.1 Acquisition of minority interests

On 11 April 2014, the EDF group acquired the 10% investment held by the Brazilian company Petrobras in the EDF Norte Fluminense SA thermal power plant located in Brazil. The Group now owns 100% of the company's capital. Acquisition of Petrobras' investment has a negative €35 million impact on equity (EDF share) resulting from the difference between the book value of the share of net assets acquired and the price paid.

5.1.2 Investment in SINOP Energy Company

In December 2014, EDF Norte Fluminense took a 51% investment in SINOP Energy Company (CES), which is in charge of building and operating the SINOP hydroelectric dam. The two other shareholders are Eletronorte (24.5%) and CHESF (24.5%), both subsidiaries of the Eletrobras group.

Work on the dam, which will have installed capacity of 400MW, began in spring 2014 and commercial operation is scheduled to start in the second half-year of 2017.

Based on analysis of the governance arrangements set up between the shareholders of CES, the Group's investment is classified as a joint venture under IFRS 10 and accounted for by the equity method.

5.2 Investment in Jiangxi Datang International Fuzhou Power Generation Company Ltd.

In April 2014 EDF and the electricity operator China Datang Corporation (CDT) signed an agreement for EDF to take a 49% stake in Jiangxi Datang International Fuzhou Power Generation Company Ltd. (FPC). This joint venture will build and operate an ultra-supercritical coal-fired power plant consisting of two 1,000MW units. Construction work has begun on the Fuzhou site in the south-east of China, and the new plant is scheduled for commissioning in 2016.

Based on analysis of the governance arrangements between the shareholders of FPC, the Group's investment is classified as a joint venture under IFRS 10 and accounted for under the equity method.

5.3 Sale of South Stream Transport BV

On 29 December 2014 EDF and Gazprom signed an agreement for the acquisition by Gazprom of EDF's 15% stake, held through its subsidiary EDF International, in the South Stream Transport BV gas pipeline project.

Given this development, in line with pre-existing agreements EDF International recovered the full amount invested in the project.

5.4 Merger of Group entities

- In Poland: EDF Wybrzeże SA merged with EDF Polska SA, an entity owned 97.26% by the EDF group;
- In Italy: Transalpina di Energia SRL and Wagram Holding 4 SpA merged to form Transalpina di Energia SpA (TdE SpA), an entity fully-owned by EDF that holds the Group's investment in Edison. Following this merger the Group's investment in Edison stands at 97.40% (unchanged from 31 December 2013).

These merger operations have no impact on the Group's consolidated financial statements.

5.5 Changes in the scope of consolidation in 2013

The main changes in the scope of consolidation during 2013 are presented in note 3.7.

➤ Note 6 Segment reporting

6.1 Reporting by operating segment

Segment reporting presentation complies with IFRS 8, "Operating segments".

Segment reporting is determined before inter-segment eliminations. Inter-segment transactions take place at market prices.

In accordance with IFRS 8, the breakdown used by the EDF group corresponds to the operating segments as regularly reviewed by the Management Committee. The Group uses the following segments:

- **"France"**: EDF, RTE Réseau de Transport d'Electricité and ERDF, mainly comprising Generation and Supply (deregulated activities), the network activities (Distribution and Transmission) and island activities;

- **"United Kingdom"**: the entities of the EDF Energy subgroup including EDF Energy Nuclear Generation Ltd and EDF Development Company Ltd;
- **"Italy"**: all the entities located in Italy, principally the Edison subgroup, TdE and Fenice;
- **"Other international"**: EDF International and the other gas and electricity entities located in continental Europe, the US, Latin America and Asia;
- **"Other activities"**: all the Group's other investments, including EDF Trading, EDF Énergies Nouvelles, Dalkia, Tiru, Électricité de Strasbourg and EDF Investissements Groupe.

No segments have been merged.

6.1.1 At 31 December 2014

(in millions of Euros)	France	United Kingdom	Italy	Other international	Other activities	Inter-segment eliminations	Total
Income statements:							
External sales	39,910	10,160	12,687	5,603	4,514	–	72,874
Inter-segment sales	931	–	3	193	1,374	(2,501)	–
TOTAL SALES	40,841	10,160	12,690	5,796	5,888	(2,501)	72,874
OPERATING PROFIT BEFORE DEPRECIATION AND AMORTISATION	12,198	1,941	886	632	1,622	–	17,279
OPERATING PROFIT	6,238	810	228	(356)	1,064	–	7,984
Balance sheet:							
Goodwill	–	8,652	–	42	1,000	–	9,694
Intangible assets and property, plant and equipment	96,404	14,531	8,915	4,206	12,328	–	136,384
Investments in associates and joint ventures	5,109	51	219	5,028	582	–	10,989
Other segment assets ⁽¹⁾	31,147	4,919	3,862	1,126	7,686	–	48,740
Assets classified as held for sale	–	–	–	–	18	–	18
Other non-allocated assets	–	–	–	–	–	–	62,164
TOTAL ASSETS	132,660	28,153	12,996	10,402	21,614	–	267,989
Other information:							
Net depreciation and amortisation	(5,343)	(1,007)	(714)	(385)	(491)	–	(7,940)
Impairment	(35)	(169)	(182)	(606)	(197)	–	(1,189)
Equity (non-controlling interests)	–	2,998	729	730	962	–	5,419
Investments in intangible assets and property, plant and equipment	9,025	1,585	444	511	2,156	–	13,721

(1) Other segment assets include inventories, trade receivables and other receivables.

6.1.2 At 31 December 2013

(in millions of Euros)	France	United Kingdom	Italy	Other international	Other activities	Inter-segment eliminations	Total
Income statements:							
External sales	40,210	9,782	12,689	6,349	2,886	–	71,916
Inter-segment sales	762	–	2	223	1,005	(1,992)	–
TOTAL SALES	40,972	9,782	12,691	6,572	3,891	(1,992)	71,916
OPERATING PROFIT BEFORE DEPRECIATION AND AMORTISATION	10,778	1,992	1,059	814	1,456	–	16,099
OPERATING PROFIT	6,229	1,021	243	(178)	1,019	–	8,334
Balance sheet:							
Goodwill	–	8,140	–	337	604	–	9,081
Intangible assets and property, plant and equipment	91,702	13,286	9,256	4,327	10,096	–	128,667
Investments in associates and joint ventures	5,134	47	217	5,116	965	–	11,479
Other segment assets ⁽¹⁾	29,443	4,560	3,869	1,130	6,257	–	45,259
Assets classified as held for sale	–	–	–	–	1,154	–	1,154
Other non-allocated assets							55,279
TOTAL ASSETS	126,279	26,033	13,342	10,910	19,076	–	250,919
Other information:							
Net depreciation and amortisation	(4,698)	(903)	(716)	(397)	(440)	–	(7,154)
Impairment	(71)	(7)	(88)	(371)	(80)	–	(617)
Equity (non-controlling interests)	–	2,783	439	867	909	–	4,998
Investments in intangible assets and property, plant and equipment	9,015	1,339	339	392	1,957	–	13,042

(1) Other segment assets include inventories, trade receivables and other receivables.

6.2 Sales to external customers, by product and service group

The Group's sales are broken down by product and service group as follows:

- **"Generation/Supply"**: energy generation and energy sales to industry, local authorities, small businesses and residential consumers. This segment also includes commodity trading activities;
- **"Distribution"**: management of the low and medium-voltage public distribution network;
- **"Transmission"**: operation, maintenance and development of the high-voltage and very-high-voltage electricity transmission network;
- **"Other"**: energy services (district heating, thermal energy services, etc.) for industry and local authorities, and new businesses mainly aimed at boosting electricity generation through cogeneration and renewable energy sources (e.g. wind turbines, photovoltaic panels, etc.).

<i>(in millions of Euros)</i>	Generation/Supply	Distribution	Transmission	Other	Eliminations	Total
2014:						
External sales:						
– France	26,030	14,317	–	460	(897)	39,910
– International and other activities	29,428	588	245	2,703	–	32,964
TOTAL SALES	55,458	14,905	245	3,163	(897)	72,874
2013:						
External sales:						
– France	25,789	14,699	–	310	(588)	40,210
– International and other activities	29,715	806	219	966	–	31,706
TOTAL SALES	55,504	15,505	219	1,276	(588)	71,916

"Other" sales include a scope effect of €1,621 million due to the acquisition of Dalkia (energy services) on 25 July 2014.

Income statements

➤ Note 7 Sales

Sales are comprised of:

<i>(in millions of Euros)</i>	2014	2013
Sales of energy and energy-related services	70,449	69,653
Other sales of goods and services	1,515	1,416
Trading	910	847
SALES	72,874	71,916

Sales of energy and energy-related services for 2014 include the €921 million effects of the retroactive tariff adjustment for 2012 (see note 4.1.1) and the €1,456 million scope effect of consolidation of Dalkia from 25 July 2014.

After eliminating these factors, sales for 2014 were down compared to 2013, principally due to the lower volumes sold as a result of unfavourable weather effects in most European countries where the Group does business (notably France).

➤ Note 8 Fuel and energy purchases

Fuel and energy purchases comprise:

<i>(in millions of Euros)</i>	2014	2013
Fuel purchases used - power generation	(12,307)	(12,639)
Energy purchases	(15,380)	(15,900)
Transmission and delivery expenses	(9,316)	(9,134)
Gain/loss on hedge accounting	(122)	(125)
(Increase)/decrease in provisions related to nuclear fuels and energy purchases	421	(318)
FUEL AND ENERGY PURCHASES	(36,704)	(38,116)

Fuel purchases used include costs relating to raw materials for energy generation (coal, biomass, oil, propane, fissile materials, nuclear fuels and gas), purchases of services related to the nuclear fuel cycle, and costs

associated with environmental schemes (mainly greenhouse gas emission rights and renewable energy certificates).

Energy purchases include energy generated by third parties, incorporating energy derived from cogeneration intended for resale.

➤ Note 9 Other external expenses

Other external expenses comprise:

<i>(in millions of Euros)</i>	2014	2013
External services	(11,316)	(10,539)
Other purchases (excluding external services, fuel and energy)	(2,707)	(2,218)
Change in inventories and capitalised production	4,673	4,260
(Increase)/decrease in provisions on other external expenses	169	210
OTHER EXTERNAL EXPENSES	(9,181)	(8,287)

➤ Note 10 Personnel expenses

10.1 Personnel expenses

Personnel expenses comprise:

<i>(in millions of Euros)</i>	2014	2013
Wages and salaries	(7,426)	(7,027)
Social contributions	(1,668)	(1,543)
Employee profit sharing	(257)	(230)
Other contributions related to personnel	(373)	(388)
Other expenses linked to short-term benefits	(242)	(232)
Short-term benefits	(9,966)	(9,420)
Expenses under defined-contribution plans	(852)	(805)
Expenses under defined-benefit plans	(723)	(933)
Post-employment benefits	(1,575)	(1,738)
Other long-term expenses	(237)	(122)
Termination payments	(7)	(11)
Other personnel expenses	(244)	(133)
PERSONNEL EXPENSES	(11,785)	(11,291)

10.2 Average workforce

	2014	2013
IEG status	103,088	101,732
Other	44,936	38,142
AVERAGE WORKFORCE	148,024	139,874

Average workforce numbers for the controlled entities and joint operations are reported on a full-time equivalent basis.

The rise observed in 2014 principally results from inclusion of Dalkia in the scope of consolidation.

➤ Note 11 Taxes other than income taxes

Taxes other than income taxes break down as follows:

<i>(in millions of Euros)</i>	2014	2013
Payroll taxes	(243)	(236)
Energy taxes	(1,494)	(1,476)
Other non-income taxes	(1,856)	(1,769)
TAXES OTHER THAN INCOME TAXES	(3,593)	(3,481)

➤ Note 12 Other operating income and expenses

Other operating income and expenses comprise:

(in millions of Euros)	Notes	2014	2013
Operating subsidies	12.1	6,116	5,310
Net income on deconsolidation	12.2	254	301
Gains on disposal of fixed assets	12.2	(153)	(100)
Net increase in provisions on current assets		(195)	(208)
Net increase in provisions for operating contingencies and losses		(142)	(140)
Other items	12.3	(212)	195
OTHER OPERATING INCOME AND EXPENSES		5,668	5,358

12.1 Operating subsidies

This item mainly comprises the subsidy received or receivable by EDF in respect of the CSPE, reflected in the financial statements through recognition of income of €5,888 million for 2014 (€5,103 million for 2013). The difference is largely attributable to the decline in market electricity prices and the rise in purchase volumes of photovoltaic energy, which had the effect of increasing the subsidy receivable for purchase obligations in mainland France, and the rise in energy purchase volumes in non-interconnected zones.

12.2 Net income on deconsolidation and gains on disposal of fixed assets

In 2014, net income on deconsolidation and gains on disposal of property, plant and equipment included:

- gains on sales of EDF Énergies Nouvelles' generation assets as part of the Development and Sale of Structured Assets (DSSA) activities, amounting to €225 million (€188 million for 2013);
- gains on sales of real estate assets in France, amounting to €17 million (€62 million for 2013).

12.3 Other items

In 2013 and 2014, other items mainly include prior year effects of renegotiations in favour of Edison in connection with litigation and arbitration concerning price reviews on long-term gas supply contracts.

➤ Note 13 Impairment/reversals

13.1 Impairment by category of asset

Details of impairment recognised and reversed are as follows:

(in millions of Euros)	Notes	2014	2013
Impairment of goodwill	18	(298)	(129)
Impairment of other intangible assets	19	(74)	(56)
Impairment of tangible assets and discontinued operations	21-22-46	(832)	(432)
Other items		15	–
IMPAIRMENT NET OF REVERSALS		(1,189)	(617)

In 2013, the €(617) million of impairment recorded principally includes €(229) million related to EDF Luminus and €(127) million related to EDF Polska.

In 2014, impairment amounts to €(1,189) million. Details are given below.

13.2 Impairment tests on goodwill and other assets and recognition of impairment

The following tables give details of impairment tests carried out on the main goodwill, intangible assets with indefinite useful lives and other Group assets in 2014, and the key assumptions used.

Impairment tests on goodwill and intangible assets with indefinite useful lives:

Operating segment	Cash-Generating Unit or asset	WACC after tax	Growth rate to infinity	Impairment 2014 (in millions of Euros)
United Kingdom	EDF Energy goodwill	6.7%	–	–
Italy	Edison brand	7.9% – 9.5%	2.0%	–
Other international	EDF Luminus goodwill	6.5%	1.9%	(281)
Other activities	Dalkia goodwill and brand	7.0%	1.7%	–
Other impairment of goodwill				(17)
IMPAIRMENT OF GOODWILL AND INTANGIBLE ASSETS WITH INDEFINITE USEFUL LIVES				(298)

Impairment of other intangible assets and property, plant and equipment:

Operating segment	Cash-Generating Unit or asset	Impairment indicators	WACC after tax	Impairment 2014 (in millions of Euros)
United Kingdom	CCGT and gas storage	Reduction of spreads	6.5% – 6.7%	(169)
Italy	Edison assets	Decline in electricity prices	6.9% – 8.9%	(167)
Other international	EDF Luminus assets in Belgium	Decline in electricity prices	6.5%	(305)
Other activities	Gas storage in Germany	Reduction of seasonal spreads	6.0%	(46)
Other activities	EDF Énergies Nouvelles CGU	New regulations	5.1% – 9.7%	(127)
Other impairment of assets				(92)
IMPAIRMENT OF OTHER INTANGIBLE ASSETS AND PROPERTY, PLANT AND EQUIPMENT				(906)

General assumptions

Discount rates in the benchmark countries are relatively stable between 2013 and 2014, as the fall in the risk-free rate was offset by a rise in the market risk premium.

Long-term scenarios confirm ongoing tensions on the energy markets in Europe. Falling prices, falling demand, the rise of renewable energies and excess capacities are all affecting the profitability of the traditional forms of generation.

Against this background, regulations on capacity premium mechanisms are being considered, to keep generation facilities online for peakload supplies and send a sufficient price signal to trigger the investments necessary for network security. These systems have been taken into consideration in tests on a case by case basis, depending how advanced the regulations are.

United Kingdom – EDF Energy

EDF Energy's goodwill amounted to €8,652 million at 31 December 2014 and resulted from acquisition by the EDF group between 1998 and 2009 of various businesses currently operating in the United Kingdom.

The recoverable value of EDF Energy is estimated by discounting future cash flows. The useful life of the generation units incorporates the extension of useful lives of existing nuclear reactors and the commissioning of two new EPRs with a 60-year useful life at the Hinkley Point site.

The recoverable value of existing generation facilities is sensitive to assumptions regarding long-term movements in electricity prices in the United Kingdom. The assumptions used take into consideration the gradual reduction of current surplus capacities, especially given that retirement of existing coal-fired plants has led to a need for new generation facilities and a capacity premium mechanism for all assets.

Projections for the plan to build two EPRs at the Hinkley Point site incorporate electricity sale prices based on the Contract for Difference (CfD) between the Group and the UK government. The CfD sets stable, predictable prices for EDF Energy over a 35-year horizon: if market prices fall below the CfD exercise price, EDF Energy will receive an additional payment.

A 1 point increase in the WACC would not lead to any impairment of goodwill.

Impairment of €(169) million was also booked in respect of certain EDF Energy assets:

- €(115) million on the West Burton CCGT power plant commissioned in 2013, due to a long-term reduction in spark spreads;
- €(54) million on a gas storage asset whose first storage cavities should be commissioned in 2015. This impairment is driven by two main factors: a reduction in the number of cavities that can be developed, and a significant fall in volatility on the gas market.

Italy – Edison

As an intangible asset with an indefinite useful life, the Edison brand, recorded in the Group's consolidated financial statements at the value of €945 million, was subjected to an impairment test that did not lead to recognition of any impairment. The test used the relief-from-royalty method. The company is currently applying a policy to rationalise its residential customer base, and this is causing a reduction in associated sales in the short term. However, brand recognition and the margins on customer portfolios are improving.

For other Edison assets, the downturn in wholesale prices led to recognition of €(167) million of impairment, mainly concerning hydropower and wind power generation assets.

Sensitivity analyses were conducted for Edison's exploration-generation activities, taking the lower oil prices into account. No impairment was recorded on these assets in the consolidated financial statements as a result of these analyses.

Other international

EDF Luminus

As a result of the continuing decline in electricity prices in an environment that remains very difficult for energy operators in Belgium, impairment was recognised in the total amount of €(586) million, including €(281) million for goodwill (which was fully written off at 31 December 2014).

A 0.5 point increase in the WACC would have a negative impact of €(104) million on recoverable value.

EDF Luminus and Electrabel own a 10.2% share in the Doel 3 and Tihange 2 nuclear reactors, for a balance sheet value of €190 million at 31 December 2014. These two reactors have been out of operation since March 2014 for a series of in-depth tests on the vessels. Belgium's Federal Nuclear Control Agency (AFCN) will decide whether to authorise resumption of operations based on evidence to be provided by Electrabel. Electrabel considers that the reactors will remain unavailable until 1 July 2015. This unavailability was factored into the impairment test on goodwill.

Other activities

Germany – gas storage

Impairment of €(46) million was recorded in respect of a gas storage facility in Germany, jointly owned and controlled with EnBW. This asset has been affected by the long-term deterioration in seasonal spreads.

EDF Énergies Nouvelles

At 31 December 2014, impairment of €(127) million was recorded in respect of the various CGUs of EDF Énergies Nouvelles.

This impairment essentially concerns Italy (regulatory changes for renewable energies), Mexico (operational difficulties in a fleet) and the United States (projects in development).

➤ **Note 14 Other income and expenses**

Other income and expenses in 2014 include:

- a gain on sale of €217 million from operations in connection with the Group's investment in Dalkia (see note 3.1.4);
- an expense of €(388) million relating to decommissioning of French nuclear power plants that have been permanently shut down (UNGG plants, Creys-Malville, Brennilis and Chooz A) – see note 29.1.3.

Other income and expenses in 2013 included:

- income of €472 million relating to the favourable effect of the pension reform in France (see note 4.6);
- a provision of €(174) million concerning EDF's investment in SLOE, a combined cycle gas plant in the Netherlands;
- €(55) million of restructuring expenses for the Group's activities in Belgium and certain central European countries.

➤ Note 15 Financial result

15.1 Cost of gross financial indebtedness

Details of the components of the cost of gross financial indebtedness are as follows:

<i>(in millions of Euros)</i>	2014	2013
Interest expenses on financing operations	(2,207)	(2,266)
Change in the fair value of derivatives and hedges of liabilities	(10)	(1)
Transfer to income of changes in the fair value of cash flow hedges	3	11
Net foreign exchange gain on indebtedness	(29)	(6)
COST OF GROSS FINANCIAL INDEBTEDNESS	(2,243)	(2,262)

15.2 Discount effect

The discount effect primarily concerns provisions for the back-end of the nuclear cycle, decommissioning and last cores, and long-term and post-employment employee benefits.

Details of this expense are as follows:

<i>(in millions of Euros)</i>	2014	2013
Provisions for long-term and post-employment employee benefits	(1,273)	(1,243)
Provisions for the back-end of the nuclear cycle, decommissioning and last cores ⁽¹⁾	(1,633)	(1,580)
Other provisions and advances	(90)	(108)
DISCOUNT EFFECT	(2,996)	(2,931)

(1) Including the effect of discounting the receivable corresponding to amounts reimbursable by the NLF – see note 36.3.

15.3 Other financial income and expenses

Other financial income and expenses comprise:

<i>(in millions of Euros)</i>	2014	2013
Financial income on cash and cash equivalents	17	16
Gains/(losses) on available-for-sale financial assets	1,258	1,057
Gains/(losses) on other financial assets	376	373
Changes in financial instruments carried at fair value with changes in fair value included in income	16	120
Other financial expenses	(191)	(252)
Foreign exchange gain/loss on financial items other than debts	124	(102)
Return on hedging assets	594	560
Capitalised borrowing costs	494	479
OTHER FINANCIAL INCOME AND EXPENSES	2,688	2,251

Gains net of losses on available-for-sale financial assets include gains on disposals, interest income, and dividends.

In 2014, gains and losses on available-for-sale financial assets include net gains on sales of EDF's dedicated assets, amounting to €894 million (€714 million in 2013).

➤ Note 16 Income taxes

16.1 Breakdown of tax expense

Details are as follows:

<i>(in millions of Euros)</i>	2014	2013
Current tax expense	(2,115)	(2,069)
Deferred taxes	276	173
TOTAL	(1,839)	(1,896)

In 2014, €(1,499) million of the current tax expense relates to EDF's tax consolidated group in France, and €(616) million relates to other subsidiaries (€(1,545) million and €(524) million respectively in 2013).

16.2 Reconciliation of the theoretical and effective tax expense (tax proof)

<i>(in millions of Euros)</i>	2014	2013
Income of consolidated companies before tax	5,433	5,392
Income tax rate applicable to the parent company	38.00%	38.00%
Theoretical tax expense	(2,065)	(2,049)
Differences in tax rate	87	341
Permanent differences	34	(80)
Taxes without basis	94	(135)
Unrecognised deferred tax assets	8	20
Other	3	7
ACTUAL TAX EXPENSE	(1,839)	(1,896)
EFFECTIVE TAX RATE	33.85%	35.16%

The effective tax rate for 2014 and 2013 was driven up by impairment. After adjustment for this factor, the effective tax rate is 32.2% for 2014 and 34.0% for 2013.

The main factors explaining the difference between the theoretical tax rate and the effective rate are:

- 2014:
 - the positive impact of differences in tax rates applicable to foreign subsidiaries (€87 million),
 - the favourable impact of payments made to the bearers of perpetual subordinated bonds (€111 million);
- 2013:
 - the positive impact of differences in tax rates applicable to foreign subsidiaries (€341 million, including €254 million related to the 3-point drop in tax rates in the UK),
 - the negative impact of the French finance Laws of 2012 and 2013 (€(135) million excluding the effect of the increase in the tax rate to 38%), mainly corresponding to the dividend tax and limitation of deductibility for financial interest.

16.3 Change in deferred tax assets and liabilities

<i>(in millions of Euros)</i>	2014	2013
Deferred tax assets	2,171	2,639
Deferred tax liabilities	(4,242)	(4,709)
NET DEFERRED TAXES AT 1 JANUARY	(2,071)	(2,070)
Change in net income	276	174
Change in equity	258	(192)
Translation adjustments	(101)	61
Changes in scope of consolidation	(67)	25
Other movements	16	(69)
NET DEFERRED TAXES AT 31 DECEMBER	(1,689)	(2,071)
Deferred tax assets	2,626	2,171
Deferred tax liabilities	(4,315)	(4,242)

€(241) million of the change in deferred tax assets in 2014 included in equity results from actuarial gains and losses on post-employment benefits (€(103) million in 2013).

16.4 Breakdown of deferred tax assets and liabilities by nature

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Deferred taxes:		
Fixed assets	(7,072)	(7,270)
Provisions for employee benefits	7,723	5,963
Other provisions and impairments	318	719
Financial instruments	179	298
Tax loss carryforwards and unused tax credits	839	694
Other	261	(67)
Total deferred tax assets and liabilities	2,248	337
Unrecognised deferred tax assets	(3,937)	(2,408)
NET DEFERRED TAXES	(1,689)	(2,071)

At 31 December 2014, unrecognised deferred tax assets represent a potential tax saving of €3,937 million (€2,408 million at 31 December 2013). Of the potential tax saving in 2014, €3,097 million relates to deferred tax assets, mainly on employee benefits in France (€1,747 million in 2013).

➤ Note 17 Basic earnings per share and diluted earnings per share

The diluted earnings per share is calculated by dividing the Group's share of net income, corrected for dilutive instruments and the payments made during the year to bearers of perpetual subordinated bonds, by the weighted average number of potential shares outstanding over the period after elimination of treasury shares.

The following table shows the reconciliation of the basic and diluted earnings used to calculate earnings per share (basic and diluted), and the variation in the weighted average number of shares used in calculating basic and diluted earnings per share:

<i>(in millions of Euros)</i>	2014	2013
Net income attributable to ordinary shares	3,701	3,517
Payments on perpetual subordinated bonds	(388)	(103)
Effect of dilutive instruments	—	—
Net income used to calculated earnings per share	3,313	3,414
Average weighted number of ordinary shares outstanding during the year	1,858,467,505	1,852,523,933
Average weighted number of diluted shares outstanding during the year	1,858,467,505	1,852,523,933
Earnings per share (in Euros):		
EARNINGS PER SHARE	1.78	1.84
DILUTED EARNINGS PER SHARE	1.78	1.84

Operating assets and liabilities, equity

➤ Note 18 Goodwill

18.1 Changes in goodwill

Goodwill on consolidated entities comprises the following:

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Net book value at opening date	9,081	9,400
Acquisitions	394	6
Disposals	–	–
Impairment (note 13)	(298)	(129)
Translation adjustments	573	(179)
Other changes	(56)	(17)
NET BOOK VALUE AT CLOSING DATE	9,694	9,081
Gross value at closing date	10,624	9,716
Accumulated impairment at closing date	(930)	(635)

The changes in goodwill in 2014 primarily relate to:

- acquisitions, of which €392 million result from the takeover of Dalkia;
- impairment of €(298) million, including €(281) million for EDF Luminus goodwill;
- translation adjustments of €573 million, largely due to the pound sterling's increase against the Euro.

The changes in goodwill in 2013 primarily related to:

- impairment of €(129) million, including €(102) million for EDF Luminus goodwill;
- translation adjustments of €(179) million, largely due to the pound sterling's fall against the Euro.

18.2 Goodwill by operating segment

The breakdown of goodwill is as follows:

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
EDF Energy	8,652	8,140
Total United Kingdom	8,652	8,140
EDF Luminus (Belgium)	–	281
Other	42	56
Total Other international	42	337
Dalkia	392	–
EDF Énergies Nouvelles	179	176
Other	429	428
Total Other activities	1,000	604
GROUP TOTAL	9,694	9,081

➤ Note 19 Other intangible assets

The net value of other intangible assets breaks down as follows:

At 31 December 2014

(in millions of Euros)	31/12/2013	Acquisitions	Disposals	Translation adjustments	Changes in scope	Other movements	31/12/2014
Software	2,104	542	(134)	42	46	1	2,601
Positive fair value of commodity contracts acquired in a business combination	813	–	–	–	–	(3)	810
Greenhouse gas emission rights – green certificates	826	898	(1,082)	23	9	–	674
Other intangible assets	4,591	232	(7)	24	710	(5)	5,545
Intangible assets in development	1,974	234	–	17	–	(5)	2,220
Gross values	10,308	1,906	(1,223)	106	765	(12)	11,850
Accumulated amortisation and impairment	(2,448)	(743)	233	(24)	–	16	(2,966)
NET VALUES	7,860	1,163	(990)	82	765	4	8,884

The gross value of other intangible assets at 31 December 2014 includes:

- the Edison brand and intangible assets related to Edison's hydropower concessions, for amounts of €945 million and €831 million respectively;
- the Dalkia brand and intangible assets related to Dalkia's concession agreements in France, for respective amounts of €130 million and €601 million (see note 3.1).

Impairment of €(74) million was recorded in respect of other intangible assets in 2014.

EDF's research and development expenses recorded in the income statement total €550 million for 2014.

At 31 December 2013

(in millions of Euros)	31/12/2012	Acquisitions	Disposals	Translation adjustments	Changes in scope	Other movements	31/12/2013
Software	1,686	562	(120)	(13)	–	(11)	2,104
Positive fair value of commodity contracts acquired in a business combination	838	–	–	(1)	–	(24)	813
Greenhouse gas emission rights – green certificates	516	1,052	(739)	–	–	(3)	826
Other intangible assets	4,429	215	(9)	(1)	(60)	17	4,591
Intangible assets in development	1,757	171	–	(2)	–	48	1,974
Gross value	9,226	2,000	(868)	(17)	(60)	27	10,308
Accumulated amortisation and impairment	(1,893)	(770)	136	9	35	35	(2,448)
NET VALUE	7,333	1,230	(732)	(8)	(25)	62	7,860

The gross value of other intangible assets at 31 December 2013 included the Edison brand and intangible assets related to Edison's hydropower concessions, for amounts of €945 million and €831 million respectively.

Impairment of €(56) million was recorded in respect of other intangible assets in 2013.

EDF's research and development expenses recorded in the income statement totalled €543 million for 2013.

➤ Note 20 Property, plant and equipment operated under french public electricity distribution concessions

20.1 Net value of property, plant and equipment operated under French public electricity distribution concessions

(in millions of Euros)	31/12/2014	31/12/2013
Property, plant and equipment	48,746	47,425
Property, plant and equipment in progress	1,511	1,371
PROPERTY, PLANT AND EQUIPMENT OPERATED UNDER FRENCH PUBLIC ELECTRICITY DISTRIBUTION CONCESSIONS	50,257	48,796

20.2 Movements in property, plant and equipment operated under French public electricity distribution concessions (excluding assets in progress)

(in millions of Euros)	Land and buildings	Networks	Other installations, plant, machinery, equipment & other	Total
Gross value at 31/12/2013	2,256	78,371	3,488	84,115
Increases ⁽¹⁾	123	3,470	278	3,871
Decreases	(16)	(622)	(170)	(808)
Other movements	(2)	21	4	23
Gross value at 31/12/2014	2,361	81,240	3,600	87,201
Depreciation and impairment at 31/12/2013	(1,209)	(33,265)	(2,216)	(36,690)
Net depreciation	(43)	(206)	(152)	(401)
Disposals	14	499	163	676
Other movements ⁽²⁾	(10)	(1,934)	(96)	(2,040)
Depreciation and impairment at 31/12/2014	(1,248)	(34,906)	(2,301)	(38,455)
Net value at 31/12/2013	1,047	45,106	1,272	47,425
NET VALUE AT 31/12/2014	1,113	46,334	1,299	48,746

(1) Increases also include facilities provided by the concession grantors.

(2) Other movements mainly concern depreciation of assets operated under concessions, booked against amortisation recorded in the special concession liabilities.

➤ Note 21 Property, plant and equipment operated under concessions for other activities

21.1 Net value of property, plant and equipment operated under concessions for other activities

The net value of property, plant and equipment operated under concessions for other activities breaks down as follows:

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Property, plant and equipment	6,495	6,421
Property, plant and equipment in progress	1,356	1,029
PROPERTY, PLANT AND EQUIPMENT OPERATED UNDER CONCESSIONS FOR OTHER ACTIVITIES	7,851	7,450

21.2 Movements in property, plant and equipment operated under concessions for other activities (excluding assets in progress)

<i>(in millions of Euros)</i>	Land and buildings	Thermal & hydropower plants	Networks	Other installations, plant, machinery, equipment & other	Total
Gross value at 31/12/2013	1,492	10,231	601	848	13,172
Increases	22	389	17	47	475
Decreases	(1)	(19)	(1)	(10)	(31)
Translation adjustments	9	45	(32)	47	69
Changes in the scope of consolidation	1	—	—	—	1
Other movements	(4)	41	1	(13)	25
Gross value at 31/12/2014	1,519	10,687	586	919	13,711
Depreciation and impairment at 31/12/2013	(819)	(4,982)	(302)	(648)	(6,751)
Net depreciation	(32)	(335)	(17)	(55)	(439)
Impairment net of reversals	—	(20)	—	—	(20)
Disposals	1	16	1	8	26
Translation adjustments	(1)	(22)	16	(43)	(50)
Changes in the scope of consolidation	—	—	—	—	—
Other movements	2	18	—	(2)	18
Depreciation and impairment at 31/12/2014	(849)	(5,325)	(302)	(740)	(7,216)
Net value at 31/12/2013	673	5,249	299	200	6,421
NET VALUE AT 31/12/2014	670	5,362	284	179	6,495

At 31 December 2014, property, plant and equipment operated under concessions for other activities comprise concession facilities mainly located in France (hydropower, excluding public electricity distribution) and Italy.

➤ Note 22 Property, plant and equipment used in generation and other tangible assets owned by the Group

22.1 Net value of property, plant and equipment used in generation and other tangible assets owned by the Group

The net value of property, plant and equipment used in generation and other tangible assets owned by the Group breaks down as follows:

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Property, plant and equipment	50,342	47,839
Property, plant and equipment in progress	18,813	16,432
Finance-leased property, plant and equipment	237	290
PROPERTY, PLANT AND EQUIPMENT USED IN GENERATION AND OTHER TANGIBLE ASSETS OWNED BY THE GROUP	69,392	64,561

At 31 December 2014, property, plant and equipment in progress primarily concern EPR construction projects in France and the United Kingdom, and the construction of the Dunkirk methane terminal.

Impairment of €(61) million and €(34) million was also recorded in 2014, respectively for assets in progress and finance-leased assets.

At 31 December 2013, impairment of €(214) million was recorded in respect of property, plant and equipment in progress, including €(125) million for the supercritical coal-fired power plant project in Poland.

22.2 Movements in property, plant and equipment used in generation and other tangible assets owned by the Group (excluding assets in progress and finance-leased assets)

<i>(in millions of Euros)</i>	Land and buildings	Nuclear power plants	Thermal & hydropower plants	Networks	Other installations, plant, machinery, equipment & other	TOTAL
Gross value at 31/12/2013	11,830	61,399	19,473	29	13,273	106,004
Increases	613	3,059	1,358	1	2,572	7,603
Decreases	(83)	(977)	(242)	–	(512)	(1,814)
Translation adjustments	35	726	205	–	485	1,451
Changes in the scope of consolidation	2	–	(4)	–	(316)	(318)
Other movements	5	79	62	(13)	(121)	12
Gross value at 31/12/2014	12,402	64,286	20,852	17	15,381	112,938
Depreciation and impairment at 31/12/2013	(6,545)	(37,550)	(9,204)	(3)	(4,863)	(58,165)
Net depreciation	(346)	(2,499)	(914)	(1)	(906)	(4,666)
Impairment net of reversals	(2)	(198)	(317)	–	(200)	(717)
Disposals	53	858	217	–	322	1,450
Translation adjustments	11	(242)	(87)	–	(106)	(424)
Changes in the scope of consolidation	5	–	(10)	–	35	30
Other movements	–	(109)	(1)	–	6	(104)
Depreciation and impairment at 31/12/2014	(6,824)	(39,740)	(10,316)	(4)	(5,712)	(62,596)
Net value at 31/12/2013	5,285	23,849	10,269	26	8,410	47,839
NET VALUE AT 31/12/2014	5,578	24,546	10,536	13	9,669	50,342

22.3 Finance lease contracts

(in millions of Euros)	Total	31/12/2014			31/12/2013
		Maturity			Total
		< 1 year	1-5 years	> 5 years	
Future minimum lease payments receivable as lessor	58	15	32	11	58
Future minimum lease payments payable as lessee	643	65	230	348	595

The Group is the lessor in agreements classified as finance leases under IFRIC 4 and IAS 17, which account for almost all of its finance lease commitments as lessor.

The Group is bound as lessee by irrevocable finance lease contracts for premises, equipment and vehicles used in the course of its business. The corresponding payments are subject to renegotiation at intervals defined in the contracts.

➤ Note 23 Investments in associates and joint ventures

Investments in associates and joint ventures are as follows:

		31/12/2014			31/12/2013	
(in millions of Euros)	Principal activity ⁽¹⁾	Ownership %	Share of net equity	Share of net income	Share of net equity	Share of net income
Principal investments in associates						
RTE	T	100.00	5,109	379	5,134	494
CENG ⁽²⁾	G	49.99	2,621	(101)	2,784	(152)
Alpiq	G, D, O, T	25.00	735	(193)	947	(214)
Dalkia	O	–	–	8	363	22
Other investments in associates and joint ventures			2,524	86	2,251	112
TOTAL			10,989	179	11,479	262

(1) G = generation, D = distribution, T = transmission, O = other.

(2) CENG, previously classified as a joint venture, is now classified as an associate following the agreement of 1 April 2014 with Exelon (see note 3.3).

Other investments in associates and joint ventures principally concern Taishan (TNPJVC), Estag, Nam Theun Power Company (NTPC) and certain companies owned by EDF Énergies Nouvelles and Edison.

In 2014, €(425) million of impairment was booked in respect of investments in associates and joint ventures, including:

- €(122) million on CENG assets – see note 23.2.3;

- €(206) million on the investment in Alpiq, corresponding to the Group's share of past impairment in the financial statements of Alpiq – see note 23.3.2;
- impairment of €(83) million on the investment in the joint venture Estag, corresponding to impairment of the goodwill existing at EDF group level.

23.1 RTE Réseau de Transport d'Electricité (RTE)

23.1.1 RTE – financial indicators

The key financial indicators for RTE (on a 100% basis) are as follows:

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Non-current assets	15,132	14,420
Current assets	3,000	2,161
Total assets	18,132	16,581
Equity	5,109	5,134
Non-current liabilities	8,623	8,182
Current liabilities	4,400	3,265
Total equity and liabilities	18,132	16,581
Sales	4,461	4,702
Operating profit before depreciation and amortisation	1,687	1,788
Net income	379	494
Net indebtedness	7,877	7,459
Gains and losses recorded directly in equity	(154)	31
Dividends paid to the EDF group	250	209

23.1.2 Transactions between the EDF group and RTE

At 31 December 2014 the main transactions between the EDF group and RTE are as follows:

Sales

ERDF uses RTE's high-voltage and very high-voltage networks to convey energy from its point of generation to the distribution network. This service generated €3,150 million in sales revenues for RTE from ERDF over 2014.

In executing its responsibility to ensure balance in the electricity system, during 2014 RTE also undertook:

- energy purchases and sales with EDF and ERDF, amounting to €96 million and €142 million respectively;

- system service purchases from EDF amounting to €282 million.

Other transactions

The EDF group contributes to financing of RTE through a loan amounting to a total of €670 million at 31 December 2014 (unchanged from 31 December 2013). RTE recorded a total of €36 million in interest expenses on this loan in 2014.

RTE is also included in the EDF group tax consolidation, under a tax consolidation agreement between the two companies.

23.2 CENG

23.2.1 CENG – financial indicators

The key financial indicators for CENG (on a 100% basis) are as follows:

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Non-current assets	9,968	8,331
Current assets	1,019	873
Total assets	10,987	9,204
Equity	5,243	5,569
Non-current liabilities	5,481	3,473
Current liabilities	263	162
Total equity and liabilities	10,987	9,204
Sales	1,140	1,169
Operating profit before depreciation and amortisation	285	374
Net income	(202)	(304)
Gains and losses recorded directly in equity	594	(27)
Dividends paid to the EDF group	315	–

23.2.2 Transactions between the EDF group and CENG

At 31 December 2014 the main transactions between the EDF group and CENG are as follows:

Sales

Electricity purchase contracts between CENG and the EDF group (EDF Trading North America) provide for delivery to EDF Trading North America of 15% of the energy generated by CENG that is not sold to former owners of its power plants, in application of the pre-existing electricity purchase contracts that terminate in 2014. From 1 January 2015 until the end of operation of the different plants, the Group will purchase 49.99% of CENG's power output at market prices. The electricity purchase contracts are unaffected by the agreement signed with Exelon in July 2013 and finalised on 1 April 2014, unless the Group exercises its option to sell its CENG shares to Exelon.

These electricity sales by CENG to EDF Trading North America represented a volume of 4.6TWh in 2014.

Other transactions

In application of the agreement signed with Exelon, on 1 April 2014 CENG paid the EDF group a special dividend of US\$400 million (€290 million).

23.2.3 Impairment

In 2014, impairment of €(122) million was recorded on the Group's investment in CENG. This impairment was calculated by the Group's usual impairment test method (discounting future operating cash flows, Group assumptions). It results from a decline in long-term price curves in 2014.

In 2013, impairment of €(146) million was booked in respect of the Group's investment in CENG.

23.3 Alpiq

On 25 April 2013, the main Swiss shareholders of Alpiq subscribed to a hybrid loan of CHF 366.5 million. Following this first step, on 2 May 2013 Alpiq placed a public hybrid bond amounting to CHF 650 million, with 5% coupon and a redemption option after five and a half years at the earliest.

Due to their characteristics, in compliance with IAS 32, the hybrid loan from shareholders and the public hybrid bond were recorded in equity in Alpiq's consolidated financial statements from the date of reception of the funds. Since the EDF group did not subscribe to the operation, it has no impact on the value of the investment in Alpiq reported in "Investments in associates and joint ventures".

23.3.1 Published financial indicators

The main published indicators by the Alpiq group for 2013 were as follows:

<i>(in millions of Euros)</i>	31/12/2013
Non-current assets	7,411
Current assets	4,419
Total assets	11,830
Equity ⁽¹⁾	4,756
Non-current liabilities	4,480
Current liabilities	2,594
Total equity and liabilities	11,830
Sales	7,623
Operating profit before depreciation and amortisation	642
Net income	15
Gains and losses recorded directly in equity	115
Dividends paid to the EDF group	11

(1) Including €828 million of hybrid bonds.

The difference between the share of equity as published by Alpiq and as reported in the Group's consolidated financial statements largely results from the hybrid loan issued by Alpiq in 2013 to which the Group did not subscribe.

The value of the EDF group's investment in Alpiq, valued on the basis of the stock market price at 31 December 2014, is €509 million. The Group considers that this stock market value does not correspond to the value of the company, particularly as a result of the low level of floating stock.

23.3.2 Impairment

In 2014, impairment of €(206) million was recorded on the Group's investment in Alpiq. This impairment mostly concerns hydropower plants, power plant projects in Switzerland and long-term contracts for drawings and deliveries in view of market prices and a difficult regulatory context.

In 2013, impairment of €(284) million was booked in respect of the Group's investment in Alpiq.

➤ Note 24 Inventories

The carrying value of inventories, broken down by nature, is as follows:

(in millions of Euros)	31/12/2014			31/12/2013		
	Gross value	Provision	Net value	Gross value	Provision	Net value
Nuclear fuel	10,807	(14)	10,793	10,539	(14)	10,525
Other fuel	1,916	(11)	1,905	2,023	(4)	2,019
Other raw materials	1,586	(266)	1,320	1,343	(253)	1,090
Work-in-progress for production of goods and services	197	(45)	152	90	(24)	66
Other inventories	596	(19)	577	523	(19)	504
TOTAL INVENTORIES	15,102	(355)	14,747	14,518	(314)	14,204

The long-term portion (more than one year) mainly concerns nuclear fuel inventories amounting to €7,943 million at 31 December 2014 (€7,733 million at 31 December 2013).

The value of EDF Trading's inventories stated at market value is €593 million at 31 December 2014 (€686 million at 31 December 2013).

➤ Note 25 Trade receivables

Details of net trade receivables are as follows:

(in millions of Euros)	31/12/2014	31/12/2013
Trade receivables, gross value – excluding EDF Trading	21,343	19,611
Trade receivables, gross value – EDF Trading	3,108	3,313
Impairment	(1,275)	(1,032)
TRADE RECEIVABLES, NET VALUE	23,176	21,892

Most trade receivables mature within one year.

25.1 Trade receivables due and not yet due

(in millions of Euros)	31/12/2014			31/12/2013		
	Gross value	Provision	Net value	Gross value	Provision	Net value
TRADE RECEIVABLES	24,451	(1,275)	23,176	22,924	(1,032)	21,892
overdue by up to 6 months	1,606	(245)	1,361	1,724	(308)	1,416
overdue by 6-12 months	662	(205)	457	626	(224)	402
overdue by more than 12 months	1,339	(623)	716	1,125	(432)	693
Trade receivables due	3,607	(1,073)	2,534	3,475	(964)	2,511
Trade receivables not yet due	20,844	(202)	20,642	19,449	(68)	19,381

25.2 Securitisation operations

(in millions of Euros)	31/12/2014	31/12/2013
Trade receivables assigned and wholly retained in the balance sheet	17	11
Trade receivables assigned and partly retained in the balance sheet	29	–
Trade receivables assigned and wholly derecognised	1,225	1,151

The Group undertook securitisation of trade receivables for a total of €1,225 million at 31 December 2014, including €610 million by the Edison group (€1,151 million at 31 December 2013, including €710 million by the Edison group).

As most securitisation operations are carried out on a recurrent, without-recourse basis, the corresponding receivables are not carried in the Group's consolidated balance sheet.

➤ Note 26 Other receivables

Details of other receivables are as follows:

(in millions of Euros)	31/12/2014	31/12/2013
Prepaid expenses	1,585	1,434
CSPE	2,057	1,357
VAT receivables	2,678	2,272
Other tax receivables	822	695
Other operating receivables	3,675	3,405
OTHER RECEIVABLES	10,817	9,163
Non-current portion	2,024	1,924
Current portion	8,793	7,239
Gross value	10,896	9,245
Impairment	(79)	(82)

The CSPE receivable corresponds to the amount receivable at 31 December 2014, except for the portion relating to the shortfall generated before 31 December 2012 and the associated costs, which are included in financial assets.

➤ Note 27 Equity

27.1 Share capital

At 31 December 2014, the share capital amounted to €930,004,234, comprising 1,860,008,468 fully subscribed and paid-up shares with nominal value of €0.50 each, owned 84.5% by the French State, 13.7% by the public (institutional and private investors) and 1.7% by current and retired Group employees, with 0.1% held by EDF as treasury shares.

In 2013, payment of part of the 2012 dividends in the form of shares resulted in a €6 million increase in the share capital, corresponding to issuance of 11,141,806 new shares.

Under Article L. 111-67 of the French Energy Code, the French State must hold more than 70% of the capital of EDF at all times.

27.2 Treasury shares

A share repurchase programme authorised by the General Shareholders' Meeting of 9 June 2006 was implemented by the Board of Directors, within the limit of 10% of the total number of shares making up the Company's capital. The initial duration of the programme was 18 months, renewed for 12 months then by tacit agreement every year.

A liquidity contract exists for this programme, as required by the French market regulator AMF (*Autorité des Marchés Financiers*).

At 31 December 2014, treasury shares deducted from consolidated equity represent 1,682,181 shares with total value of €41 million.

27.3 Dividends

The General Shareholders' Meeting of 15 May 2014 decided to distribute a dividend of €1.25 per share in respect of 2013.

27.5 Non-controlling interests (minority interests)

27.5.1 Details of non-controlling interests

	31/12/2014			31/12/2013	
	Ownership %	Equity (non-controlling interests)	Net income attributable to non-controlling interests	Equity (non-controlling interests)	Net income attributable to non-controlling interests
<i>(in millions of Euros)</i>					
Principal non-controlling interests:					
EDF Energy Nuclear Generation Ltd.	20.0%	2,998	155	2,783	220
EDF Luminus	36.5%	539	(96)	648	(23)
EDF Investissements Groupe	4.5%	515	19	527	17
Other non-controlling interests		1,367	(6)	1,040	27
TOTAL		5,419	72	4,998	241

In application of the amendment to the Company's articles of association proposed at the General Shareholders' Meeting of 24 May 2011, shareholders who had held their shares continuously for at least 2 years at year-end and still held them at the dividend distribution date benefit from a 10% bonus on their dividends. The number of shares carrying an entitlement to the bonus dividend cannot exceed 0.5% of the company's capital. The bonus dividend amounts to €1.375 per share.

As interim dividends of €0.57 per share had been paid out on 17 December 2013, the balance payable for 2013 amounted to €0.68 per share benefiting from the ordinary dividend and €0.805 per share benefiting from the bonus dividend. The balance of the dividend was paid out on 6 June 2014, amounting to a total €1,268 million.

On 10 December 2014, EDF's Board of Directors decided to distribute an interim dividend of €0.57 per share in circulation in respect of 2014. This interim dividend was paid out in cash on 17 December 2014, amounting to a total of €1,059 million.

27.4 Issuance of perpetual subordinated bonds

In January 2014 the Group issued perpetual subordinated bonds totalling €3,970 million (net of transaction costs). Details of the operation are given in note 3.5.

At 31 December 2014, perpetual subordinated bonds are carried in equity at the amount of €10,095 million (net of transaction costs).

In 2014 an amount of €388 million was paid out to the bearers of perpetual subordinated bonds issued in January 2013 and January 2014 (€103 million in 2013).

Non-controlling interests in EDF Energy Nuclear Generation Ltd. (formerly British Energy), which is owned 80% by the Group via EDF Energy, correspond to Centrica's share.

Non-controlling interests in EDF Luminus correspond to the investments held by Belgian local authorities.

Non-controlling interests in EDF Investissements Groupe correspond to the investment held by Natixis Belgique Investissements.

Other non-controlling interests principally correspond to the investments held by Total and Fluxys in Dunkerque LNG, and minority interests in subsidiaries of the Edison subgroup (including the effect at 31 December 2014 of F2i's investment in Edens – see note 3.2.2).

27.5.2 Non-controlling interests in EDF Energy

The key financial indicators (100% basis) for EDF Energy Nuclear Generation Ltd. are as follows:

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Non-current assets	23,810	22,316
Current assets	3,549	3,427
Total assets	27,359	25,743
Equity	14,999	13,914
Non-current liabilities	11,141	10,556
Current liabilities	1,219	1,273
Total equity and liabilities	27,359	25,743
Sales	3,864	3,794
Net income	776	1,103
Gains and losses recorded directly in equity	1,060	(398)
Net cash flow from operating activities	1,335	1,361
Net cash flow from investing activities	(622)	(505)
Net cash flow from financing activities	(809)	(1,099)
Cash and cash equivalents - opening balance	528	792
Net increase/(decrease) in cash and cash equivalents	(96)	(243)
Effect of currency fluctuations	34	(21)
Other	–	–
Cash and cash equivalents - closing balance	466	528
Dividends paid to shares of non-controlling interests	(153)	(230)

➤ Note 28 Provisions

The breakdown between current and non-current provisions is as follows:

<i>(in millions of Euros)</i>	Notes	31/12/2014			31/12/2013		
		Current	Non-current	Total	Current	Non-current	Total
Provisions for the back-end of the nuclear cycle		1,632	19,455	21,087	1,447	19,100	20,547
Provisions for decommissioning and last cores		290	22,943	23,233	265	21,327	21,592
Provisions related to nuclear generation	29	1,922	42,398	44,320	1,712	40,427	42,139
Provisions for decommissioning of non-nuclear facilities	30	37	1,297	1,334	51	1,182	1,233
Provisions for employee benefits	31	1,058	23,060	24,118	950	18,381	19,331
Other provisions	32	2,237	1,841	4,078	2,121	1,480	3,601
TOTAL PROVISIONS		5,254	68,596	73,850	4,834	61,470	66,304

➤ Note 29 Provisions related to nuclear generation – back-end of the nuclear cycle, plant decommissioning and last cores

Provisions related to nuclear generation comprise provisions for back-end nuclear cycle expenses (management of spent fuel and radioactive waste), provisions for plant decommissioning and provisions for last cores.

Provisions are estimated under the principles presented in note 1.3.21.

Obligations can vary noticeably depending on each country's legislation and regulations, and the technologies and industrial practices used in each company.

The movement in provisions for the back-end of the nuclear cycle, provisions for decommissioning and provisions for last cores breaks down as follows:

(in millions of Euros)	31/12/2013	Increases	Decreases	Discount effect	Translation adjustments	Other movements	31/12/2014
Provisions for spent nuclear fuel management	11,954	498	(997)	572	147	56	12,230
Provisions for long-term radioactive waste management	8,593	34	(240)	396	75	(1)	8,857
Provisions for the back-end of the nuclear cycle	20,547	532	(1,237)	968	222	55	21,087
Provisions for nuclear plant decommissioning	18,094	423	(186)	859	350	(43)	19,497
Provisions for last cores	3,498	–	–	177	85	(24)	3,736
Provisions for decommissioning and last cores	21,592	423	(186)	1,036	435	(67)	23,233
PROVISIONS RELATED TO NUCLEAR GENERATION	42,139	955	(1,423)	2,004	657	(12)	44,320

The breakdown of provisions by company is shown below:

(in millions of Euros)	EDF Note 29.1	EDF Energy Note 29.2	Belgium	Total
Provisions for spent fuel management	10,105	2,125	–	12,230
Provisions for long-term radioactive waste management	7,676	1,178	3	8,857
PROVISIONS FOR THE BACK-END OF THE NUCLEAR CYCLE AT 31/12/2014	17,781	3,303	3	21,087
Provisions for the back-end of the nuclear cycle at 31/12/2013	17,321	3,224	2	20,547
Provisions for nuclear plant decommissioning	13,866	5,436	195	19,497
Provisions for last cores	2,413	1,323	–	3,736
PROVISIONS FOR DECOMMISSIONING AND LAST CORES AT 31/12/2014	16,279	6,759	195	23,233
Provisions for decommissioning and last cores at 31/12/2013	15,337	6,067	188	21,592

29.1 Nuclear provisions in France

In France, the provisions established by EDF for the nuclear generation fleet result from the Law of 28 June 2006 on long-term management of radioactive materials and waste, and the associated implementing provisions concerning secure financing of nuclear expenses.

In compliance with the accounting principles described in note 1.3.21:

- EDF books provisions to cover all obligations related to the nuclear facilities it operates;
- EDF holds dedicated assets for secure financing of long-term obligations (see note 47).

The calculation of provisions incorporates a level of risks and unknowns as appropriate to the operations concerned. The valuation of costs carries uncertainty factors such as:

- changes in the regulations on safety, security and environmental protection;
- changes in the regulatory decommissioning process and the time necessary for issuance of administrative authorisation;
- future methods for storing long-lived radioactive waste and provision of storage facilities by the French agency for radioactive waste management ANDRA (*Agence Nationale pour la Gestion des Déchets Radioactifs*);
- changes in certain financial parameters such as discount and inflation rates, and changes in the contractual terms of spent fuel management.

Details of changes in provisions for the back-end of the nuclear cycle, decommissioning and last cores are as follows:

(in millions of Euros)	Notes	31/12/2013	Increases	Decreases	Discount effect	Other movements	31/12/2014
Provisions for spent fuel management	29.1.1	9,779	457	(648)	462	55	10,105
Provisions for long-term radioactive waste management	29.1.2	7,542	29	(240)	346	(1)	7,676
Provisions for the back-end of the nuclear cycle		17,321	486	(888)	808	54	17,781
Provisions for nuclear plant decommissioning	29.1.3	13,024	423	(164)	625	(42)	13,866
Provisions for last cores	29.1.4	2,313	–	–	111	(11)	2,413
Provisions for decommissioning and last cores		15,337	423	(164)	736	(53)	16,279
PROVISIONS RELATED TO NUCLEAR GENERATION		32,658	909	(1,052)	1,544	1	34,060

29.1.1 Provisions for spent fuel management

EDF's currently adopted strategy with regards to the fuel cycle, in agreement with the French State, is to process spent fuel and to recycle the separated plutonium in the form of MOX fuel (mixed oxide of plutonium and uranium).

The quantities processed – approximately 1,000 tonnes per year – are determined based on the quantity of recyclable plutonium in the reactors that are authorised to load MOX fuel.

Consequently, provisions for spent fuel cover the following services:

- removal of spent fuel from EDF's generation centres, as well as reception and interim storage;
- processing, including conditioning and storage of recyclable matter and waste resulting from this processing.

The processing expenses included in the provision exclusively concern spent fuel that can be recycled in existing facilities, including the portion in reactors but not yet irradiated.

Expenses are measured based on forecast physical flows at the year-end, with reference to the contracts currently in effect with AREVA following the framework agreement of December 2008.

The provision for long-term radioactive waste management breaks down as follows:

(in millions of Euros)	31/12/2014	31/12/2013
Very low-level and low and medium-level waste	997	967
Long-lived low-level waste	521	499
Long-lived medium and high-level waste	6,158	6,076
PROVISIONS FOR LONG-TERM RADIOACTIVE WASTE MANAGEMENT	7,676	7,542

Very low-level and low and medium-level waste

Very low-level waste mainly comes from nuclear plant decommissioning, and generally takes the form of rubble (concrete, scrap metal, insulating materials and piping). This type of waste is stored at surface level at the Morvilliers storage centre managed by ANDRA.

Low and medium-level waste comes from nuclear facilities (gloves, filters, resins). This type of waste is stored at surface level at the Soulaïnes storage centre managed by ANDRA.

29.1.2 Provisions for long-term radioactive waste management

This includes future expenses for:

- removal and storage of radioactive waste resulting from decommissioning of nuclear installations operated by EDF;
- removal and storage of radioactive waste packages resulting from spent fuel processing at La Hague;
- long-term and direct storage of spent fuel that cannot be recycled in existing installations: plutonium fuel (MOX) or uranium fuel derived from enriched processing, and fuel from Creys-Malville and Brennilis;
- EDF's share of the costs of studies, construction, shutdown and surveillance of existing and future storage centres.

The volumes of waste concerned by provisions include existing packages of waste and all waste to be conditioned, resulting from plant decommissioning or spent fuel processing at La Hague (comprising all fuel in reactors at 31 December, irradiated or otherwise). These volumes are regularly reviewed, in keeping with the data declared for the purposes of the national waste inventory undertaken by ANDRA.

The cost of removing and storing short-lived waste (very low-level and low and medium-level) is assessed on the basis of current contracts with transporters and contracts with ANDRA for operation of the existing storage centres.

Long-lived low-level waste

Long-lived low-level waste belonging to EDF essentially consists of graphite waste from the ongoing decommissioning of the former UNGG (natural uranium graphite gas-cooled) reactors.

Given its lifetime, this type of waste cannot be stored in the existing surface storage centres, but since it is lower-level than long-lived medium and high-level waste, the French Law of 28 June 2006 requires specific subsurface storage for such waste.

An initial site search launched by ANDRA in 2008 was unsuccessful. ANDRA resumed this search in 2013 and is due to present the results to the authorities by the end of 2015. Other alternative management scenarios are also being examined, including sorting and processing solutions for graphite.

Long-lived medium and high-level waste

Long-lived medium and high-level waste essentially comes from processing of spent fuel, and to a lesser extent waste resulting from nuclear plant decommissioning (metallic components that have been inside the reactor).

The French Law of 28 June 2006 requires reversible storage in deep geological layers.

Since 2005, the gross value and disbursement schedules for forecast expenses have been based on a scenario of industrial geological waste storage, following conclusions presented in the first half of 2005 by a working group formed under supervision of the State involving representatives of the administrations concerned, ANDRA and the producers of waste (EDF, AREVA, CEA). EDF has applied a reasonable approach to information from this working group, leading to a benchmark cost, for storage of waste from all producers, of €14.1 billion under the economic conditions of 2003 (€20.8 billion under 2011 economic conditions).

In the partnership set up in 2011 between ANDRA and waste producers to contribute to the success of the geological storage project (CIGÉO project), ANDRA has carried out preliminary conceptual studies since 2012, and analysed the technical optimisations proposed by the producers. The cooperation between ANDRA and producers provided a forum for formal technical discussions that have optimised the waste storage design (included for example new sizing for the above-ground installations, a significant reduction in the length of underground buildings, thinner coatings, etc) and operating conditions (such as new timetables for package transfer, which substantially reduces the numbers of operating staff).

On this basis, ANDRA drew up provisional figures in a report sent to EDF on 18 July 2014. In compliance with the law of 2006, a consultation process was started by the French Department for Energy and Climate (*Direction Générale de l'Énergie et du Climat* or "DGECL") on 18 December 2014, when ANDRA's consolidated figures were submitted to the waste producers for their comments. The consultation should focus on methods for incorporating risks, opportunities and uncertainties, and on unit costs, which are still a point of significant divergence between ANDRA and the producers. EDF and the other producers have 2 months to issue their observations, which will be included in the report to be submitted to the Minister for Ecology, Sustainable Development and Energy, who will then set the new benchmark cost for storage of long-lived medium and high-level waste after consulting the French Nuclear Safety Authority (*Autorité de Sûreté Nucléaire* or "ASN").

In view of the uncertainties over the level of costs to use and the corresponding impact for provisions, the provision recorded by EDF at 31 December 2014 continues to be based on the benchmark cost defined by the working group in 2005.

Ongoing discussions between the DGECL, ANDRA and producers concern the cost under 2011 economic conditions of storage based on a forecast inventory of all final waste from all producers.

The measurement of the provision is sensitive to the gross cost of storage, but also to key assumptions concerning disbursement schedules, cost allocations between the producers (EDF, AREVA, CEA), and the opportunities, risks, unknowns and uncertainties of the project. Using identical assumptions to those applied for the current provision, a €1 billion rise in the gross contractors' quotes under 2011 economic conditions would have an estimated impact of approximately €200 million (present value) on the provision at 31 December 2014.

If the valuation set by the minister deviates from EDF's estimates, the Group will reflect the effects in its financial statements.

29.1.3 Decommissioning provisions for nuclear power plants

EDF takes full technical and financial responsibility for decommissioning for the nuclear plants it operates. The decommissioning process is governed by French Law of 13 June 2006 and its implementing decree.

There are three levels of nuclear power plant decommissioning, according to a classification defined by the International Atomic Energy Agency (IAEA) in 1980:

- level 1: final shutdown of the power plant (fuel unloading, draining of circuits, etc);
- level 2: complete dismantling of nuclear buildings excluding the reactor building, dismantling of equipment and removal of waste;
- level 3: complete dismantling of the reactor building and its equipment, and removal of waste.

The decommissioning scenario adopted by EDF is a decommissioning immediately after shutdown, with no waiting period for radioactive decay, in compliance with French regulations, which require the period between final shutdown and dismantling to be as short as possible. While level 1 operations must be carried out first, certain level 2 and level 3 operations can be carried out in parallel.

The end-state is industrial use: the sites will be restored to their original condition and will be reused for industrial facilities.

EDF is currently conducting an inventory to identify any ground pollution at plants currently being dismantled and plants still in operation. At this stage, provisions only cover decontamination of the buildings; any accidental ground pollution at plants currently in operation is dealt with as soon as it arises. Feedback available to date on the facilities being decommissioned and the first soil analyses, mainly for the Brennilis site, support this approach.

Details of changes in decommissioning provisions for nuclear power plants are as follows:

(in millions of Euros)	31/12/2013	Increases	Decreases	Discount effect	Other movements	31/12/2014
Provisions for decommissioning nuclear plants in operation	10,907	35	–	522	(42)	11,422
Provisions for decommissioning permanently shut-down nuclear plants	2,117	388	(164)	103	–	2,444
DECOMMISSIONING PROVISIONS FOR NUCLEAR POWER PLANTS	13,024	423	(164)	625	(42)	13,866

For nuclear power plants currently in operation (PWR plants with 900MW, 1,300MW and N4 reactors)

Until 2013, provisions were estimated based on a 1991 study by the French Ministry of Trade and Industry, which set an estimated benchmark cost for decommissioning expressed in €/MW, confirming the assumptions defined in 1979 by the PEON commission.

In 2009, EDF carried out a detailed study of decommissioning costs, using Dampierre (four 900MW units) as a representative site. This study involved the following steps:

- measurement of the decommissioning cost for the Dampierre site, taking into consideration the most recent developments in regulations, past experience in decommissioning of shut-down plants and recommendations issued by the ASN;
- a review of the timeline for decommissioning operations (the total duration of decommissioning for one reactor is estimated at 15 years following shutdown);
- determination of the rules for extrapolation of cost estimates for the entire fleet of PWR plants in operation.

An intercomparison with the study carried out by consultants La Guardia, based mainly on the Maine Yankee reactor in the US which is comparable in terms of technology and capacity, subsequently corroborated the results of EDF's study.

The Dampierre study did not result in any change to the amount of provisions based on the benchmark cost, and until 2013 provisions for all 58 reactors were based on a forecast amount equivalent to €309₂₀₁₃ per kilowatt installed.

In 2014 the Dampierre study was reviewed by EDF to make sure that the previous calculations were still valid in view of recent developments and experience, both internationally and internally. This review reinforced the amounts of decommissioning provisions for plants in operation based on costs resulting from the Dampierre study, incorporating best estimates and feedback in and outside France.

This change of estimate has no significant impact on the level of provisions at 31 December 2014.

For permanently shut-down nuclear power plants

Unlike the PWR fleet currently in operation, the first-generation reactors now shut down used a range of different technologies: UNGG (natural uranium graphite gas-cooled) reactors at Bugey, Saint-Laurent and Chinon, a heavy water reactor at Brennilis, a PWR reactor at Chooz A, and a fast-neutron reactor at Creys-Malville. Decommissioning costs are therefore estimated individually for each site.

EDF has chosen to fully dismantle first-generation plants by 2040, in line with the future availability of solutions for the resulting waste:

- for long-lived medium-level waste, the packaging and interim storage installation for radioactive waste (ICEDA) due to open in 2017, until it can be placed in deep underground storage;

- for long-lived low-level waste, the facility for storing graphite waste, due to open by 2025.

The amount of the provision also depends on issuance of the Decree for full dismantling of Brennilis by the end of 2018.

The decommissioning costs are based on contractor quotes, which in principle are fully revised every 3 years. The quotes established in 2008 were revised in 2012 to take account of accumulated industrial experience, unforeseen and regulatory developments, and the latest available figures. Full revision of these quotes is due in 2015, but preparatory work has led to a €388 million re-estimation at 31 December 2014 to reflect delays in physical progress at the sites, and cost reassessments for certain contracts. This change has led to recognition in the income statement of an expense included in "Other income and expenses".

29.1.4 Provisions for last cores

These provisions cover the future expenses resulting from scrapping fuel that will only be partially irradiated when the reactor is shut down. It is measured based on:

- the cost of the loss on fuel in the reactor that is not totally spent at the time of final reactor shutdown and cannot be reused due to technical and regulatory constraints;
- the cost of fuel processing, and waste removal and storage operations. These costs are valued in a similar way to provisions for spent fuel management and long-term radioactive waste management.

These unavoidable costs are components of the cost of nuclear reactor shutdown and decommissioning. As such, they are fully covered by provision from the commissioning date and an asset associated with the provision is recognised.

29.1.5 Discounting of provisions related to nuclear generation and sensitivity analyses

29.1.5.1 Discount rate

Calculation of the discount rate

The discount rate is determined based on long-series data for a sample of bonds with maturities as close as possible to that of the liability. However, some expenses covered by these provisions will be disbursed over periods significantly longer than the duration of instruments generally traded on the financial markets.

The benchmark used to determine the discount rate is the sliding 10-year average of the return on French OAT 2055 treasury bonds, which have a similar duration to the obligations, plus the spread of corporate bonds rated A to AA, which include EDF.

The assumed inflation rate is determined in line with the forecasts provided by consensus and expected inflation based on the returns on inflation-linked bonds.

The discount rate determined in this way is 4.6% at 31 December 2014, assuming inflation of 1.7% (4.8% for assumed inflation of 1.9% at 31 December 2013).

Revision of the discount rate and regulatory limit

The methodology used to determine the discount rate, particularly the reference to sliding 10-year averages, is able to prioritise long-term trends in rates, in keeping with the long-term horizon for disbursements. The discount rate is therefore revised in response to structural developments in the economy leading to medium and long-term changes.

The discount rate applied must also comply with the two limits laid down by the Decree of 23 February 2007 and the decision of 21 March 2007. This means it must be lower than:

- a regulatory maximum "equal to the arithmetic average over the forty-eight most recent months of the constant 30-year rate (TEC 30 years), observed on the last date of the period concerned, plus one point";
- and the expected rate of return on assets covering the liability (dedicated assets).

The ceiling rate based on the TEC 30-year rate is 4.31% at 31 December 2014.

The work undertaken by nuclear operators together with the French government since 2013 on regulations governing the discount rate applicable for provisions has now been completed, and the results should be transposed into regulations during the first quarter of 2015. Under the expected new rules, the ceiling for the discount rate would have been approximately 4.8% at 31 December 2014.

Until the new regulations are issued, the Minister for Ecology, Sustainable Development and Energy, the Minister for Finance and Public Accounts, and the Minister for the Economy, Productive Recovery and Digital affairs have granted the EDF group an extension until 31 March 2015 to apply a discount rate that complies with the regulations in force.

Consequently, the discount rate applied at 31 December 2014 was determined under the Company's usual method, and amounts to 4.6%.

29.1.5.2 Analyses of sensitivity to macro-economic assumptions

Sensitivity to assumptions concerning costs, inflation rate, long-term discount rate, and disbursement schedules can be estimated through comparison of the gross amount estimated under year-end economic conditions with the present value of the amount.

	31/12/2014		31/12/2013	
	Costs based on year-end economic conditions	Amounts in provisions at present value	Costs based on year-end economic conditions	Amounts in provisions at present value
<i>(in millions of Euros)</i>				
Spent fuel management	16,463	10,105	15,868	9,779
Long-term radioactive waste management	26,159	7,676	25,578	7,542
BACK-END NUCLEAR CYCLE EXPENSES	42,622	17,781	41,446	17,321
Decommissioning provisions for nuclear power plants	22,608	13,866	22,448	13,024
Provisions for last cores	4,050	2,413	3,979	2,313
DECOMMISSIONING AND LAST CORE EXPENSES	26,658	16,279	26,427	15,337

This approach can be complemented by estimating the impact of a change in the discount rate on the present value.

In application of Article 11 of the Decree of 23 February 2007, the following table reports these details for the main components of provisions for the back-end of the nuclear cycle, decommissioning of nuclear plants and last cores.

At 31 December 2014:

	Amounts in provisions at present value	Sensitivity to discount rate					
		Balance sheet provision			Pre-tax net income		
		+0.20%	-0.20%	-0.30%	+0.20%	-0.20%	-0.30%
<i>(in millions of Euros)</i>							
Back-end nuclear cycle expenses:							
– spent fuel management	10,105	(171)	180	274	141	(149)	(227)
– long-term radioactive waste management	7,676	(381)	425	657	327	(368)	(568)
Decommissioning and last cores:							
– decommissioning of nuclear power plants	13,866	(431)	449	681	52	(54)	(82)
– last cores	2,413	(64)	68	103	–	–	–
TOTAL	34,060	(1,047)	1,122	1,715	520	(571)	(877)

At 31 December 2013:

(in millions of Euros)	Amounts in provisions at present value	Sensitivity to discount rate			
		Balance sheet provision		Pre-tax net income	
		+0.20%	-0.20%	+0.20%	-0.20%
Back-end nuclear cycle expenses:					
– spent fuel management	9,779	(167)	177	139	(147)
– long-term radioactive waste management	7,542	(374)	417	320	(359)
Decommissioning and last cores:					
– decommissioning of nuclear power plants	13,024	(456)	476	45	(47)
– last cores	2,313	(66)	69	–	–
TOTAL	32,658	(1,063)	1,139	504	(553)

29.2 EDF Energy's nuclear provisions

The specific financing terms for long-term nuclear obligations related to EDF Energy are reflected as follows in the EDF group's financial statements:

- the obligations are reported in liabilities in the form of provisions amounting to €10,062 million at 31 December 2014;
- in the assets, EDF group reports receivables corresponding to the amounts payable under the restructuring agreements by the NLF, for

non-contracted obligations or decommissioning obligations, and by the British Government for contracted obligations (or historical liabilities).

These receivables are discounted at the same real rate as the obligations they are intended to finance. They are included in "Financial assets" in the consolidated balance sheet (see note 36.3) at the amount of €8,617 million at 31 December 2014 (€7,958 million at 31 December 2013).

Details of changes in provisions for the back-end of the nuclear cycle and provisions for decommissioning and last cores are as follows:

(in millions of Euros)	31/12/2013	Increases	Decreases	Discount effect	Translation adjustments	Other movements	31/12/2014
Provisions for spent fuel management	2,175	41	(349)	110	147	1	2,125
Provisions for long-term radioactive waste management	1,049	4	–	50	75	–	1,178
Provisions for the back-end of the nuclear cycle	3,224	45	(349)	160	222	1	3,303
Provisions for nuclear plant decommissioning	4,882	–	(22)	226	350	–	5,436
Provisions for last cores	1,185	–	–	66	85	(13)	1,323
Provisions for decommissioning and last cores	6,067	–	(22)	292	435	(13)	6,759
PROVISIONS RELATED TO NUCLEAR GENERATION	9,291	45	(371)	452	657	(12)	10,062

29.2.1 Regulatory and contractual framework

Amendments signed with the Nuclear Liabilities Fund (NLF – an independent trust set up by the UK Government as part of the restructuring of British Energy) following the EDF group's acquisition of British Energy have a limited impact on the contractual financing commitments made to British Energy by the UK Secretary of State and the NLF under the "Restructuring Agreements". These agreements were entered into by British Energy on 14 January 2005 as part of the restructuring led by the UK Government from 2005 in order to

stabilise British Energy's financial position. British Energy Generation Limited changed its name to EDF Energy Nuclear Generation Limited on 1 July 2011 and replaced British Energy in these agreements and amendments.

Under the terms of the Restructuring Agreements:

- the NLF agreed to fund, to the extent of its assets: (i) qualifying contingent and/or latent nuclear liabilities (including liabilities for management of spent fuel from the Sizewell B power station); and (ii) qualifying decommissioning costs for EDF Energy's existing nuclear power stations;

- the Secretary of State agreed to fund: (i) qualifying contingent and/or latent nuclear liabilities (including liabilities for the management of spent fuel from the Sizewell B power station) and qualifying decommissioning costs related to EDF Energy's existing nuclear power stations, to the extent that they exceed the assets of the NLF; and (ii) subject to a cap of £2,185 million (in December 2002 monetary values, adjusted accordingly), qualifying known existing liabilities for EDF Energy's spent fuel (including liabilities for management of spent fuel from plants other than Sizewell B loaded in reactors prior to 15 January 2005);
- EDF Energy is responsible for funding certain excluded or disqualified liabilities (e.g. those defined as EDF Energy liabilities), and additional liabilities which could be created as a result of failure by EDF Energy to meet minimum performance standards under applicable law. The obligations of EDF Energy to the NLF and the Secretary of State are guaranteed by the assets of the principal members of EDF Energy.

EDF Energy has also undertaken commitments to pay:

- annual decommissioning contributions for a period limited to the useful lives of the plants as at the date of the "restructuring agreements"; the corresponding provision amounts to €168 million at 31 December 2014;
- £150,000 (indexed to inflation) per tonne of uranium loaded in the Sizewell B reactor after the date of the "restructuring agreements".

Furthermore, EDF Energy has entered into a separate contract with the Nuclear Decommissioning Authority (NDA) for management of AGR spent fuel and associated radioactive waste resulting from operation of power plants other than Sizewell B after 15 January 2005, and bears no

responsibility for this fuel and waste once it is transferred to the processing site at Sellafield. The corresponding costs of £150,000 (indexed to inflation) per tonne of loaded uranium – plus a rebate or surcharge dependent on market electricity price and electricity generated in the year – are included in inventories (see note 1.3.17.1).

EDF Energy finalised work on updating estimates of nuclear liabilities in 2013. The conclusions led to a €1,173 million revision to the provisions booked in the liabilities, but an equivalent adjustment was also made to the amount receivable from the NLF (or the British government in the event the NLF is unable to meet its obligations). There was therefore no impact on the Group's income statement.

29.2.2 Provisions for the back-end of the nuclear cycle

Spent fuel from the Sizewell B PWR (pressurized water reactor) plant is stored on site. Spent fuel from other plants is transferred to Sellafield for storage and reprocessing.

EDF Energy's provisions for the back-end of the nuclear cycle concern obligations for reprocessing and storage of spent fuel and long-term storage of radioactive waste, required by the existing regulations in the UK approved by the Nuclear Decommissioning Authority (NDA). Their amount is based on contractual agreements or if this is not possible, on the most recent technical estimates.

	31/12/2014		31/12/2013	
	Costs based on year-end economic conditions	Amounts in provisions at present value	Costs based on year-end economic conditions	Amounts in provisions at present value
<i>(in millions of Euros)</i>				
Spent fuel management	3,192	2,125	3,228	2,175
Long-term radioactive waste management	7,741	1,178	7,132	1,049
BACK-END NUCLEAR CYCLE EXPENSES	10,933	3,303	10,360	3,224

29.2.3 Decommissioning provisions

Provisions for decommissioning of nuclear plants result from management's best estimates. They cover the full cost of decommissioning and are measured on the basis of existing techniques and methods that are most likely to be used for application of current regulations. The current costs are based on Baseline Decommissioning Plans produced in 2012 and approved in 2013 and assume that plants will be decommissioned and the land will ultimately be reused.

	31/12/2014		31/12/2013	
	Costs based on year-end economic conditions	Amounts in provisions at present value	Costs based on year-end economic conditions	Amounts in provisions at present value
<i>(in millions of Euros)</i>				
PLANT DECOMMISSIONING EXPENSES	16,088	5,268	14,823	4,712

The table above concerns decommissioning obligations excluding the present value of decommissioning contributions payable to the NLF (€168 million at 31 December 2014, see note 29.2.1).

29.2.4 Discounting of provisions related to nuclear generation

The discount rate has been calculated using an average series of data for a sample of UK Government gilts over the longest available durations plus the spread of UK Corporate bonds rated A to AA, again over the longest-term

duration. The implicit inflation rate used in determining a discount rate is based on long-term forecast of adjusted retail prices (the UK's RPIJ index).

At 31 December 2014, EDF Energy applied a real discount rate of 3.0% to nuclear liabilities in the United Kingdom. This rate was unchanged from 2013.

➤ Note 30 Provisions for decommissioning of non-nuclear facilities

The breakdown by company is as follows:

<i>(in millions of Euros)</i>	EDF	EDF Energy	Edison	Other entities	Total
PROVISIONS FOR DECOMMISSIONING OF NON-NUCLEAR FACILITIES AT 31/12/2014	589	88	521	136	1,334
Provisions for decommissioning of non-nuclear facilities at 31/12/2013	572	66	489	106	1,233

Provisions for decommissioning of non-nuclear facilities principally concern thermal power plants and hydropower plants.

The costs of decommissioning thermal power plants are calculated using regularly updated studies based on estimated future costs, measured by

reference to the charges recorded on past operations and the most recent estimates for plants still in operation.

The provision recorded at 31 December 2014 reflects the most recent known contractor quotes and commissioning of new generation assets.

➤ Note 31 Provisions for employee benefits

31.1 EDF group

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Provisions for employee benefits - current portion	1,058	950
Provisions for employee benefits - non-current portion	23,060	18,381
PROVISIONS FOR EMPLOYEE BENEFITS	24,118	19,331

31.1.1 Breakdown of the change in the provision

<i>(in millions of Euros)</i>	Obligations	Fund assets	Provision in the balance sheet
Balance at 31/12/2013	34,190	(14,859)	19,331
Net expense for 2014	2,233	(594)	1,639
Actuarial gains and losses	7,088	(2,477)	4,611
Employer's contributions to funds	–	(667)	(667)
Employees' contributions to funds	4	(4)	–
Benefits paid	(1,525)	585	(940)
Translation adjustment	504	(482)	22
Changes in scope of consolidation	125	–	125
Other movements	(3)	–	(3)
BALANCE AT 31/12/2014	42,616	(18,498)	24,118

31.1.2 Post-employment and long-term employee benefit expenses

<i>(in millions of Euros)</i>	2014	2013
Current service cost	(792)	(948)
Past service cost	75	477
Actuarial gains and losses – long-term benefits	(243)	(112)
Net expenses recorded as operating expenses	(960)	(583)
Interest expense (discount effect)	(1,273)	(1,243)
Return on fund assets	594	560
Net interest expense included in financial result	(679)	(683)
EMPLOYEE BENEFIT EXPENSES RECORDED IN THE INCOME STATEMENT	(1,639)	(1,266)
Actuarial gains and losses – post-employment benefits	(7,088)	(2)
Actuarial gains and losses on fund assets	2,477	78
Actuarial gains and losses	(4,611)	76
Translation adjustments	(22)	11
GAINS AND LOSSES ON EMPLOYEE BENEFITS RECORDED DIRECTLY IN EQUITY	(4,633)	87

The past service cost for 2013 includes income of €472 million resulting from the positive effect of the pension reform in France (see note 4.6).

31.1.3 Provisions for employee benefits by operating segment

<i>(in millions of Euros)</i>	France	United Kingdom	Italy	Other international	Other activities	Total
Obligations at 31/12/2013	27,069	6,703	52	163	203	34,190
Net expense for 2014	1,678	549	5	(22)	23	2,233
Actuarial gains and losses	6,304	716	3	13	52	7,088
Employees' contributions to funds	–	4	–	–	–	4
Benefits paid	(1,259)	(223)	(3)	(23)	(17)	(1,525)
Translation adjustment	–	504	–	–	–	504
Changes in scope of consolidation	–	–	–	–	125	125
Other movements	–	–	(4)	(1)	2	(3)
OBLIGATIONS AT 31/12/2014	33,792	8,253	53	130	388	42,616
Fair value of fund assets	(10,421)	(7,990)	–	(56)	(31)	(18,498)
PROVISIONS FOR EMPLOYEE BENEFITS AT 31/12/2014	23,371	263	53	74	357	24,118

<i>(in millions of Euros)</i>	France	United Kingdom	Italy	Other international	Other activities	Total
Obligations at 31/12/2013	27,069	6,703	52	163	203	34,190
Fair value of fund assets	(8,458)	(6,313)	–	(58)	(30)	(14,859)
PROVISIONS FOR EMPLOYEE BENEFITS AT 31/12/2013	18,611	390	52	105	173	19,331

31.2 France

The "France" segment mainly comprises EDF and ERDF. Almost all employees of these companies benefit from IEG status including the special pension system and other IEG benefits, described in note 1.3.22.

31.2.1 Details of changes in the provision

<i>(in millions of Euros)</i>	Obligations	Fund assets	Provision in the balance sheet
Balances at 31/12/2013	27,069	(8,458)	18,611
Net expense for 2014	1,678	(296)	1,382
Actuarial gains and losses	6,304	(1,671)	4,633
Contributions to funds	–	(352)	(352)
Benefits paid	(1,259)	356	(903)
BALANCES AT 31/12/2014	33,792	(10,421)	23,371

31.2.2 Post-employment and long-term employee benefit expenses

<i>(in millions of Euros)</i>	2014	2013
Current service cost	(546)	(732)
Past service cost	55	472
Actuarial gains and losses – long-term benefits	(244)	(105)
Net expenses recorded as operating expenses	(735)	(365)
Interest expense (discount effect)	(943)	(959)
Return on fund assets	296	295
Net interest expense included in financial result	(647)	(664)
EMPLOYEE BENEFIT EXPENSES RECORDED IN THE INCOME STATEMENT	(1,382)	(1,029)
Actuarial gains and losses – post-employment benefits	(6,304)	358
Actuarial gains and losses on fund assets	1,671	(121)
Actuarial gains and losses	(4,633)	237
GAINS AND LOSSES ON EMPLOYEE BENEFITS RECORDED DIRECTLY IN EQUITY	(4,633)	237

The past service cost for 2013 includes income of €472 million resulting from the positive effect of the pension reform in France (see note 4.6).

Actuarial gains and losses on post-employment benefits break down as follows:

<i>(in millions of Euros)</i>	2014	2013
Experience adjustments	244	(401)
Changes in demographic assumptions	–	(38)
Changes in financial assumptions ⁽¹⁾	(6,792)	692
ACTUARIAL GAINS AND LOSSES ON OBLIGATIONS	(6,548)	253
Including:		
actuarial gains and losses on post-employment benefits	(6,304)	358
actuarial gains and losses on long-term benefits	(244)	(105)

⁽¹⁾ Financial assumptions are mainly the discount rate, inflation rate and wage increase rate.

The actuarial gains and losses on obligations generated over 2014 amount to €(6,548) million, and mainly relate to the effect of revised financial assumptions (particularly the lower assumptions for the discount rate and changes in assumptions concerning valuation of benefits in kind in the form of electricity or gas).

In 2013, actuarial gains and losses on obligations amounted to €253 million, mainly related to the favourable effect of revised financial assumptions (particularly the lower assumptions for the inflation rate and wage increase rate).

31.2.3 Provisions for employee benefits by nature

At 31 December 2014:

<i>(in millions of Euros)</i>	Obligations	Fund assets	Provision in the balance sheet
Provisions for post-employment benefits at 31/12/2014	32,310	(10,421)	21,889
Comprising			
Pensions	23,504	(9,683)	13,821
Benefits in kind (electricity/gas)	6,752	–	6,752
Retirement gratuities	916	(724)	192
Other	1,138	(14)	1,124
Provisions for other long-term employee benefits at 31/12/2014	1,482	–	1,482
Comprising			
Annuities following work-related accident and illness, and invalidity	1,278	–	1,278
Long service awards	170	–	170
Other	34	–	34
PROVISIONS FOR EMPLOYEE BENEFITS AT 31/12/2014	33,792	(10,421)	23,371

At 31 December 2013:

<i>(in millions of Euros)</i>	Obligations	Fund assets	Provision in the balance sheet
Provisions for post-employment benefits at 31/12/2013	25,756	(8,458)	17,298
Comprising			
Pensions	19,414	(7,810)	11,604
Benefits in kind (electricity/gas)	4,551	–	4,551
Retirement gratuities	853	(635)	218
Other	938	(13)	925
Provisions for other long-term employee benefits at 31/12/2013	1,313	–	1,313
Comprising			
Annuities following work-related accident and illness, and invalidity	1,125	–	1,125
Long service awards	155	–	155
Other	33	–	33
PROVISIONS FOR EMPLOYEE BENEFITS AT 31/12/2013	27,069	(8,458)	18,611

31.2.4 Breakdown of obligations by type of beneficiary

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Current employees	20,452	16,530
Retirees	13,340	10,539
OBLIGATIONS	33,792	27,069

31.2.5 Fund assets

For France, these assets amount to €10,421 million at 31 December 2014 (€8,458 million at 31 December 2013) and concern retirement gratuities (with target coverage of 100%) and the specific benefits of the special pension system.

They consist of insurance contracts with the following risk profile:

- 70% in a hedging pocket consisting of bonds, designed to replicate variations in the obligation caused by changes in interest rates;
- 30% in a growth asset pocket consisting of international equities.

These assets break down as follows:

(in millions of Euros)	31/12/2014	31/12/2013
FUND ASSETS	10,421	8,458
<i>Assets funding special pension benefits</i>	<i>9,683</i>	<i>7,810</i>
(%)		
Listed equity instruments (shares)	29%	31%
Listed debt instruments (bonds)	71%	69%
<i>Assets funding retirement gratuities</i>	<i>724</i>	<i>635</i>
(%)		
Listed equity instruments (shares)	31%	32%
Listed debt instruments (bonds)	69%	68%
Other fund assets	14	13

At 31 December 2014, the equities held as part of fund assets are distributed as follows:

- approximately 50% of the total are shares in North American companies;
- approximately 25% of the total are shares in European companies;
- approximately 25% of the total are shares in companies in the Asia-Pacific zone and emerging countries.

This distribution is stable compared to the distribution at 31 December 2013.

At 31 December 2014, the bonds held as part of fund assets are distributed as follows:

- approximately 85% of the total are AAA and AA-rated bonds;
- approximately 15% of the total are bonds with A, BBB and other ratings.

Around 80% of bonds are sovereign bonds issued by Euro zone countries, and the balance mainly consists of bonds issued by financial and non-financial firms.

This distribution is stable compared to the distribution at 31 December 2013.

31.2.6 Future cash flows

Cash flows related to future employee benefits are as follows:

(in millions of Euros)	Cash flow in year-end economic conditions	Amount covered by provision (present value)
Less than one year	1,433	1,419
One to five years	6,130	5,720
Five to ten years	6,586	5,542
More than ten years	42,740	21,111
CASH FLOWS RELATED TO EMPLOYEE BENEFITS	56,889	33,792

At 31 December 2014, the average duration of employee benefit commitments in France is 18.1 years.

31.2.7 Actuarial assumptions

(in %)	31/12/2014	31/12/2013
Discount rate/rate of return on assets	2.20%	3.50%
Inflation rate	1.70%	1.90%
Wage increase rate ⁽¹⁾	1.70%	1.70%

(1) Excluding inflation.

In France, the discount rate used for employee benefit obligations is determined by applying the yield rate on high-quality corporate bonds based on their duration to maturities corresponding to the future disbursements resulting from these obligations.

Changes in the economic and market parameters used has led the Group to review the discount rate to 2.20% at 31 December 2014.

From 1 January 2014, the inflation rate used to calculate provisions for employee benefits is derived from an internally-determined inflation curve by maturity which is used in the Group as a benchmark for Euro zone countries. The inflation rate determined in this way at 31 December 2014 is an average 1.70%.

31.2.8 Sensitivity analysis

Sensitivity analyses on the amount of the obligation are as follows:

(in %)	31/12/2014
Impact of a 25bp increase or decrease in the discount rate	-4.4% / +4.8%
Impact of a 25bp increase or decrease in the wage increase rate	+3.0% / -3.0%
Impact of a 25bp increase or decrease in the inflation rate	+4.8% / -4.4%

31.3 United Kingdom

The United Kingdom segment chiefly comprises EDF Energy, whose principal employee benefits are described in note 1.3.22.

31.3.1 Details of the change in the provision

(in millions of Euros)	Obligations	Fund assets	Provision in the balance sheet
Balances at 31/12/2013	6,703	(6,313)	390
Net expense for 2014	549	(294)	255
Actuarial gains and losses	716	(808)	(92)
Employer's contributions to funds	–	(313)	(313)
Employees' contributions to funds	4	(4)	–
Benefits paid	(223)	223	–
Translation adjustment	504	(481)	23
BALANCES AT 31/12/2014	8,253	(7,990)	263

31.3.2 Post-employment benefit and long-term employee benefit expenses

(in millions of Euros)	2014	2013
Current service cost	(227)	(196)
Past service cost	(6)	(2)
Actuarial gains and losses – long-term benefits	–	–
Net expenses recorded as operating expenses	(233)	(198)
Interest expense (discount effect)	(316)	(269)
Return on fund assets	294	261
Net interest expense included in financial result	(22)	(8)
EMPLOYEE BENEFIT EXPENSES RECORDED IN THE INCOME STATEMENT	(255)	(206)
Actuarial gains and losses – post-employment benefits	(716)	(371)
Actuarial gains and losses on fund assets	808	198
Actuarial gains and losses	92	(173)
Translation adjustments	(23)	10
GAINS AND LOSSES ON EMPLOYEE BENEFITS RECORDED DIRECTLY IN EQUITY	69	(163)

31.3.3 Breakdown of obligations by type of beneficiary

(in millions of Euros)	31/12/2014	31/12/2013
Current employees	5,013	3,980
Retirees	3,240	2,723
OBLIGATIONS	8,253	6,703

31.3.4 Fund assets

Pension obligations in the United Kingdom are partly covered by external funds with a present value of €7,990 million at 31 December 2014 (€6,313 million at 31 December 2013).

The investment strategy applied in these funds is a liability driven investment strategy. The allocation between growth and back-to-back is regularly reviewed by the trustees, at least after every actuarial valuation, to ensure that the funds' overall investment strategy remains coherent in order to achieve the target coverage level required.

These assets break down as follows:

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
BEGG pension fund	6,560	5,177
EEGSG pension fund	892	732
EEPS pension fund	538	404
FUND ASSETS	7,990	6,313
(%)		
Listed equity instruments (shares)	35%	36%
Listed debt instruments (bonds)	47%	48%
Real estate properties	6%	7%
Cash and cash equivalents	1%	2%
Other	11%	7%

At 31 December 2014, the equities held as part of fund assets are distributed as follows:

- approximately 30% of the total are shares in North American companies;
- approximately 40% of the total are shares in European companies;
- approximately 30% of the total are shares in companies in the Asia-Pacific zone and emerging countries.

This distribution is stable compared to the distribution at 31 December 2013.

At 31 December 2014, the bonds held as part of fund assets are distributed as follows:

- approximately 65% of the total are AAA and AA-rated bonds;
- approximately 35% of the total are bonds with A, BBB and other ratings.

Around 60% of bonds are sovereign bonds issued by Euro zone countries, the United Kingdom and the United States. The balance mainly consists of bonds issued by financial and non-financial firms.

This distribution is stable compared to the distribution at 31 December 2013.

31.3.5 Future cash flows

Cash flows related to future employee benefits are as follows:

<i>(in millions of Euros)</i>	Cash flow under year-end economic conditions	Amount covered by provision (present value)
Less than one year	270	270
One to five years	1,356	1,224
Five to ten years	2,393	1,832
More than ten years	12,818	4,927
CASH FLOWS RELATED TO EMPLOYEE BENEFITS	16,837	8,253

The contribution to funds for 2015 is estimated at approximately €300 million.

The average weighted duration of funds in the United Kingdom is 19.9 years at 31 December 2014.

31.3.6 Actuarial assumptions

<i>(in %)</i>	31/12/2014	31/12/2013
Discount rate / rate of return on assets	3.60%	4.50%
Inflation rate	3.10%	3.50%
Wage increase rate	3.10%	3.50%

In the United Kingdom, the discount rate used for employee benefit obligations is determined by applying the yield rate on high-quality non-financial corporate bonds based on their duration to maturities corresponding to the future disbursements resulting from these obligations.

31.3.7 Sensitivity analyses

Sensitivity analyses on the amount of the obligations are as follows:

(in %)	31/12/2014
Impact of a 25bp increase or decrease in the discount rate	-4.6% / +4.9%
Impact of a 25bp increase or decrease in the wage increase rate	+1.2% / -1.1%
Impact of a 25bp increase or decrease in the inflation rate	+4.6% / -4.5%

➤ Note 32 Other provisions

Details of changes in other provisions are as follows:

	31/12/2013	Increases	Decreases		Changes in scope	Other changes	31/12/2014
(in millions of Euros)			Utilisations	Reversals			
Provisions for contingencies related to investments	414	117	(172)	–	2	(1)	360
Provisions for tax liabilities	506	72	(9)	–	14	1	584
Provisions for litigation	518	121	(12)	(11)	12	(95)	533
Provisions for onerous contracts	144	9	(49)	–	55	–	159
Provisions related to environmental schemes ⁽¹⁾	873	918	(884)	(6)	16	35	952
Other provisions	1,146	551	(362)	(65)	125	95	1,490
TOTAL	3,601	1,788	(1,488)	(82)	224	35	4,078

(1) Provisions related to environmental schemes include provisions for greenhouse gas emission rights and renewable energy certificates (see note 49).

➤ Note 33 Special French public electricity distribution concession liabilities

The changes in special concession liabilities for existing assets and assets to be replaced are as follows:

(in millions of Euros)	31/12/2014	31/12/2013
Value in kind of assets	44,183	43,050
Unamortised financing by the operator	(21,599)	(21,013)
Rights in existing assets - net value	22,584	22,037
Amortisation of financing by the grantor	11,586	11,006
Provisions for renewal	10,176	10,411
Rights in assets to be replaced	21,762	21,417
SPECIAL FRENCH PUBLIC ELECTRICITY DISTRIBUTION CONCESSION LIABILITIES	44,346	43,454

➤ Note 34 Trade payables

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Trade payables - excluding EDF Trading	11,151	10,331
Trade payables - EDF Trading	3,713	3,826
TRADE PAYABLES	14,864	14,157

➤ Note 35 Other liabilities

Details of other liabilities are as follows:

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Advances and progress payments received	7,283	6,986
Liabilities related to property, plant and equipment	3,647	3,234
Tax liabilities	5,910	5,356
Social charges	3,671	3,345
Deferred income on long-term contracts	3,762	3,751
Other deferred income	763	1,016
Other	3,069	2,469
OTHER LIABILITIES	28,105	26,157
Non-current portion	4,956	5,001
Current portion	23,149	21,156

35.1 Advances and progress payments received

At 31 December 2014 advances and progress payments received include monthly standing order payments by EDF's residential and business customers amounting to €6,340 million (€6,129 million at 31 December 2013). The increase over 2014 is mainly explained by the growing number of customers who opt to pay their bills this way.

35.2 Tax liabilities

At 31 December 2014 tax liabilities mainly include an amount of €1,122 million for the CSPE income to be collected by EDF on energy supplied but not yet billed (€984 million at 31 December 2013).

35.3 Deferred income on long-term contracts

EDF's deferred income on long-term contracts at 31 December 2014 comprises €1,989 million (€2,112 million at 31 December 2013) of partner advances made to EDF under the nuclear plant financing plans.

Deferred income on long-term contracts also include an advance paid to the EDF group in 2010 under the agreement with the Exeltium consortium. The clauses of the agreement signed by the two parties on 24 October 2014 (see note 3.6) do not provide for any additional payment or reimbursement in connection with this advance.

Financial assets and liabilities

➤ Note 36 Current and non-current financial assets

36.1 Breakdown between current and non-current financial assets

Current and non-current financial assets break down as follows:

(in millions of Euros)	31/12/2014			31/12/2013		
	Current	Non-current	Total	Current	Non-current	Total
Financial assets at fair value through profit or loss	4,194	–	4,194	3,030	–	3,030
Available-for-sale financial assets	13,474	15,953	29,427	13,008	14,926	27,934
Positive fair value of hedging derivatives	1,519	3,349	4,868	634	1,045	1,679
Loans and financial receivables	1,565	14,183	15,748	1,175	13,640	14,815
CURRENT AND NON-CURRENT FINANCIAL ASSETS ⁽¹⁾	20,752	33,485	54,237	17,847	29,611	47,458

(1) Including impairment of €(373) million at 31 December 2014 (€(290) million at 31 December 2013).

36.2 Details of financial assets

36.2.1 Financial assets carried at fair value with changes in fair value included in income

(in millions of Euros)	31/12/2014	31/12/2013
Positive fair value of trading derivatives	4,194	3,023
Fair value of financial assets held for trading	–	7
FINANCIAL ASSETS CARRIED AT FAIR VALUE WITH CHANGES IN FAIR VALUE INCLUDED IN INCOME	4,194	3,030

Financial assets carried at fair value with changes in fair value included in income mainly concern EDF Trading.

36.2.2 Available-for-sale financial assets

(in millions of Euros)	31/12/2014			31/12/2013		
	Equities ⁽¹⁾	Debt securities	Total	Equities ⁽¹⁾	Debt securities	Total
EDF dedicated assets	8,301	7,064	15,365	8,170	5,941	14,111
Liquid assets	1,774	11,216	12,990	3,182	9,384	12,566
Other securities	987	85	1,072	1,024	233	1,257
AVAILABLE-FOR-SALE FINANCIAL ASSETS	11,062	18,365	29,427	12,376	15,558	27,934

(1) Equities or investment funds.

Changes in the fair value of available-for-sale financial assets were recorded in equity (EDF share) over the period as follows:

	2014		2013	
	Gross changes in fair value recorded in equity ⁽¹⁾	Gross changes in fair value transferred to income ⁽²⁾	Gross changes in fair value recorded in equity ⁽¹⁾	Gross changes in fair value transferred to income ⁽²⁾
<i>(in millions of Euros)</i>				
EDF dedicated assets	1,439	976	1,197	579
Liquid assets	223	68	30	31
Other securities	(83)	–	(227)	(266)
AVAILABLE-FOR-SALE FINANCIAL ASSETS ⁽³⁾	1,579	1,044	1,000	344

(1) + / (): increase / (decrease) in equity (EDF share).

(2) + / (): increase / (decrease) in net income (EDF share).

(3) Excluding associates and joint ventures.

Gross changes in fair value included in equity (EDF share) in 2014 and 2013 principally concern EDF.

No significant impairment was recorded in 2014.

36.2.2.1 Dedicated assets

Diversified bond investments and equities included in EDF's dedicated assets are recorded as "available-for-sale financial assets". The general management policy for dedicated assets is presented in note 47.

36.2.2.2 Liquid assets

Liquid assets are financial assets consisting of funds or interest rate instruments with initial maturity of over three months that are readily convertible into cash, and are managed according to a liquidity-oriented policy.

EDF's monetary investment funds, included in liquid assets, amount to €1,595 million at 31 December 2014 (€2,809 million at 31 December 2013).

36.2.2.3 Other securities

At 31 December 2014, other securities mainly include EDF's shares in Areva (€78 million).

36.3 Loans and financial receivables

Loans and financial receivables are recorded at amortised cost.

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Loans and financial receivables - amounts receivable from the NLF	8,617	7,958
Loans and financial receivables - CSPE	5,144	5,051
Loans and financial receivables - other	1,987	1,806
LOANS AND FINANCIAL RECEIVABLES	15,748	14,815

Loans and financial receivables include:

- amounts representing reimbursements receivable from the NLF and the British government for coverage of long-term nuclear obligations, totalling €8,617 million at 31 December 2014 (€7,958 million at 31 December 2013), discounted at the same rate as the provisions they finance;
- the receivable corresponding to the CSPE shortfall at 31 December 2012, in application of the agreement of 14 January 2013 with the authorities;
- EDF's loan to RTE, amounting to €670 million at 31 December 2014 (unchanged from 31 December 2013).

36.4 Change in financial assets other than derivatives

The variation in financial assets is as follows:

36.4.1 At 31 December 2014

(in millions of Euros)	31/12/2013	Net increases	Changes in fair value	Discount effect	Changes in scope	Translation adjustments	Other	31/12/2014
Available-for-sale financial assets	27,934	(151)	1,599	–	(1)	(2)	48	29,427
Loans and financial receivables	14,815	(270)	–	384	201	577	41	15,748

36.4.2 At 31 December 2013

(in millions of Euros)	31/12/2012	Net increases	Changes in fair value	Discount effect	Changes in scope	Translation adjustments	Other	31/12/2013
Available-for-sale financial assets	26,618	190	1,037	–	(4)	(43)	136	27,934
Held-to-maturity investments	–	1	–	–	–	–	(1)	–
Loans and financial receivables	13,962	(859)	–	404	316	(134)	1,126	14,815

Other changes in loans and financial receivables include €1,173 million reflecting the effect of EDF Energy's work updating estimates of its nuclear liabilities in 2013 (see note 29.2) on the receivable representing reimbursements due from the NLF and the British government.

➤ Note 37 Cash and cash equivalents

Cash and cash equivalents comprise cash in hand and at bank and investments in money market instruments. Cash and cash equivalents as stated in the cash flow statements include the following amounts recorded in the balance sheet:

(in millions of Euros)	31/12/2014	31/12/2013
Cash	3,037	2,593
Cash equivalents ⁽¹⁾	1,649	2,473
Financial current accounts	15	30
CASH AND CASH EQUIVALENTS	4,701	5,096

(1) Items stated at fair value amount to €1,635 million at 31 December 2014 (€2,458 million at 31 December 2013).

➤ Note 38 Current and non-current financial liabilities

38.1 Breakdown between current and non-current financial liabilities

Current and non-current financial liabilities break down as follows:

(in millions of Euros)	31/12/2014			31/12/2013		
	Non-current	Current	Total	Non-current	Current	Total
Loans and other financial liabilities	46,537	9,115	55,652	40,613	11,024	51,637
Negative fair value of derivatives held for trading	–	2,855	2,855	–	2,583	2,583
Negative fair value of hedging derivatives	737	2,214	2,951	800	1,040	1,840
FINANCIAL LIABILITIES	47,274	14,184	61,458	41,413	14,647	56,060

38.2 Loans and other financial liabilities

38.2.1 Changes in loans and other financial liabilities

(in millions of Euros)	Bonds	Loans from financial institutions	Other financial liabilities	Loans related to finance-leased assets	Accrued interest	Total
Balances at 31/12/2013	40,725	3,899	5,339	428	1,246	51,637
Increases	4,983	343	1,671	–	68	7,065
Decreases	(5,720)	(476)	(1,374)	(68)	(41)	(7,679)
Translation adjustments	762	113	108	–	1	984
Changes in scope of consolidation	–	(127)	323	117	(9)	304
Changes in fair value	2,845	–	472	3	–	3,320
Other changes	(11)	16	22	11	(17)	21
BALANCES AT 31/12/2014	43,584	3,768	6,561	491	1,248	55,652

Loans and other financial liabilities of the Group's main entities are as follows:

(in millions of Euros)	31/12/2014	31/12/2013
EDF and other affiliated subsidiaries ⁽¹⁾	43,358	37,732
EDF Energy ⁽²⁾	4,898	6,665
EDF Énergies Nouvelles	4,060	3,311
Edison ⁽³⁾	2,349	2,833
Other	987	1,096
LOANS AND OTHER FINANCIAL LIABILITIES	55,652	51,637

(1) ERDF, PEI, EDF International, C3 and EDF Investissements Groupe.

(2) Including holding companies.

(3) Edison excluding TdE.

At 31 December 2014, none of these entities was in default on any borrowing.

The Group's principal borrowings at 31 December 2014 are as follows:

Type of borrowing (in millions of currencies)	Entity	Issue ⁽¹⁾	Maturity	Issue amount	Currency	Rate
Euro MTN	EDF	01/2009	01/2015	2,000	EUR	5.13%
Euro MTN	EDF	10/2001	10/2016	1,100	EUR	5.50%
Euro MTN	EDF	02/2008	02/2018	1,500	EUR	5.00%
Bond	EDF	01/2009	01/2019	2,000	USD	6.50%
Bond	EDF	01/2010	01/2020	1,400	USD	4.60%
Euro MTN	EDF	05/2008	05/2020	1,200	EUR	5.38%
Euro MTN	EDF	01/2009	01/2021	2,000	EUR	6.25%
Euro MTN (Green Bond)	EDF	11/2013	04/2021	1,400	EUR	2.25%
Euro MTN	EDF	01/2012	01/2022	2,000	EUR	3.88%
Euro MTN	EDF	09/2012	03/2023	2,000	EUR	2.75%
Euro MTN	EDF	09/2009	09/2024	2,500	EUR	4.63%
Euro MTN	EDF	11/2010	11/2025	750	EUR	4.00%
Euro MTN	EDF	03/2012	03/2027	1,000	EUR	4.13%
Euro MTN	EDF	04/2010	04/2030	1,500	EUR	4.63%
Euro MTN	EDF	07/2001	07/2031	650	GBP	5.88%
Euro MTN	EDF	02/2003	02/2033	850	EUR	5.63%
Euro MTN	EDF	06/2009	06/2034	1,500	GBP	6.13%
Bond	EDF	01/2009	01/2039	1,750	USD	6.95%
Euro MTN	EDF	11/2010	11/2040	750	EUR	4.50%
Euro MTN	EDF	10/2011	10/2041	1,250	GBP	5.50%
Euro MTN	EDF	09/2010	09/2050	1,000	GBP	5.13%
Bond	EDF	01/2014	01/2017	1,000	USD	1.15%
Bond	EDF	01/2014	01/2019	1,250	USD	2.15%
Bond	EDF	01/2014	01/2044	1,000	USD	4.88%
Bond	EDF	01/2014	01/2114	1,350	GBP	6.00%

(1) Date funds were received.

On 13 January 2014 EDF issued several tranches of a senior bond in US dollars:

- US\$750 million with 3-year maturity at floating rate;
- US\$1,000 million with 3-year maturity and coupon of 1.15%;
- US\$1,250 million with 5-year maturity and coupon of 2.15%;
- US\$1,000 million with 30-year maturity and coupon of 4.875%;
- US\$700 million with 100-year maturity and coupon of 6%.

On 17 January 2014, EDF also issued a £1,350 million bond with 100-year maturity and coupon of 6%.

These issues enable the Group to prepare for redemption of bonds maturing in 2014, taking advantage of good market conditions to pursue its financing policy aim of extending the average maturity of debt and bringing it closer to the useful life of its long-term industrial assets.

38.2.2 Maturity of loans and other financial liabilities

At 31 December 2014:

	Bonds	Loans from financial institutions	Other financial liabilities	Loans related to finance-leased assets	Accrued interest	Total
<i>(in millions of Euros)</i>						
Less than one year	2,006	1,095	4,862	46	1,106	9,115
From one to five years	8,624	1,345	1,295	185	25	11,474
More than five years	32,954	1,328	404	260	117	35,063
LOANS AND OTHER FINANCIAL LIABILITIES AT 31/12/2014	43,584	3,768	6,561	491	1,248	55,652

At 31 December 2013:

	Bonds	Loans from financial institutions	Other financial liabilities	Loans related to finance-leased assets	Accrued interest	Total
<i>(in millions of Euros)</i>						
Less than one year	5,732	1,231	2,878	39	1,144	11,024
From one to five years	6,024	1,251	1,910	137	13	9,335
More than five years	28,969	1,417	551	252	89	31,278
LOANS AND OTHER FINANCIAL LIABILITIES AT 31/12/2013	40,725	3,899	5,339	428	1,246	51,637

38.2.3 Breakdown of loans and other financial liabilities by currency

	31/12/2014			31/12/2013		
	Initial debt structure	Impact of hedging instruments ⁽¹⁾	Debt structure after hedging	Initial debt structure	Impact of hedging instruments ⁽¹⁾	Debt structure after hedging
<i>(in millions of Euros)</i>						
Euro (EUR)	30,110	7,647	37,757	31,629	(472)	31,157
American dollar (USD)	12,948	(10,073)	2,875	10,192	(4,786)	5,406
Pound sterling (GBP)	11,095	1,939	13,034	7,945	5,116	13,061
Other	1,499	487	1,986	1,871	142	2,013
LOANS AND OTHER FINANCIAL LIABILITIES	55,652	–	55,652	51,637	–	51,637

(1) Hedges of liabilities and net assets of foreign subsidiaries

38.2.4 Breakdown of loans and other financial liabilities by type of interest rate

	31/12/2014			31/12/2013		
	Initial debt structure	Impact of derivatives	Final debt structure	Initial debt structure	Impact of derivatives	Final debt structure
<i>(in millions of Euros)</i>						
Fixed rates	48,795	(15,377)	33,418	46,966	(7,549)	39,417
Floating rates	6,857	15,377	22,234	4,671	7,549	12,220
LOANS AND OTHER FINANCIAL LIABILITIES	55,652	–	55,652	51,637	–	51,637

The breakdown of loans and financial liabilities by interest rate includes the impact of all derivatives classified as hedges in accordance with IAS 39.

38.2.5 Credit lines

At 31 December 2014, the Group has unused credit lines with various banks totalling €10,756 million (€10,353 million at 31 December 2013).

	Total	31/12/2014			31/12/2013
		Maturity			Total
		< 1 year	1-5 years	> 5 years	
(in millions of Euros)					
CONFIRMED CREDIT LINES	10,756	498	10,258	-	10,353

38.2.6 Early repayment clauses

Project financing loans to EDF Énergies Nouvelles from non-Group parties generally include early repayment clauses, mainly applicable when the borrower fails to maintain a minimum Debt Service Coverage Ratio (DSCR). In general, early repayment clauses are activated when this ratio falls below 1.

No early repayment took place in 2014 as a result of any Group entity's failure to comply with contractual clauses concerning loans.

38.3 Net indebtedness

Net indebtedness is not defined in the accounting standards and is not directly presented in the consolidated balance sheet. It comprises total loans and financial liabilities, less cash and cash equivalents and liquid assets. Liquid assets are financial assets consisting of funds or interest rate instruments with initial maturity of over three months that are readily convertible into cash and are managed according to a liquidity-oriented policy.

Net indebtedness includes the loan by the Group to RTE, a consolidated entity which has been accounted for under the equity method since 31 December 2010.

(in millions of Euros)	Notes	31/12/2014	31/12/2013
Loans and other financial liabilities	38.2.1	55,652	51,637
Derivatives used to hedge liabilities		(3,083)	128
Cash and cash equivalents	37	(4,701)	(5,096)
Available-for-sale financial assets - Liquid assets	36.2.2	(12,990)	(12,566)
Loan to RTE	36.3	(670)	(670)
NET INDEBTEDNESS		34,208	33,433

➤ Note 39 Other information on financial assets and liabilities

39.1 Fair value of financial instruments

The following tables show the breakdown of financial assets and liabilities in the balance sheet, by level.

39.1.1 At 31 December 2014

(in millions of Euros)	Balance sheet value	Fair value	Level 1 Unadjusted quoted prices	Level 2 Observable data	Level 3 Non-observable data
Financial assets carried at fair value with changes in fair value included in income ⁽¹⁾	4,194	4,194	352	3,754	88
Available-for-sale financial assets	29,427	29,427	1,147	27,265	1,015
Positive fair value of hedging derivatives	4,868	4,868	21	4,847	-
Cash equivalents carried at fair value	1,635	1,635	105	1,530	-
Financial assets carried at fair value in the balance sheet	40,124	40,124	1,625	37,396	1,103
Loans and financial receivable – Assets receivable from the NLF	8,617	8,617	-	8,617	-
Loans and financial receivable – CSPE	5,144	5,144	-	5,144	-
Other loans and financial receivable	1,987	2,071	-	2,071	-
Financial assets recorded at amortised cost	15,748	15,832	-	15,832	-
Negative fair value of hedging derivatives	2,951	2,951	20	2,929	2
Negative fair value of trading derivatives	2,855	2,855	272	2,518	65
Financial liabilities carried at fair value in the balance sheet	5,806	5,806	292	5,447	67
Loans and other financial liabilities	55,652	63,460	-	63,460	-
Financial liabilities recorded at amortised cost	55,652	63,460	-	63,460	-

(1) Including €4,194 million for the positive fair value of trading derivatives.

Level 3 available-for-sale financial assets are principally non-consolidated investments carried at historical value.

Cash equivalents, which principally take the form of negotiable debt instruments and short-term investments, are generally valued using yield curves, and therefore observable market data.

39.1.2 At 31 December 2013

(in millions of Euros)	Balance sheet value	Fair value	Level 1 Unadjusted quoted prices	Level 2 Observable data	Level 3 Non-observable data
Financial assets carried at fair value with changes in fair value included in income ⁽¹⁾	3,030	3,030	26	2,832	172
Available-for-sale financial assets	27,934	27,934	1,680	25,289	965
Positive fair value of hedging derivatives	1,679	1,679	-	1,679	-
Cash equivalents carried at fair value	2,458	2,458	-	2,458	-
Financial assets carried at fair value in the balance sheet	35,101	35,101	1,706	32,258	1,137
Loans and financial receivable – Assets receivable from the NLF	7,958	7,958	-	7,958	-
Loans and financial receivable – CSPE	5,051	5,051	-	5,051	-
Other loans and financial receivable	1,806	1,918	-	1,918	-
Financial assets recorded at amortised cost	14,815	14,927	-	14,927	-
Negative fair value of hedging derivatives	1,840	1,840	6	1,834	-
Negative fair value of trading derivatives	2,583	2,583	21	2,402	160
Financial liabilities carried at fair value in the balance sheet	4,423	4,423	27	4,236	160
Loans and other financial liabilities	51,637	56,469	-	56,469	-
Financial liabilities recorded at amortised cost	51,637	56,469	-	56,469	-

(1) Including €3,023 million for the positive fair value of trading derivatives.

39.2 Offsetting of financial assets and liabilities

39.2.1 At 31 December 2014

(in millions of Euros)	As reported in balance sheet	Balance without offsetting	Balance with offsetting under IAS 32			Amounts covered by a general offsetting agreement but not offset under IAS 32		
			Gross amount recognised (before offsetting)	Gross amount offset under IAS 32	Net amount recognised after offsetting under IAS 32	Financial instruments	Fair value of financial collateral	Net amount
Fair value of derivatives – assets	9,062	594	12,764	(4,296)	8,468	(1,522)	(1,307)	5,639
Fair value of derivatives – liabilities	(5,806)	(721)	(9,381)	4,296	(5,085)	1,522	238	(3,325)

39.2.2 At 31 December 2013

(in millions of Euros)	As reported in balance sheet	Balance without offsetting	Balance with offsetting under IAS 32			Amounts covered by a general offsetting agreement but not offset under IAS 32		
			Gross amount recognised (before offsetting)	Gross amount offset under IAS 32	Net amount recognised after offsetting under IAS 32	Financial instruments	Fair value of financial collateral	Net amount
Fair value of derivatives – assets	4,702	1,121	6,468	(2,887)	3,581	(998)	(332)	2,251
Fair value of derivatives – liabilities	(4,423)	(1,213)	(6,097)	2,887	(3,210)	998	36	(2,176)

➤ Note 40 Management of market and counterparty risks

As an operator in the energy sector worldwide, the EDF group is exposed to financial market risks, energy market risks and counterparty risks. All these risks could generate volatility in the financial statements.

■ Financial market risks

The main financial market risks to which the Group is exposed are the liquidity risk, the foreign exchange risk, the interest rate risk and the equity risk.

The objective of the Group's liquidity risk management is to seek resources at optimum cost and ensure their constant accessibility.

The foreign exchange risk relates to the diversification of the Group's businesses and geographical locations, and results from exposure to the risk of exchange rate fluctuations. These fluctuations can affect the Group's translation differences, balance sheet items, financial expenses, equity and net income.

The interest rate risk results from exposure to the risk of fluctuations in interest rates that can affect the value of assets invested by the Group, the value of the liabilities covered by provision, or its financial expenses.

The Group is exposed to equity risks, particularly through its dedicated asset portfolio held for secure financing of long-term nuclear commitments, through external pension funds, and to a lesser extent through its cash assets and directly-held investments.

A more detailed description of these risks can be found in chapter 9 ("Operating and financial review"), section 9.5 ("Management and control of market risks") of the Reference Document.

■ Energy market risks

With the opening of the end customer market, development of the wholesale markets and international business expansion, the EDF group is exposed to price variations on the energy market which can have a significant impact on its financial statements.

A more detailed description of these risks can be found in chapter 9 ("Operating and financial review"), section 9.5.2 ("Management and control of energy market risks") of the Reference Document.

■ Counterparty risks

Counterparty risk is defined as the total loss that the EDF group would sustain on its business and market transactions if a counterparty defaulted and failed to perform its contractual obligations.

A more detailed description of these risks can be found in chapter 9 ("Operating and financial review"), section 9.5.1.7 ("Management of counterparty/credit risks") of the Reference Document.

Regarding the customer risk, which is another component of the counterparty risk, a statement of receivables not yet due and overdue is shown in note 25.

The sensitivity analyses required by IFRS 7 are presented in chapter 9 ("Operating and financial review"), section 9.5.1 ("Management and control of financial risks") of the Reference Document:

- Foreign exchange risks: section 9.5.1.3;
- Interest rate risks on financing issued and financial assets: section 9.5.1.4;
- Equity risk on financial assets: sections 9.5.1.5 and 9.5.1.6.

The principal information on financial assets and liabilities is described by theme in the following notes and sections:

- Liquidity risks:
 - maturity of loans and other financial liabilities: note 38.2.2 to the consolidated financial statements,
 - credit lines: note 38.2.5 to the consolidated financial statements,
 - early repayment clauses for borrowings: note 38.2.6 to the consolidated financial statements,
 - off-balance sheet commitments: note 44 to the consolidated financial statements;

■ Foreign exchange risks:

- breakdown of loans by currency and type of interest rate: notes 38.2.3 and 38.2.4 to the consolidated financial statements;

■ Equity risks (chapter 9 ("Operating and financial review"), sections 9.5.1.5 ("Management of equity risks") and 9.5.1.6 ("Management of financial risk on EDF's dedicated asset portfolio") of the Reference Document):

- coverage of nuclear obligations: note 47 and 29.1.5 to the consolidated financial statements,
- coverage of social obligations: note 31.2.5 and 31.3.4 to the consolidated financial statements,
- long-term cash management,
- direct investments;

■ Interest rate risks:

- discount rate for nuclear provisions: calculation method and sensitivity: note 29.1.5.1 to the consolidated financial statements,
- discount rate used for employee benefits: notes 31.2.7 and 31.3.6 to the consolidated financial statements,
- breakdown of loans by currency and interest rate: notes 38.2.3 and 38.2.4 to the consolidated financial statements;

■ Balance sheet treatment of financial and market risks:

- derivatives and hedge accounting: note 41 to the consolidated financial statements, and the statement of changes in equity,
- derivatives not classified as hedges: note 42 to the consolidated financial statements.

➤ Note 41 Derivatives and hedge accounting

Hedge accounting is applied in compliance with IAS 39, and concerns interest rate derivatives used to hedge long-term indebtedness, currency derivatives used to hedge net foreign investments and debts in foreign currencies, and currency and commodity derivatives used to hedge future cash flows.

The fair value of hedging derivatives reported in the balance sheet breaks down as follows:

(in millions of Euros)	Notes	31/12/2014	31/12/2013
Positive fair value of hedging derivatives	36.1	4,868	1,679
Negative fair value of hedging derivatives	38.1	(2,951)	(1,840)
FAIR VALUE OF HEDGING DERIVATIVES		1,917	(161)
Interest rate hedging derivatives	41.4.1	2,339	395
Exchange rate hedging derivatives	41.4.2	959	(472)
Commodity-related cash flow hedges	41.4.3	(1,374)	(124)
Commodity-related fair value hedges	41.5	(7)	40

41.1 Fair value hedges

The EDF group hedges the exposure to changes in the fair value of fixed-rate debts. The derivatives used for this hedging are fixed/floating interest rate swaps and cross currency swaps, with changes in fair value recorded

in the income statement. Fair value hedges also include currency hedging instruments on certain firm purchase commitments.

In 2014, the ineffective portion of fair value hedges represents a loss of €(8) million (loss of €(3) million in 2013), included in the financial result.

41.2 Cash flow hedges

The EDF group uses cash flow hedging principally for the following purposes:

- to hedge its floating-rate debt, using interest-rate swaps (floating/fixed rate);
- to hedge the exchange rate risk related to debts contracted in foreign currencies, using cross currency swaps;
- to hedge future cash flows related to expected sales and purchases of electricity, gas, and coal, using futures, forwards and swaps.

The EDF group also hedges the currency risk associated with fuel and commodity purchases.

In 2014, the ineffective portion of cash flow hedges represents a loss of €(2) million (gain of €1 million in 2013).

41.4 Impact of hedging derivatives on equity

Changes during the period in the fair value of hedging instruments included in equity (EDF share) are detailed below:

	2014			2013		
	Gross changes in fair value recorded in equity ⁽¹⁾	Gross changes in fair value transferred to income – Recycling ⁽²⁾	Gross changes in fair value transferred to income – Ineffectiveness	Gross changes in fair value recorded in equity ⁽¹⁾	Gross changes in fair value transferred to income – Recycling ⁽²⁾	Gross changes in fair value transferred to income – Ineffectiveness
(in millions of Euros)						
Interest rate hedging	(36)	–	(2)	84	–	–
Exchange rate hedging	1,004	628	40	(514)	(460)	1
Net foreign investment hedging	(1,076)	–	–	551	(5)	5
Commodity hedging	(1,946)	(698)	(29)	(468)	(692)	–
HEDGING DERIVATIVES⁽³⁾	(2,054)	(70)	9	(347)	(1,157)	6

(1) + / (): increase / (decrease) in equity (EDF share).

(2) + / (): increase / (decrease) in net income (EDF share).

(3) Excluding associates and joint ventures.

41.4.1 Interest rate hedging derivatives

Interest rate hedging derivatives break down as follows:

	Notional at 31/12/2014			Total	Notional at 31/12/2013	Fair value	
	< 1 year	1-5 years	> 5 years		Total	31/12/2014	31/12/2013
(in millions of Euros)							
Purchases of CAP contracts	–	–	–	–	20	–	–
Purchases of options	–	–	–	–	25	–	–
Interest rate transactions	–	–	–	–	45	–	–
Fixed rate payer/floating rate receiver	158	1,166	486	1,810	2,545	(172)	(162)
Floating rate payer/fixed rate receiver	225	696	15,787	16,708	9,727	2,609	565
Floating rate/floating rate	657	1,267	837	2,761	2,222	7	(2)
Fixed rate/fixed rate	54	6,146	2,143	8,343	7,914	(105)	(6)
Interest rate swaps	1,094	9,275	19,253	29,622	22,408	2,339	395
INTEREST RATE HEDGING DERIVATIVES	1,094	9,275	19,253	29,622	22,453	2,339	395

The fair value of interest rate/exchange rate cross-currency swaps comprises the interest rate effect only.

The notional value of cross-currency swaps is included both in this note and the note on Exchange rate hedging derivatives (41.4.2).

41.4.2 Exchange rate hedging derivatives

Exchange rate hedging derivatives break down as follows:

At 31 December 2014:

(in millions of Euros)	Notional amount to be received at 31/12/2014				Notional amount to be given at 31/12/2014				Fair value
	< 1 year	1-5 years	> 5 years	Total	< 1 year	1-5 years	> 5 years	Total	31/12/2014
Forward exchange transactions	2,289	340	–	2,629	2,252	333	–	2,585	48
Swaps	9,600	9,597	7,824	27,021	9,160	9,380	7,539	26,079	911
EXCHANGE RATE HEDGING DERIVATIVES	11,889	9,937	7,824	29,650	11,412	9,713	7,539	28,664	959

At 31 December 2013:

(in millions of Euros)	Notional amount to be received at 31/12/2013				Notional amount to be given at 31/12/2013				Fair value
	< 1 year	1-5 years	> 5 years	Total	< 1 year	1-5 years	> 5 years	Total	31/12/2013
Forward exchange transactions	2,966	769	–	3,735	2,993	784	–	3,777	(45)
Swaps	13,687	5,441	5,604	24,732	13,961	5,352	5,884	25,197	(427)
EXCHANGE RATE HEDGING DERIVATIVES	16,653	6,210	5,604	28,467	16,954	6,136	5,884	28,974	(472)

The notional value of cross-currency swaps shown in this note is also included in the note on interest rate hedging derivatives (note 41.4.1).

41.4.3 Commodity-related cash flow hedges

For commodities, changes in fair value are mainly explained by:

(in millions of Euros)	31/12/2014	31/12/2013
Electricity hedging contracts	42	(178)
Gas hedging contracts	(290)	(27)
Coal hedging contracts	(462)	(395)
Oil product hedging contracts	(1,243)	93
CO ₂ emission rights hedging contracts	7	39
CHANGES IN FAIR VALUE BEFORE TAXES	(1,946)	(468)

The main components of the amount transferred to income in respect of commodity hedges terminated during the year are:

(in millions of Euros)	31/12/2014	31/12/2013
Electricity hedging contracts	(274)	(177)
Gas hedging contracts	42	(79)
Coal hedging contracts	(423)	(420)
Oil product hedging contracts	33	24
CO ₂ emission rights hedging contracts	(76)	(40)
CHANGES IN FAIR VALUE BEFORE TAXES	(698)	(692)

Details of commodity-related cash flow hedges are as follows:

		31/12/2014				31/12/2013		
		Net notional				Fair value	Net notional	Fair value
(in millions of Euros)	Units of measure	< 1 year	1-5 years	> 5 years	Total			
Forwards/futures		(1)	(18)	–	(19)	193	(11)	(16)
Electricity	Terrawatt hours	(1)	(18)	–	(19)	193	(11)	(16)
Swaps		(271)	(30)	–	(301)	42	(361)	6
Forwards/futures		1,299	1,082	–	2,381	(402)	2,253	4
Gas	Millions of therms	1,028	1,052	–	2,080	(360)	1,892	10
Swaps		33,514	15,637	–	49,151	(1,153)	39,843	123
Oil products	Thousands of barrels	33,514	15,637	–	49,151	(1,153)	39,843	123
Swaps		5	1	–	6	(104)	11	(179)
Coal	Millions of tonnes	5	1	–	6	(104)	11	(179)
Swaps		21,219	4,782	–	26,001	40	–	–
Forwards/futures		3,628	3,974	–	7,602	10	38,572	(62)
CO ₂	Thousands of tonnes	24,847	8,756	–	33,603	50	38,572	(62)
COMMODITY-RELATED CASH FLOW HEDGES						(1,374)		(124)

41.5 Commodity-related fair value hedges

Details of commodity-related fair value hedges are as follows:

(in millions of Euros)	Units of measure	31/12/2014		31/12/2013	
		Net notional	Fair value	Net notional	Fair value
Coal and freight	Millions of tonnes	27	(7)	(42)	40
COMMODITY-RELATED FAIR VALUE HEDGES			(7)		40

➤ Note 42 Non-hedging derivatives

Details of the fair value of trading derivatives reported in the balance sheet are as follows:

(in millions of Euros)	Notes	31/12/2014	31/12/2013
Positive fair value of trading derivatives	36.2.1	4,194	3,023
Negative fair value of trading derivatives	38.1	(2,855)	(2,583)
FAIR VALUE OF TRADING DERIVATIVES		1,339	440
Interest rate derivatives held for trading	42.1	(42)	(46)
Currency derivatives held for trading	42.2	(12)	18
Non-hedging commodity derivatives	42.3	1,393	468

42.1 Interest rate derivatives held for trading

Interest rate derivatives held for trading break down as follows:

(in millions of Euros)	Notional at 31/12/2014			Total	Notional at 31/12/2013		Fair value	
	< 1 year	1-5 years	> 5 years		Total	31/12/2014	31/12/2013	
Purchases of options	–	–	515	515	–	21	–	–
Interest rate operations	–	–	515	515	–	21	–	–
Fixed rate payer/floating rate receiver	10,185	980	515	11,680	3,478	(145)	(160)	
Floating rate payer/fixed rate receiver	4,800	828	241	5,869	1,555	84	126	
Floating rate/floating rate	225	–	–	225	725	(2)	(12)	
Interest rate swaps	15,210	1,808	756	17,774	5,758	(63)	(46)	
INTEREST RATE DERIVATIVES HELD FOR TRADING	15,210	1,808	1,271	18,289	5,758	(42)	(46)	

42.2 Currency derivatives held for trading

Currency derivatives held for trading break down as follows:

At 31 December 2014:

(in millions of Euros)	Notional amount to be received at 31/12/2014				Notional amount to be given at 31/12/2014				Fair value 31/12/2014
	< 1 year	1-5 years	> 5 years	Total	< 1 year	1-5 years	> 5 years	Total	
Forward transactions	1,050	318	19	1,387	1,048	320	22	1,390	22
Swaps	9,845	320	–	10,165	9,868	323	–	10,191	(34)
CURRENCY DERIVATIVES HELD FOR TRADING	10,895	638	19	11,552	10,916	643	22	11,581	(12)

At 31 December 2013:

(in millions of Euros)	Notional amount to be received at 31/12/2013				Notional amount to be given at 31/12/2013				Fair value	
	< 1 year	1-5 years	> 5 years	Total	< 1 year	1-5 years	> 5 years	Total	31/12/2013	
Forward transactions	2,243	308	22	2,573	2,264	312	25	2,601	(25)	
Swaps	7,956	184	–	8,140	7,913	186	–	8,099	43	
CURRENCY DERIVATIVES HELD FOR TRADING	10,199	492	22	10,713	10,177	498	25	10,700	18	

42.3 Non-hedging commodity derivatives

Details of commodity derivatives not classified as hedges are as follows:

(in millions of Euros)	Unit of measure	31/12/2014		31/12/2013	
		Net notional	Fair value	Net notional	Fair value
Swaps		(26)	(29)	(95)	430
Options		93	11	91	(24)
Forwards/futures		(65)	173	10	332
Electricity	Terrawatt hours	2	155	6	738
Swaps		2,722	248	2,156	(90)
Options		6,359	17	22,204	47
Forwards/futures		(2,051)	487	(1,033)	(527)
Gas	Millions of therms	7,030	752	23,327	(570)
Swaps		260	(79)	2,927	11
Options		1,039	67	218	1
Forwards/futures		10,879	16	(258)	–
Oil products	Thousands of barrels	12,178	4	2,887	12
Swaps		(15)	394	(27)	113
Options		(21)	(1)	–	–
Forwards/futures		87	(41)	101	(8)
Freight		(27)	108	42	87
Coal and freight	Millions of tonnes	24	460	116	192
Swaps		(156)	11	(156)	23
Options		–	–	168	–
Forwards/futures		10,663	(4)	(9,288)	69
CO₂	Thousands of tonnes	10,507	7	(9,276)	92
Forwards/futures			11		–
Other commodities			11		–
Embedded commodity derivatives			4		4
NON-HEDGING COMMODITY DERIVATIVES			1,393		468

These mainly include contracts included in EDF Trading's portfolio.

Cash flows and other information

➤ Note 43 Cash flows

43.1 Change in working capital

<i>(in millions of Euros)</i>	2014	2013
Change in inventories	(111)	(678)
Change in the CSPE receivable	(699)	(360)
Change in trade receivables	(504)	(559)
Change in trade payables	147	366
Change in other receivables and payables (excluding CSPE)	126	(480)
CHANGE IN WORKING CAPITAL	(1,041)	(1,711)

43.2 Investments in intangible and tangible assets

<i>(in millions of Euros)</i>	2014	2013
Acquisitions of intangible assets	(1,006)	(946)
Acquisitions of tangible assets	(13,067)	(12,659)
Change in payables to suppliers of fixed assets	352	563
INVESTMENTS IN INTANGIBLE AND TANGIBLE ASSETS	(13,721)	(13,042)

➤ Note 44 Off-balance sheet commitments

This note presents off-balance sheet commitments given and received by the Group at 31 December 2014. The amounts of commitments correspond to non-discounted contractual values.

44.1 Commitments given

The table below shows off-balance sheet commitments given by the Group that have been valued at 31 December 2014. Other commitments are described separately in the detailed notes.

<i>(in millions of Euros)</i>	Notes	31/12/2014	31/12/2013
Operating commitments given	44.1.1	40,933	40,136
Investment commitments given	44.1.2	14,437	14,471
Financing commitments given	44.1.3	5,425	5,596
TOTAL COMMITMENTS GIVEN		60,795	60,203

In almost all cases, these are reciprocal commitments, and the third parties concerned are under a contractual obligation to supply the Group with assets or services related to operating, investment and financing activities.

44.1.1 Operating commitments given

Operating commitments given by the Group at 31 December 2014 are as follows:

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Fuel and Energy purchase commitments ⁽¹⁾	29,147	28,978
Operating contract performance commitments given	8,207	7,482
Operating lease commitments as lessee	3,579	3,676
TOTAL OPERATING COMMITMENTS GIVEN	40,933	40,136

(1) Excluding gas purchases and related services

44.1.1.1 Fuel and energy purchase commitments

In the course of its ordinary generation and supply activities, the Group has entered into long-term contracts for purchases of electricity, gas, other energies and commodities and nuclear fuels, for periods of up to 20 years.

The Group has also entered into long-term purchase contracts with a certain number of electricity producers, by contributing to the financing of power plants.

At 31 December 2014, fuel and energy purchase commitments mature as follows:

<i>(in millions of Euros)</i>	Total	31/12/2014				31/12/2013
		Maturity				Total
		< 1 year	1-5 years	5-10 years	> 10 years	
Electricity purchases and related services ⁽¹⁾	8,672	1,920	3,090	1,374	2,288	8,963
Other energy and commodity purchases ⁽²⁾	1,362	679	513	170	–	1,188
Nuclear fuel purchases	19,113	1,937	7,558	5,870	3,748	18,827
FUEL AND ENERGY PURCHASE COMMITMENTS	29,147	4,536	11,161	7,414	6,036	28,978

(1) Including commitments given by controlled entities to joint ventures, amounting to €697 million at 31 December 2014 (€723 million at 31 December 2013).

(2) Excluding gas purchases and related services – see note 44.1.1.1.4.

The changes primarily relate to EDF and result from an increase in commitments to purchase nuclear fuel, partially offset by the decrease in electricity purchase contracts.

44.1.1.1.1 Electricity purchases and related services

Electricity purchase commitments mainly concern EDF, ERDF and EDF Energy. In the case of EDF they are borne by the Island Energy Systems (IES), which have made commitments to purchase the electricity generated using bagasse and coal.

In addition to the obligations reported above and under Article 10 of the Law of 10 February 2000, in mainland France EDF is obliged, at the producer's request and subject to compliance with certain technical features, to purchase the power produced by co-generation plants and renewable energy generation units (wind turbines and small hydro-electric plants, photovoltaic power, etc). The additional costs generated by this obligation are offset,

after validation by the CRE, by the CSPE. These purchase obligations total 35TWh for 2014 (34TWh for 2013), including 5TWh for co-generation (7TWh for 2013), 16TWh for wind power (15TWh for 2013), 6TWh for photovoltaic power (4TWh for 2013) and 3TWh for hydropower (3TWh for 2013).

44.1.1.1.2 Other energy and commodity purchases

Purchase commitments for other energies and commodities mainly concern coal and oil used to operate the thermal plants, and purchases of biomass fuel used by Dalkia in the course of its business.

44.1.1.1.3 Nuclear fuel purchases

Commitments for purchases of nuclear fuel arise from supply contracts for the nuclear plants intended to cover the EDF group's needs for uranium and fluorination, enrichment and fuel assembly production services.

44.1.1.1.4 Gas purchases and related services

Gas purchase commitments are principally undertaken by Edison and EDF. The volumes concerned for both entities at 31 December 2014 are as follows:

	Total	31/12/2014			31/12/2013
		Maturity			Total
		< 1 year	1-5 years	> 5 years	
(in billions of m³)					
Edison	191	11	53	127	202
EDF	58	2	5	51	57

Edison has entered into agreements to import natural gas from Russia, Libya, Algeria and Qatar, for a total maximum volume of 14.4 billion m³ per year. These contracts contain "take-or-pay" clauses committing the buyer to pay for a minimum volume of gas every year, whether or not it actually takes delivery of that volume. At 31 December 2014, off-balance sheet commitments under Edison's take-or-pay clauses amount to €116 million, corresponding to the value of the volumes of gas not withdrawn at that date and for which delivery is deferred to a subsequent period.

Under the contract with Terminale GNL Adriatico, a gas liquefaction unit in operation since October 2009 in which Edison has a 7.3% holding, Edison also benefits from approximately 80% of the terminal's regasification capacities until 2034, for an annual premium of approximately €100 million.

Gas purchase commitments have also been given by EDF in connection with its expanding gas supply business.

EDF and Gazprom signed an agreement in 2013 defining the essential conditions of a gas supply contract.

Gas purchase commitments are also borne by subsidiaries, through commitments generally covered by electricity sale agreements which include "pass-through" clauses allowing almost all fluctuations in supply source costs to be passed on to the customer.

44.1.1.2 Operating contract performance commitments given

At 31 December 2014, these commitments mature as follows:

	Total	31/12/2014			31/12/2013
		Maturity			Total
		< 1 year	1-5 years	> 5 years	
(in millions of Euros)					
Operating guarantees given	3,751	1,808	511	1,432	3,122
Operating purchase commitments ⁽¹⁾	4,294	2,428	1,543	323	4,210
Other operating commitments	162	72	43	47	150
OPERATING CONTRACT PERFORMANCE COMMITMENTS GIVEN ⁽²⁾	8,207	4,308	2,097	1,802	7,482

(1) Excluding fuel and energy.

(2) Including commitments given by controlled entities to joint ventures, amounting to €128 million at 31 December 2014 (€172 million at 31 December 2013).

44.1.1.2.1 Operating guarantees given

Operating guarantees given are as follows:

	31/12/2014	31/12/2013
(in millions of Euros)		
EDF	1,382	871
Edison	1,179	1,290
EDF Énergies Nouvelles	356	551
Other entities	834	410
TOTAL	3,751	3,122

44.1.1.2 Operating purchase commitments

Operating purchase commitments are as follows:

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
EDF	2,418	2,539
EDF Energy	738	668
ERDF	527	414
Other entities	611	589
TOTAL	4,294	4,210

44.1.1.3 Operating lease commitments as lessee

At 31 December 2014, operating lease commitments as lessee break down as follows:

<i>(in millions of Euros)</i>	Total	31/12/2014			31/12/2013
		Maturity			Total
		< 1 year	1-5 years	> 5 years	
OPERATING LEASE COMMITMENTS AS LESSEE	3,579	610	1,570	1,399	3,676

The Group is bound as lessee by irrevocable operating lease contracts, principally for premises, equipment and vehicles used in the course of its business and maritime freight contracts for trading activities. The corresponding rents are subject to renegotiation at intervals defined in the contracts. Operating leases mainly concern EDF, EDF Énergies Nouvelles, ERDF and EDF Trading.

44.1.2 Investment commitments given

At 31 December 2014, details of investment commitments are as follows:

<i>(in millions of Euros)</i>	Total	31/12/2014			31/12/2013
		Maturity			Total
		< 1 year	1-5 years	> 5 years	
Commitments related to acquisition of tangible and intangible assets	13,628	6,419	6,700	509	13,269
Commitments related to acquisition of financial assets	248	144	76	28	1,004
Other commitments related to investments	561	95	466	–	198
TOTAL INVESTMENT COMMITMENTS GIVEN ⁽¹⁾	14,437	6,658	7,242	537	14,471

⁽¹⁾ Including commitments given by controlled entities to joint ventures, amounting to €317 million at 31 December 2014 (€4 million at 31 December 2014).

44.1.2.1 Commitments related to acquisition of tangible and intangible fixed assets

At 31 December 2014, commitments related to acquisition of tangible and intangible fixed assets are as follows:

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
EDF	9,391	8,856
EDF Énergies Nouvelles	1,506	1,361
ERDF	1,163	1,129
EDF Energy	642	454
PEI ⁽¹⁾	78	400
Dunkerque LNG ⁽²⁾	261	352
Other entities	587	717
TOTAL	13,628	13,269

⁽¹⁾ These commitments mainly concern construction of thermal power plants.

⁽²⁾ These commitments mainly concern construction of the Dunkirk methane terminal.

The higher level of EDF's commitments related to acquisition of tangible and intangible fixed assets is largely explained by the signature of contracts for the supply of "last resort" diesel generators for the nuclear power plants.

At EDF Énergies Nouvelles, the rise essentially concerns orders for turbines, particularly in the United States.

44.1.2.2 Commitments related to acquisition of financial assets

The Group no longer has any significant commitment related to acquisition of financial assets at 31 December 2014.

Following the sale of its investment in South Stream to Gazprom on 29 December 2014, EDF International's commitment existing at 31 December 2013 to make capital contributions or shareholder advances to the project company has been cancelled.

The main share purchase commitments that cannot be valued concern EDF Luminus.

The shareholder agreement signed on 16 April 2010 defines a liquidity commitment for the shares held by EDF Luminus' minority shareholders which could, subject to certain conditions and at EDF's initiative, result in disposal of their shares through an IPO, or result in the Group buying their shares at a price made up of variable components. The agreement states that this liquidity commitment can be applied in two liquidity windows, one in 2015 and one in 2018. The minority shareholders thus triggered the preparatory phase for implementation of this liquidity clause in 2014, in compliance with the procedure and timeline set out in the agreement. The

minority shareholders may now, during the first quarter of 2015, notify their application to sell their shares via an IPO. If they do not give such notification, they still retain the second liquidity window of 2018.

In view of these characteristics, it is not possible to value this commitment at 31 December 2014.

Regarding the investment in EDF Investissements Groupe, C3 (a fully-owned EDF subsidiary) and NBI (Natixis Belgique Investissement, a subsidiary of the Natixis group) amended the agreements for their investment in EDF Investissements Groupe (EIG) on 12 February 2014.

C3 now has a unilateral promise to sell EIG shares held by NBI at a fixed price, exercisable at any time until May 2021. Meanwhile, NBI has a put option to sell EDF all of its EIG shares for a fixed amount of cash, exercisable subject to certain conditions between February 2019 and May 2020.

Due to their features, in compliance with IAS 39, NBI's put option and C3's unilateral promise of sale are considered as derivatives and their net value is included in the positive or negative fair value of trading derivatives. At 31 December 2014, the fair value of these trading derivatives is not significant.

44.1.2.3 Other commitments related to investments

Other commitments given related to investments at 31 December 2014 mainly comprise guarantees given by EDF Norte Fluminense in connection with its 51% investment in CES, the company in charge of constructing and operating a hydroelectric dam on the Teles Pires river in Brazil (the SINOP project).

44.1.3 Financing commitments given

Financing commitments given by the Group at 31 December 2014 comprise the following:

	Total	31/12/2014			31/12/2013
		Maturity			Total
		< 1 year	1-5 years	> 5 years	
(in millions of Euros)					
Security interests in real property	4,316	90	1,272	2,954	4,512
Guarantees related to borrowings	860	359	332	169	743
Other financing commitments	249	219	25	5	341
TOTAL FINANCING COMMITMENTS GIVEN ⁽¹⁾	5,425	668	1,629	3,128	5,596

(1) Including commitments given by controlled entities to joint ventures, amounting to €900 million at 31 December 2014 (€642 million at 31 December 2013). These financing commitments to joint ventures mainly concern EDF Énergies Nouvelles.

Security interests and assets provided as guarantees mainly concern pledges or mortgages of tangible assets and shares representing investments in consolidated subsidiaries which own property, plant and equipment, for EDF Énergies Nouvelles. The decrease observed in these commitments at 31 December 2014 essentially results from sales of power plants in the United States.

44.2 Commitments received

The table below shows off-balance sheet commitments received by the Group that have been valued at 31 December 2014. Other commitments received are described separately in the detailed notes.

(in millions of Euros)	Notes	31/12/2014	31/12/2013
Operating commitments received ⁽¹⁾	44.2.1	2,964	2,765
Investment commitments received	44.2.2	102	24
Financing commitments received	44.2.3	124	130
TOTAL COMMITMENTS RECEIVED ⁽²⁾		3,190	2,919

(1) Excluding commitments related to supplies of energy and related services – see notes 44.2.1.4 and note 44.2.1.5.

(2) Excluding commitments related to credit lines, which are described in note 38.2.5.

44.2.1 Operating commitments received

Operating commitments received by the Group at 31 December 2014 comprise the following:

(in millions of Euros)	Total	31/12/2014			31/12/2013
		Maturity			Total
		< 1 year	1-5 years	> 5 years	
Operating lease commitments as lessor	1,241	242	481	518	1,358
Operating sale commitments	480	103	227	150	142
Operating guarantees received	1,164	914	154	96	1,195
Other operating commitments received	79	24	37	18	70
OPERATING COMMITMENTS RECEIVED	2,964	1,283	899	782	2,765

44.2.1.1 Operating lease commitments as lessor

The Group benefits from commitments as lessor in operating leases amounting to €1,241 million.

Most of these commitments derive from contracts classified as operating leases under IFRIC 4, "Determining whether an arrangement contains a lease". They mainly concern the Asian Independent Power Projects (IPPs) and real estate leases.

44.2.1.2 Operating sale commitments

Operating sale commitments received principally concern EDF Énergies Nouvelles and relate to operation and maintenance service agreements. The increase in these commitments mainly concerns activities in Canada and France.

44.2.1.3 Operating guarantees received

Operating guarantees received primarily concern EDF and relate to guarantees received from suppliers, notably in connection with deliveries under the ARENH scheme.

44.2.1.4 Electricity supply commitments

In the course of its business, the EDF group has signed long-term contracts to supply electricity as follows:

- long-term contracts with a number of European electricity operators, for a specific plant or for a defined group of plants in the French nuclear generation fleet, corresponding to installed power capacity of 3.5GW;
- in execution of France's NOME Law on organisation of the French electricity market, EDF has a commitment to sell some of the energy generated by its "traditional" nuclear power plants to other suppliers. This covers volumes of up to 100TWh each year until 31 December 2025;
- in the United Kingdom, EDF made a commitment in 2009 to supply 18TWh of electricity to Centrica at market price for a 5-year period starting in 2011. The residual commitment at 31 December 2014 concerns a volume of 4.9TWh;
- EDF is still committed to supplying residual volumes of around 345GWh by March 2015 corresponding to rights acquired at VPP or Virtual Power Plant capacity auctions, which ended in 2011.

44.2.1.5 Sale commitments for gas and related services

The Total group has subscribed a liquified natural gas (LNG) regasification capacity from Dunkerque LNG for a 20-year period, covering a cumulative volume of 31.5 billion cubic metres. Once commissioned in late 2015, the Dunkirk methane terminal will have annual regasification capacity of some 13 billion cubic metres.

44.2.2 Investment commitments received

	Total	31/12/2014			31/12/2013
		Maturity			Total
		< 1 year	1-5 years	> 5 years	
(in millions of Euros)					
INVESTMENT COMMITMENTS RECEIVED	102	26	76	–	24

Under the terms of the agreement signed with Exelon on 29 July 2013 and finalised on 1 April 2014 (see note 3.3), EDF has an option to sell its share in CENG to Exelon at fair value, which can be exercised between January 2016 and June 2022. Due to its features, this commitment has nil value at 31 December 2014. The Group had not received any significant commitment of this type at 31 December 2014.

44.2.3 Financing commitments received

	Total	31/12/2014			31/12/2013
		Maturity			Total
		< 1 year	1-5 years	> 5 years	
(in millions of Euros)					
FINANCING COMMITMENTS RECEIVED	124	82	41	1	130

No significant financing commitment received exists at 31 December 2014.

➤ Note 45 Contingent liabilities

45.1 Proceedings by the Baden-Württemberg region / EnBW

In February 2012 EDF International received a request for arbitration filed with the International Chamber of Commerce by the German company Neckarpri GmbH, the vehicle for the Baden-Württemberg region's acquisition of the EDF group's stake in EnBW, which was agreed on 6 December 2010 and completed on 17 February 2011.

Neckarpri claims that the price paid for the EDF group's investment in EnBW was excessive and therefore constitutes illegal State aid. On those grounds, it is claiming reimbursement of the allegedly excess portion of the price. This was initially estimated at €2 billion in the request for arbitration, but was re-estimated at €834 million in July 2012 in an independent report on the valuation of EnBW commissioned by Baden-Württemberg. As an alternative, Neckarpri is seeking cancellation of the sale of the EDF group's stake in EnBW.

The arbitration procedure is currently in process. Neckarpri's statement of claim and EDF's statement in defence have been exchanged, including EDF's counterclaim for damages for the prejudices caused by this legal action, which EDF considers unfounded and a misuse of law. The ruling is expected to be issued by the end of 2015, after a further exchange of conclusions between the parties.

45.2 General Network – rejection of the European Commission's appeal

On 15 December 2009 the European Union Court cancelled the European Commission's decision of 16 December 2003 that had classified the tax treatment of provisions created for the renewal of the General Network at the time of EDF's capital increase in 1997 as state aid, and ordered repayment to the French State of the updated value, i.e. €1,224 million (paid by EDF in February 2004). The State therefore reimbursed this amount to EDF on 30 December 2009, then in February 2010 the European Commission filed an appeal before the Court of Justice of the European Union.

On 5 June 2012, the Court of Justice of the European Union rejected the European Commission's appeal and upheld the European Union Court's decision of 15 December 2009.

The European Commission then decided in May 2013 to reopen the proceedings. As a result, a further adversarial exchange of positions has begun between the French state and the European Commission.

45.3 Tax inspections

EDF

Following inspections of previous years' accounts, the French tax authorities are challenging the tax-deductibility of the provision for annuities following work-related accidents and illness. As this is an issue that relates to the special gas and electricity (IEG) statutes, it also concerns RTE, ERDF and Électricité de Strasbourg. The Group is contesting the tax authorities' position on this question. In late 2014 the National Commission of direct taxes and sales taxes issued several opinions that were favourable to RTE and EDF. The subsidiaries RTE and Électricité de Strasbourg also received favourable rulings from Montreuil Administrative Court. If the outcome of this dispute is unfavourable, the financial risk for the Group (payment of back income taxes) could amount to some €250 million.

EDF was notified in late 2011 of a proposed rectification for 2008, particularly concerning deductibility of certain long-term liabilities. During 2013, EDF received a letter from the tax administration accepting some of its arguments, which reduces the risk to €600 million. The Company considers it is likely to win this dispute, and no provision has been recorded in connection with this matter.

The tax authorities have also proposed a reassessment concerning an interest-free advance made by EDF to its indirect subsidiary Lake Acquisitions Ltd. in connection with the acquisition of British Energy. EDF is contesting this reassessment.

EDF International

The tax inspection of EDF International for the years 2008 to 2011 led to proposed rectifications received in late 2011 and late 2013. Two main reassessments amounting to some €265 million concerned the amount of the loss on the contribution of CEG shares to the American subsidiary EDF Inc., which arose in late 2009 and was deducted from EDF International's income, and the valuation of the bond convertible into shares issued to refinance the acquisition of British Energy. In 2012 EDF International contested these reassessments, and considers it has good chances of winning the dispute. In late 2012 EDF International began amicable proceedings, involving France and the USA and based on the US-France tax treaty, concerning the valuation of CEG shares at the time of the contribution.

45.4 Labour litigation

EDF is party to a number of labour lawsuits with employees, primarily regarding implementation of legislation regarding working hours. EDF estimates that none of these lawsuits, individually, is likely to have a significant impact on its profits and financial position. However, because they relate to situations likely to concern a large number of EDF's employees in France, any increase in such litigations could present a risk with a potentially significant, negative impact on the Group's financial results.

45.5 ERDF – litigation with photovoltaic producers

During 2010, announcements of lower tariffs for electricity purchases caused an upsurge in the number of applications for connection received by ERDF, as the applicable tariff depended on the application filing date.

The "moratorium" Decree of 9 December 2010 suspended conclusion of all new contracts for a three-month period and stipulated that applications for which the technical and financial proposals had not been accepted by 2 December 2010 would have to be resubmitted after that three-month period.

When the moratorium ended, new arrangements for electricity purchases were introduced, mainly through a decision issued on 4 March 2011 that had the effect of significantly reducing the purchase price for photovoltaic electricity.

The Decree of December 2010 led to a large number of appeals, which were rejected by the Council of State on 16 November 2011. This generated an increase in new legal action, now against ERDF, from November 2011 and continuing during 2012, 2013 and 2014. The number of appeals rose by 132 in 2014, mostly in the first half of the year.

These appeals are mainly initiated by generators who found themselves forced to abandon their projects because the new electricity purchase tariffs made operating conditions less favourable. They consider ERDF responsible for this situation, alleging that as a public company it did not issue the technical and financial connection proposals in time for them to benefit from more advantageous electricity purchase terms.

The first instance and appeal court rulings given have varied in their grounds and verdicts: some have rejected all claims while others have awarded indemnities, which have generally been smaller than the amounts initially claimed.

ERDF considers that it cannot be held liable, and has lodged appeals against all the first instance rulings issued against it since 2011.

The Court of Cassation is expected to give its first decision in 2015.

➤ Note 46 Assets held for sale and related liabilities

(in millions of Euros)

	31/12/2014	31/12/2013
ASSETS HELD FOR SALE	18	1,154
LIABILITIES RELATED TO ASSETS HELD FOR SALE	-	-

At 31 December 2013, assets held for sale and the related liabilities consist of the Group's investment in Dalkia International, which was sold on 25 July 2014.

➤ Note 47 Dedicated assets

47.1 Regulations

The French Law of 28 June 2006 and the implementing regulations require assets (dedicated assets) to be set aside for secure financing of nuclear plant decommissioning expenses and long-term storage expenses for radioactive waste (spent fuel and fuel recovered from decommissioning). The regulations govern the way dedicated assets are built up, and the management and governance of the funds themselves. These assets are clearly identified and managed separately from the company's other financial assets and investments. They are also subject to specific monitoring and control by the Board of Directors and the administrative authorities.

The initial aim of these laws and regulations was to cover the full discounted cost of long-term nuclear obligations by 29 June 2011. The "NOME" Law enacted in 2010 introduced a 5-year extension, subject to certain conditions, of the deadline for constitution of dedicated assets.

The Decree of 29 December 2010 made RTE shares eligible for inclusion in dedicated assets subject to certain conditions and administrative authorisation. The Decree of 24 July 2013 revised the list of eligible assets by reference to the insurance code, and unlisted securities are also now eligible subject to certain conditions.

47.2 Portfolio contents and measurement

Given the applicable regulations, these dedicated assets are a highly specific category of assets.

Dedicated assets are structured and managed according to a strategic allocation defined by the Board of Directors and reported to the administrative authorities. The strategic allocation is designed to meet the overall objective of long-term coverage of obligations, and determines the structure and management of the portfolio as a whole. It takes into account regulatory constraints concerning the nature and liquidity of the dedicated assets, the financial outlook for the equity and bond markets, and the diversifying contribution of unlisted assets.

As part of the strategic allocation review process and in order to pursue the diversification into unlisted assets begun in 2010 with the shares in RTE, in 2013 the Board of Directors approved the introduction of an unlisted asset portfolio alongside the diversified equity and bond investments. This portfolio is managed by EDF Invest, which was formed following the Decree

of 24 July 2013 on securing the funding for nuclear expenses. EDF Invest has three target asset classes: principally infrastructures, and also real estate and private equity. EDF Invest's objective is ultimately to have some €5 billion of unlisted investments under management, representing approximately a quarter of the total dedicated assets.

Following the French government's authorisation issued on 8 February 2013, and the approval of the Nuclear Commitments Monitoring Committee and the Board of Directors' decision of 13 February 2013, EDF allocated the entire receivable representing the accumulated shortfall in CSPE financing at 31 December 2012 to its dedicated assets. This financial asset, considered as a risk-free asset, is expected to be repaid by late 2018.

47.2.1 Diversified equity and bond investments

Certain dedicated assets take the form of bonds held directly by EDF. The rest comprise specialised collective investment funds on leading international markets, managed by independent asset management companies. They take the form of open-end funds and "reserved" funds established solely for the use of the Group (which does not participate in the fund management).

These investments are structured and managed in line with the strategic allocation, which takes into consideration international stock market cycles, for which the statistical inversion generally observed between equity market cycles and bond market cycles – as well as between geographical areas – has led the Group to define an overall composite benchmark indicator that guarantees continuation of the long-term investment policy.

As a result, for accounting purposes the portfolio is evaluated as a whole, all funds combined, treating the cash flows generated as a group of financial assets. This ensures consistency with the specificities of the dedicated asset portfolio, in particular the legal matching with the liability and the distant timing of significant payments – the first important due date is not until 2021, and payments will continue until 2117 for the plants currently in operation.

At the year-end, dedicated assets are presented in available-for-sale financial assets in the balance sheet, at their liquidation value. In view of the specific financial characteristics of the dedicated asset portfolio, the Group exercises judgment in determining whether indicators of impairment appropriate to the structure of the portfolio should be taken into consideration.

The Group thus takes a 5-year period as the basis for assessment of prolonged decline compared to historical value. This period is at the low end of the range of statistical estimates concerning stock markets. Also, based on statistical observations of the asset/liability management model used for this portfolio,

the Group considers impairment of dedicated assets to be significant when the value is 40% or more below the portfolio's historical value.

In parallel to these general criteria for impairment, in the course of operational asset monitoring the Group exercises judgment through long-term, specific management rules defined and supervised by its governance bodies (maximum investment ratios, volatility analyses and assessment of individual fund manager quality).

47.2.2 Unlisted assets (EDF Invest)

The assets managed by EDF Invest consist of unlisted securities related to investments in infrastructures, real estate, and private equity.

At 31 December 2014, the assets managed by EDF Invest represent a value of €3,264 million, mainly including:

- 50% of the Group's investment in RTE, with a value of €2,555 million at 31 December 2014 (€2,567 million at 31 December 2013). This value is the net consolidated value of 50% of the Group's investment in RTE, as presented in investments in associates and joint ventures in the consolidated balance sheet;
- the Group's investment in TIGF, presented in available-for-sale financial assets in the consolidated balance sheet;
- and since October 2014, the Group's investment in Porterbrook Rail Finance Limited ("Porterbrook"), presented in available-for-sale financial assets in the consolidated balance sheet.

47.3 Valuation of EDF's dedicated assets

Dedicated assets are included in the EDF group's consolidated financial statements at the following values:

<i>(in millions of Euros)</i>		Balance sheet presentation	31/12/2014	31/12/2013
Equities			7,592	7,904
Debt instruments			6,419	5,147
Cash portfolio			640	790
Dedicated assets – equities and debt instruments	Available-for-sale financial assets		14,651	13,841
Derivatives	Fair value of derivatives		(23)	10
Other	Available-for-sale financial assets		5	4
Diversified equity and bond investments			14,633	13,855
CSPE receivable	Loans and financial receivables		5,144	5,051
Derivatives	Fair value of derivatives		(8)	(2)
CSPE receivable after derivatives			5,136	5,049
RTE (50% of the investment held by the Group)	Investments in associates and joint ventures		2,555	2,567
Other assets	Available-for-sale financial assets		709	266
Unlisted assets (EDF Invest)			3,264	2,833
TOTAL DEDICATED ASSETS			23,033	21,737

47.4 Changes in dedicated assets in 2014

At 31 December 2014, the objective of 100% coverage of long-term nuclear provisions was still achieved, ahead of the legal June 2016 deadline (set by the "NOME" Law).

Withdrawals totalled €403 million, equivalent to payments made in respect of the long-term nuclear obligations to be covered in 2014 (€326 million in 2013). The allocation to dedicated assets for 2014 was zero, as the realisable value of the assets now exceeds the value of the provisions they are intended to cover (in 2013 a net amount of €2,591 million was allocated).

For the financial portfolio, the allocation strategy focused on a conservative approach in a context of volatile but generally rising markets:

- in the bond portfolio, underweighting in Euro zone countries was maintained early in the year, followed by a gradual return to allocation in line with the benchmark index in core countries, and reinforcement of positions in non-core countries (principally Italy and Spain);
- in the equities portfolio, there was underweighting in the Pacific and Emerging countries zones at the start of the year, followed by lower overall allocation to equities, especially in the Euro zone from the summer onwards, in response to intensifying geopolitical tensions.

In 2014 EDF Invest acquired a minority interest in Porterbrook in a consortium with three other long-term infrastructure investors: Alberta Investment Management Corporation, Allianz Capital Partners and Hastings Funds Management. Porterbrook is one of the three main railway rolling stock leasing companies in the United Kingdom. This investment was allocated to EDF Invest's "Infrastructures" pocket alongside TIGF and RTE.

During the year, EDF Invest also continued to build up its real estate and investment fund portfolio. Amundi and EDF Invest have announced the creation of a non-exclusive real estate investment fund to invest at European level. This fund will raise EDF Invest's exposure to the real estate asset class, to complement its direct investment strategy. This initiative led to a first real estate investment in Germany in late 2014.

A total of €894 million in net gains on disposals was recorded in the financial result in 2014 (€714 million in 2013).

The difference between the fair value and acquisition cost of diversified bond and equity investments included in equity was a positive €2,299 million before taxes at 31 December 2014 (€1,839 million at 31 December 2013).

The Group's assessment of the value of the dedicated asset portfolio did not lead to recognition of any impairment in 2014.

47.5 Present cost of long-term nuclear obligations

The Group's long-term nuclear obligations in France concerned by the regulations for dedicated assets are included in the EDF group's consolidated financial statements at the following values:

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Provisions for long-term radioactive waste management	7,676	7,542
Provisions for nuclear plant decommissioning	13,866	13,024
Provisions for last cores - portion for future long-term radioactive waste management	476	454
PRESENT COST OF LONG-TERM NUCLEAR OBLIGATIONS	22,018	21,020

➤ Note 48 Related parties

Details of transactions with related parties are as follows:

	Associates and joint ventures		Joint operations		French State or State-owned entities		Group Total	
<i>(in millions of Euros)</i>	31/12/2014	31/12/2013	31/12/2014	31/12/2013	31/12/2014	31/12/2013	31/12/2014	31/12/2013
Sales	584	638	–	–	833	867	1,417	1,505
Energy purchases	3,572	3,926	4	4	1,738	2,051	5,314	5,981
External purchases	50	(7)	4	4	1,173	1,197	1,227	1,194
Financial assets	670	670	–	–	94	84	764	754
Other assets	459	565	–	–	715	639	1,174	1,204
Financial liabilities	–	–	–	–	–	–	–	–
Other liabilities	1,139	1,242	–	1	1,134	1,509	2,273	2,752

48.1 Transactions with entities included in the scope of consolidation

Transactions with the principal associates (RTE, CENG and Alpiq) are presented in note 23.

Transactions with other associates, joint ventures, and partner entities in joint arrangements with the Group mainly consist of sales and purchases of energy.

48.2 Relations with the French State and State-owned entities

48.2.1 Relations with the French State

The French State holds 84.49% of the capital of EDF at 31 December 2014, and is thus entitled in the same way as any majority shareholder to control decisions that require approval by the shareholders.

In accordance with the legislation applicable to all companies having the French State as their majority shareholder, the EDF group is subject to certain inspection procedures, in particular economic and financial inspections by

the State, audits by the French Court of Auditors (*Cour des Comptes*) or Parliament, and verifications by the French General Finance Inspectorate (*Inspection générale des finances*).

Under an agreement entered into by the French State and the EDF group on 27 July 2001 concerning the monitoring of external investments, procedures exist for prior approval by the French State or notification (advance or otherwise) of the State in respect of certain planned investments, additional investments or disposals by the Group. This agreement also introduced a procedure for monitoring the results of external growth operations.

The public service contract between the French State and EDF was signed on 24 October 2005. This contract is intended to form the framework for public service missions assigned to EDF by the lawmaker for an unlimited period. The Law of 9 August 2004 does not stipulate the duration of the contract.

EDF, like other electricity producers, also participates in the multi-annual generation investment program defined by the minister in charge of energy, which sets objectives for the allocation of generation capacity.

Finally, the French State intervenes through the regulation of electricity and gas markets, particularly for authorisation to build and operate generation facilities, establishment of sales tariffs for customers that have stayed on the regulated tariffs, transmission and distribution tariffs, and also determination of the ARENH price in accordance with the "NOME" Law, and the level of the Contribution to the Public Electricity Service.

48.2.2 Relations with GDF Suez

Since the distribution network management businesses were transferred to subsidiaries – ERDF, a subsidiary of EDF, has managed electricity distribution since 1 January 2007 and GRDF, a subsidiary of GDF Suez, has managed gas distribution since 1 January 2008 – the agreement of 18 April 2005 (amended on 20 December 2007) defining relations between EDF and GDF in respect of the common operator was transferred to the two new companies, and has been executed by them since that date. The common network operator's activities for the distribution sector cover network construction, network operation and maintenance, and metering.

48.2.3 Relations with public sector entities

The Group's relations with public sector entities mainly concern AREVA.

Transactions with AREVA concern:

- the front-end of the nuclear fuel cycle (uranium supplies, conversion and enrichment services and fuel assembly production);
- the back-end of the nuclear fuel cycle (transportation, storage, processing and recycling services for spent fuel);
- plant maintenance operations and equipment purchases.

Front-end of the cycle

In December 2008 EDF and AREVA signed an agreement for uranium enrichment services to cover the period 2013-2032, and in July 2012 two agreements were signed for supplies of natural uranium concentrate, covering the period 2014-2035.

In December 2014 EDF and AREVA NP signed a contract for supplies of enriched-uranium fuel assemblies from 2015.

As part of the plan to construct two EPRs in the United Kingdom (Hinkley Point 1 and 2), EDF and AREVA signed a letter of intent on 21 October 2013 defining the terms for supplies of fuel (components: uranium, fluorination, enrichment and production). This letter of intent will be applied through four contracts (one for each component) which are currently being signed.

Back-end of the cycle

Relations between EDF and AREVA concerning transportation, processing and recycling of spent fuels are formally defined for the period 2008-2040 in a framework agreement signed on 19 December 2008. In execution of this agreement, EDF and AREVA signed an application contract on 12 July 2010 setting the prices and quantities for these services, for the period 2008-2012. The conditions for processing and recycling services over the period 2013-2020 are covered by general terms signed by EDF and AREVA in June 2014, and will be transposed into the application contract for 2013-2020 due to be signed in early 2015.

EDF and AREVA have signed the following contracts for the 1,300MW nuclear power plants:

- in 2011, a contract for supply of 32 steam generators and a contract for renewal of the control/command systems;
- in August 2012, a contract for services related to replacement operations for the first steam generators.

In 2013 EDF and AREVA signed two amendments to the initial 2007 contract for the Flamanville EPR boiler, covering the period from development studies to industrial commissioning.

The Group also holds shares in AREVA, as stated in note 36.2.2.3.

48.3 Management compensation

The Company's key management and governance personnel are the Chairman and CEO, the members of the Comex (Executive Committee) throughout 2014 or since their date of appointment if they joined the Comex during the year, and the Directors. Directors representing the employees receive no remuneration for their services.

The total compensation paid by EDF and controlled companies to the Group's key management and governance personnel amounted to €8.4 million in 2014 (€10 million in 2013). This amount covered short-term benefits (basic salaries, performance-related salary, profit share and benefits in kind), special IEG post-employment benefits where relevant, and the corresponding employer contributions, plus director's fees. The change observed in 2014 is mostly attributable to the retirement of a Comex member in late 2013.

Other than the benefits reported above, key management and governance personnel benefit from no other special pension system, starting bonus or severance payment entitlement except by contractual arrangement.

➤ Note 49 Environment

49.1 Greenhouse gas emission rights

In application of the Kyoto protocol, the EU Directive aiming to reduce greenhouse gas emissions came into effect in 2005 for an initial three-year period, followed by a second period from 2008 to 2012, with progressive reduction of the emission rights allocated.

One of the main features of the third phase, running from 2013 to 2020, is the discontinuation of free allocation of emission rights in certain countries, including France and United Kingdom.

In the EDF group, the entities subject to this Directive are EDF, EDF Energy, Edison, Fenice, Dalkia, BERT, Kogeneracja, Zielona Gora, EDF Polska and EDF Luminus.

In 2014, the Group surrendered 60 million tonnes in respect of emissions generated in 2013. In 2013, the Group surrendered 67 million tonnes in respect of emissions generated in 2012.

The Group's total emission rights allocation for 2014 recorded in the national registers is 6 million tonnes (10 million tonnes for 2013).

The volume of emissions at 31 December 2014 stood at 51 million tonnes. The provision resulting from over-quota emissions amounts to €314 million at 31 December 2014 (€356 million at 31 December 2013).

49.2 Energy savings certificates

In all its subsidiaries, the Group is engaged in a process to control energy consumption through various measures developed by national legislations, in application of European Union Directives.

The French Law of 13 July 2005, for example, introduced a system of energy savings certificates. Companies selling electricity, gas, heat or cold

to end-users with sales above a certain level are subject to energy savings obligations for a defined period. They fulfil these obligations by making direct or indirect energy savings rewarded by certificates, or by purchasing energy savings certificates. At the end of the set period, the entities concerned must provide evidence of compliance with obligations by surrendering the certificates, or pay a fine to the Treasury.

In France, the system was extended to new obligated actors (fuel distributors) in the second period, which began on 1 January 2011 and ran until 31 December 2014, with stricter requirements for obtaining energy savings certificates. EDF is well-placed to meet its obligation thanks to energy-efficient offers for each market segment: residential customers, business customers, local authorities and organisations funding social projects.

EDF's obligation is calculated retrospectively, based on gas and electricity sales to households and service sector businesses for the period 2010-2013. The volumes of certificates obtained between the two periods will count towards achievement of the obligation for the second period.

The energy savings certificate system has been renewed for a third period, from 1 January 2015 to 31 December 2017, by Decree 2014-1557 of 24 December 2014.

49.3 Renewable energy certificates

Through the renewable energy certificates scheme, the EDF group has an obligation to surrender renewable energy certificates, particularly in the United Kingdom, Italy and Belgium (see note 1.3.27.2).

At 31 December 2014, a provision of €638 million was booked, essentially by EDF Energy (United Kingdom) and EDF Luminus (Belgium) to cover the shortfall in renewable energy certificates compared to the assigned obligations.

➤ Note 50 Subsequent events

50.1 Payment to bearers of perpetual subordinated bonds

In January 2015, EDF paid a total of €387 million to the bearers of the perpetual subordinated bonds issued in January 2013 and January 2014. In compliance with IAS 32, an amount corresponding to the cash disbursed will be charged to Group equity in the first half of 2015.

➤ Note 51 Scope of consolidation

51.1 Fully consolidated companies at 31 december 2014

		Percentage of ownership at 31/12/2014	Percentage of ownership at 31/12/2013	Business sector
France				
Electricité de France – Parent Company		100.00	100.00	G, D, O
Electricité Réseau Distribution France (ERDF)		100.00	100.00	D
EDF Production Électrique Insulaire (PEI)		100.00	100.00	G
United Kingdom				
EDF Energy plc. (EDF Energy)		100.00	100.00	G, O
EDF Energy UK Ltd.		100.00	100.00	O
EDF Development Company Ltd.		100.00	100.00	O
Italy				
Edison SpA (Edison)		97.40	97.40	G, D, O
Transalpina di Energia SpA (TdE SpA) ⁽¹⁾		100.00	–	O
Transalpina di Energia SRL (TdE) ⁽¹⁾		–	100.00	O
WGRM Holding 4 SpA ⁽¹⁾		–	100.00	O
Fenice Qualita'Per L'Ambiente SpA (Fenice)		100.00	100.00	G, O
Other international				
EDF International SAS	France	100.00	100.00	O
EDF Belgium SA	Belgium	100.00	100.00	G
EDF Luminus SA	Belgium	63.53	63.53	G
EDF Norte Fluminense SA	Brazil	100.00	90.00	G
Ute Paracambi SA	Brazil	100.00	100.00	G
French Investment Guangxi Laibin Electric Power Co. Ltd. (Figlec)	China	100.00	100.00	G
EDF (China) Holding Ltd.	China	100.00	–	O
EDF Inc.	USA	100.00	100.00	O
Unistar Nuclear Energy LLC	USA	100.00	100.00	G
Budapesti Erőmű ZRt (Bert)	Hungary	95.62	95.62	G
EDF Démasz ZRt.	Hungary	100.00	100.00	G, D, O
EDF Wybrzeże SA ⁽²⁾	Poland	–	99.87	G
EDF Paliwa Sp. z o.o. (Energokrak)	Poland	97.26	96.93	O
EDF Polska SA ⁽²⁾	Poland	97.26	96.51	G
Zec Kogeneracja SA (Kogeneracja)	Poland	49.51	49.38	G, D
Elektrociepłownia Zielona Góra SA (Zielona Góra)	Poland	48.72	48.59	G, D
EDF Alpes Investissements SARL	Switzerland	100.00	100.00	O
Mekong Energy Company Ltd. (Meco)	Vietnam	56.25	56.25	G

(1) In 2014, TdE SRL and Wagram Holding 4 SpA merged to form TdE SpA.

(2) In 2014, EDF Wybrzeże SA merged with EDF Polska SA.

Business segments: G = Generation, D = Distribution, T = Transmission, O = Other.

		Percentage of ownership at 31/12/2014	Percentage of ownership at 31/12/2013	Business sector
Other activities				
EDF Développement Environnement SA	France	100.00	100.00	O
Société pour le Conditionnement des Déchets et Effluents Industriels (SOCODEI)	France	100.00	100.00	O
Compagnie Financière de Valorisation pour l'Ingénierie (COFIVA)	France	100.00	100.00	O
Société Française d'Ingénierie Électronucléaire et d'Assistance (SOFINEL)	France	55.00	55.00	O
Électricité de Strasbourg	France	88.64	88.64	D
Tiru SA – Traitement Industriel des Résidus Urbains	France	51.00	51.00	O
Dunkerque LNG	France	65.00	65.00	O
EDF Énergies Nouvelles	France	100.00	100.00	G, O
EDF IMMO et filiales immobilières	France	100.00	100.00	O
EDF Optimal Solutions SAS	France	100.00	100.00	O
Société C2	France	100.00	100.00	O
Société C3	France	100.00	100.00	O
EDF Holding SAS	France	100.00	100.00	O
CHAM SAS	France	100.00	100.00	O
Dalkia	France	99.94	34.00	O
Citelum	France	100.00	34.00	O
EDF Trading Ltd.	UK	100.00	100.00	O
EDF Production UK Ltd.	UK	–	100.00	O
EDF DIN UK Ltd.	UK	100.00	100.00	O
Wagram Insurance Company Ltd.	Ireland	100.00	100.00	O
EDF Investissements Groupe SA	Belgium	95.51	95.51	O
Océane Re	Luxembourg	99.98	99.98	O
EDF Gas Deutschland GmbH	Germany	100.00	100.00	O

Business segments: G = Generation, D = Distribution, T = Transmission, O = Other.

51.2 Company held in the form of joint operations at 31 December 2014

		Percentage of ownership at 31/12/2014	Percentage of ownership at 31/12/2013	Business sector
Other activities				
Friedeburger Speicherbetriebsgesellschaft GmbH (Crystal)	Germany	50.00	50.00	O

Business segments: G = Generation, D = Distribution, T = Transmission, O = Other.

51.3 Companies accounted for by the equity method at 31 December 2014

		Percentage of ownership at 31/12/2014	Percentage of ownership at 31/12/2013	Business sector
France				
RTE Réseau de Transport d'Électricité (RTE)		100.00	100.00	T
Other international				
Energie Steiermark Holding AG (Estag)	Austria	25.00	25.00	G, O
Constellation Energy Nuclear Group LLC (CENG)	USA	49.99	49.99	G
SLOE Centrale Holding BV	Netherlands	50.00	50.00	G
Shandong Zhonghua Power Company Ltd.	China	19.60	19.60	G
Datang Sanmenxia Power Generation Co. Ltd.	China	35.00	35.00	G
Taishan Nuclear Power Joint Venture Company Ltd.	China	30.00	30.00	G
Jiangxi Datang International Fuzhou Power Generation Company Ltd.	China	49.00	–	G
Nam Theun 2 Power Company	Laos	40.00	40.00	G
Alpiq	Switzerland	25.00	25.00	G, D, T, O
Other activities				
Dalkia Holding	France	–	34.00	O
Dalkia Investissement	France	–	67.00	O
Domofinance SA	France	45.00	45.00	O
South Stream Transport BV	Netherlands	–	15.00	T

Business segments: G = Generation, D = Distribution, T = Transmission, O = Other.

51.4 Companies in which the EDF group's voting rights differ from its percentage ownership at 31 December 2014

At 31 December 2014 the percentage of voting rights, which is decisive for assessing control, differs from the Group's percentage ownership for the following entities:

	Percentage of ownership at 31/12/2014	Percentage of voting rights at 31/12/2014
Edison SpA	97.40	99.48
Zec Kogeneracja SA (Kogeneracja)	49.51	50.00
Elektrociepłownia Zielona Góra SA (Zielona Góra)	48.72	98.40
EDF Paliwa Sp. z o.o.	97.26	100.00
Société Française d'Ingénierie Électronucléaire et d'Assistance (SOFINEL)	55.00	54.98
EDF Investissements Groupe SA	95.51	50.00

20.2 Statutory Auditors' report on the consolidated financial statements

This is a free translation into English of the Statutory Auditors' report on the consolidated financial statements issued in French and is provided solely for the convenience of English speaking readers.

This Statutory Auditors' report includes information specifically required by French law in such reports, whether qualified or not. This information is presented below the audit opinion on the consolidated financial statements and includes an explanatory paragraph discussing the auditor's assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the consolidated financial statements taken as a whole and not to provide separate assurance on individual account balances transactions, or disclosures.

The report also includes information relating to the specific verification of information given in the Group's management report.

This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

Year ended 31 December 2014

To the Shareholders,

Following our appointment as Statutory Auditors by your General Meeting, we hereby report to you, for the year ended 31 December 2014 on:

- the audit of the accompanying consolidated financial statements of Electricité de France S.A. ("the Group");
- the justification of our assessments;
- the specific verification required by law.

The consolidated financial statements have been approved by the Board of Directors. Our role is to express an opinion on these consolidated financial statements based on our audit.

Opinion on the consolidated financial statements

We conducted our audit in accordance with professional standards applicable in France; those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes examining, using sample testing techniques or other selection methods, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting policies used and significant accounting estimates made, as well as the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities, and of the financial position of the Group as of 31 December 2014 and of the results of its operations for the year then ended in accordance with IFRS as adopted by the European Union.

Without qualifying our opinion, we draw your attention to the following matters:

- the change in accounting principles described in note 1.2.1.1 and 2.1, and related to the application as of 1 January 2014 of IFRS 10 "Consolidated financial statements", IFRS 11 "Joint arrangements" and IFRS 12 "Disclosure of Interests in Other Entities" standards;
- the valuation of long-term provisions relating to nuclear electricity production, which results from management's best estimates and assumptions as described in notes 1.3.2.1 and 29. This valuation is sensitive to the assumptions made concerning technical processes, costs, inflation rates, long-term discount rates and forecast cash outflows. Changes in these parameters could lead to a material revision of the level of provisioning.

Justification of assessments

In accordance with the requirements of article L. 823-9 of the French commercial Code, we have made our own assessments which are brought to your attention, in relation to the following matters:

Accounting policies

We have verified the appropriateness of the disclosures presented in note 1.3.27.1 with respect to the accounting treatments of greenhouse gas emission quotas, an area which is not mandatory or specifically addressed in IFRS as adopted in the European Union as of 31 December 2014.

Management judgments and estimates

Note 1.3.2 to the consolidated financial statements describes the main sensitive accounting policies for which management makes significant estimates and assumptions and exercises judgment, based on macro-economic assumptions appropriate to the very long-term cycle of Group assets. It may be possible that future results could differ from those estimates, which were made in a context of economic and financial crisis and significant market volatility, thus resulting in difficulties to assess the economic outlook in the medium term.

Particularly, the Group describes in the notes to the consolidated financial statements the information related to:

- the methods used to account for the shortfall in the compensation for the Contribution to the Electricity Public Service Costs (*Contribution au Service Public de l'Électricité*) as at 31 December 2012, subsequent to the agreement announced on 14 January 2013 with the French State and the allocation during the period ended 31 December 2013 of the related receivable held to the dedicated assets for secure financing of long-term nuclear expenses on 8 February 2013 (notes 36.3 and 47.2);

- the main assumptions and indicators used for the purposes of testing goodwill and long-lived assets for impairment as well as the impairment charges recognized during the period (notes 1.3.15 and 13);
- the provisions for employee benefits, other provisions and contingent liabilities (notes 31, 32 and 45).

Our procedures consisted in assessing these estimates, the data and assumptions, and as applicable, the legal opinions on which they are based, reviewing, on a test basis, the technical data and calculations performed by the Group, comparing accounting estimates of prior periods with corresponding actual amounts, reviewing the procedures for approving these estimates by management and finally verifying that the notes to the consolidated financial statements provide appropriate disclosures.

Verification procedures

The procedures we performed in relation to the regulatory framework related to the principle of regulated access to historical nuclear energy (*Accès Régulé à l'Énergie Nucléaire Historique* or ARENH) as established by the NOME Law in France, effective 1 July 2011, are based on the information available from the Group, or released by the Regulatory Energy Commission (*Commission de Régulation de l'Énergie*), and the findings resulting from agreed-upon procedures performed by independent third parties that had access to the underlying transactions.

These assessments were made as part of our audit of the consolidated financial statements taken as a whole and contributed to the opinion we formed which is expressed in the first part of this report.

Specific verification

As required by law we have also verified, in accordance with professional standards applicable in France, the information relating to the Group, given in the management report.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

Paris - La Défense and Neuilly-sur-Seine, 11 February 2015

The Statutory Auditors

KPMG Audit
Department of KPMG SA
Jacques-François Lethu

Deloitte & Associés

Patrick E. Suissa

20.3 Fees paid by the Group to Statutory Auditors

The following table sets forth the fees related to the 2014 financial year for EDF and its fully consolidated subsidiaries for services by its Statutory Auditors and their respective affiliates:

	Deloitte		KPMG	
	Amount (taxes excluded)	%	Amount (taxes excluded)	%
<i>(In thousands of Euros)</i>				
Audit:				
Statutory audit, certification, review of company and consolidated accounts				
Issuer	3,709	25.0	3,425	28.8
Fully consolidated subsidiaries	7,112	47.8	6,746	56.7
Other tasks and services directly connected to the Statutory Auditor's mission				
Issuer	617	4.1	1,102	9.3
Fully consolidated subsidiaries	177	1.2	309	2.7
Sub-total	11,615	78.1	11,582	97.5
Other services provided by the auditors' networks to fully integrated subsidiaries:				
Legal, tax, social	1,362	9.2	179	1.5
Other	1,888	12.7	123	1.0
Sub-total	3,250	21.9	302	2.5
TOTAL	14,865	100.0	11,884	100.0

Information given for the 2013 financial year:

The following table sets forth the fees related to the 2013 financial year for EDF and its fully consolidated subsidiaries for services by its Statutory Auditors and their respective affiliates:

	Deloitte		KPMG	
	Amount (taxes excluded)	%	Amount (taxes excluded)	%
<i>(In thousands of Euros)</i>				
Audit:				
Statutory audit, certification, review of company and consolidated accounts				
Issuer	3,781	27.8	3,637	29.9
Fully consolidated subsidiaries	6,354	46.7	6,171	50.8
Other tasks and services directly connected to the Statutory Auditor's mission				
Issuer	623	4.6	1,579	13.0
Fully consolidated subsidiaries	66	0.5	196	1.6
Sub-total	10,824	79.6	11,583	95.3
Other services provided by the auditors' networks to fully integrated subsidiaries:				
Legal, tax, social	1,314	9.7	166	1.4
Other	1,458	10.7	401	3.3
Sub-total	2,772	20.4	567	4.7
TOTAL	13,596	100.0	12,150	100.0

20.4 Dividend policy

20.4.1 Dividends and interim dividends paid within the last three fiscal years

The amount of dividends and interim dividends paid within the last three fiscal years was as follows:

Financial year	Number of shares	Dividend per share (in Euros)	Total dividends paid ⁽¹⁾ (in Euros)	Dividend payment date
2011	1,848,866,662	1.15	2,124,757,978.20 ⁽²⁾	6 June 2012
2012	1,848,866,662	1.25	2,308,912,900.34 ⁽³⁾	8 July 2013
2013	1,860,008,468	1.25 ⁽⁴⁾	2,327,462,364.03 ⁽⁵⁾	6 June 2014

(1) After deduction of treasury shares.

(2) €1,053,169,658.76 of which paid on 16 December 2011 as an interim dividend 2011.

(3) €1,052,601,974.10 of which paid on 17 December 2012 as an interim dividend 2012 and €170,358,213.74 of which paid on 8 July 2013 in newly-issued shares.

(4) I.e. €1.375 for shares benefiting from the loyalty dividend.

(5) €1,059,290,112.42 of which paid on 17 December 2013 as an interim dividend 2013.

On 10 December 2014, the Board of Directors decided to pay an interim dividend in cash of €0.57 per share relating to fiscal year 2014. The total amount of the interim dividend (excluding treasury shares) is €1,059,262,163.04, and was paid on 17 December 2014.

At its meeting of 11 February 2015, the Board of Directors decided to propose to the Shareholders' Meeting of 19 May 2015 the distribution of a dividend of €1.25 per share under the year 2014. Given the interim dividend of €0.57 per share paid on 17 December 2014, the balance of the dividend to be distributed for the 2014 fiscal year amounts to €0.68 per share for the shares with ordinary dividend and to €0.805 per share for the shares which benefit from loyalty dividend.

Dividend will be paid on 5 June 2015 (ex-date being 3 June 2015), subject to the Shareholders' Meeting approval.

20.4.2 Dividend policy, increased dividend

The dividend distribution policy, determined by its Board of Directors, will take into account its investment needs, the economic context and all other factors considered to be relevant.

In line with the statutory modification made at the general meeting on 24 May 2011, the first loyalty dividend was paid in 2014 in regards to financial year 2013. Shareholders having held their shares at nominal value for at least two years are eligible for loyalty dividends. The number of shares giving entitlement to such increase of 10% may not exceed 0.5% of the share capital per shareholder.

The Shareholders' Meeting of 21 November 2014 amended the Company's articles of association which now provide that the Shareholders' Meeting can decide to pay any dividend, interim dividend, reserve or premium distributed or any reduction of the share capital, via the distribution of Company's assets, including financial assets.

20.4.3 Prescription

Dividends that are not claimed within five years of the declared date of payment become time barred and are paid to the French State.

20.5 Legal proceedings and arbitration

In the ordinary course of its business, the Group is involved in certain legal, arbitration and administrative proceedings. Charges that result from such proceedings are only provided for where such charges are likely and can be either quantified or assessed within a reasonable range. In the latter case, the amount of the provision is calculated on a case-by-case basis, based on the best possible estimate. The amounts of any provisions made depend on the case-by-case risk assessments and do not depend primarily on the status of the proceedings; however, developments in the proceedings may nonetheless lead to a reassessment of such risks.

To the knowledge of the Company, except for the proceedings set out below, there are no other administrative, legal or arbitration proceedings (including pending or threatened proceedings), likely to have or having had in the past 12 months a material impact on the financial situation or the profitability of the Company and/or the Group.

20.5.1 Legal proceedings concerning EDF

French utilities network (Réseau d'alimentation général – RAG)

In October 2002, the European Commission initiated proceedings against France, claiming that State aid had been granted to EDF when its balance sheet was restructured on 1 January 1997. By a decision dated 16 December 2003, the European Commission set the principal amount of aid to be repaid at €889 million. On 11 February 2004, the French State issued a collection note for €1,224 million, consisting of the principal amount and interest. This amount was paid by EDF. On 27 April 2004, EDF initiated an action before the European Union General Court, at the time known as the European Court of First Instance, to annul the European Commission's decision. The European Union General Court issued, on 15 December 2009, a ruling annulling the European Commission's decision of 16 December 2003, holding that when making its decision, it should have applied the informed market economy investor test to determine whether or not the action constituted State aid. As this ruling was binding on the parties, the State repaid €1,224 million to EDF on 30 December 2009. On 26 February 2010, the European Commission filed an appeal against the European Union General Court's ruling before the Court of Justice of the European Union. By order dated 5 June 2012, the Court of Justice rejected the appeal by the European Commission and confirmed the order of the General Court of the European Union of 15 December 2009.

On 2 May 2013, the European Commission decided to reopen its investigation and will therefore re-examine the question of whether or not the action constituted State aid under the tests established by the European courts. This decision marks a new adversarial exchange between the French State and the European Commission. This does not affect the final decision that will be adopted by the European Commission.

Asbestos

In the past, EDF has used products containing asbestos. Thus, certain employees, in particular those working in thermal power plant maintenance, may have been exposed to asbestos, principally before such asbestos was replaced or protective measures were implemented by EDF from the late 1970s.

Between 1997 and the middle of December 2014, EDF and ERDF have been party to 627 strict liability (*faute inexcusable*) actions in France in relation to the alleged exposure of its employees to asbestos in their workplace. A finding of liability in such an action could lead to the payment of additional compensation by the employer to victims or their legal successors.

The number of proceedings issued has stabilised since 2010 (approximately 20 new cases each year). Accordingly, there should not be any significant variations in the financial burden for the CNIIEG (Pension fund for Electricity and Gas Industry companies). A €30 million provision was created in EDF's financial statements in 2008 to cover the financial risk.

As at the end of December 2014, the cumulative amount of the final judgments against EDF, in relation to litigations relating to the *faute inexcusable* of the employer amounted to approximately €26.2 million.

Solaire Direct

On 17 December 2013, the Competition Authority (ADLC) fined the EDF group €13.5 million for practices constituting an abuse of a dominant position which the ADLC felt allowed it to favour its subsidiaries operating in the photovoltaic sector to the detriment of other market players. The ADLC criticised the fact that EDF had made various material and non-material resources available to its subsidiaries which could not be reproduced by

competitors (in particular, the *Bleu Ciel*® brand, trademark and logo and customer data), thereby creating confusion among customers between its role as an electricity supplier subject to regulated rates and the role of its subsidiaries operating in the photovoltaic sector. EDF has lodged an appeal against this decision before the Court of Appeal in Paris. The Court of Appeal's judgment should be handed down in April 2015.

Litigation by photovoltaic operators for compensation

On 26 July 2013, the liquidator of Evasol, a company operating in the energy-saving sector, issued proceedings against EDF, EDF EN, EDF ENR and EDF ENR Solaire before the Commercial Court in Lyon, claiming alleged breaches of competition law by these companies in the photovoltaic sector in France. It claims that this is the direct cause of Evasol's liquidation and seeks damages of €33 million.

On 13 May 2014, Solaire Direct issued proceedings against EDF, EDF EN, EDF ENR and EDF ENR Solaire before the Commercial Court in Paris seeking compensation for the damage it claims to have suffered as a result of the practices condemned by the ADLC in its decision issued on 17 December 2013, assessed by Solaire Direct at €8.7 million.

On 11 December 2014, Apem Énergie, Arkeos, Biosystem-AD, Cap Eco Énergie, Cap Sud, Isowatt, PCI-m, Photen and Sol'Air Confort issued proceedings against EDF, EDF ENR and EDF ENR Solaire before the Commercial Court in Paris on the same grounds. They claim interim damages of €100,000 each, to be applied against their loss, and the appointment of a court expert to assess the final amount of this loss.

SUN'R

On 21 June 2012, SUN'R filed a complaint and an application for protective measures (*mesures conservatoires*) with France's ADLC. SUN'R accuses ERDF of delays in the procedure for the connection of its photovoltaic facilities and EDF of delays in the implementation of the purchase obligation contracts and the payment of the related invoices. In addition, according to SUN'R, EDF ENR benefited from special treatment for the connection of its facilities by ERDF and the payment of its invoices by EDF. The *inter partes* proceedings were opened on 16 November 2012. The discussions with the ADLC regarding the admissibility of the action and the possible granting of protective measures took place on 23 January 2013.

In a decision of 14 February 2013, the ADLC issued a decision rejecting all the applications for protective measures made by SUN'R but the proceedings on the merits are still ongoing. This decision does not in any way affect the outcome of the proceedings. If the ADLC's investigation leads to a finding that EDF's practices are anti-competitive, it could, notably, in accordance with Article L. 464-2 of the French Commercial Code, impose a financial sanction, the amount of which would be determined in proportion to the seriousness of the charges made, the significance of the damage made to the economy and to the company's situation, up to a maximum of 10% of the global turnover of the company before taxes.

At the same time, SUN'R filed on 29 August 2012 a petition at an urgent applications hearing for expert assessment and provision before the Administrative Court in Paris including a claim for provisional compensation of €1 million for EDF and €2.5 million for ERDF. By order of 27 November 2012, the urgent applications judge (*juge des référés*) at the Administrative Court in Paris dismissed this petition.

CSPE ceiling investigation

On 27 March 2014, the European Commission opened an in-depth investigation into the reductions on the contribution to the public electricity service (CSPE) granted to large energy consumers and self-generators based on State aid rules. As an interested third party, EDF submitted its comments on the decision, following its publication in the Official Journal of the European Union on 3 October 2014.

Labour litigation

EDF is a party to a number of labour lawsuits with employees relating in particular to working time. EDF does not consider that any of these lawsuits, taken individually, is likely to have a significant impact on its financial results or its financial position. However, as these disputes relate to situations that could involve a significant number of EDF's employees in France, if they were to multiply, they could then potentially have a significant negative impact on the Group's financial results.

Environmental litigation

Due to its industrial activities, the Group is a party to various environmental lawsuits, in particular, regarding ground decontamination. As of the date of the filing of this reference document, the Group does not believe that any of these lawsuits, individually, is likely, in the event of an unfavourable outcome, to have a material negative impact on the Group's financial results.

Tax litigation

Following audits of its accounts for previous financial years, the authorities dispute the tax deductibility of the provision for benefits for work-related accidents and sicknesses (*accident du travail et maladies professionnelles – AT/MP*). This also concerns RTE, ERDF and Électricité de Strasbourg, since this issue is linked to the nature of Electricity and Gas Industry companies. The Group challenged the position of the tax authorities. At the end of 2014, the French national commission on direct taxes and turnover taxes rendered several decisions in favour of RTE and EDF. Moreover, judgments have also been issued in favour of the RTE and Électricité de Strasbourg subsidiaries by the Administrative Court in Montreuil. In case of unfavourable outcome, the financial risk for the Group in relation to the payment of corporate income tax amounts to approximately €250 million.

At the end of 2011, EDF received a proposed correction for the 2008 financial year relating, primarily, to the deductibility of certain long-term liabilities. In 2013, EDF received a letter from the authorities accepting part of its arguments, reducing this risk to €600 million. The Company considers it has good chances to be successful in this litigation and no provision has been recorded to cover these claims.

In addition, an adjustment was proposed by the authorities regarding a non-remunerated advance granted by EDF to its indirect subsidiary Lake Acquisition Limited in connection with the acquisition of British Energy. EDF contests this adjustment claim.

Greenpeace

A preliminary investigation was initiated in February 2009 before the Nanterre Criminal Court in relation to a "concealment of invasion of an automated data processing system" (*complicité et recel d'atteinte à un système de traitement automatisé de données*) after a computer expert from a non-Group company stated that he had hacked into the computer used by former Greenpeace spokesman in 2006, Mr. Yannick Jadot, at the request of an EDF employee. Said employee and his supervisor were formally placed under investigation (*mis en examen*) on 24 March and 10 June 2009 respectively, and have been subject to disciplinary transfers. EDF was placed under investigation on 26 August 2009. By judgment delivered on 10 November 2011, EDF and the two employees were sentenced by the Nanterre Court.

By order delivered on 6 February 2013, the Court of Appeal in Versailles cleared EDF and the supervisor of the allegations. In terms of the other employee, the Court of Appeal confirmed the judgment of guilt and sentenced him to 6 months in prison. The employee, Greenpeace and Mr. Yannick Jadot appealed to the Court of Cassation. Mr. Jadot is the sole party to have maintained his appeal, which only relates to civil matters (potential damages). The appeal could be examined in 2015.

Fessenheim

On 25 July 2008, an association and individuals petitioned the French Ministers in charge of nuclear safety (the Ministers for Energy and Ecology) to order the permanent shutdown and dismantling of the Fessenheim nuclear power plant. The petitioners based their request on Article 34 of the law of 13 June 2006 relating to transparency and safety in nuclear matters (the "TSN" law), which allows the enactment of a decree adopted in the French Council of State, after consultation with the French Nuclear Safety Authority (*Autorité de Sûreté Nucléaire – ASN*), to order the final shutdown and dismantling of a basic nuclear installation that presents serious risks, when no other course of action is possible.

After the dismissal of the petition by the Ministers, the petitioners filed an appeal with the Strasbourg Administrative Tribunal on 10 December 2008, which was dismissed in the judgment of 9 March 2011. The petitioners lodged an appeal on 4 May 2011, which was dismissed in a judgment issued by the Administrative Court of Appeal in Nancy on 16 May 2013.

The same petitioners filed an application for review on 18 April 2011, requesting the Ministers in charge of nuclear safety and ASN suspend the operation of the Fessenheim power plant. The petitioners base their request on Articles 34 and 35 of the decree of 2 November 2007 relating to basic nuclear facilities and to the monitoring of nuclear safety and security for the transportation of radioactive substances, which enables Ministers or the ASN to suspend the operation of a basic nuclear facilities in case of serious risk. After the refusal of the Ministers and the ASN to adhere to their request, the petitioners respectively initiated actions with the Administrative Court in Strasbourg (for the Ministers' implied refusal) and French Council of State (for ASN's implied refusal).

By order of 9 March 2012, the President of the Administrative Court in Strasbourg referred to the Council of State the applications regarding the Ministers' implied refusal. In a decision issued on 28 June 2013, the Council of State dismissed the applications finding that the existence of serious and imminent risks for the protection of security, health and public health, nature and the environment justifying the suspension of the power plant had not been established.

Finally, by an application for interim measures dated 23 March 2013, several associations including *Réseau Sortir du Nucléaire* applied for the suspension of the works related to the safety review and including the strengthening of the slab. This application was dismissed in an order issued by the Council of State on 10 April 2013. The Council of State then examined the merits of the case, and again dismissed the application in a judgment issued on 28 November 2014, thus bringing an end to this dispute.

Vent de colère

Following an appeal lodged by an association, *Vent de Colère*, against the order issued on 17 November 2008 fixing the price at which wind-generated electricity is purchased, the Council of State stayed the proceedings and submitted a reference for a preliminary ruling to the European Court of Justice on whether the mechanism for financing the obligation to purchase electricity binding on CSPE (*Contribution au Service Public de l'Électricité – Contribution to the Public Electricity Service*) is to be regarded as an intervention by the State or through State resources within the meaning of and for the application of the provisions of the TEU relating to State aid.

On 11 July 2013, the advocate general to the European Court of Justice issued his opinion, concluding that the mechanism for financing is covered by the concept of "intervention by the State or through State resources".

On 19 December 2013, the Court issued its decision and confirmed that "the new mechanism for offsetting in full the additional costs imposed on undertakings because of an obligation to purchase wind-generated electricity at a price higher than the market price that is financed by all final consumers of electricity (...) constitutes an intervention through State resources".

In a judgment issued on 28 May 2014, the Council of State set aside the order issued on 17 November 2008 on the ground that the prices it fixes constitute State aid that had not been notified to the European Commission prior to its implementation. As an alternative, on 17 June 2014, the Ministry of Ecology, Sustainable Development and Energy signed an order setting the conditions for the purchase of wind-generated electricity produced on land. This new legislation restates the conditions for the purchase of wind-generated electricity stated in the 2008 order and the impact on the CSPE remains the same.

Photovoltaic producers litigation

The announcement by the public authorities in autumn 2009 of an upcoming decrease in the photovoltaic electricity purchase prices triggered a massive increase in requests for purchase contracts, likely to generate a very significant increase in costs to be compensated by the CSPE. Several successive ministerial orders were then issued reducing purchase prices.

As these price decreases were not sufficient to stem the flow of requests for contracts, by decree of 9 December 2010, the Government provisionally suspended the obligation to purchase photovoltaic electricity for a period of three months.

In this context, a certain number of producers brought legal proceedings against EDF with the aim of being able to benefit from the most favourable purchase price or to be exempted from the suspension.

In addition, in Corsica and in the French overseas departments where EDF also operates as a network manager, some producers brought action for compensation against it.

Given the steep increase in connection requests for photovoltaic facilities and despite the resources implemented to process them, EDF has sometimes been unable to meet the deadlines set in the connection procedures, and accordingly, producers are seeking compensation for the loss in earnings they consider that they incurred as a result of these delays, which caused them to be affected by the suspension of the purchase obligation.

Although certain decisions issued at first instance rejected all of their claims, others have awarded compensation to them.

EDF disputes its liability and has routinely appealed against the judgments issued against it at first instance.

Radioactive waste packaging and interim storage facility (ICEDA)

A decree of 23 April 2010 authorised EDF to set up a regulated nuclear facility, known as a "radioactive waste processing and interim storage facility" in the city of Saint-Vulbas, in the Ain département. The lawfulness of this decree was upheld by the Council of State on two occasions (judgments issued on 1 March 2013 and 24 March 2014) following various petitions lodged by third parties.

Moreover, following the cancellation of the first building permit for the ICEDA for violation of the city's local zoning plan by the Administrative Court in Lyon on 13 December 2011, upheld by the Administrative Court of Appeal in Lyon on 19 June 2012, EDF lodged a further appeal with the French Council of State.

In a decision issued on 24 March 2014, the Council of State upheld EDF's appeal and set aside the judgment appealed against, referring the case back to the Administrative Court of Appeal in Lyon. The latter, in a judgment issued on 8 December 2014, set aside the above-mentioned judgment of the Administrative Court in Lyon and thus upheld the lawfulness of the building permit which means that the works can resume. The works are scheduled to resume in April 2015.

Without waiting for the decision of the Council of State on its appeal relating to the first building permit, EDF had applied for a second building permit, which was issued by the Prefect of Ain on 21 August 2013. This new permit was challenged by third parties before the Administrative Court in Lyon

which held, on 2 July 2014, that it should be cancelled as the application did not contain an updated cutaway plan, also holding *"that the irregularity affecting the building permit application can be resolved by applying for an amending building permit"*. All of the third parties involved lodged an appeal against this decision before the Administrative Court of Appeal in Lyon on 9 and 17 September 2014. However, given the above-mentioned decision issued by the Administrative Court of Appeal in Lyon on 8 December 2014, a judgment against EDF would not affect the lawfulness of the first building permit and the resumption of work previously suspended.

Flamanville

On 15 November 2006, EDF filed an application with the ASN to authorise the retention and disposal of liquid and gaseous effluents from the nuclear plant in Flamanville (Manche). This application included the retention and disposal of the two existing reactors on the site (Flamanville 1 and Flamanville 2), as well as those of the future EPR reactor (Flamanville 3) currently under construction.

The ASN decided, on 7 July 2010, to limit EDF disposals in the environment of the liquid and gaseous effluents for the operation of the three reactors. This decision was validated by an order of the Ministers in charge of nuclear safety on 15 September 2010.

A local association, CRILAN, initiated proceedings with the Administrative Court in Caen on 23 March 2011 to have this order cancelled.

By order of 20 July 2012, the President of the Administrative Court in Caen referred the case to the French Council of State. The Court deemed that CRILAN's request did not relate to the ministerial approval order but rather to the decision by the ASN of 7 July 2010. However, under the terms of Article R. 351-2 of the French Administrative Justice Code, the French Council of State has jurisdiction over appeals against decisions by ASN. In a judgment handed down on 17 October 2014, the Council of State dismissed the petition filed by the association, thus bringing the dispute to an end.

Arbitration following the termination of a gas supply contract

On 2 August 2012, EDF received a demand for arbitration filed with the International Chamber of Commerce by one of its gas suppliers. This supplier is contesting the termination by EDF of a 4-year natural gas supply contract which had one year left to run, and is claiming one hundred million US dollars in compensation. EDF considers that the conditions required for it to terminate the contract had been met and therefore deems unfounded the amount claimed by the plaintiff. The court of arbitration, formed in January 2013, suspended the proceedings in March 2014 at the parties' request, as the supplier had proposed negotiations with EDF to attempt to find an overall commercial solution to end the dispute. In December 2014, the Court extended this suspension at the parties' request, but the parties reserved the right to decide to resume the arbitration at any time, in which case the arbitration would resume in January 2016.

Superphénix

Following the State's decision to abandon the construction of the Superphénix nuclear reactor, AREVA NC considered that EDF should be responsible for providing the preliminary services for the construction of core 3 and cover the cost of processing the manufacturing waste of cores 1 and 2 to extract the excess plutonium. As no amicable agreement could be reached between the companies, AREVA NC issued proceedings against EDF on 19 June 2013 seeking a decision ordering EDF to pay €148 million – to be adjusted (under the original economic conditions). A hearing before the Commercial Court in Paris was scheduled to be held in January 2015 to fix the dates of the pleadings. However, as the two companies have managed to reach a settlement, the dispute is over and withdrawal submissions were filed, by both parties, on 23 February 2015 before the Commercial Court in Paris, which has formally noted the said withdrawals.

Bugey 2 and 4

Following the third safety review of reactors 2 and 4 at the Bugey site to allow their continued operation for a further ten years, ASN adopted decisions establishing additional technical requirements in 2012 (reactor 2) and in 2013 (reactor 4). These requirements apply in addition to other technical requirements, also applicable to reactors 2 and 4, adopted by ASN on 26 June 2012 following the additional safety assessments performed in the wake of the Fukushima accident.

In December 2013, the Republic and Canton of Geneva filed two applications before the Council of State seeking the cancellation of these decisions. EDF submitted its statement of defence on 23 June 2014.

20.5.2 Legal proceedings concerning EDF's subsidiaries and holdings

RTE

Sale of high voltage electricity transmission by SNCF

The French law of 9 August 2004 on the public electricity and gas service and electricity and gas companies had set out that SNCF's high voltage electricity transmission network facilities should be sold to RTE. On 9 July 2009 a specially-formed commission issued its decision on the transfer value of the network, estimating it at €140 million. SNCF filed an appeal against this decision with the French Council of State on 20 August 2009, considering the transfer value of the facilities to be much higher. Until the French Council of State rules on the appeal, SNCF has transferred its electricity facilities to RTE and the sale was agreed on 26 May 2010 for an amount of €140 million, of which only €80 million have been paid by RTE as down-payment. The Council of State appointed an expert in February 2014 to value the assets. The expert filed his report at the end of December 2014, valuing the assets at a price of €129 million. The Council of State will now rule on the dispute based on this valuation.

Tax litigation

RTE was subject to an audit of its accounts for the 2005-2011 financial years. One of the main grounds for adjustment refers to the tax deductibility of the provision for benefits for work-related accidents and sicknesses (*accident du travail et maladies professionnelles* – AT/MP), which remains contested by the Group. At the end of 2013, the French national commission on direct taxes and turnover taxes rendered several decisions in favour of the company on the deductibility of the provision for benefits for work-related accidents and sicknesses. Moreover, a judgment has also been issued in favour of this company in this respect by the Administrative Court in Montreuil. The authorities lodged an appeal against this decision in 2014.

ERDF

Tax litigation

EDF received at the end of 2009 a proposed correction related to an accounts audit for the 2004, 2005 and 2006 financial years, including the share connected to the distribution, since consolidated. The adjustment claim relating to the deductibility of the provision for the benefits for work-related accidents and sicknesses remains contested by the Group.

Photovoltaic producers litigation

The rapid and successive announcements and changes made in 2010 to the regulations and prices for the purchase of photovoltaic electricity led to a considerable surge in the number of connection requests received by

ERDF. Despite its best efforts, connection deadlines were not always met and accordingly, several disputes have arisen with photovoltaic electricity producers.

Mixed decisions have been issued at first instance and by the Court of Appeal. Some decisions dismiss all of the claims filed by the claimants while others award them compensation, but more often than not the compensation is much lower than requested.

EDF considers that it cannot be held liable and since 2011, has lodged an appeal against the judgments issued against it at first instance.

The Court of Cassation is scheduled to rule on this matter for the first time in 2015.

Claim against the TURPE 3 and 4 price decisions

By order of 28 November 2012, the French Council of State pronounced the cancellation of the TURPE 3 price decision of 5 May and 5 June 2009, which set the prices for the use of the distribution network for 2010-2013.

The grounds for cancellation were the method used to determine the "average weighted capital cost" (AWCC): the Council of State deemed this method "legally incorrect", on the grounds that it does not take into account "the specific accounts of concessions, which correspond to the rights of grantors to recover free of charge the assets belonging to the concession at the end of the contract (...) as well as the provisions for the renewal of long-term assets".

In order to take into account the Council of State's decision, the State approved a TURPE 3bis based on the proposal submitted by the CRE to retroactively cover the period commencing on 1 August 2009 and ending on 31 July 2013. The effective date of TURPE 4 was then put back to 1 January 2014 and a TURPE 3ter was produced to cover the period commencing on 31 July 2013 and ending on 31 December 2013. Finally, on 12 December 2013, the CRE adopted the TURPE 4 decision. On 17 February 2014, Direct Energie lodged an appeal against this decision before the Council of State, requesting the cancellation of the CRE's decision on the ground that, in particular, the method used by the CRE is partially economic and accordingly, incompatible with the applicable French and European provisions and with the judgment issued by the Council of State on 21 December 2012 on TURPE 3.

Application filed by UFC Que Choisir before the CoRDIS

On 25 June 2014, UFC Que Choisir, an association, filed an application with the standing committee for disputes and sanctions (*Comité de règlement de différends et des sanctions* or CoRDIS) seeking an end to alleged breaches by ERDF of its obligations to remain independent from EDF. These proceedings are pending.

EDF International

Tax disputes

EDF International's tax audit relating to the 2008 to 2011 financial years led to a correction proposal being issued in late 2011 and late 2013. Two main adjustment claims, amounting to an approximate total of €265 million, relate firstly to the loss of value recorded at the end of 2009 and deducted from EDF International's income following the contribution of the CEG shares to its American subsidiary, EDF Inc., and secondly the valuation of the convertible bond created for the refinancing of the acquisition of British Energy. In 2012, EDF International contested these adjustment claims, for which it considers it has good chances to be successful in this litigation. In late 2012, EDF International sought to reach an amicable settlement in both France and the US regarding the valuation of the CEG shares recorded at the time of the contribution, based on the tax agreement to prevent double taxation in both France and the US.

ICC Arbitration – SOROOF vs. EDFI

EDF implemented a partnership with SOROOF International (SOROOF) in order to penetrate the Saudi Arabian market and expand its services business in the electricity transmission and thermal production sector. EDF Saudi Arabia (EDF KSA), a company incorporated under the laws of Saudi Arabia, 85% owned by EDF International and 15% owned by SOROOF, was formed on 8 March 2011. EDF has not managed to develop its business in a highly competitive Saudi Arabian market. SOROOF expected to earn an income from this partnership and is today claiming lost earnings. SOROOF filed a request for arbitration seeking compensation for its lost earnings with the International Chamber of Commerce in Paris on 30 September 2013. On 5 November 2013, EDF International sent an answer to the request for arbitration, challenging the compensation claimed by SOROOF and issuing a counterclaim based on SOROOF's breaches of contract, seeking damages of 15 million US dollars covering the sums incurred by EDF International for this partnership and the damage sustained to EDF's image.

EDF Énergies Nouvelles

Silpro

Silpro (Silicium de Provence) went into court-ordered liquidation on 4 August 2009. EDF ENR group held a 30% minority shareholding in this company along with the main shareholder, the German company Sol Holding. On 30 May 2011, the liquidator brought action against the shareholders and executives of Silpro, with joint and several liability, to make up for the shortfall in assets resulting from Silpro's liquidation, amounting to €101 million.

In its judgment issued on 17 December 2013, the Commercial Court in Manosque ordered, without joint and several liability, the EDF ENR Group to contribute €120,000 to Silpro's shortfall in assets. The Court of Appeal in Aix-en-Provence by judgment of 19 March 2015 set aside the judgment and dismissed the liquidator of all its claims directed, in particular, against the EDF ENR Group. The Court held that there was no *de facto* managerial authority, no mismanagement and concluded, in essence, that the financial crisis of 2008 and the failure of the main shareholder, unpredictable events, combined with the no substitution of a credible partner to the majority shareholder in the pursuit of the project, are responsible for the failure of the project.

SOCODEI

The low-activity waste processing and packaging centre (Centrac) operated by SOCODEI, a subsidiary wholly owned by EDF, is used to process weakly radioactive waste either by smelting or by incineration. On 12 September 2011, the explosion of a waste smelter caused a fire, killing one and injuring four. The accident did not cause any chemical or radioactive discharge. The ASN rated the accident as an INES level-1 accident and decided, on 27 September 2011, to only permit the smelters and incinerators stopped shortly after the accident to be re-started with prior authorisation. On 29 June 2012, ASN authorised SOCODEI to restart the incinerator subject to prior filing with ASN of the full report on the checking operations relating to the compliance of the facilities necessary for the furnace to be safe. The smelting unit, in which the accident occurred, is still shut down.

Following the accident, several investigations were opened. On 16 September 2011, the Public Prosecutor's Department in Nîmes opened an inquiry against X for homicide and involuntary injuries and the inquiry is ongoing. The results of the investigations by the Labour Inspectorate and ASN were sent to the Public Prosecutor's Department and a court expert was appointed. Once the court-ordered expert assessment operations had been completed, the examining magistrate authorised the removal of the seals on the smelter, which meant that the repairs could commence. In decision no. 2014-DC-0391 adopted on 14 January 2014, ASN set new technical requirements. Accordingly, pursuant to this decision and in order to be authorised to restart the smelters, SOCODEI will need to send ASN a detailed file presenting the

steps taken to meet the new requirements, covering the technical, social, organisational and human aspects.

Edison

Legal action initiated by ACEA SpA concerning Edison's shareholding in Edipower

In May 2006, ACEA SpA (ACEA), Rome's municipal utility, addressed a complaint to the Italian government and to Italian regulatory (AEEG) and competition (AGCM) authorities, alleging that the joint takeover of Edison by EDF and A2A SA (formerly AEM SpA) had crossed the threshold of 30% of the share capital of Edipower held by State corporations (limit set forth by a decree of the President of the Italian Council of Ministers, dated 8 November 2000 defining the rules applicable to the privatisation of companies (called "Gencos") then held by Enel SpA).

On 7 July 2006, the AGCM rendered an opinion (*segnalazione*) supporting ACEA's position and officially requiring the Italian government and parliament to take measures to comply with the provisions of the 8 November 2000 Decree.

In August 2006, ACEA initiated an action against EDF, IEB and WGRMH Holding 4 (along with Edison, A2A SA, Delmi, Edipower, AEM Turin, Atel and TdE) before the Civil Court in Rome.

According to ACEA, crossing this threshold is a violation of the applicable laws and constitutes an act of unfair competition which could adversely affect the competition on the energy market and consumers' interests.

ACEA therefore asked the court to acknowledge the unfair behaviour of EDF and A2A SA, and force EDF and A2A SA to sell their stakes in order to remain under the 30% limit and prohibit them from taking and using energy in excess of the 30% threshold, and, finally, to compensate ACEA for the prejudice suffered that it has not been able to precisely evaluate at this stage, the valuation being subject to distinct proceedings.

ACEA also indicated that it would request the court to take protective measures to protect its interests until the court rules on the merits.

In January 2007, Endesa Italia joined ACEA in its legal action.

The judge has rejected the addition to the file of a note from ACEA (new evidence) which assessed the prejudice that ACEA would have suffered at €800 million.

In December 2010, Endesa Italia, now named E.ON Italia, and EDF signed a settlement agreement in which E.ON Italia undertakes to drop the case and all other claims against EDF in connection with EDF's indirect investment in Edipower. The judge has acknowledged this agreement in an order dated 19 May 2011.

On 19 September 2013, the Civil Court in Rome issued a judgment in favour of EDF, dismissing all of ACEA's claims. The Court excluded all liability under competition or tort law for EDF as all of EDF's acts had been authorised in advance by the relevant regulatory bodies and it had not breached any rules. ACEA appealed against this judgment on 23 September 2014. The hearing is scheduled for 3 June 2015, before the Court of Appeal in Rome.

Proceedings concerning the sale of Ausimont (Bussi)

Further to a preliminary investigation initiated by the Public Prosecutor of Pescara (Abruzzo region) in relation to a suspected case of water pollution and ecological disaster affecting the river Aterno basin at Bussi sul Tirino, which for more than a century has been the site of an industrial complex belonging to Ausimont SpA that was sold to Solvay Solexis SpA in 2002, the Public Prosecutor of Pescara notified certain former Directors and managers of Solvay Solexis and Edison that the case would go to court on charges of water poisoning, ecological disaster and fraud to the prejudice of the site's purchaser, Solvay Solexis.

On 15 December 2009, the proceedings against Montedison (now Edison) for fraud were abandoned. The proceedings on the matters of environmental disaster and poisoning of water or foodstuffs continued and on 18 April 2013 the judge entertaining jurisdiction decided to bring action against Montedison's former executives before the Assize Court in Chieti. In a decision issued on 7 February 2014 by the Assize Court, the case against Edison was dismissed and accordingly, it is no longer a party to the criminal proceedings. In a decision issued on 19 December 2014, the same Court acquitted all of the defendants.

In this context, a large quantity of industrial waste was found on a plot of land belonging to Edison adjacent to the plant, and an attachment order has been placed on that land, and the President of the Italian Council of Ministers appointed on 4 October 2007 a deputy special commissioner empowered to undertake urgent measures: identification, safety and rehabilitation measures for the land. The commissioner has ordered Edison to prepare a survey of the zone, take urgent measures to make it safe and present proposals for decontamination of the ground and ground water. Edison, which has never used this site for its business, filed an appeal with the Regional Administrative Court in June 2008. The Regional Administrative Court rejected this appeal in March 2011 and Edison challenged this judgment before the Council of State. The hearing has been scheduled for 15 January 2015. The Council of State's decision should be issued during the first half of 2015.

Action by the Public Prosecutor of Alessandria

In 2009, the Public Prosecutor of Alessandria (Italy) sent certain managers and former Directors of Ausimont Spa (now named Solvay Solexis SpA, a company sold by Montedison to the Solvay group in 2002) notification of the conclusion of investigations related to the possible poisoning of water from the spring on the industrial site of Spinetta Marengo and surrounding sites, and the lack of any action for site rehabilitation. The investigation was closed on 16 January 2012.

The judge entertaining jurisdiction decided, on 16 January 2012, to bring action before the Assize Court in Alessandria against a number of former Montedison executives for behaviour that could constitute environmental and public safety offences.

The trial before the Assize Court began on 17 October 2012 and the last trial hearing is scheduled for 13 April 2015. In addition, an administrative decision ordered Solvay Solexis to rehabilitate the Spinetta Marengo site. Edison voluntarily intervened in the proceedings to defend its interests in relation with the claim filed by Solvay Solexis for the cancellation of this administrative decision, notably because the administrative decision doesn't impose any obligation on Edison to rehabilitate the site (this obligation is imposed exclusively on Solvay Solexis). To date, no hearing has been scheduled before the Administrative Court in Piedmont.

Carlo Tassara

The company Carlo Tassara, Edison's main minority shareholder, brought legal proceedings on 12 July 2012 before the Regional Administrative Court in Latium (Rome) requesting on the merits an increase in the price of the mandatory takeover bid launched by the EDF subsidiary Transalpina di Energia (TdE), following the takeover of Edison on 24 May 2012. The parties against which the plaintiff brought these proceedings are CONSOB, the Italian financial market authority, EDF, as well as its Italian subsidiaries (MNTC, WGRM4 and TdE), Edison, Delmi and A2A. The date of the hearing before the Court has not yet been scheduled. Any decision may be appealed before the Italian Council of State.

At the same time, the plaintiff filed with CONSOB in May 2012 a request to increase the price of the mandatory takeover bid based on practically identical arguments to those filed for the proceedings on merits before the Administrative Court. CONSOB dismissed this request on 25 July 2012. The plaintiff did not appeal against this decision.

In March 2015, the plaintiff also brought before the Court of Milan a civil action for damages against EDF, A2A and Edison on the basis of factual argument similar to the one that has been developed in the context of the administrative procedure. The writ was served to EDF on 27 March 2015. In this case, the plaintiff claims that negotiations between EDF and A2A that led to the takeover of Edison and Edipower was not conducted in line with the principle of good management and was contrary to the interest of its minority shareholders. The plaintiff pretends he was forced to sell his shares as part of compulsory takeover bid that followed the Edison takeover, otherwise he would have lost the liquidity of its stake representing about 10% of the share capital of Edison. The offer price was 0.89 cents per common share. The plaintiff seeks damages resulting from the devaluation of the Edison securities recorded on its balance sheet at 31 December 2011 of around €294 million. However, he does not quantify his claim for damages and requires the appointment of an expert to make an assessment of his injury. The first hearing should be held at the earliest in October 2015.

Claims brought by employees concerning exposure to asbestos or other harmful chemical substances

Over the last years, Edison has faced a significant increase in the number of claims for damages arising from the death or illness of employees that were allegedly caused by exposure to several forms of asbestos at factories owned by Montedison, or other judicial cases assumed by Edison as a result of corporate acquisitions.

Furthermore, Edison is involved in several criminal proceedings filed by former employees of companies belonging to the Edison group or their legal successors, arising from exposure to harmful chemical substances emitted by Montedison's facilities (since transferred to Enimont which became Enichem, a subsidiary of ENI).

Environmental litigation

Edison is involved in several criminal proceedings currently underway concerning damages caused by the operation of Montedison's chemical factories (petrochemical facilities in Porto Marghera, Crotone, Mantua and Cesano Maderno) prior to their sale to Enimont. These criminal proceedings also include actions brought by third parties concerning personal injuries related to the alleged environmental damage.

BE ZRt

Following a formal investigation based on European regulations on State aid, the European Commission issued a decision on 4 June 2008, requiring the Hungarian government to terminate the long-term electrical energy purchase agreements (PPAs) existing by the end of 2008 and that the electricity producers refund by April 2009 any amounts of State aid received since 1 May 2004, the date on which Hungary joined the European Union. BE ZRt lodged an appeal against this decision before the European General Court (EGC) on 4 May 2009.

The Hungarian Government did not challenge the European Commission's decision, and the Hungarian legislature enacted a law on 10 November 2008 terminating all PPAs on 31 December 2008 without compensation. In late April 2010 the European Commission and the Hungarian government accepted the principle of netting stranded costs with the State aid paid. As a result BE ZRt had no illegal State aid to repay.

By order of 13 February 2012, the EGC dismissed the action for cancellation filed by BE ZRt against the decision. However, insofar as BE ZRt is no longer liable to refund this State aid, and due to the absence of direct impact on the ongoing arbitration (see below), BE ZRt did not appeal against this decision.

Significant change in the Company's financial or trading position

In order to pursue its business after the termination of its PPAs, BE ZRT negotiated an 8-year sales contract with MVM, the sole Hungarian buyer owned by the Hungarian State, for half of its electricity output, and benefited from the "Cogen" decree¹ for the sale of the other half of its output, for a period due to run until 2013. However, Hungary adopted on 16 March 2011 an amendment to the law on electricity ending any support to cogeneration in Hungary as from July 2011.

EDF International, whose investment in BE ZRT was undertaken after the company's privatisation on specific terms that are now in question, notified the Hungarian State, on 12 May 2009 of an arbitration on the basis of the Energy Charter Treaty (ECT), in accordance with UNCITRAL rules. Further to several successive agreements, the arbitration proceedings were suspended until 1 October 2011, and have now resumed. EDF International filed on 30 December 2011, with the permanent arbitration court of The Hague, a statement in reply in order to obtain compensation for the loss of the PPAs. The prejudice with respect to heating prices in 2011 was introduced in this statement for protective purposes. On 2 November 2012, Hungary filed its statements for the defence, both on the merits and in order to contest the Court's jurisdiction.

The European Commission, acting as an *amicus curiae*, filed its statement, in May 2013, primarily contesting the jurisdiction of the Court. In its statement in reply filed on 1 July 2013, EDF International reassessed the damage sustained at approximately €290 million in light of the "heating" decree which now limits BE ZRT's total profits. Moreover, an alternative claim was made by EDF International for reimbursement of the stranded costs, assessed at approximately €300 million. Hungary replied in a rejoinder on 25 October 2013.

The hearings were held in The Hague from 3 to 6 December 2013. The Arbitration Court issued its award on 3 December 2014, upholding EDF International's claims and ordering the Hungarian State to pay it €107 million (plus interest). The Arbitration Court found that Hungary had breached the Energy Charter Treaty in two respects: firstly, a lack of sufficient compensation following the termination of the PPAs and secondly, the adoption of the "heating" decree, which constitutes a separate breach of the ECT.

Under Swiss law, which is applicable as the law of the place of arbitration, the award is enforceable as soon as it has been notified, meaning as of 4 December 2014. On 16 December 2014, EDF International sent a letter to Hungary for the enforcement of the award.

On 20 January 2015, Hungary filed an application with the Federal Swiss Court challenging the award (EDF International filed a reply on 19 March 2015). These proceedings are expected to last a maximum of twelve months.

The proceedings issued before the Federal Swiss Court do not suspend the arbitration award.

EnBW

In February 2012, EDF International received an arbitration request filed with the International Chamber of Commerce by the German company Neckarpri GmbH, acquisition vehicle of the Baden-Württemberg State within the scope of the transfer by the EDF group of its shareholding in EnBW, signed on 6 December 2010 and finalised on 17 February 2011.

Neckarpri claims that the level of the price paid for the acquisition of the EDF group's shareholding in EnBW was excessive and thus constituted illegal State aid. On this basis, Neckarpri is mainly seeking the reimbursement of the amount allegedly paid in excess. This amount, initially estimated at €2 billion in the demand for arbitration, was re-estimated in July 2012 in an expert report ordered by Baden-Württemberg State at €834 million. In September 2012, Neckarpri confirmed the reduction of its main claim to this amount. Alternatively, Neckarpri requests the cancellation of the sale of the EDF group's shareholding in EnBW.

The arbitration proceedings are ongoing. The statements have been exchanged by Neckarpri (request) and EDF (answer), including the counterclaim made by EDF for damages for the losses incurred as a result of the proceedings, which EDF considers to be unfounded and unjustified. The award should be issued, after an additional exchange of statements between the parties, by the end of 2015.

20.5.3 Litigation having arisen after the closing of the 2014 financial year

None.

20.6 Significant change in the Company's financial or trading position

The significant events that took place between the end of the 2014 fiscal year and the date of filing of this reference document are mentioned in note 50 to the consolidated financial statements for the fiscal year ended 31 December 2014 as to events that took place before the financial statements were

drawn up by the Board of Directors on 11 February 2015, and, for events occurring after 11 February 2015, in section 12.1 ("Subsequent events") of this Reference Document.

1. Decree defining the terms and conditions, including prices, for renewable energy and cogeneration adopted by the Hungarian government on 28 November 2008, known as the "Cogen" decree.

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Additional information



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21.1 General information regarding the Company's capital

21.1.1 Share capital amount

On the filing date of this Reference Document, the details of the Company's share capital are as follows:

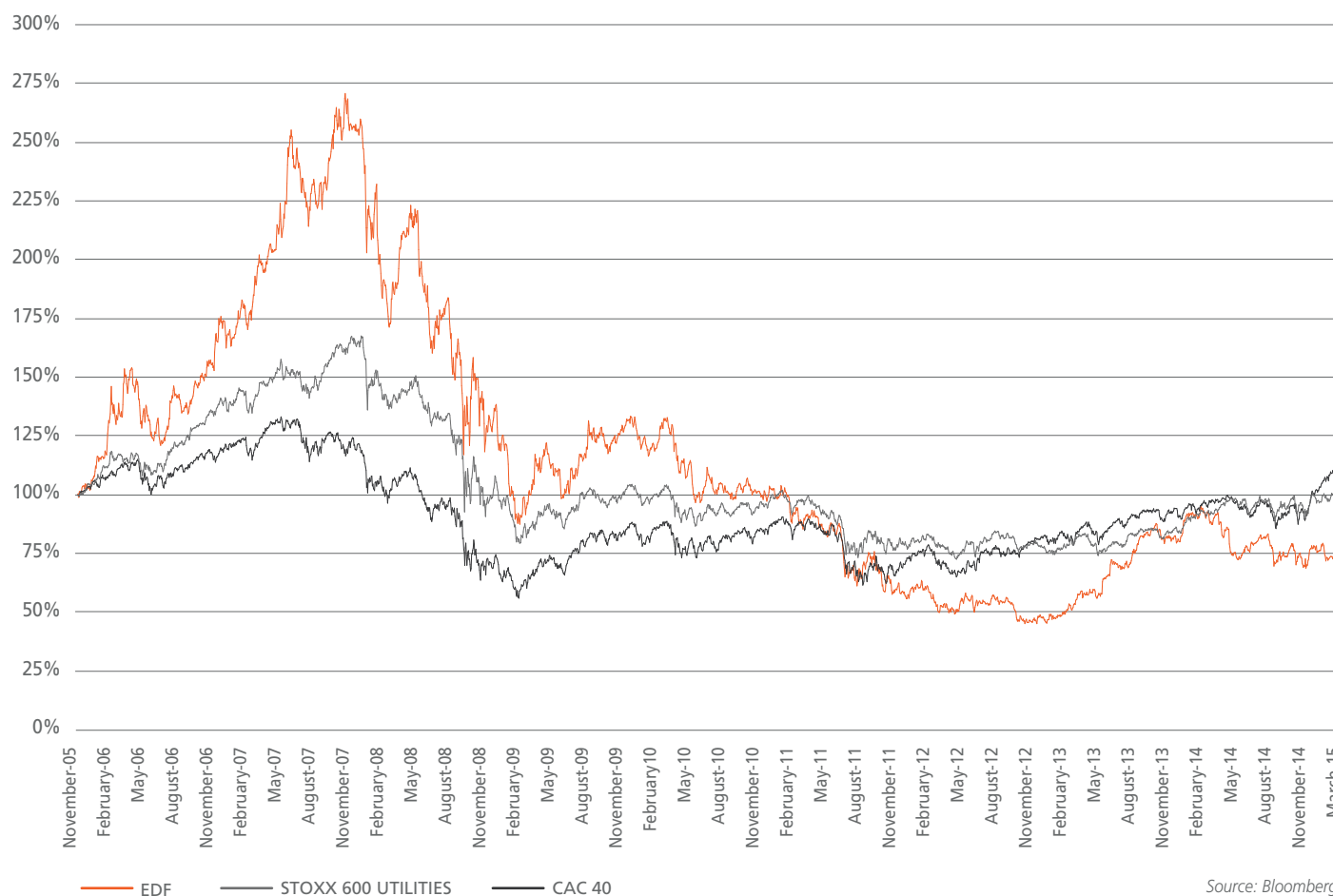
Number of shares issued	1,860,008,468
Par value	€0.50 per share
Type of shares issued	common shares
Share capital amount	€930,004,234

The share capital issued by the Company has been paid up in full. The Company has not issued or authorised any preference shares.

21.1.2 Market for the Company's shares

The Company's shares have been listed for trading by Euronext Paris (Compartment A) since 21 November 2005, under ISIN code FR 0010242511, Reuters code (EDF.PA) and Bloomberg code (EDF:FP).

The following graph shows the changes in the Company's share price between 21 November 2005 and 31 March 2015:



The following table shows the share price and volume of EDF shares traded between 1 January 2014 and 31 March 2015 on the Euronext Paris stock market:

	Transactions		Closing price (in euros)	
	(in millions of shares)	(in millions of euros ⁽¹⁾)	High	Low
2015				
March 2015	49.28	1,126.40	24.53	22.265
February 2015	32.78	784.86	24.70	23.405
January 2015	43.57	975.70	24.36	21.255
2014				
December 2014	31.18	725.76	24.655	21.735
November 2014	26.76	617.39	24.075	22.36
October 2014	45.30	1,047.62	25.98	21.555
September 2014	25.50	648.71	25.97	24.88
August 2014	28.18	684.21	24.86	23.475
July 2014	32.95	764.78	24.14	22.44
June 2014	49.91	1,247.25	26.91	23
May 2014	33.93	934.24	28.935	25.755
April 2014	30.11	861.30	29.73	27.455
March 2014	28.14	802.69	28.905	28.075
February 2014	28.50	770.29	28.815	24.90
January 2014	29.01	735.68	25.77	24.73

(1) The transactions expressed in millions of euros correspond to the monthly sum of the daily number of securities traded, multiplied by the market closing price on the same day (Source: Euronext).

2014

In 2014, EDF's share price decreased by 11.1%. The French CAC 40 index decreased by 0.5%, while the Euro Stoxx Utility sector index increased by 13.3%.

At 31 December 2014, the closing price of the EDF share was €22.825 (compared to €25.69 at 31 December 2013). Its highest closing price in 2014 was €29.73 on 2 April 2014, and its lowest closing price was €21.555 on 16 October 2014.

At 31 December 2014, EDF's market capitalisation totalled €42.45 billion (compared to €47.77 billion at 31 December 2013).

2015

Between the start of 2015 and 31 March inclusive, EDF's share price decreased by 2.1%, the CAC 40 index increased by 17.8% and the Euro Stoxx Utility (SX6P) sector index increased by 2.8%.

At 31 March 2015, the closing price of the EDF share was €22.34. Its lowest closing price in 2015, through 31 March inclusive, was €21.255 on 14 January 2015, and its highest closing price was €24.70 on 27 February 2015.

At 31 March 2015, EDF's market capitalisation totalled €41.55 billion.

21.1.3 Treasury shares and share buyback programme

21.1.3.1 Share buyback programme in force as of the filing date of the Reference Document (programme authorised by the Shareholders' Meeting of 15 May 2014)

After consulting the Board of Directors' report, and in accordance with the provisions of Articles L. 225-209 *et seq.* of the French Commercial Code, the seventh resolution adopted by the General Meeting held on 15 May 2014 authorised the Board of Directors to implement a programme to buy back Company shares, capped at a maximum of 10% of the Company's capital.

This resolution immediately terminated the unused portion of the authorisation to purchase Company shares, which was granted by the seventh resolution adopted by the General Meeting held on 30 May 2013.

The aims of the share buyback programme are as follows: to deliver shares when rights are exercised that are attached to securities which grant immediate or deferred access to shares by all means, as well as to perform all hedging transactions with respect to the obligations of EDF (or one of its subsidiaries) that are connected with such securities; to retain shares for future delivery in exchange or as payment in the context of external growth or contribution operations or mergers or demergers; to allocate shares to

EDF group employees, in particular, within the framework of any share purchase or bonus share award plans under the terms stipulated by law and, in particular, by Articles L. 225-197-1 *et seq.* of the French Commercial Code or Articles L. 3332-18 *et seq.* of the French Labour Code; to reduce the Company's capital by cancelling all or part of the shares purchased; and, finally, to ensure the liquidity of EDF shares via an investment services provider, under a liquidity agreement that is consistent with the Code of Ethics recognised by the *Autorité des marchés financiers* (French Market Authority).

Purchases of Company shares may involve any number of shares, provided that the number of shares that the Company purchases during the buyback programme does not exceed 10% of the shares that make up the Company's existing share capital on the date of the General Meeting, and provided that the number of shares that the Company holds at any given time does not exceed 10% of the shares that make up the Company's capital.

These shares may be acquired or transferred, under the conditions and within the limits, in particular in terms of volumes and price, provided for by the

laws and regulations in force on the date of the relevant transactions, by any means, such as on the market or over the counter, including via block trades (purchases or sales), by the use of derivative financial instruments or notes or securities that grant access to Company shares, or by implementing option strategies, under the conditions stipulated by the market authorities and at such times as determined by the Board of Directors or any person who is acting on the Board's behalf. This authorisation may not be used during public takeover bids.

The General Meeting has set at €45 the maximum purchase price per share¹ and at €2 billion the maximum amount of funds allocated to the implementation of the programme, and has granted the Board of Directors full powers, with the right of delegation, to use this authorisation.

The authorisation was granted for a maximum of 18 months as from the General Meeting of 15 May 2014, and will therefore end on 15 November 2015, unless the General Meeting of 19 May 2015 adopts the new programme described in paragraph 21.1.3.3 below.

21.1.3.2 Summary of the Company's trading in its own shares during the 2014 financial year

Number of treasury shares held at 31 December 2014	1,682,181
Percentage of capital held through treasury shares at 31 December 2014	0.0904%
Carrying value of the portfolio at 31 December 2014 ⁽¹⁾ (in euros)	40,829,919.34
Market value of the portfolio at 31 December 2014 ⁽²⁾ (in euros)	38,395,781.33
Number of shares cancelled over the past 24 months	0

(1) Valued at the purchase price.

(2) Based on the closing price at 31 December 2014, i.e. €22.825.

Liquidity contract

From 25 July 2012, EDF engaged Oddo Corporate Finance to implement a new liquidity contract that complies with the Charter of Ethics of the *Association française des marchés financiers* (AMAFI) as approved by the French market authority. The following assets were allocated to this liquidity contract: 1,350,000 EDF shares transferred from the former liquidity contract and €50 million in cash.

In 2014, EDF paid the following commissions on its liquidity contracts: €80,000 to Oddo Corporate Finance.

Number of shares bought and sold during the 2014 financial year

During the 2014 financial year, EDF purchased, within the framework of its liquidity contracts, a total of 17,349,008 treasury shares and sold 17,410,843 shares. The average share purchase price was €25.5508 and the average share sale price was €25.5534.

Portfolio breakdown at 31 December 2014

At 31 December 2014, the Company held a total of 1,682,181 treasury shares. 1,631,587 of these shares (or 0.0877% of its share capital) are held under the liquidity contract, and the remaining 50,594 shares (0.0027% of its share capital), were acquired on the market with a view to being allocated to employees within the framework of the "ACT 2007" bonus share award plan, but were not actually allocated.

On this date, EDF's subsidiaries did not hold any shares, either directly or indirectly.

Post-closing transactions

Between 1 January 2015 and 31 March 2015, the Company acquired 4,018,275 treasury shares for an average unit value of €22.887, and sold 3,717,324 shares for an average unit value of €23.064.

21.1.3.3 Description of the programme submitted to the Shareholders' Meeting of 19 May 2015 for authorisation

As stated above, the authorisation described in section 21.1.3.1 will end on 15 November 2015, unless the General Meeting of 19 May 2015 adopts the resolution described below.

In accordance with the draft resolution prepared by the Board of Directors' meeting of 10 March 2015, the Shareholders' Meeting of 19 May 2015 will be asked to authorise a share buyback programme, the characteristics of which are similar to the programme authorised by the General Meeting of 15 May 2014, in particular with regard to the objectives of this programme, the limits on the number of shares that can be bought back, as well as the maximum amount that may be allocated to the share buyback programme (€2 billion). The maximum purchase price is set at €45.

1. The Board of Directors may, however, adjust the aforementioned purchase price if premiums, reserves or profits are capitalised, which results either in an increase in the par value of the shares or the creation and award of bonus shares, and in the event of a stock split or reverse stock split, or any other transaction involving the shareholders' equity, in order to take into account the impact of these operations on share value.

21.1.4 Capital authorised but not issued

The following table presents a summary of the delegations of authority and authorisations to increase or reduce the share capital that are in force on the filing date of this Reference Document, which the Board of Directors was granted by the Combined Shareholders' Meeting of 15 May 2014, and the extent to which they have been used at 31 December 2014:

Status of the authorisations adopted by the Combined Shareholders' Meeting of 15 May 2014

Securities concerned/type of issue	Term ⁽¹⁾ of the authorisation and expiration	Maximum nominal increase or reduction in capital (in millions of euros)	Use made of the authorisations (in millions of euros)
Delegation of authority to the Board to increase the capital with maintenance of the shareholders' preferential subscription right			
Capital increase, all securities	26 months 15 July 2016	45 ⁽²⁾	none
Delegation of authority to the Board to increase the capital with cancellation of the shareholders' preferential subscription right			
Capital increase, all securities	26 months 15 July 2016	45 ⁽²⁾	none
Delegation of authority to the Board to make offers for private placements ⁽³⁾ with cancellation of the shareholders' preferential subscription right			
Capital increase, all securities	26 months 15 July 2016	45 ⁽²⁾ and 20% of the share capital per year	none
Authorisation for the Board to increase the number of securities to be issued in the event of a capital increase, with or without preferential subscription rights			
Capital increase, all securities	26 months 15 July 2016	15% of the amount of the initial issue ⁽²⁾	none
Delegation of authority to the Board to increase the capital through the capitalisation of reserves, profits, premiums or otherwise	26 months 15 July 2016	1,000	none
Delegation of authority to the Board to increase the capital as consideration for a public exchange bid initiated by the Company	26 months 15 July 2016	45 ⁽²⁾	none
Authorisation for the Board to increase the capital to compensate in-kind contributions ⁽⁴⁾	26 months 15 July 2016	10% of the Company capital up to a maximum of 45 ⁽²⁾	none
Authorisation for the Board to increase the capital for the benefit of savings plan members			
Issues reserved for the employees	26 months 15 July 2016	10	none
Authorisation for the Board to reduce the capital by cancelling treasury shares	26 months 15 July 2016	10% of the capital by 24-month periods	none

(1) As from 15 May 2014, the date of the Combined Shareholders' Meeting.

(2) The nominal aggregate limit on the share capital increase of €45 million provided for in the eighth resolution submitted to the General Meeting of 15 May 2014 applies to all capital increases, with the exception of capital increases through capitalisation of reserves, premiums, profits or otherwise and capital increases that are reserved for savings plan members.

(3) Offers governed by Article L. 411-2 II of the French Monetary and Financial Code, in that they are exclusively intended for persons who provide investment portfolio management services on behalf of third parties or qualified investors or a restricted circle of investors acting on their own behalf.

(4) Article L. 225-147 of the French Commercial Code.

21.1.5 Other equity securities

On the filing date of this Reference Document, other than the common shares of Company stock, there are no other securities that grant access to EDF's share capital, either directly or indirectly.

21.1.6 Non-equity securities

On 18 April 1996, EDF implemented a programme to issue debt securities in the form of Euro Medium Term Notes (the "EMTN" programme). Since this date, this programme has been regularly renewed.

On 13 January 2014, EDF launched a "senior" bond issue in an amount of 4,700 million in five tranches in US dollars:

- \$750 million, with a floating rate, 3-year bond;
- \$1,000 million, with a coupon of 1.15%, 3-year bond;
- \$1,250 million, with a coupon of 2.15%, 5-year bond;
- \$1,000 million, with a coupon of 4.875%, 30-year bond;
- \$700 million, with a coupon of 6%, 100-year bond.

On 17 January 2014, EDF also launched a bond issue in an amount of £1,350 million pounds sterling with a coupon of 6% as a 100-year bond.

Moreover, on 15 January 2014, EDF launched an issue in several tranches of securities subordinated for an unlimited period, in euros, US dollars and pounds sterling (a "hybrid" issue) in an amount of €4,000 million (equivalent in euros of the amounts in dollars, euros and pounds sterling):

- \$1,500 million with coupon of 5.625% and a redemption option after 10 years;
- €1,000 million with coupon of 4.125% and a redemption option after 8 years;
- €1,000 million with coupon of 5% and a redemption option after 12 years;
- £750 million with coupon of 5.875% and a redemption option after 15 years.

Owing to their characteristics and pursuant to IAS 32, these issues were recorded as shareholders' equity when the funds were received in an amount of €3,970 million (net of transaction costs).

EDF had also issued "standard" bonds in an amount of €1.4 billion with annual coupon of 2.25%, 7.5-year bonds, on 20 November 2013 (Green Bond issue). The funds raised during this "green" bond issue are to be used to finance future renewable energy projects only, conducted by EDF Énergies Nouvelles (see Appendix F).

These operations contribute to the financing of the Group's investment strategy and fall within the scope of the policy to extend the maturity of its debt.

A description of the Group's bond debt is provided in note 38 to the consolidated financial statements at 31 December 2014.

21.1.7 Changes in the share capital

Pursuant to the law of 9 August 2004, EDF was converted into a *société anonyme* (joint-stock company) on 20 November 2004 and its capital set at €8,129,000,000, divided into 1,625,800,000 shares with a par value of €5.

The EDF General Meeting of 31 August 2005 granted full powers to the EDF Board of Directors with a view to reducing the capital by a maximum amount of €7,316,100,000, via a reduction in the par value of shares from €5 to a minimum of €0.5. During its meeting of 27 October 2005, the Board of Directors decided to reduce the share capital by €7,316,100,000, via a €4.5 reduction in the par value of shares, which therefore decreased from €5 to €0.5. The share capital was thus reduced to €812,900,000.

During its 18 November 2005 meeting, the Board of Directors used the authority granted to it by the Combined Shareholders' Meeting of 10 October 2005, and approved the increases in the Company's share capital in connection with the Open Price Offering and the Guaranteed Global Placement that were performed when the Group was first listed on the stock market. As a result, the Board of Directors increased the share capital to €906,834,514.

On 20 December 2005, Calyon (now Crédit Agricole-CIB) paid EDF the price that corresponded to the exercise of 8,502,062 warrants that the EDF Board issued to Calyon by decision taken on 18 November 2005. Consequently, the share capital was increased to €911,085,545 divided into 1,822,171,090 common shares.

The payment of dividends in shares on 17 December 2009 resulted in an increase in the share capital of €13,347,786 following the issue of 26,695,572 shares. On 21 January 2010 the share capital was thus increased to €924,433,331 divided into 1,848,866,662 common shares.

On 24 June 2011, the capital was increased to €930,406,055 divided into 1,860,812,110 common shares, via the issue of new shares as consideration for the EDF Énergies Nouvelles shares contributed to EDF in exchange for the EDF shares tendered as part of the alternative simplified public purchase or exchange offer involving EDF Énergies Nouvelles shares, which was initiated by EDF (see section 6.4.1.2.2 ("EDF Énergies Nouvelles")). Then, on 28 September 2011, the capital was reduced to €924,433,331 divided into 1,848,866,662 common shares, via the cancellation of the shares purchased as part of the share buyback programme with a view to cancellation, in order to offset the dilution caused by the aforementioned offer.

On 29 July 2013, the capital was increased to €930,004,234, divided into 1,860,008,468 common shares. This increase of capital followed the decision of the EDF General Meeting of 30 May 2013 to offer each shareholder in the company the possibility to elect for the payment in new shares of a fraction of the remaining dividend to be distributed for the financial year ending 31 December 2012.

21.1.8 Information on the capital of every Group member that is the subject of a conditional or unconditional agreement

The acquisition and disposal commitments involving securities in subsidiaries are described in note 44 to the consolidated financial statements for the financial year ended 31 December 2014.

With the exception of these commitments to acquire and dispose of securities and any other commitments that may be described in section 6 ("Overview of activities") of this Reference Document, EDF has not made any promises to purchase or sell that would make it possible to acquire or dispose of, as applicable, all or part of the capital of the Company or of any of its subsidiaries, as defined in Article L. 233-1 of the French Commercial Code.

21.1.9 Pledge of the Company's securities

To the Company's knowledge, none of the Company's common shares that make up its share capital have been pledged.

21.2 Provisions of the articles of association

21.2.1 Corporate purpose

EDF's purpose, both in France and abroad is:

- to ensure the generation, transmission, distribution, supply and trading of electrical energy, and the import and export of said energy;
- to carry out the public service missions assigned to EDF by the laws and regulations, in particular by the French Energy Code, and Article L. 2224-31 of the French Local Authorities Code, as well as by concession agreements, and in particular the mission to develop and operate public electricity grids and the mission to supply energy at regulated rates, and to supply back-up power to electricity producers and customers with the aim of compensating for unforeseen supply failures, and electricity to eligible customers who cannot find a supplier, while contributing to the balanced development of electricity supply by reaching the goals defined by the multi-year generation investments programme defined by the Minister for Energy;
- more generally, to engage in any industrial, commercial or service activity, including research and engineering activities, in the field of energy, for all categories of customer;
- to enhance the value of all the personal and real property assets it holds or uses;
- to create, acquire, rent or lease under a business lease, all personal property, real property, businesses and clientele, to lease, install and operate all establishments, businesses and clientele, plants and workshops relating to any one of the aforementioned purposes;
- to obtain, acquire, operate or sell all processes and patents concerning the activities that are related to any of the aforementioned purposes;
- to take part, directly or indirectly, in all transactions that may be connected to any of the aforementioned purposes, by creating new companies or undertakings, by contributing, subscribing for or purchasing equity or ownership interests, stakes, or through mergers, partnerships or in any other way whatsoever; and
- more generally, to engage in all industrial, commercial, financial transactions, whether in personal or real property, that are directly or indirectly connected, in whole or in part, to any similar or related purposes or even to any purposes that may favour or develop the Company's business.

21.2.2 Financial year

Each financial year lasts for 12 months, starting on 1 January and ending on 31 December of each year.

21.2.3 Appropriation of profits under the articles of association

The distributable profit consists of the net profit for the financial year, less prior losses carried forward and the various deductions provided for by the law or the articles of association, plus any retained earnings carried forward.

The General Meeting may decide to distribute amounts that are deducted from the reserves that are freely available to it, but must expressly state the reserve items from which the deductions are made.

After approving the financial statements and confirming the existence of distributable amounts (which include the distributable profit and any amounts deducted from the reserves mentioned above), the General Meeting can decide to distribute all or part of such amounts to the shareholders

in the form of a dividend, allocate them to reserve items or carry them forward. The Board of Directors may also distribute interim dividends prior to the approval of the financial statements for the financial year, under the conditions laid down by law.

The General Meeting has the option of granting the shareholders a choice, for all or part of the dividend or interim dividend paid out, between payment in cash and payment in shares. Moreover, the General Meeting may decide to pay any dividend, interim dividend, reserve or premium that is distributed or any reduction in capital, through remittance of assets of the Company, including financial securities.

Any shareholder who can prove, at the close of a financial year, that he has held registered shares for at least two years and still holds such shares on the date of payment of the dividend declared for the said financial year, will be entitled to an increased dividend for the said registered shares, equal to 10% of the dividend paid for the other shares, including in cases where the dividend is paid in shares. The number of shares eligible for the 10% increased dividend may not exceed 0.5% of the share capital at the close of the previous financial year, for any one shareholder. The first increased dividend was paid in 2014 for the 2013 financial year (see section 20.4.2 ("Dividend policy, increased dividend")).

The terms governing the payment of distributions decided by the General Meeting, and the ex-dividend date of the distributed shares will be fixed by the General Meeting or, failing this, by the Board of Directors, in accordance with the applicable statutory provisions. If the amount of the non-cash distributions to which a shareholder is entitled does not correspond to a whole number of shares, the said number will be rounded down to the next whole number and a balancing cash payment made to the shareholder or, if requested by the General Meeting, rounded up to the next whole number, with the difference being paid in cash by the relevant shareholder.

21.2.4 Rights attached to shares

Each share entitles its holder to a portion of the Company's profit and corporate assets that is proportional to the percentage of the capital that the share represents. Moreover, each share confers a voting right and the right to be represented at Shareholders' Meeting in accordance with restrictions coming from law, regulations and articles of association.

On the filing date of this Reference Document, EDF has only issued a single class of shares.

Ownership of a share automatically entails acceptance of the articles of association and decisions adopted by General Meetings.

Pursuant to Article L. 225-123 of the French Commercial Code, as amended by Act no. 2014-384 of 29 March 2014, all fully paid-up shares that have been held in registered form for at least two years in the name of the same shareholder will automatically entitle their holder to double voting rights. These provisions will take effect on 3 April 2016. Indeed, the Board of Directors decided not to propose to the General Meeting to amend the Company's articles of association so as to prevent the implementation of such double voting right in accordance with Article L. 225-123 of the French Commercial Code.

Shareholders are only liable for losses within the limit of their contributions.

Whenever it is necessary to hold more than one share in order to exercise any right whatsoever, in the event of an exchange, reverse stock split or allocation of shares, or due to a capital increase or reduction, a merger or any other corporate transaction, owners of single shares or numbers of shares below that required may only exercise such right if they take personal responsibility for consolidating or, if necessary, purchasing or selling the requisite number of shares.

Shareholders can choose to hold shares in registered or bearer form, subject to compliance with the laws and regulations.

Shares may be registered with an intermediary under the conditions provided for in Articles L. 228-1 *et seq.* of the French Commercial Code. Intermediaries must declare their status as intermediaries who hold shares for a third party, under the conditions provided for in the laws and regulations. These provisions are also applicable to the other securities issued by the Company.

Under the conditions provided for by the law and regulations in force, the Company is entitled to request from the central custodian of financial instruments, at any time and provided that it pays the required consideration, as applicable, the name or corporate name, the nationality, the year of birth or the year of incorporation, and the address of the holders of bearer shares that grant an immediate or deferred right to vote at its own Shareholders' Meetings, as well as the quantity of securities held by each of these shareholders and, where applicable, any restrictions to which the securities may be subject. On the basis of the list provided by such custodian, the Company has the option of asking the persons or entities listed that the Company believes may be registered on behalf of third parties, for the information stated above concerning the owners of the securities.

For registered shares that grant immediate or deferred access to the capital, intermediaries that are registered under the conditions provided for in Article L. 228-1 of the French Commercial Code mentioned above, are required, within ten business days as from the request made by the Company or its agent, which may be made at any time, to disclose the identity of the owners of said securities.

21.2.5 Assignment and transfer of shares

Shares can be traded without restriction, subject to compliance with the provisions of the law and regulations. They are registered in an account and are transmitted by transfer from one account to another.

21.2.6 Changes to the articles of association, the capital and the rights attached to votes

All changes to the articles of association, the capital or the voting rights attached to the securities that make up the capital are subject to the requirements of law, as the articles of association contain no specific provisions regarding such matters.

21.2.7 Shareholders' Meetings

21.2.7.1 Convening notices to meetings

General Meetings are convened by the Board of Directors or, in the last resort, by the Statutory Auditors or by any person empowered to do so. Meetings are held at the registered office or at any other place stated in the convening notice.

21.2.7.2 Participation in meetings and exercise of voting rights

General Meetings may be held by video conference or telecommunication means that allow for shareholders to be identified. The conditions governing the type and use of such means are specified in Articles R. 225-97 to R. 225-99 of the French Commercial Code. In such cases, shareholders who participate in the meeting by such means are deemed to be present for the calculation of the quorum and majority, under the conditions specified by law.

All shareholders can attend General Meetings, regardless of the number of shares they own.

Shareholders can choose between one of the three following methods of participation: attend the meeting in person by requesting an admission card, grant authorisation (a proxy) to the Chairman of the General Meeting or to any individual or legal entity of their choice (Article L. 225-106 of the French Commercial Code), or vote remotely.

In accordance with Article R. 225-85 of the French Commercial Code, proof of the right to participate in a General Meeting is obtained by the registration of the securities in an account in the name of the shareholder or of the intermediary that is registered on the shareholder's behalf (pursuant to paragraph 7 of Article L. 228-1 of the French Commercial Code), on the second day prior to the Meeting, i.e. at midnight, Paris time, either in the registered share accounts held by the Company (or its authorised representative), or in the bearer share accounts held by the accredited intermediary.

In accordance with Article R. 225-85 of the French Commercial Code, the registration of the securities in the bearer share accounts held by financial intermediaries is evidenced by a shareholding certificate issued by these intermediaries, where applicable by electronic means under the conditions provided for in Article R. 225-61 of the French Commercial Code, as an appendix to the postal voting form, the voting proxy or admission card request made on behalf of a shareholder or on behalf of a shareholder who is represented by the registered intermediary.

All shareholders may grant a proxy to any individual or legal entity of their choice in order to be represented at a General Meeting. Proxies, as well as any proxy revocations, must be evidenced in writing and notified to the Company. Proxies may be revoked in the same forms as those required for the designation of the proxy holder, including by electronic means if need be. The owners of shares that are properly registered in the name of an intermediary under the conditions provided for in Article L. 228-1 of the French Commercial Code may be represented by a registered intermediary under the conditions provided for in said article.

EDF gives its shareholders the possibility of voting online, prior to the General Meeting.

Certain shares may carry double voting rights in accordance with the conditions laid down in Act no. 2014-384 of 29 March 2014 (see section 21.2.4 ("Rights attached to shares")).

21.2.7.3 Requests for the inclusion of items or draft resolutions on the agenda and written questions to the Board of Directors

Requests for the inclusion of items or draft resolutions on the General Meeting agenda made by shareholders who meet the conditions provided for in Article R. 225-71 of the French Commercial Code must be received by the Company by the twenty-fifth day prior to the date of the General Meeting at the latest, but may not be sent more than 20 calendar days after the publication of the prior meeting notice, in accordance with Article R. 225-73 of the French Commercial Code.

Requests for the inclusion of items on the agenda must be substantiated. The wording of the draft resolutions must accompany requests for the inclusion of draft resolutions, and a brief explanation of the reasons may also be given.

On the date of the request, the authors must provide proof of owning or representing the percentage of the capital required by Article R. 225-71 of the French Commercial Code. Requests must be accompanied by proof of entry in an account. Agenda items or draft resolutions that are proposed for inclusion are only reviewed if the authors of the request submit a new certificate proving the registration of the securities in the same accounts on the second day prior to the meeting.

Each shareholder also has the option of sending the Board of Directors written questions of his or her choice. The Board of Directors will answer the questions during the meeting, or, in accordance with Article L. 225-108 of the French Commercial Code, the answer is deemed to have been given provided that it is published on the Company's website.

Written questions must be sent to the Company by registered letter with return receipt or by electronic telecommunication at the latest on the fourth business day prior to the date of the General Meeting. In accordance with Article R. 225-84 of the French Commercial Code, these questions must be accompanied by a shareholding certificate, in order to be taken into account.

21.2.7.4 Temporary disposals during meeting periods

In accordance with the provisions of Article L. 225-126 of the French Commercial Code, any person who holds, alone or together with other persons, in respect of one or more temporary disposals or any transaction that grants the right to or requires the resale or return of said shares to the assignor, a number of shares that represents more than 0.5% of the voting rights in a listed company, must inform the Company and the French Market Authority no later than midnight, Paris time, on the second business day prior to the General Meeting, and when the contract that arranges this transaction remains in force on this date, said information must include the total number of shares held on a temporary basis. In addition to the number of shares acquired, this declaration must contain the identity of the assignor, the date and the expiration of the contract that organises the transaction and, as applicable, the voting agreement.

If no information is provided to the company and the French Market Authority, the shares thus acquired are automatically stripped of voting rights for the Shareholders' Meeting concerned and for all Shareholders' Meetings that are held until such shares are resold or returned.

Moreover, the company representative, a shareholder or the French Market Authority may petition the Commercial Court to order the complete or partial suspension, for a maximum of five years, of the voting rights of any shareholder who fails to provide such information, regardless of whether or not the voting borrowing shareholder has exercised his or her voting rights.

21.2.8 Provisions of law or articles of association that delay acquisition of control over the Company

Pursuant to Article L. 111-67 of the French Energy Code and the EDF articles of association, changes in share capital cannot result in the French State's shareholding falling below the statutory 70% threshold.

Certain shares may carry double voting rights in accordance with the conditions laid down in Act no. 2014-384 of 29 March 2014 (see section 21.2.4 ("Rights attached to shares")).

With the exception of the foregoing, no other provision specifically aims to prevent or delay the takeover of the Company by a third party.

21.2.9 Threshold disclosure requirements

Pursuant to the provisions of the French Commercial Code, any individual or legal entity, acting alone or together with other persons or entities, that acquires a number of shares that represents more than 5%, 10%, 15%, 20%, 25%, 30%, 33.3%, 50%, 66.6%, 90% or 95% of the capital or voting rights must inform the Company, no later than prior to the close of business on the fourth trading day following the day on which the shareholding threshold is exceeded, of the total number of shares or voting rights owned (Article R. 233-1 of the French Commercial Code). Moreover, such individuals or legal entities must also inform the AMF of these acquisitions no later than prior to the close of business on the fourth trading day after exceeding the shareholding threshold (Article 223-14 of the AMF General Regulation). The AMF publishes threshold crossings that are notified to it.

Since 2012, the cash payoff derivative and having a similar economic effect to detention of underlying shares, are taken into account for this calculation of the threshold crossing (article L. 233-9 (I) (4) *bis* of the French Commercial Code). Pursuant to AMF General Regulations, holders of these financial instruments must take into account the number of shares that carry this type of agreement and financial instruments for the calculation of their participation in the framework of their reporting obligation, and must precise, when they declare threshold crossing, their intention as to the outcome of this type of agreements and financial instruments they benefitate.

Within the same timeframes and under the same conditions, this information must also be disclosed when the capital or voting rights fall below the thresholds stated above.

Absent a proper declaration, the shares that exceed the fraction which should have been declared in accordance with the provisions of law mentioned above will be stripped of voting rights for all Shareholders' Meetings that are held during a two-year period following the date on which the effective disclosure is made.

Moreover, the Company's articles of association provide that any individual or legal entity, acting alone or jointly, who acquires or ceases to hold, directly or indirectly, a number of shares that corresponds to 0.5% of the Company's capital or voting rights, or a multiple of said fraction, is required to inform the Company, by registered letter with return receipt requested, at the latest before the close of business on the fourth trading day following the crossing of such threshold, of the total number of shares, voting rights or equity interests held. The Company's articles of association state that the rules for the calculation and assimilation of shareholdings applicable to the statutory thresholds, as well as the obligations to provide information on financial instruments that are not assimilated to shares, apply to the disclosure requirements set out in the articles of association for thresholds provided in.

Failure to comply with the above provisions is punishable by the loss of voting rights for the shares that exceed the fraction that should have been declared, for all Shareholders' Meetings that are held until the expiration of a two-year period following the date of the effective threshold disclosure provided for above, if the application of this penalty is requested by one or more shareholders who hold at least 1% of the Company's capital. Such requests are recorded in the minutes of General Meetings.



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Material contracts

With the exception of contracts described in chapters 6 and 9 of this reference document and in the notes to the consolidated financial statements for the year ended 31 December 2014, and particularly those listed below, during the two years preceding the date of filing of this document, EDF has not concluded any material contracts other than those entered into in the ordinary course of business:

- agreement between EDF and EPH finalised on 27 November 2013 regarding the sale to EPH of a 49% stake in Stredoslovenska Energetika a.s. (SSE) (see chapter 5 of this reference document and note 3.7.1 to the consolidated financial statements for the year ended 31 December 2014);
- agreement with Exelon regarding CENG finalised on 1st April 2014 (see section 9.2.2.2.2 ("Final agreement with Exelon concerning CENG") and section 6.3.3.2.2.1 ("Existing Nuclear business unit: Constellation Energy Nuclear Group (CENG)"));
- agreement between EDF and Veolia Environnement finalised on 25 July 2014 regarding the taking over by the EDF group of all of the Dalkia's activities in France (see section 6.4.1.3.1.4 ("Termination of the partnership with Veolia Environnement") and note 3.1 to the consolidated financial statements for the year ended 31 December 2014);
- finalisation of the agreement between Edison, EDF Énergies Nouvelles and F2i for the creation of a new operator in the renewable energy sector announced on 6 November 2014 (see sections 6.3.2.3.1 ("Electricity generation business"), 9.2.2.2.6 ("finalisation of the agreement between Edison, EDF Énergies Nouvelles and F2i ") and note 3.2.2 to the consolidated financial statements for the year ended 31 December 2014).



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Third party information, statement by experts and declaration of interests

None.



24 Documents available to the public

The Company's press releases, annual reports, including historical financial information relating to the Company and any related updates filed with the AMF, are available on the Company's website: <http://finance.edf.com/finance-41326.html>. Copies of these documents may also be obtained at the Company's registered office at 22-30, avenue de Wagram in Paris, France.

All of the regulated information published by the Company, pursuant to Article 221-1 *et seq.*, in the AMF's General Regulation, is available at the following address: <http://finance.edf.com/actualites-et-publications/publications/information-reglementee/sommaire-44493.html>.

Finally, the documents and information referred to in Article R. 225-73-1 of the French Energy Code, are available on EDF web site in the section dedicated to Shareholders' Meetings.



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Information on holdings

For information about the companies in which EDF holds an interest that could have a significant effect on an assessment of its holdings, its financial position or financial results, see Chapters 7 (“Organisational chart”) and 6 (“Overview of activities”) as well as note 51 to the consolidated financial statements for the year ended 31 December 2014.

Glossary

ANDRA (*Agence nationale pour la gestion des déchets radioactifs*)

In France, radioactive waste is managed by the National Agency for Radioactive Waste Management (“ANDRA”), a public industrial and commercial institution created under the French law of 30 December 1991. To this end, the agency, which is overseen by the Ministries of Industry, Research and the Environment, commissioned the storage centres in the French department of Aube for the long-term management of short-lived waste.

AP913 Procedure

Standard procedure created by the INPO (Institute of Nuclear Power Operations) to verify equipment reliability and implement equipment health checks. This procedure consists of classifying components according to the consequences of their failure. It enables the development of a maintenance strategy that is adapted to the criticality of each component.

Architect-Assembler

For EDF, the architect-assembler has control over:

- the design and operation of its power plants;
- the organisation of development projects;
- the schedule for completion and costs of construction;
- relations with the French Nuclear Safety Authority; and
- the integration of feedback from operational experience.

EDF's role as architect-assembler ensures control over its industrial policy with respect to the design, construction and operation of its fleet of power plants.

ASN (*Autorité de sûreté nucléaire*)

On behalf of the Government, the Nuclear Safety Authority (“ASN”) supervises nuclear safety and radiation protection in France to protect workers, patients, the public and the environment from the risks related to the use of nuclear power. It is responsible in particular for the external oversight of nuclear facilities in France. The ASN is an independent administrative authority comprised of over 300 people. At the national level, the ASN is represented by the Directorate-General for Nuclear Safety and Radiation Protection (“DGSNR”).

Assembly/Fuel

Nuclear fuel is in the form of an assembly made up of an array of 264 fuel rods, bound together by a rigid structure made of tubes and grids. Each fuel rod consists of a water-tight zirconium tube into which uranium oxide pellets are piled, constituting the fuel. The assemblies are loaded side by side into the reactor vessel – 205 assemblies are required for a 1,500MW reactor – to make up the core of the reactor. During operation, these assemblies are crossed by bottom to top with primary water which heats on contact and carries this energy to the steam generators.

Balancing Mechanism

Created by RTE on 1 April 2003, the balancing mechanism allows it to use power reserves that can be mobilised in the event of an imbalance between supply and demand.

Becquerel (Bq)

International legal unit for measuring radioactivity. The Becquerel (Bq) is equal to one disintegration per second. The activity represented by this unit is so low that multiples of it are used: the MBq (megabecquerel or million Becquerels) and the GBq (gigabecquerel or billion Becquerels).

Caisse nationale des IEG

Administrative management body created in 2004; since 2005, it has been responsible for the retirement and other benefits system for employees in the electricity and gas industry (including risks of old age, work accidents, occupational diseases, disability and death and recovery of contributions owed by employers and employees, etc.).

Clean Development Mechanism ("CDM")	<p>The CDM is a mechanism defined by the Kyoto Protocol based on projects to reduce emissions or capture greenhouse gases ("GHS") and sustainable development plans in developing countries. This mechanism provides that any public or private entity in a country on Schedule I (industrialised countries) which makes investments in such projects in a country on Schedule II (developing countries) acquires carbon credits in return. These credits can then be used by those Parties to meet their emission quotas, or they can be sold on the carbon market in International Emissions Trading ("IET") or the EU emissions quota trading system ("EU ETS").</p> <p>The CDM is placed under the authority of the Conference of the Parties acting as a meeting of the parties to the Kyoto Protocol, supervised by an Executive Board, the powers of which were defined by the 2001 Marrakech agreements.</p>
Cogeneration	<p>Generation technique for combined electricity and heat production. The advantage of cogeneration is the ability to capture the heat produced by the fuel whereas in traditional electricity generation this heat is lost. This process also allows the same facility to meet the heating (hot water or steam) and electricity needs of both industrial and local authority customers. This system improves the energy efficiency of the generation process and reduces fuel use by an average of 20%.</p>
Combined-Cycle Gas	<p>The most recent technology for generating electricity in a natural gas-fired plant. A combined cycle is made up of one or more combustion turbines and a steam turbine allowing for an improved yield. The syngas is routed to the combustion turbine, which generates electricity and very hot exhaust gases (effluents). The heat from the exhaust gases is recovered by a boiler, thus producing steam. Part of the steam is then recovered by the steam turbine to generate electricity.</p>
Congestion	<p>Situation in which an interconnection linking the national transmission grids cannot absorb all of the physical flows resulting from international exchanges required by market operators due to a shortage of capacity in the interconnection and/or the national transmission grids involved.</p>
CRE (Commission de Régulation de l'Énergie)	<p>The French Energy Regulatory Commission ("CRE") was created on 30 March 2000 to ensure the proper functioning of the electricity and gas market. The CRE, an independent body, regulates the opening of the French energy market. It ensures that all of the generators and eligible customers have non-discriminatory access to the network. Within its jurisdiction, this body supervises and authorises, settles any disputes and, if required, imposes sanctions. For a detailed description of its powers, see section 6.5.3.2 ("French legislation: Energy Code").</p>
Disruption	<p>Voluntary reduction of electrical power by a customer, in exchange for compensation. It is called "diffused" when it is due to the aggregation of small consumption sites.</p>
Distribution network	<p>Downstream of the transmission network, medium- and low-voltage distribution networks serve end-users (residential, local authorities, SMEs, SMLs, etc.).</p>
DNN	<p>Non-Nationalised Distributor.</p>
Downstream	<p>See "Fuel Cycle" and "Downstream Asset Portfolio".</p>
Downstream Asset Portfolio	<p>All contractual energy disposal commitments involving operators or end users.</p>
EaR (Earning at Risk)	<p>A financial indicator providing a statistical measure of risk of maximum potential loss of a company's income versus its budgeted income in the event of unfavorable market movements over a certain period of time and within a given confidence interval.</p>
EBITDA	<p>Earnings before interest, taxes, depreciation and amortisation, corresponding to gross operating profit.</p>
Effects of changes in the scope of consolidation	<p>Effects of changes in the scope of consolidation, occurring during a given year, including acquisitions, disposals and changes in the Group's scope of consolidation.</p>
Effects of exchange rate variations	<p>The impact of exchange rates recognised in the income statement for a financial year, reflects the fluctuations in average exchange rates between the euro and another operational currency in use by the subsidiaries within the Group's scope of consolidation.</p>
Electric and Gas Industries (IEG) status	<p>Special status instituted in 1946 applicable to active and retired (inactive) electricity and gas industry employees in France, which differs from ordinary law in the following areas:</p> <ul style="list-style-type: none"> ■ retirement benefits; ■ collective agreements (salary scale, working hours and organisation); ■ employee representative institutions; ■ social activities.

Electricity supply	<p>Electricity demand can be broken down into four types of consumption:</p> <ul style="list-style-type: none"> ■ the “basic” (or “ribbon”) supply of electricity, which is generated and consumed throughout the year; ■ “semi-basic” supply is the electricity generated and consumed over the winter period; ■ “peak” supply corresponds to periods of the year when electricity generation or supply is in heavy demand; ■ “lace” supply is a complement to “ribbon” supply.
Electricity Value Chain	The electricity value chain includes both deregulated activities (generation and supply) and regulated activities (transmission and distribution).
Enrichment	Process to increase the fissile content of an element. In its natural state uranium is 0.7% uranium 235 (fissile) and 99.3% uranium 238 (non fissile). To enable its efficient use in a pressurised water reactor, it is enriched with uranium 235 whose proportion is increased to around 4%.
Enriched uranium	Uranium, whose isotope 235 content, the only fissile material, has been increased from its low natural level (0.7%) to approximately 4% for pressurised water reactor fuel.
Entity Responsible for Balance	Entities with which RTE signs a contract for the financing of shortfalls between forecast and actual consumption and the production of a portfolio of users brought together by the balance responsible entity which plays a role of insurer covering the potential losses arising from the many differences between over- and under-supply.
ERU (enriched reprocessed uranium)	To be used in a reactor, reprocessed uranium (RepU), even if containing more fissile uranium than in its natural state, must be further enriched. It is therefore called re-enriched uranium (ERU).
EPR	European Pressurised Reactor. The latest generation of reactors currently under construction (known as generation 3), it is the result of Franco-German cooperation, and offers advanced safety, environmental and technical performance.
Fluorination (conversion)	Also called “conversion”, fluorination allows for the purification of uranium compounds and their transformation into uranium hexafluoride (UF ₆), allowing their enrichment using current techniques.
FNCCR	French National Federation of Licensors and Local Utilities (<i>Fédération nationale des collectivités concédantes et régies</i>).
Fuel	See Assembly/Fuel.
Fuel Cycle	<p>The nuclear fuel cycle encompasses all industrial operations in France and abroad which enable the supply of the fuel to generate energy in a reactor, then to unload and process it. The cycle can be broken down into three stages:</p> <ul style="list-style-type: none"> ■ upstream: the processing of concentrates from uranium ore, the conversion, enrichment and production of fuel (which takes more than two years); ■ the core of the cycle corresponding to the use of fuel in the reactor: receipt, loading, operation and discharging (which takes three to five years); ■ downstream: pool storage, reprocessing of spent fuel in reactors of recoverable material, vitrification of highly radioactive waste, then temporary storage of the waste before storage.
Generic Hazard	In the nuclear field, an unpredictable technical incident common to a set of nuclear plants.
Greenhouse gases	Gas that retains a portion of the solar radiation in the atmosphere and for which an increase in emissions due to human activity (man-made emissions) causes an increase in the earth's average temperature and plays an important role in climate change. The Kyoto Protocol covers the seven following principal greenhouse gases: carbon dioxide (CO ₂), methane (CH ₄), nitrogen protoxide (N ₂ O), hydrofluorocarbons (HFC), perfluorated hydrocarbons (PFC), sulfurhexafluoride (SF ₆) and, since 2013, nitrogen trifluoride (NF ₃).
Gross energies margin	Gross energies margin is calculated based on accounting data from the income statement and represents the margin on energy, fuel and transmission costs generated by energy (i.e., electricity and gas) sales.
IAEA	International Atomic Energy Agency based in Vienna (Austria).
Interconnection	Electricity transmission infrastructure that allows for exchanges of energy between different countries, by connecting the transmission network of one country to that of a neighbouring country.
Intermediate Storage	Intermediate stage in the process of managing nuclear waste. It involves placing waste packages in a facility to ensure, for a given period of time, their isolation from contact with man and the environment with the intention of retrieving them for a further stage in the waste management process. Intermediate storage facilities are designed, built and managed by the producers of such waste (EDF, AREVA NC (formerly COGEMA) and CEA) and are close to areas where waste is conditioned.

IPP	An Independent Power Producer, whose operations are not state-regulated. IPP can only refer to projects and/or units developed outside France.
Kyoto Protocol	An international protocol adopted in 1997 to combat climate change. It was ratified in 2002 by the European Union and went into effect on 16 February 2005. Its aim is to reduce greenhouse gas emissions.
LDC	French Local Distribution Companies. Local Distribution Companies sell and deliver electrical energy to end users located in their exclusive service area.
LNG (Liquefied Natural Gas)	Natural gas turned into liquid form by reducing its temperature to -162°C allowing for a reduction by 600 in its volume.
Metering	A system allowing for the recording, at a given network connection point, of the volumes of electricity transmitted or distributed (power, frequency, active and reactive energy).
Midstream	All assets of the gas business, allowing for its availability, transportation and management. These might be infrastructures (gas pipelines, storage facilities, LNG terminals, etc.) or contractual (rights relating to pre-determined capacity, procurement contracts, etc.). The midstream segment includes the trading and negotiating activities.
MOX (Mixed Oxides)	Nuclear fuel based on a mixture of uranium oxides (natural or depleted) and plutonium.
MW/MWh	<p>The MWh is the energy unit generated by a facility and is equal to the facilities' power, expressed in MW, multiplied by the duration of operations in hours.</p> <p>1MW = 1,000 kilowatts = 1 million watts</p> <p>1MWh = 1MW generated in one hour = 1 megawatthour</p> <p>1GW = 1,000MW = 1 billion watts</p> <p>1TW = 1,000GW</p>
MWh cumac	The MWh cumac is the certificate energy unit of counting which corresponds to the cumulative energy savings aggregated on the operations' lifetime.
National Quota Allocation Plan	This plan defines the total quantity of greenhouse gas emission quotas that the French government plans to grant for the quotas exchange system for each multi-year period (NAP 1: 2005-2007, NAP 2: 2008-2012) and the allocation method used to allocate quotas to the industrial facilities in question.
Non-interconnected zones	Zones in France which are not connected to metropolitan France (Corsica and overseas departments).
Nuclear safety	Nuclear safety includes all of the technical, organisational and human measures which are intended to prevent accident risks and to limit the effects of an accident, and which are taken at every stage of the life of a nuclear power plant (from design to operation and finally to decommissioning).
Nuclear tranche	Electrical production unit consisting of a nuclear boiler and a turbo-alternator generator. A nuclear tranche essentially consists of its reactor type and the power of its turbo-alternator generator. EDF nuclear plants include two or four tranches, and occasionally six.
PCB	Polychlorobiphenyls.
PCT	Polychloroterphenyls.
Plant availability	Fraction of power available, out of theoretical maximum energy, counting only technical non-availability. The availability coefficient (Kd) is defined as the ratio between annual actual generation capacity (or amount producible annually) and maximum theoretical generation capacity, where maximum theoretical generation capacity = installed capacity × 8,760h. The Kd, which counts only technical non-availability, i.e., scheduled shutdowns, unplanned outages and testing periods, characterises a plant's industrial performance. For EDF's nuclear fleet in France, the maximum theoretical generation capacity is of 553TWh (63.1GW × 8,760h).
Plutonium (Pu)	Element with the atomic number of 94 (number of neutrons) and no naturally occurring isotopes (elements whose atoms possess the same number of electrons and protons – thus the same chemical properties – but a different number of neutrons). Plutonium 239, a fissile isotope, is produced in nuclear reactors from uranium 238.

Post-employment benefits	<p>Specific benefits acquired due to electricity and gas industry (“IEG”) status, in addition to ordinary French law, recognized according to IAS 19 and related primarily to:</p> <ul style="list-style-type: none"> ■ specific supplementary retirement benefits; ■ end-of-service awards and exceptional supplementary retirement benefits; ■ energy benefits in kind (gas and electricity) and compensatory payments for education expenses; ■ asbestos-related benefits and annuities for accidents at work or occupational diseases for inactive agents; ■ exceptional leave benefits; ■ bereavement benefits. <p>These specific benefits are not covered by ordinary law arrangements but through an asset fund (insurance policies) and provisions recognised by EDF.</p>
PPA	A power purchase agreement. This type of long-term contract generally forms the basis for an IPP project (see above).
Producible hydropower generation	Maximum energy that hydropower facilities may produce using contributions under normal hydraulicity conditions. However, generation from hydroelectric facilities does vary, sometimes markedly, from one year to the next depending on hydraulicity (rainfall and snowfall). In dry years, the generation index may vary by 20% or more from the standard level.
Profit at Risk (“PaR”)	The Profit at Risk (“PaR”) is, for a given confidence interval, the maximum decline of the expected value of a portfolio (“MtM”) on a yearly time horizon.
Radiation protection (Dosimetry - Dose)	At a power plant, ionising radiation sources are numerous: the fuel itself, equipment activated by neutron flux (particularly that which is close to the core, such as tanks or lids) and particles from corrosion of the primary circuit of reactors and carried by the primary fluid. The level of exposure of a person is quantified by the dose equivalent in Sieverts (Sv). The total dose equivalents, called dosimetry and expressed in man-sieverts, is used as an indicator of dose received by all participating persons. The mobilisation of ground players has allowed a continuous improvement of performance on the protection of employees against the effects of ionising radiation.
Remote metering	Remote metering of the quantity of electrical power injected into and drawn from the network.
Renewable energies	Energies for which production does not require extinction of the initial resource. They include hydro, wind, solar, marine (the energy produced by marine waves and currents), geothermal (energy derived from the heat below the earth’s magma) energies, and bio-mass (energy derived from living matter, particularly wood and organic waste). They often include energy from the incineration of household or industrial waste.
Reprocessing	Reactor burnt fuel reprocessing aimed at separating materials that can be recycled (uranium and plutonium) from final waste.
RepU (reprocessed uranium)	Reprocessed uranium (“RepU”), uranium derived from spent fuel reprocessing, differs from natural uranium as it contains slightly more uranium 235 and more uranium isotopes. It is recyclable and RepU fuel assembly refuelling is commonly used in reactors.
RPD	French public distribution network.
RPT	French public transmission network.
Series	In the nuclear field, a series of plants means a set of nuclear plants with identical generation capacity. EDF’s PWR model is divided into three series of available electrical power: the 900-MW series (34 tranches of approximately 900MW each), the 1,300-MW series (20 tranches) and the 1,450-MW series (four tranches).
STEP	An energy transfer pumping station (“STEP”) is a plant with two reservoirs, one higher and one lower, connected via pumps to push the water up and turbines to produce energy.
Storage	Storage consists in placing packages of radioactive waste in a facility, ensuring their long-term management, i.e., under safe conditions allowing for long-term risk control.
Storage center	Low- or medium-level short-lived radioactive waste from nuclear plants, from La Hague or Centraco facilities, are sent to ANDRA’s Soulaines storage center in the French department of Aube, which has been operational since 1992. This centre has a capacity of 1,000,000m ³ , and acceptance capacity of approximately 60 years. Very low-level short-lived radioactive waste is sent to ANDRA’s Morvilliers storage center (also in the Aube). This center was commissioned in October 2003 and has an operating life of about 30 years.

Systems services	Systems Services are services provided to users (consumers or electricity producers) through the joint action of the electricity transmission network operator RTE and the producers. They are intended to regulate frequency and voltage in order to maintain the balance between electric consumption and production at all times. They are created by RTE from elementary contributions from producers, i.e. primary and secondary reserves provided to RTE. RTE remunerates the producers for these auxiliary services before re-invoicing these services via the tariff to use the network under the rules defined by the Union for the Coordination of Transmission of Electricity ("UCTE").
Therms (th)	One therm is equivalent to 1,163kWh or 4,186 million joules.
Transmission network	Network providing for the transmission of electrical power at high and very high voltages from the generating sites to the distribution networks or industrial sites directly connected to it; this includes the major interconnection transmission network (400,000 volts and 225,000 volts) and the regional distribution networks (225,000 volts, 150,000 volts, 90,000 volts and 63,000 volts).
Transmission Tariff Contribution ("CTA")	Contribution applied to consumer bills that covers specific benefits constituted before 2005 concerning employees who work in transport and distribution. The CTA ends in 2025 and annual payments will be made to the National Fund for the Electricity and Gas Industries ("CNIEG").
Tritium ($_3\text{H}$)	Hydrogen isotope, which emits beta rays, present in pressurised water reactor effluents.
Ultracentrifugation	This process involves very high speed spinning in a vacuum of a cylinder containing uranium hexafluoride (UF_6). Through the effect of the centrifugal force, the heavier molecules ($_{238}\text{U}$) aggregate at the periphery while the lighter ones ($_{235}\text{U}$) move towards the centre, creating an isotopic separation effect.
UO_2	Natural uranium, fluorinated and then enriched. Uranium oxide, a particularly stable chemical form of uranium used as fissile material in fuel assemblies of pressurised water reactors.
Upstream	See "Fuel Cycle" and "Upstream Asset Portfolio".
Upstream Asset Portfolio	All assets that contribute to electrical power availability. These might be infrastructures (production plants, etc.) or their contractual equivalent long-term contracts, equity interests, contracts granting rights to a portion of the energy produced.
Uranium (U)	<p>In its natural state, uranium is a mix containing three main isotopes (elements whose atoms have the same number of electrons and protons, thus the same chemical properties, but a different number of neutrons):</p> <ul style="list-style-type: none"> ■ uranium 238, 99.3% fertile; ■ uranium 235, 0.7% fissile; ■ uranium 234. <p>Uranium 235 is the only natural fissile isotope, a quality which justifies its use as an energy source.</p>
VaR (Value at Risk)	Financial indicator giving the statistical measure of potential maximum risk of loss of economic value (market value or mark to market) to a portfolio of cash flows in the event of unfavourable market movements over a certain period of time and a given confidence interval.
Vitrification	Process of immobilisation in a glass structure concentrated solutions of high-level waste by mixing at high temperature with glass paste.
Waste	<p>The nuclear generation of 1MWh of electricity (equivalent to the monthly consumption of two households) produces around 11g of total waste across all categories.</p> <p>Short-lived waste represents more than 90% of the total, but contains only 0.1% of the radioactivity of waste. Accordingly, based on their level of radioactivity, they are separated into two sub-categories: low-level waste and very-low-level waste.</p> <p>Long-lived medium and high-level waste are produced in low quantity (less than 10% of the total quantity), but they contain almost all of the radioactivity of the waste (99.9%).</p>

Appendix



EDF – Mario Fourmy ▲ Tobias Smith ▼



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Introduction

Pursuant to Article L. 225-37 of the French Commercial Code, this report sets out:

- the corporate governance environment (the composition of the Board of Directors, the conditions under which the Board of Directors' work is prepared and performed, and the limits to the Chairman and Chief Executive Officer's powers), the principles and rules laid down by the Board of Directors to determine the corporate officers' compensation and the provisions governing shareholders' participation to EDF Shareholders' Meetings (see § 1);
- as well as the internal control and risk management procedures implemented within the EDF group (see § 2).

For the purposes of this report, the terms "EDF" or "Company" refer to Électricité de France SA.

The terms "EDF group" or "Group" refer to:

- the EDF corporation;
- its subsidiaries in the regulated sector: the "regulated subsidiaries":
 - RTE, which is responsible for managing the public network for the transmission of electricity. Under Articles L. 111-2 to L. 111-46 of the French Energy Code, and pursuant to the Third Directive of 13 July 2009, this management must be independent with regard to the parent company,
 - ERDF, which is responsible for managing the public network for the distribution of electricity, for which the French Energy Code also contains provisions on independent management (Articles L. 111-57 to L. 111-66).

These statutory provisions introduce limits (which are specific to each of these subsidiaries but more restrictive for RTE) on the extent to which the parent company can control their activities;

- its other directly or indirectly held subsidiaries, over which it has majority control, in or outside France: "the controlled subsidiaries";
- its subsidiaries that are jointly-controlled: "the jointly-controlled subsidiaries"¹;
- its minority subsidiaries or direct or indirect holdings: "the shareholdings".

Note 1: the scope for the Group's consolidated financial statements is detailed in note 51 of the notes to the consolidated financial statements for the financial year ended 31 December 2014 (see chapter 20 of the 2014 Reference Document).

Note 2: the information that is specific to the subsidiaries RTE and Électricité de Strasbourg is available in the reports produced by these two companies pursuant to Article L. 225-37 of the French Commercial Code. The practices and terms for exercising control may differ depending on the specific area of activity of the entities mentioned above, and will be specified as necessary throughout this report.

Note 3: The information contained in this report was established as of 31 December 2014, except as otherwise stated. Additional information and updates are available in the EDF 2014 Reference Document, to which the report will be appended.

1 Corporate governance

1.1 Corporate Governance Code

EDF adheres to the consolidated AFEP-MEDEF Code, revised in June 2013, which is the Corporate Governance Code to which the Company refers, in accordance with article L. 225-37 of the French Commercial Code², subject to the specific laws and regulations applicable to EDF.

These specific laws and regulations, which result from EDF's status as a state-owned company and in particular the application to the Company of order 2014-948 of 20 August 2014 and its implementing texts, French

law 83-675 of 26 July 1983 relating to the democratisation of the public sector and decree 53-707 of 9 August 1953, are specified in this reference document and relate specifically to the terms and conditions for the setting of the compensation of the Chairman and Chief Executive Officer (see section 15.1.1.1 ("Terms and conditions for the setting of compensation of the Chairman and Chief Executive Officer")), or otherwise the method of executive management (see section 16.2.1.4 ("Method of Executive Management – Appointment and powers of the Chairman and Chief Executive Officer"))).

1. Within the meaning of this report, as of 31 December 2014, the term "jointly-controlled affiliate" includes affiliates and joint ventures (primarily CENG, Estag, Fuzhou and Sloe) and joint activities (Friedeburger Speicherbetriebsgesellschaft GmbH (Crystal)). See chapter 20 of the 2014 Reference Document.

2. After having considered the AFEP-MEDEF recommendations of October 2008 on the compensation of corporate officers and directors of companies, the Company's Board of Directors met as soon as 17 December 2008 to approve these recommendations, deeming that they are in line with EDF's corporate governance approach, and that they had already been implemented by the Company.

In addition to the aforementioned specific laws and regulations, the table below sets out the AFEP-MEDEF code recommendations that are not applied by the Company and the related explanations:

Issue addressed by AFEP-MEDEF code recommendation	Company's position	Explanation	Relevant section of reference document
Members of the Board of Directors	EDF's Board of Directors has eighteen members, including eleven directors appointed by the Shareholders' Meeting (five appointed on recommendation from the French state) and one representative of the French state. It also includes one third directors elected by the employees.	This membership of the Board is the result of the application to the Company of order 2014-948 of 20 August 2014.	See sections 14.1.1 ("Members of the Board of Directors") and 16.2.1.1 ("Members of the Board").
Staggered re-election of the Board of Directors	The re-election of the whole Board of Directors is no longer compulsory in accordance with the order of 20 August 2014.	As the re-election of the whole Board of Directors is no longer compulsory, the Company recently modified its articles of association accordingly at the Shareholders' Meeting of 21 November 2014, which will enable it to consider the staggering of the re-election of the members of the Board.	See section 16.2.1.2 ("Term of office of directors")
Terms and conditions for the appointment of the Chairman and Chief Executive Officer of EDF	The Chairman and Chief Executive Officer of EDF is appointed by decree of the President of the Republic of France on recommendation from the Board of Directors, after interviewing the candidates and based on the opinion of the permanent committees of the French National Assembly and Senate	The terms and conditions for the appointment of EDF's Chairman & Chief Executive Officer are based on the order of 20 August 2014 and article 13 of the French Constitution	See section 16.2.1.4 ("Method of Executive Management – Appointment and powers of the Chairman and Chief Executive Officer").
Holding of Company shares by directors	The Company's articles of association and the Board's internal rules of procedures do not specify that directors must possess a relatively high number of shares in relation to the directors' fees paid	In accordance with the law of 26 July 1983 the directors representing the employees receive no directors' fees. Furthermore, the directors' fees payable to members recommended by the French state who are civil servants are paid to the French state budget. Representatives of the French state who are not civil servants can only receive 30% of the directors' fees due to them, the remainder being paid to the French state budget. Finally, the Chairman of the Board of Directors does not receive any directors' fees. For these reasons, a specific rule applicable only to directors receiving directors' fees has not been adopted. Each director must also act in the Company's best interests, irrespective of the number of Company shares they hold	See section 14.4 ("Shareholding by directors and trading in EDF securities by corporate officers and executives").
Rules for the distribution of the directors' fees	A significant but not "preponderant" share of the directors' fees is dependent upon actual attendance by the directors at the Board and Committee meetings	Special distribution rules were adopted, which in particular take account of the level of responsibilities and the time spent by the directors on their duties. Though the variable portion of the compensation paid in directors' fees is not preponderant, the Company considers that it is nonetheless significant and appropriate since the total budget for directors' fees is divided between a fixed portion and a variable portion (each 50% of the total budget) distributed as follows: (i) the fixed portion is shared equally between the eligible directors, and (ii) the variable portion is distributed between these directors by applying a variable coefficient depending on the type of meetings and the specific positions held by each of them	See section 15.1.2 ("Total compensation of directors")

1.2 Composition and functioning of the Board of Directors

The internal rules of procedure of the Board of Directors set the principles of its functioning and the terms and conditions according to which the Board and its specialised Committees fulfil their duties. It also defines the role and powers of the Chairman and Chief Executive Officer.

At its meeting held on 10 December 2014, the Board of Directors updated its internal rules of procedure to bring them into line with the modifications to the articles of association and the legislative and regulatory changes (see § 1.1).

Between 1 January 2014 and the Shareholders' Meeting of 21 November 2014, the following changes were made to the composition of the Board of Directors:

First name, surname	College	Date of appointment	To replace
Mrs. Sidonie DELALANDE	Director elected by the employees	1 February 2014	Mr. Philippe MAÏSSA
Mrs. Colette LEWINER	Director appointed by the Shareholders' Meeting	11 April 2014	Mrs. Mireille FAUGÈRE
Mr. Régis TURRINI	Director representing the State	15 September 2014	Mr. David AZÉMA
Mr. Christian MASSET	Director representing the State	26 September 2014	Mr. Pierre SELLAL

The Shareholders' Meeting held on 21 November 2014 modified the Company's articles of association in order to implement the new provisions of order no. 2014-948 of 20 August 2014 relating to governance and trading in shares of state-owned companies. In accordance with this order, EDF is now administered by a Board of Directors consisting of three to eighteen members, including members appointed by the Shareholders' Meeting, if applicable on recommendation from the French state in accordance with article 6 of the order, a French state representative chosen by the Minister for the Economy from the civil service in accordance with article 4 of the order, and one third employee representatives elected in accordance with the provisions of the law of 26 July 1983.

In accordance with the option provided by the order of 20 August 2014, the Shareholders' Meeting held on 21 November 2014 modified the Company's articles of association and reduced the term of office of the directors to 4 years. As an exception, the articles of association state that the first term of office of the directors representing the employees that came into effect after the Shareholders' Meeting held on 21 November 2014 shall be 5 years and that the term of office of the directors appointed by the Shareholders' Meeting held on 21 November 2014 shall expire at the end of the Shareholders' Meeting called to approve the financial statements for the fiscal year ending 31 December 2018.

The conditions under which directors may be removed from office are described in section 16.2.1.2 of the 2014 Reference Document.

As of the date of this report, the Board of Directors comprises:

- eleven directors appointed by the Shareholders' Meeting: Mr. Jean-Bernard Lévy, the Chairman and Chief Executive Officer, Mrs. Marie-Christine Lepetit, Colette Lewiner and Laurence Parisot, Messrs. Olivier Appert, Philippe Crouzet, Bruno Lafont, Bruno Léchevin, Gérard Magnin, Christian Masset and Philippe Varin;
- one director representing the French State: Mr. Régis Turrini¹;

1.2.1 Composition of the Board of Directors

Until the Shareholders' Meeting of 21 November 2014 and in accordance with article 6 of law no. 83-675 of 26 July 1983 relating to the democratization of the public sector, the Company's Board of Directors consisted of eighteen members divided into three categories: six directors were appointed by the Shareholders' Meeting, six directors representing the French state were appointed by decree and finally six directors were elected by the employees.

- six directors elected by the employees: Mrs. Christine Chabauty and Marie-Hélène Meyling, Messrs. Jacky Chorin, Jean-Paul Rignac, Christian Taxil and Maxime Villota.

Amongst the eleven directors appointed or re-appointed at the Meeting of 21 November 2014, five were on recommendation from the French state in accordance with the order of 20 August 2014: Mrs. Marie-Christine Lepetit and Messrs. Olivier Appert, Bruno Léchevin, Gérard Magnin and Christian Masset.

The list of the directors' personal details is provided in section 14.1 of the 2014 Reference Document

Since the Shareholders' Meeting of 21 November 2014 and up through the date of this report, no changes have been made to the composition of the Board of Directors.

Pursuant to law no. 2011-103 of 27 January 2011 relating to the balanced representation of women and men on Boards of Directors and Supervisory Boards and equal access to employment, EDF, in its capacity as a listed *société anonyme* and state-owned company, is subject to the rules applicable to listed companies and to the rules applicable to state-owned companies.

In accordance with the aforementioned law of 27 January 2011, as of the date of this report, the EDF Board of Directors has five female members, two of whom were elected by the employees, i.e. 27.8% of all Board members are women and 25% of the Board members used to calculate this percentage in accordance with the AFEP-MEDEF Code are women (i.e. excluding directors who represent the employees).

The Government Commissioner² and the Head of the French State's Economic and Financial Verification Mission for EDF³, as well as the Secretary of the Central Works Council attend the meetings of the Board of Directors in an advisory capacity.

1. Appointed by Order of the Minister for Finances and Public Accounts and the Minister for the Economy, Industry and Digital Affairs of 21 November 2014, published in the Journal officiel de la République française of 22 November 2014.

2. Decree no. 2012-406 of 23 March 2012; Order of 13 November 2014.

3. In accordance with the Decree no. 55-733 of 26 May 1955, this assignment covers the French State's Economic and Financial Verification Mission for EDF and may include extended verification procedures.

1.2.2 Obligations and duties of directors

The internal rules of procedure of the Board of Directors state that its members are subject to obligations such as: acting in the corporate interest of the Company, informing the Board of situations of conflict of interest, and refraining from voting on any decision in which there might be a conflict of interest, fulfilling the obligation of confidentiality and complying with the EDF Stock Exchange Code of Ethics.

Members of the Board and the Chairman and Chief Executive Officer are required to immediately inform the Board of any agreement entered into by the Company in which they hold a direct or indirect interest, or which might be entered into through an intermediary.

Each director receives a directors' guide, which is regularly updated and specifically contains the following documents: the Company's articles of association, the internal rules of procedure of the Board of Directors and its Committees, the Stock Exchange Ethics Code (see section 16.5 ("Stock Exchange Ethics Code")), Group Ethics Code, Group corporate social Responsibility commitments and the AFEP-MEDEF listed company code of corporate governance.

1.2.3 Executive Management method, powers and responsibilities of the Chairman and Chief Executive Officer

In accordance with the option provided for in article 18 of the order of 20 August 2014, the EDF's articles of association state that the Chairman of the Board of Directors is the Executive Manager of the Company and holds the title of Chairman and Chief Executive Officer. The "non-separated" executive management structure is therefore set out in the Company's articles of association. The Board's internal rules of procedure, and in particular the limitations it applies to the powers of the Chief Executive Officer, ensure a balance between the Chairman and Chief Executive Officer and the Board of Directors, whilst preserving the flexibility, effectiveness and responsiveness necessary in the administration and management of the Company.

EDF's Chairman and Chief Executive Officer is appointed by decree of the President of the Republic of France, on recommendation from the Board of Directors. They can be dismissed by decree in accordance with article 20 of the order of 20 August 2014.

In accordance with the provisions of article 13 of the French Constitution, the Chair is appointed based on the candidates' interviews and the opinion of the permanent committees of the French National Assembly and Senate. Mr. Jean-Bernard Lévy was appointed following this process as Chairman and Chief Executive Officer of EDF by decree of 27 November 2014.

In case of vacation of the office of Chairman and Chief Executive Officer, article 21 of the order of 20 August 2014 states that the French state can appoint someone to the role temporarily¹ until the appointment of the new Chairman and Chief Executive Officer.

Subject to the specific legal provisions governing public sector companies and the powers specifically reserved by law or by the articles of association to the Board of Directors or to Shareholders' Meetings, and the limits to the powers of the Chairman and Chief Executive Officer provided for by the internal rules of procedure of the Board of Directors as internal rules (see § 1.2.4), the Chairman and Chief Executive Officer is vested with the most extensive powers to act on behalf of the Company under all circumstances, within the limits of the corporate purpose. The Chairman and Chief Executive Officer organises and supervises the work of the Board of Directors and reports to the Shareholders' Meeting. He oversees the proper running of the Company's bodies and, in particular, ensures that the directors are in a position to fulfil their duties.

1.2.4 Powers and duties of the Board of Directors

In accordance with the law, the Board of Directors sets the strategies for the Company's activities and oversees their implementation. It defines the major strategic, economic, financial and technological objectives for the Company and the Group. Subject to powers expressly attributed to the Shareholders' Meetings and as limited by the Company's corporate purpose, the Board may consider any question relating to the proper running of the Company and acts, through its deliberations, on any such issue.

In accordance with its internal rules of procedure, the Board of Directors alone is competent to authorise the following transactions:

- transactions of external or internal growth or disposals involving a financial exposure for the Company exceeding €200 million; this threshold falls to €50 million for acquisitions not in line with the Company's strategic objectives;
- real estate transactions exceeding €200 million;
- certain financial transactions, whenever their amount exceeds a value set each year by special decision of the Board; for the 2014 fiscal year, the Board set: (i) at €1.5 billion, the total authorised budget for sureties, endorsements or guarantees (the Chairman and Chief Executive Officer reports to the Board on any transaction of this kind that exceeds €100 million, granted on behalf of the Company or by a company controlled by the Company) and (ii) at €5 billion, the individual unit amount of certain financial transactions. For 2015, the Board of Directors decided to maintain the same authorisation limits;
- contracts (supplies, work or services with or without financial commitment) involving amounts, including any necessary subsequent amendments signed during the same year, equal to or exceeding €200 million, or between €100 million and €200 million if these contracts relate to a new strategic direction or a new business line for the Group;
- long-term contracts for the purchase or sale of energy, CO₂ emission credits and quotas, by the Company or by a company it exclusively controls, for annual volumes or amounts in excess of: 10TWh for electricity, 20TWh for gas (detailed information must also be provided on long-term gas purchase or sale agreements greater than 5TWh and less than 20TWh at the meeting of the Board of Directors following their signing) and €250 million for coal and carbon dioxide;
- strategies relating to upstream and downstream operations of the nuclear fuel cycle;
- operations involving the transfer of obligations relating to decommissioning or downstream processes of the nuclear fuel cycle.

The Board of Directors sets the framework of the policy for the constitution, management and risk management of assets for hedging EDF's nuclear commitments, specifically ruling on asset/liability management, asset allocation strategy, asset quality and the method of selecting any financial intermediaries. If the Nuclear Commitments Monitoring Committee issues a negative opinion on a plan for investment in unlisted assets for dedicated assets, the Board of Directors has sole authority to authorise the aforementioned plan (see § 1.4.2.2). It set limits on market, counterparty and liquidity risks.

Finally, in accordance with law 2011-103 of 27 January 2011 relating to the balanced representation of women and men on Boards of Directors and Supervisory Boards² and equal access to employment, the Board of Directors must annually approve the Company's policy with regard to equal access to employment and equal pay.

1. Mr. Jean-Bernard Lévy was appointed temporary Chairman & Chief Executive Officer from 23 November 2014, by ministerial decisions of 21 November 2014.

2. See section 16.2.1 of the 2014 Reference Document.

1.2.5 Evaluation of directors' independence

The AFEP-MEDEF Corporate Governance Code, revised in June 2013, recommends that, in controlled companies, the proportion of independent directors should be at least one third of the Board of Directors and specifies that directors representing employees are not taken into account to calculate the proportion of independent directors.

Given the specific legal framework applicable to the Company, the Board of Directors has, out of a total of eighteen members, one representative of the French state who cannot meet the independence criteria defined by the AFEP-MEDEF code, as well as six directors representing the employees who are not taken into account to calculate the proportion of independent directors. Likewise, the Chairman and Chief Executive Officer in his capacity as Chairman and Chief Executive Officer cannot be considered as independent as regards the criteria defined by the AFEP-MEDEF code in such matters.

At the joint meetings of 21 November 2014 and 10 December 2014, the Ethics Committee and the Appointments and Remunerations Committee examined the individual situation of the directors whose appointment was proposed by the Board of Directors to the Shareholders' Meeting. After the issuing of an opinion by these Committees, the Board of Directors proceeded, at its meeting of 21 November 2014, to assess the independence of the directors as regards the criteria defined by the AFEP-MEDEF corporate governance code and classified Mrs. Colette Lewiner and Laurence Parisot as well as Messrs. Philippe Crouzet and Bruno Lafont as independent directors, as the Board deemed that these directors have no relations with the Company, its Group or its Management that might compromise the exercise of their freedom of judgment. In particular, the Board of Directors examined the existence of any business ties that might exist between directors and the Company and their significance, and noted the absence of significant business ties regarding each of the directors that it classified as independent. After approval from these Committees, the Board of Directors, at its meeting of 10 December 2014 considered that Mr. Philippe Varin could not be considered as an independent director since his appointment as Chairman of the Board of AREVA in January 2015.

On the date of this document, the Company's Board of Directors therefore features four independent directors out of the twelve taken into account to make the calculation in accordance with the revised AFEP-MEDEF code, i.e. a proportion of independent directors of one third, in accordance with the recommendations of the code.

1.2.6 Evaluation of the functioning of the Board of Directors

In accordance with the provisions of the AFEP-MEDEF code, the Board's internal rules of procedure state that the Ethics Committee will report annually on the functioning of the Board of Directors and propose areas for improvement. Once a year, therefore, the Board dedicates one item on its agenda to this evaluation and holds a discussion on its functioning in order to improve its efficiency and ensure that important issues are appropriately prepared and discussed by the Board. Furthermore, every three years, this evaluation is conducted by an external consultant under the supervision of the Ethics Committee.

The last evaluation conducted by an external consultant was in 2013. In 2014, the annual evaluation was conducted internally, before the Board's re-appointment, using a questionnaire, approved by the Board of Directors on recommendation from the Ethics Committee. The results examined by the Ethics Committee on 13 November 2014 and presented to the Board of Directors on 10 December 2014 show that the directors are generally satisfied with the functioning of the Board. They consider that the number of meetings and their periodicity are consistent with the Company's needs. They particularly appreciate the extensiveness of the discussions of both the Board and its specialised Committees, the exhaustiveness of the information with which they are provided and also the quality of the reports presented by the Company. They underline the usefulness of the various informative documents issued to them (Directors' guide, "News" document, monthly media analysis, etc).

1.2.7 Information and training of directors

Under the terms of the Board's internal rules of procedure, it periodically receives information on the financial, treasury and commitments position of the Company and the Group, as well as information such as the financial balance sheet for agreements approved by the Company for the purchase of nuclear fuels, a performance review of the Company's principal subsidiaries on the occasion of the presentation of the annual and semi-annual financial statements, sales policy, purchasing and subcontracting policy and human resources policy.

A document reviewing the Group's current major sectors of business and the market trends, as well as the economic, financial and institutional context is prepared for each meeting of the Board of Directors.

The principal events relating to the Company occurring between two meetings of the Board as well as the monitoring of the decisions taken by the Board of Directors are reported to the directors.

The directors can add to this information by meeting with the principal executives of the Company or Group.

In addition, information meetings are organised on complex matters or issues of major strategic importance, together with any training requested by members. Accordingly, the directors elected by the employees can receive a training in business management and on the Company's specific industrial and operational characteristics, which can be extended to other directors.

1.3 Activities of the Board of Directors in 2014

The Board of Directors meets as often as the interest of the Company requires, in accordance with applicable legislative and regulatory provisions.

Over the 2014 fiscal year, the Board of Directors met eleven times and thirty-four Committee meetings were held to prepare for these meetings.

Board meetings lasted an average of two hours and ten minutes, allowing for an in-depth review and discussion of the items on the agenda.

The average attendance rate for directors at the meetings of the Board was 86.7% for 2014.

In 2014, the Board of Directors examined and authorised, in addition to various items relating to the Company's regular business, issues such as the agreement between EDF and Veolia Environnement under the terms of which EDF took over all the activities of the Dalkia group in France (including Citelum), whereas the activities of Dalkia International were taken over by Veolia Environnement; the changes to the amendment to the industrial partnership contract between EDF and the Exeltium consortium; the EDF equal access to employment and equal pay policy; the launch by ERDF of the programme for the rollout of the first wave of smart meters (Linky); the development by EDF Energy of a pilot project with a view to the rollout of smart meters in the United Kingdom; the acquisition of a 51% interest by EDF Norte Fluminense in Companhia Energetica Sinop (CES), the contractor of the concession contract for the construction of the 400MW hydraulic power plant in Mato Grosso (Brazil); the agreement for the restructuring of the Group's renewable activities in Italy between Edison, EDF Energies Nouvelles and F2i; EDF Énergies Nouvelles development projects (Chile, United States).

The Board of Directors was also informed of the signing of the amendment to the Exeltium contract and a partnership between EDF and Amundi relating to the financing of the energy transition, the approval by the European Commission of the agreements on the nuclear reactor development project (Hinkley Point C) in the United Kingdom as well as the signing of the agreement for the acquisition by Gazprom of EDF International's 15% interest in South Stream Transport BV.

1.4 Board of Directors' Committees

To perform its duties, the Board of Directors has created five Committees to examine and prepare certain projects before they are presented to the whole Board. These specialised committees are: the Audit Committee, the Nuclear Commitments Monitoring Committee, the Strategy Committee, the Ethics Committee and the Appointments & Remunerations Committee.

The composition, functioning and duties of the Committees are governed by the internal rules of procedure of the Board of Directors. The Committees include at least three directors chosen by the Board of Directors, which appoints the Chair of each Committee. The Company's articles of association state that the Committees created by the Board include at least one director representing the employees.

On the date of this document, the Chairs of the Board Committees were as follows:

- Mr. Jean-Bernard Lévy for the Strategy Committee;
- Mrs. Lepetit for the Audit Committee;
- Mr. Philippe Crouzet for the Nuclear Commitments Monitoring Committee;
- Mrs. Colette Lewiner for the Ethics Committee;
- Mr. Bruno Lafont for the Appointments and Remunerations Committee.

The composition of each Committee is described below.

The Government Commissioner and the Head of the French State General Economic and Financial Supervisory Mission to the Company attend the meetings of these Committees in a consultative capacity.

The work of the Committees is organised within a program prepared for the year. Meetings are recorded in the form of written minutes and reports, which are submitted by the Committee Chair to the Board of Directors. Their length allows for an in-depth review and discussion of the items on the agenda.

The Board's internal rules of procedure provide for a minimum of three working days between the meeting of the Board of Directors for which the agenda features examination of the items examined by a Committee and the meeting of said Committee. It also states that each Committee may employ external experts as required.

1.4.1 Audit Committee

1.4.1.1 Functioning and composition

The Audit Committee fulfils the remits conferred on it by Article L. 823-19 of the French Commercial Code.

This article provides that at least one member of the Audit Committee must have specific financial or accounting skills, and be independent on the basis of criteria that are specified and made public by the Board of Directors.

More generally, all the Audit Committee members must contribute to the quality of Committee discussions and work through their experience and skills.

The Audit Committee is chaired by Mrs. Marie-Christine Lepetit, director appointed by the Shareholders' Meeting. The other members of the Committee are Mrs. Colette Lewiner and Laurence Parisot and Mr. Philippe Crouzet, directors appointed by the Shareholders' Meeting, as well as Mrs. Marie-Hélène Meyling, Messrs. Jacky Chorin, Christian Taxil and Maxime Villota, directors elected by the employees. It therefore includes three independent directors out of the four taken into account to calculate

the proportion of independent directors (therefore excluding directors representing the employees), i.e. a proportion of three-quarters for a minimum of two-thirds recommended by the AFEP-MEDEF code.

This Committee does not include any executive director, in accordance with the recommendations of the AFEP-MEDEF code.

At the joint meeting of 10 December 2014, the Ethics Committee and the Appointments & Remunerations Committee examined the situation of Mrs. Colette Lewiner and Laurence Parisot and Mr. Philippe Crouzet and issued a notice to the Board of Directors. The Board of Directors, meeting on 10 December 2014, noted that Mrs. Colette Lewiner and Laurence Parisot and Mr. Philippe Crouzet have specific skills in financial and accounting matters according to the criteria recommended by the French Financial Markets Authority (AMF) in its report on the Audit Committee dated 22 July 2010. On 21 November 2014, the Board of Directors also classified as independent directors Mrs. Colette Lewiner and Laurence Parisot and Mr. Philippe Crouzet. They therefore meet the criteria of both expertise and independence in accordance with the article L. 823-19 of the French Commercial Code (see § 1.2.5).

The Audit Committee met six times in 2014. The average attendance rate of its members was 89%. Board meetings lasted an average of two hours and twenty minutes, allowing for an in-depth review and discussion of the items on the agenda.

1.4.1.2 Duties

The Committee reviews and gives its opinion, before examination by the Board, on:

- the Company's financial position;
- the medium-term plan and the budget;
- the draft financial reports prepared by the Corporate Finance Division (Company financial statements and the Group's consolidated financial statements and management report);
- the monitoring of the Company's risks (specifically, the review every six months¹ of the Group's risk mapping and risk management methods);
- auditing and internal control: organisation, deployment and evaluation of the system of internal controls, annual audit program, main findings and the resulting corrective actions, monitoring of their implementation, as well as the draft annual report by the Chairman of the Board of Directors on corporate governance, internal control and risk management procedures;
- insurance strategy;
- the choice of Statutory Auditors, ensuring their independence, and the fees paid to them;
- the financial aspects of external growth or disposal activities that are particularly significant (see § 1.2.4);
- changes to the analysts' perception of the Group;
- the Group energy market risk policy and counterparty default risk policy.

The examination of the financial statements by the Committee is accompanied by a presentation by the Statutory Auditors underlining the basis for the preparation of the financial statements, the mandatorily-applicable accounting frame of reference, the audit approach implemented and the conclusions of their auditing work.

For the purposes of its work, the Committee regularly meets with the Statutory Auditors, Executive Management, Corporate Finance Management, Group Risk Management and Internal Audit Management.

1. A complete analysis of the mapping is performed once a year at the end of the year; it is presented to the Audit Committee during the first half of the following year; an update is presented in the second half of the year.

1.4.1.3 Activities in 2014

In 2014, the Audit Committee reviewed, in particular, the half-yearly and annual financial statements, as well as the related press releases, the Statutory Auditors' presentation of the main points of their findings concerning the annual and half-yearly financial statements, the press releases on the quarterly sales figures, the risk mapping and risk control methods, the internal audit summary reports and the audit programme. The off-balance sheet commitments were also presented to the Committee.

As required, the Committee may call on outside experts. It did not use this option during the 2014 fiscal year.

1.4.2 Nuclear Commitments Monitoring Committee

1.4.2.1 Functioning and composition

The Nuclear Commitments Monitoring Committee (NCMC), created by article 9 of the Decree of 23 February 2007, is chaired by Mr. Philippe Crouzet, an independent director appointed by the Shareholders' Meeting. The other members of the Committee are Mrs. Marie-Christine Lepetit and Mr. Olivier Appert, directors appointed by the Shareholders' Meeting, as well as Mrs. Marie-Hélène Meyling and Mr. Maxime Villota, directors elected by the employees.

The Nuclear Commitments Monitoring Committee met five times in 2014. The average attendance rate of its members was 100%. The Committee's meetings lasted an average of one hour and forty minutes, allowing for an in-depth review and discussion of the items on the agenda.

1.4.2.2 Duties

The Nuclear Commitments Monitoring Committee is tasked with monitoring changes in nuclear provisions, issuing an opinion on issues relating to governance of dedicated assets, the rules for asset-liability matching and on strategic allocation, as well as ensuring the compliance of the management of the assets constituted by the Company in accordance with the policy for constituting, managing and controlling dedicated assets. For this purpose, it may be supported by the Nuclear Commitments Financial Expertise Committee (NCFEC) which is comprised of six independent¹ experts, whose duty it is to assist the Company and its corporate bodies in such matters.

Finally, the Committee issues an opinion prior to any investment in unlisted assets for any project exceeding a unit amount of €400 million as well as for any project (excl. real estate) exceeding a unit amount of €200 million resulting in full consolidation of the target investment by the Company. In case the Committee issues a negative opinion on an investment plan, the Board of Directors has sole authority to authorise the aforementioned plan.

1.4.2.3 Activities in 2014

In 2014, the Committee reviewed, in particular, changes in the framework for the policy on the constitution and management of dedicated assets and on the control of financial risks, the state of progress of the project to decommission first generation nuclear power stations and the project for the industrial geological storage centre (Cigéo) for high-level waste and long-lived Intermediate-Level Waste, the 2014 annual update letter on securing the long-term financing of nuclear expenses (see § 2.3.3.1), the discount rate for nuclear commitments, as well as investment decisions and prospects in the category of unlisted assets.

1.4.3 Strategy Committee

1.4.3.1 Functioning and composition

The Strategy Committee is chaired by Mr. Jean-Bernard Lévy, Chairman and Chief Executive Officer. The other members are Mrs. Laurence Parisot and Messrs. Olivier Appert and Christian Masset, directors appointed by the Shareholders' Meeting, Mr. Régis Turrini, Representative of the French state, as well as Mrs. Marie-Hélène Meyling and Messrs. Jacky Chorin, Jean-Paul Rignac and Christian Taxil, directors elected by the employees.

The Chairman invites non-member directors to meetings of the Strategy Committee, in order to increase the involvement of the Board of Directors in the strategic discussion.

The Strategy Committee met six times in 2014. The average attendance rate of its members was 89.3%. The Committee's meetings lasted an average of two hours and ten minutes, allowing for an in-depth review and discussion of the items on the agenda.

1.4.3.2 Duties

The Strategy Committee issues an opinion to the Board of Directors on the Company's major strategy policies, in particular the strategic development plan, the industrial and commercial policy, the public service contract, strategic agreements, alliances and partnerships, the research and development policy, external or internal growth or disposal projects that require authorisation from the Board of Directors.

1.4.3.3 Activities in 2014

In 2014, the Strategy Committee reviewed, in particular, the situation of the markets and market participants in Europe, the nuclear fuel cycle strategy, the industrial project for the existing nuclear facilities in France, the Energy Services strategy for the B-to-B segment and the international strategy outside Europe.

1.4.4 Ethics Committee

1.4.4.1 Functioning and composition

The Ethics Committee is chaired by Mrs. Colette Lewiner, an independent director appointed by the Shareholders' Meeting. The other members are Messrs. Bruno Léchevin and Gérard Magnin, directors appointed by the Shareholders' Meeting, as well as Mrs. Christine Chabauty and Marie-Hélène Meyling and Mr. Jacky Chorin, directors elected by the employees.

The Ethics Committee met ten times in 2014. The average attendance rate of its members was 89.2%. The Committee's meetings lasted an average of one hour and ten minutes, allowing for an in-depth review and discussion of the items on the agenda.

1.4.4.2 Duties

The Ethics Committee ensures that ethical considerations are taken into account in the work of the Board of Directors and in the management of the Company. The Committee reviews the reports filed by the Mediator, the Inspector General for nuclear safety and radiation protection as well as the Inspector for hydraulic safety.

Moreover, each year the Ethics Committee oversees an assessment of how the Board and its Committees function and, every three years, performs a formalised assessment of the work of the Board and its Committees, which is entrusted to an specialist external consultant (see § 1.2.6).

1. Appointed on 26 November 2013 by the Board of Directors for three years.

1.4.4.3 **Activities in 2014**

In 2014, the Ethics Committee, amongst other items, examined the results of the customer satisfaction survey, the ethical reporting and commitments relating to the Group's corporate responsibility, the EDF's equal access to employment and equal pay policy and the Group's health and safety policy.

1.4.5 **Appointments & Remuneration Committee**

1.4.5.1 **Functioning and composition**

The Appointments & Remunerations Committee is chaired by Mr. Bruno Lafont, an independent director appointed by the Shareholders' Meeting. The other members of the Board are Mrs. Colette Lewiner, independent director appointed by the Shareholders' Meeting, Mr. Régis Turrini, Representative of the French state as well as Mr. Maxime Villota, director elected by the employees. The Committee is chaired by an independent director and is comprised of a majority of independent directors as it includes two independent directors out of the three taken into account to calculate this proportion (excluding directors representing the employees), in accordance with the recommendations of the AFEF-MEDEF code.

The Appointments and Remunerations Committee met seven times in 2014. The average attendance rate of its members was 92.9%. The Committee's meetings lasted an average of half an hour.

1.4.5.2 **Duties**

In accordance with the internal rules of procedure, the Appointments & Remunerations Committee submits recommendations to the Board of Directors regarding the appointment of directors by the Shareholders' Meeting. It submits, for approval, to the Minister for the Economy and Finance and the Minister for Energy, an opinion on the compensation of the Chairman and Chief Executive Officer regarding the salary, variable portion (criteria for the setting of the variable portion and assessment of the results achieved in regard to the objectives set) and peripheral compensation of the Chairman and Chief Executive Officer. It also submits this opinion to the Board of Directors for deliberation and setting of this compensation. The Committee prepares its recommendations within the limits specified by Decree no. 2012-915 of 26 July 2012 relating to French state control of the compensation of the executives of state-owned companies, in accordance with which the Chairman & Chief Executive's annual compensation must not exceed the gross sum of €450,000.

The Committee examines, if applicable, the compensation of the Deputy Chief Executive Officers. It submits its recommendations and its opinion, for approval, to the Minister for the Economy and the Minister for Energy, and also submits it to the Board of Directors for deliberation and setting of this compensation.

The Committee submits to the Board of Directors its opinion on the terms and conditions for the setting of the compensation of the principal executives (fixed and variable portions, calculation method and indexing), as well as the amount and terms and conditions for the distribution of the directors' fees. It ensures the existence of succession plan charts for Executive Committee positions.

1.4.5.3 **Activities in 2014**

In 2014, the Appointments & Remunerations Committee examined, amongst other items, the compensation policy for the Group's principal executives, the recommendations for appointment and re-appointment of directors to be submitted to the Shareholders' Meeting and changes to the budget for directors' fees to take account of the increase in the number of directors receiving them as from the re-appointment of the Board of Directors on 23 November 2014. The Committee also examined the bonus criteria to determine the variable portion of the compensation of the Group's executives.

1.5 **Compensation**

In 2014, Messrs. Henri Proglio and Jean-Bernard Lévy did not receive any directors' fees in respect of their terms of office as Chairman of the Board of Directors and EDF director. Moreover, they did not receive any directors' fees in respect of the offices held in companies controlled by EDF, or any compensation of any kind from controlled companies.

The Company did not award any share subscription or purchase options to the Chairman and Chief Executive Officer in 2014, and no options were exercised during the fiscal year. Moreover, no performance shares were awarded to the Chairman and Chief Executive Officer during the past fiscal year, and no performance shares became available.

Mr. Henri Proglio did not receive a hiring bonus from EDF or any indemnity linked to the ending of his duties at the Company in 2014. Mr. Jean-Bernard Lévy did not receive a hiring bonus from EDF.

The terms for setting EDF corporate officers' compensation, the principles and rules established by the Board of Directors for determining this compensation, as well as the amounts paid to directors in 2014, are detailed in chapter 15 of the 2014 Reference Document.

1.6 **Shareholders' meetings**

The rules governing shareholder involvement in general meetings are set out in Article 20 of the Company's articles of association, and are described in section 21.2.7 of the 2014 Reference Document.

Moreover, the information provided for by Article L. 225-100-3 of the French Commercial Code is published in the Company's Reference Document.

2 **EDF group internal control**

The purpose of this report is not to give an exhaustive presentation of all the control procedures that exist within the Group's companies, but to emphasize the control procedures that concern activities or risks that are deemed to be significant, as well as the main long-lasting procedures in effect in 2014, highlighting any changes and key initiatives developed during that year. These internal control and risk management procedures are consistent with the general principles stipulated in the AMF Reference Framework for risk management and internal control¹ (published on 22 January 2007 and updated on 22 July 2010).

2.1 **Control environment**

2.1.1 **Executive Management steering structures**

EDF's Executive Management is organised in line with two major policies: improve functioning as an integrated Group while respecting the management autonomy of the regulated subsidiaries and reinforce the role of the operating teams in the decision-making process.

1. In preparing this report, EDF ensured consistency with the AMF Reference Framework, which is itself based on changes observed in the main international frameworks, in particular COSO II and ISO 31000.

Executive Committee

The Chairman and Chief Executive Officer is supported by an Executive Committee comprising representatives from all the Group's business lines.

Up until 21 November 2014 inclusive, the Executive Committee membership was as follows:

- Henri Proglio, Chairman and Chief Executive Officer, Chairman of the Executive Committee;
- Marianne Laigneau, Group Senior Executive Vice President, Human Resources;
- Henri Lafontaine, Group Senior Executive Vice President, Customers, Optimisation, Trading and IES (Island Energy Systems);
- Pierre Lederer, Special Advisor to the Chairman;
- Hervé Machenaud, Group Senior Executive Vice President, Generation and Engineering;
- Thomas Piquemal, Group Senior Executive Vice President, Finance;
- Vincent de Rivaz, Chief Executive of EDF Energy;
- Alain Tchernonog, Group Senior Executive Vice President, Group General Secretary.

Denis Lépée, Advisor to the Chairman, was the Secretary of the Executive Committee.

On the date of this report, the Executive Committee membership is as follows:

- Jean-Bernard Lévy, Chairman and Chief Executive Officer, Chairman of the Executive Committee;
- Antoine Cahuzac, Chief Executive Officer of EDF Energies Nouvelles, Group Senior Executive Vice President, Renewable Energies;
- Henri Lafontaine, Group Senior Executive Vice President, Customers, Services and Regional Action;
- Marianne Laigneau, Group Senior Executive Vice President, Human Resources;
- Bruno Lescœur, Deputy director (Administrateur délégué) of Edison, Group Senior Executive Vice President, Gas and Italy;
- Dominique Minière, Group Senior Executive Vice President, Nuclear and Thermal Power Plants Division;
- Thomas Piquemal, Group Senior Executive Vice President, Group Finance;
- Vincent de Rivaz, Group Senior Executive Vice President;
- Simone Rossi, Group Senior Executive Vice President, International Division;
- Pierre Todorov, Group Senior Executive Vice President, Group General Secretary;
- Philippe Torrion, Group Senior Executive Vice President, Innovation, Strategy and Planning;
- Xavier Ursat, Group Senior Executive Vice President, New Nuclear Projects and Engineering.

Alexandre Perra is Secretary of the Executive Committee.

This Committee is a forum for decision-making, reflection, and consultation on operational and strategic issues. It reviews all major matters of substance and current affairs for the Group, monitors the targets and operating results, and contributes to the management and anticipation of the EDF group's major strategic challenges. The Committee reviews and approves major projects and, in particular, Group investment or divestment projects for which the amounts exceed certain thresholds. The Executive Committee meets weekly in principle.

Executive Committee meetings in the form of "risks committee" meetings are devoted to the review and management of risks.

Commitments Committee within the Group Executive Committee

In order to boost project analysis and monitoring, a Commitments Committee within the Group Executive Committee¹ performs in-depth reviews of the most significant projects in terms of the commitments involved or risks run, prior to the Executive Committee making a decision. No Company investment project can be submitted to the Board of Directors for review without first being approved by this Committee.

Management Committee

The Executive Management organisation is complemented by a Management Committee, which is a forum for discussions and information. The Executive Committee members also sit on the Management Committee, along with the Group's top international executives and the heads of geographical regions and Directors of Company support functions.

General Inspector of Nuclear Safety and Radioprotection

The General Inspector of Nuclear Safety and Radioprotection, who is appointed by and reports to the EDF Chairman and Chief Executive Officer, is tasked with conducting audits in his or her spheres of action and issuing an annual opinion on the overall safety of the Group's nuclear power stations. The remit also includes making proposals to Executive Management regarding potential areas for improvement.

EDF group Inspector of Hydro Safety

An EDF group Inspector of Hydro Safety, who is appointed by and reports to the EDF Chairman and Chief Executive Officer, is tasked with conducting audits in his or her spheres of action and issuing an annual opinion on the overall safety of the Group's hydroelectric plants. The remit also includes making proposals to Executive Management regarding potential areas for improvement.

2.1.2 Description and leadership of the internal control system

The Chairman and Chief Executive Officer signed off on a decision relating to the implementation of internal control within the EDF group on 3 September 2010. This decision takes into account, in particular, the provisions of the Order of 8 December 2008 on statutory audits of financial statements and specifies the EDF group's internal control policies. It aims to provide a reasonable assurance of risk management at EDF, with a view to ensuring constant improvement, by using the following key principles as a foundation:

- delegated accountability to each of the Group's executives who, at every level, are responsible for:
 - managing the principal risks,
 - checking this management for the activities they have sub-delegated,
 - ensuring that the risks identified have the appropriate, proportionate control procedures in place,
 - self-assessing the procedures thus implemented and reporting regularly and formally on these procedures to their line managers;
- an internal audit procedure, as described in paragraph 2.1.3.2.

1. The composition of the Commitments Committee within the Group Executive Committee is the same as that of the Executive Committee. This Committee was created by decision of the Chairman and Chief Executive Officer on 14 April 2010.

These key principles apply to all the Group's entities, although the implementation conditions may vary depending on the entities concerned (size, governance conditions and level of control).

Within the control scope (excluding regulated subsidiaries), these principles are implemented by the Executive Management functions at the subsidiaries that they control and in the main EDF Operating Divisions, which themselves control several operating units or subsidiaries.

Each executive concerned has appointed an "Internal Control Coordinator". The Corporate Risk Management Division organises this network of coordinators (around 80 persons).

An Internal Control Manual¹ has been written and is offered to each entity² as a standard for the implementation of its own internal control system. This manual describes the risk areas concerned, identifies the main aims of control to be explored and suggests the best practices to be adopted. It is updated annually to take into account feedback and new control requirements, in particular those linked to compliance with General Management policies and decisions. At the end of 2014, each of the 56 entities concerned produced an annual report on internal control that included a description of their internal control system, a self-assessment³ of this system and a statement by the head of the entity on commitment to internal control and an account of the intended measures to fulfil this commitment. This is the eighth consecutive year that the Group has commissioned this report. Each year a summary of these documents and how they could be interpreted in terms of the state of internal control in the Group is provided to the Chairman and Chief Executive Officer and the Audit Committee, then to the Board of Directors.

The Audit Division now performs full audits on these entities, which include a review of the robustness of their internal control, at the same frequency as previously (three to five years depending on their size).

Concerning the other Group subsidiaries (regulated subsidiaries, and significant shareholdings), risk control is the responsibility of EDF's representatives within the governance bodies. For each subsidiary, these representatives are responsible for implementing risk mapping, producing a description of the internal control and audit systems, and providing regular information on risk mapping and the audit activities (audit programme and main findings), as well as verifying the effectiveness and the relevance of each of these systems through periodic audits⁴.

The Corporate Audit Division and the Corporate Risk Management Division provide support for:

- the EDF representatives within its major subsidiaries, to help them implement and manage the initiative within governance bodies;
- the heads of the Divisions to which they report, who are tasked with providing the same level of support to the EDF representatives within subsidiaries of lesser importance within their area of responsibility, and reporting back on this in their annual self-assessment reports.

2.1.3 The contribution to internal control by the Corporate Risk Management Division, the Group Audit function, the Finance Division and the Legal Affairs Division

2.1.3.1 Corporate Risk Management Division

For many years, EDF has implemented a policy for managing its operating (e.g. industrial, environmental and health), financial and organisational risks.

Over and above these sector-specific policies, in response to a constantly changing environment, back in 2003 EDF decided to establish an overarching process for managing and controlling its risks with the aim of improving existing procedures, in particular by creating the Corporate Risk Management Division (DCRG), which is primarily responsible for:

- ensuring that each Group entity carries out risk mapping, either directly for the EDF scope and that of the controlled subsidiaries, or through the governance bodies for the regulated subsidiaries and jointly-controlled affiliates, and establishing and updating the consolidated risk mapping of the Group's major risks (see § 2.2.2);
- warning the Chairman and Chief Executive Officer and the Executive Committee of emerging risks and risks that have not been adequately identified;
- consolidating the deployment of the risk control policy, either directly within the EDF scope and that of the controlled subsidiaries, or through the governance bodies for the regulated subsidiaries and jointly-controlled affiliates (see § 2.2) in particular by ensuring the comprehensiveness and consistency of the various sectoral risk control policies (see § 2.3.1.1);
- ensuring the deployment of the internal control policy and steering the internal control function (see § 2.1.2);
- ensuring the deployment of the energy market risk policy within the EDF scope and that of the controlled subsidiaries and, more generally, ensuring the control of these energy market risks either directly within the EDF scope and that of the controlled subsidiaries, or through the governance bodies for the regulated subsidiaries and jointly-controlled affiliates (see § 2.3.1.1.1);
- defining and implementing financial risk control (interest, currency exchange, liquidity, equities and credit risks) and counterparty default risk control for the EDF scope and that of the controlled subsidiaries and ensuring the control of these financial risks through the governance bodies, for the regulated subsidiaries and jointly-controlled affiliates (see § 2.3.1.1);
- managing the comprehensiveness and relevance of the risk analyses performed on long-term investment and commitment projects, which are submitted to Executive Committee-level bodies for approval;
- ensuring the deployment of the crisis management policy for the EDF scope and that of the controlled subsidiaries, and defining the terms of exchange and coordination with all subsidiaries during periods of crisis and guaranteeing the operational readiness of the crisis management system at Group level (see § 2.2.3);

1. In preparing this report, EDF ensured consistency with the AMF Reference Framework, which is itself based on changes observed in the main international frameworks, in particular COSO II and ISO 31000. The first Internal Control Manual was written and distributed on 22 January 2007. It has subsequently been updated each year.

2. Since 2014, Edison has been fully integrated into the EDF internal control and risk management system. During 2014, EDF took over Dalkia and Citelum. These companies will now be progressively integrated into the EDF system.

3. Self-assessments report on all the areas mentioned in the Internal Control Manual, and in particular all the areas of action mentioned in the AMF Reference Framework.

4. For regulated subsidiaries, these responsibilities are exercised within the limits laid down by the regulations in force.

- defining, coordinating and deploying the prevention and control systems that are needed to manage risks of fraud and commercial non-compliance (corruption, money laundering, financing of terrorism, compliance with international sanctions, etc.); ensuring the management of these risks for the perimeter of EDF and its controlled subsidiaries, as well as for planned investments and commitments, in conjunction with the Legal Division.

2.1.3.2 Group Audit function

The Group Audit function is made up of all the audit resources of the Group, EDF and the subsidiaries that perform internal audit activities. Following a decision by the Chairman and Chief Executive Officer, the management of this function is entrusted to the Senior Vice President, Risks and Audit. The audit function includes the Corporate Audit Division and dedicated "operations" audit teams, namely "business line" audit teams (for generation, engineering and trade, as well as the Asia-Pacific zone for EDF) and audit teams that are specific to each of the main French and international subsidiaries and affiliates (RTE, ERDF, EDF Énergies Nouvelles, EDF Energy, EDF Trading, Edison, EDF Luminus and EDF Polska).

The relationships between the Corporate Audit Division and the various audit teams, along with their respective prerogatives, take into account the fact that they are part of teams at EDF, the controlled subsidiaries or the regulated subsidiaries. The Corporate Audit Division is responsible for the operational coordination of the function (joint appointment and joint assessment of business line Audit Directors by the Corporate Audit Division – excluding RTE and ERDF – exchanges of best practices, training initiatives, pooling of tools and methods, etc.).

Operating standards for EDF and the controlled subsidiaries

- The Corporate Audit Division applies international standards as defined by the Institute of Internal Auditors and ensures that these standards are promoted and upheld within the scope of control.
- The duties, powers and responsibilities of the auditors, as well as the rights and duties of the audited entities, are defined in a charter that was updated on 3 September 2010. This charter, which was signed by the Chairman and Chief Executive Officer, highlights the independence of the audit function and outlines the missions and commitments of the internal audit function, together with the duties and the prerogatives of auditors and audited entities. It is used in conjunction with an ethics code that applies to the entire Group audit function. The aim of this code is to promote an ethics-aware culture, and to emphasise that auditors must comply with and apply certain relevant, fundamental principles for the profession and for the internal audit practices.
- The Corporate Audit Division reports to the General Secretary. The Senior Vice President, Corporate Audit, also benefits from direct access to the Chairman and Chief Executive Officer and reports on audit work to the Audit Committee.
- All the Auditors in the Corporate Audit Division and the Audit departments of EDF and its controlled subsidiaries (excluding the regulated subsidiaries) are trained to use the same methodology, which is consistent with international standards. They are recruited from EDF's various business lines, as well as from external audit firms. Each auditor is assessed at the end of each mission and a transfer to audit is considered a positive career move. A memorandum of understanding was signed to this effect in March 2006 between the Corporate Audit Division and the EDF Senior Executive Development Division.
- The key processes that are essential to the proper functioning of the Corporate Audit Division throughout the chain of its activities (from the drawing up of audit programs to the monitoring of the implementation of recommendations) are outlined and overseen.

In 2014, the audit function voluntarily submitted itself to an assessment by the IFACI¹, which certified that its practices comply with the international standards for the profession, as it did in 2008, then in 2011 and 2012.

Operating rules for EDF and the controlled subsidiaries

- The Corporate Audit Division and the corporate-level divisions audit the internal control procedures in the various divisions and controlled subsidiaries. The Corporate Audit Division conducts crosscutting corporate and service line-division audits, and also audits on their scope of responsibility. The Corporate Audit Division is the only structure that is authorised to perform business line audits that involve a corporate-level risk.
- The audit programme is reviewed by the Chairman and Chief Executive Officer then approved by the EDF Audit Committee, which reports back to the Board of Directors. The audit programme takes into account:
 - the need to audit, at intervals adapted to their size, the Group's main entities (divisions and subsidiaries), in order to assess, in particular, the management of their internal control system;
 - the major risks identified in the risk mapping, which are not covered by the above audits, at a frequency that is appropriate for the risk criticality;
 - the main "Head of Group" and accounting and financial processes;
 - major projects;
 - monitoring of decisions taken by Executive Management.
- The plan for the business line audit teams is coordinated with that of the Corporate Audit Division.
- All audits give rise to recommendations, which, after being approved by the audited entities and their management, form the basis for action plans on their part that are submitted to the Corporate Audit Division. During the 12 to 18 months following the audit, the Corporate Audit Division monitors the implementation of these corrective actions or any other action decided on by the management with the aim of eradicating the dysfunctions identified by the audit. An audit is only considered to have reached a satisfactory conclusion when these dysfunctions have been eliminated. In contrast, an unsatisfactory conclusion to an audit or one where reservations are expressed triggers an appropriate management alert.
- These principles are applied by the entire audit function under the same terms.
- The Corporate Audit Division issues half-yearly summary reports, which resume, for the entire scope of the Group audit function, the main audit findings and the corresponding recommendations, as well as the results of audits concluded during the period. It also identifies possible recurring or generic problems that appeared over the course of several audits conducted during the period, which warrant particular attention of the management. This report is presented first to the Chairman and Chief Executive Officer, then to the Audit Committee and the Board of Directors.

2.1.3.3 Corporate Finance Division

The Corporate Finance Division monitors changes that affect the markets and financial techniques, and also analyses project financial risks. The internal control systems for the Management Control, Accounting and Tax business lines are incorporated into the Group's Internal Control Policy (proposed control area standards, which may be adapted by operational entities) and concern the implementation of function-specific policies. These policies concern, in particular, in the area of management control: the management cycle, expense commitments and investment monitoring, and, in the areas of accounting and tax, the reliability of accounting and tax information.

Management Control has the following remits:

- manage the forecasting processes for the Group's management cycle (budgets, forecast updates and medium-term plans), summarise these processes and proposes trade-offs at Division and subsidiary level for the Group as a whole. In its analyses, Management Control is required to issue warnings and make proposals, before decisions are taken, regarding the financial consequences of the contemplated transactions, or the proposed performance levels;

1. The French Institute of Audit and Internal Control.

- assist operations management in performance steering: tracking of budget implementation (for which forecast adjustments are issued twice a year, as well as a monthly reporting package that covers the results achieved to date and update of the most recent forecast adjustment) is tracked through regular, general performance reviews within the Divisions and controlled subsidiaries;
- perform the financial control function for the Group, by contributing, in particular, to the investment control processes and by performing economic and financial optimisation analyses;
- be the driving force behind the preparation of medium- and long-term financial trajectories.

The Finance Management Heads of the Divisions and subsidiaries sit on the Management Committees of the entities to which they are assigned. They are appointed and assessed by the operations management and the Management Control service line.

Accounting has the following remits:

- prepare and publish the EDF parent company financial statements, as well as the Group's consolidated financial statements;
- ensure the quality of accounting by designing a set of Group standards that detail the accounting practices and chart of accounts to be applied;
- update, for EDF, the internal control standards concerning the management of accounting and financial information.

Moreover, the accounting internal control policies for the subsidiaries are the responsibility of each legal structure concerned.

Tax has the following remits:

- guarantee the consistency of tax policies within the Group;
- ensure the proper performance of legal and filing obligations, in particular by monitoring changes in legal and regulatory obligations;
- track deferred tax positions in the accounts, as well as periodic justification of the accounts;
- identify and reduce Group tax risks.

2.1.3.4 Legal Affairs Division

The remit of the Legal Affairs Division, which reports to the General Secretary's office, is to protect the interests of the Group and to ensure the legal certainty of its activities, by providing support, counsel and expert assistance. It is also to anticipate and organise this protection of the Group's interests in a sustainable manner, and to contribute to the Group's performance, in particular by optimising contractual structures and legal solutions.

In order to enhance the overall management of Group legal risks, on 23 September 2014 the Chairman and Chief Executive Officer took a decision to create a Group legal function, under the management of the Group General Counsel.

In addition to the Legal Affairs Division's contribution to the Group's internal control outlined in paragraphs 2.1.4 and 2.3.3, Group-level legal reporting has been implemented on a quarterly basis for litigation and major or sensitive cases.

Moreover, a contract library is used to guarantee knowledge of and control over EDF's sensitive contract archives. This contract library, which is an integral part of the internal control system, is a secure information system for the centralised archiving and scanning of the major contractual commitments of EDF and certain subsidiaries (excluding the regulated subsidiaries and jointly-controlled affiliates). This system was complemented by a new decision and a practical memorandum on the management of major contracts, according to which the original counterparts of major contracts that meet certain specific criteria are centralised in a secure national storage facility.

In addition, the Legal Affairs Division entrusts a knowledge manager with capitalising on, harmonising and sharing the Legal Affairs Division's precedents and positions, as well as monitoring legal developments in the field of legislation and case law that are of major interest for the Group.

2.1.4 Delegations of powers and technical authorisations

The Chairman and Chief Executive Officer delegates some of his powers to the Board of Directors, in particular to certain members of the management team.

In the area of procurements, the existing organisation is designed to ensure that control is maintained over purchases. Based on a series of thresholds, procurement contracts are signed by the Chairman, a Group Senior Executive Vice President or one of their delegated representatives after being approved by the Senior Vice President, Purchasing, or his or her delegated representatives; this approval confirms that the contract complies with the procurement process. Each Group Senior Executive Vice President must also reinforce the internal control procedures on procurement contracts that are submitted for his or her signature and those handled directly by their respective divisions.

The powers conferred on the "nuclear operator's representative" are delegated to the Senior Executive Vice President, Generation and Engineering, who, in turn, delegates to the Senior Vice Presidents in charge of the Nuclear Operations and Nuclear Engineering Divisions, who themselves have sub-delegated powers to unit directors.

Each facility head, subject to prior evaluation of the appropriate skills, issues the technical authorisations allowing individuals to work in the facilities (power plants, electricity transmission networks, etc.). These requirements apply to all workers, be they employees of EDF or external service providers.

The Legal Affairs Division drafts and updates delegations of powers where required by changes to EDF's organisation.

In addition, a handbook on delegations of powers written by the Legal Affairs Division, which was first released in November 2008, has been updated and was re-released in 2010. This handbook is designed as a tool for informing and raising awareness at EDF entities on the nature, consequences and management rules for delegations of powers.

2.1.5 Ethics and Environmental Quality Initiatives

2.1.5.1 Ethics initiative

In a decision dated 2 April 2013 issued to the members of the Executive Committee and the Group Management Committee, the Chief Executive Officers of the Group Companies and to the Country Directors, the Chairman and Chief Executive Officer launched the deployment of the Group Ethics Charter; this decision is a second stage, namely the extension to Group level of an initiative that was launched in this area in 2004 and initially confined to EDF. The Chairman had set as a common objective that all Group employees should be aware of the new ethics standards before the end of 2013.

In each company and major division of EDF, the Group's senior executives have appointed an Ethics Officer, whom they have entrusted with promoting the Ethics Charter within their Service Line, ensuring the prevention and handling of Ethics problems and being proactive in the furtherance of the Group's Ethics initiative. Regular reports were provided to the General Secretary on its deployment during the second half of 2013 and early 2014. At the end of October 2014, 47%¹ of the Group's employees had received a presentation of the Charter.

In addition to its Chair, the Group's Ethics & Deontology Committee has five voting members who are Group senior executives. Geographical parity (France/other countries) and gender parity are maintained within this

1. My EDF survey carried out from 23 September to 21 October 2014, among 132,000 employees of the EDF group, excluding Dalkia: percentage of employees who answered "yes" to the question "have you received a presentation of the Group Ethics Charter?"

Committee. The executive secretary of the Committee is the EDF Ethics & Deontology Advisor. It also has three non-voting members who represent the Group's HR Division, the Group Legal Affairs Division and the Corporate Risk Management Division.

The Committee is a forum for advice, consultation and support and is called upon to issue positions and make recommendations to the management on all matters relating to Group ethics and their implementation. It also responds to all internal and external consultation requests and to all ethics alerts at Group level (known as "central" alerts). It is provided with the reports produced by the EDF ethics advisor on the results of central alerts and of each company on the results of local alerts, as well as the implementation of the ethics policy. On behalf of the Committee, its Chair reports to the EDF Board of Directors' Ethics Committee. In 2014, the Committee met on two occasions and issued several decisions (concerning the legal nature of the Ethics Charter, the employees' freedom of expression and the remit of the ethics officers, for example).

The Group Ethics Charter guarantees that any Group employee who is confronted with a situation that is contrary to the Group's values and commitments has the right to alert his or her manager or a dedicated contact person in his or her company, or, if necessary and in the last resort, the Group's Ethics & Deontology Committee, in complete confidentiality and without risk, in particular via a secure email address (alerte-ethique@edf.com or ethics-alert@edf.com). This Committee handled 84 cases¹ in 2014. Around two-thirds of the alerts by Group employees concerned the commitment to «ensure individual respect», a situation that has been stable for several years.

2.1.5.2 Environmental Quality Policy

For many years, the EDF group has taken into account the strategic issues associated with sustainable development, and has made sustainable development a fully-fledged component of its overarching strategy. This Group policy was materialised by the signature in 2009 of shared commitments by senior executives from the Group's principal companies. This policy provides a framework to facilitate consistency between the initiatives taken by these companies and is built around three priorities:

- combating climate change, controlling and limiting impacts on the environment, in particular the protection of biodiversity;
- giving everyone access to energy and developing local action links;
- contributing to the debate on sustainable development.

The EDF group Sustainable Development Committee (SDC) coordinates the implementation of this policy.

The Sustainable Development Committee acts as an Environment Board at Group level, and is in charge of steering the Environmental Management System in compliance with ISO 14001.

The EDF group has been ISO 14001 certified since 9 April 2002. The certification scope includes EDF (all its operating entities and most of its functional entities), a number of French subsidiaries (including ERDF, Electricité de Strasbourg and EDF Énergies Nouvelles...) as well as numerous international subsidiaries, including EDF Energy. In May 2014, the AFNOR independent certification organisation issued a new ISO 14001 certificate to the expanded Group, following the addition of Edison and EDF Luminus, in particular. Certification now covers 98% of the Group's 2014 consolidated revenue. The 2014 annual audit noted that the system is supported by an appropriate policy and indicators (which are aligned with the Group's "Corporate Responsibility" commitments that were published in 2013), which gives greater overall cohesion to the policy.

The processes implemented within the framework of this certification help strengthen the management of the Group's environmental risks, the regulatory aspect of which is moreover undergoing continual improvement, and gives our stakeholders the assurance of a structured organisation, which is tangible proof that the Group's commitment to environmental protection is an acknowledged reality. Since 2011, the number of instances of non-compliance identified by the ISO Audit has halved.

2.1.6 Organisation and steering of the Information Systems (IS)

Each Company and Group entity (Divisions or subsidiaries) has project ownership responsibilities for its specified scope. The Group Information Systems Division (Group DSI) is responsible for infrastructures and shared services. Depending on the policies adopted and in liaison with each Division, project management responsibilities are shared between the division concerned and the IT and Telecommunications Shared Services Division, which acts as a cross-functional operator for EDF and certain subsidiaries.

The Finance Information System (IS) is used by several Group Divisions and is of strategic importance in terms of data integrity and application availability. The Finance IS Division is entrusted with the project management via a delegation from the Group Executive Director who is responsible for Finance. It oversees the day-to-day functioning of applications, manages changes and takes all requisite steps to ensure the security of this IS.

Stricter governance for the IS function was implemented pursuant to the Chairman's decision of 19 December 2011 to improve Group steering of support functions. This governance is characterised by a broader scope of application, which includes all the Group's non-regulated subsidiaries and more integrated management, which is entrusted to the Group Information Systems Division in order to guarantee IS synergies and performance for the benefit of business line strategy, in particular for the financial trajectory, security and availability of the IS.

Depending on their nature and the scope concerned, strategic decisions and choices are reviewed on a quarter basis either by one of the EDF Committees mentioned in paragraph 2.1.1 or by the IS Strategy Committee, which involves the main Directors and subsidiary Heads and their IS Divisions; other major decisions are taken by a committee of the Heads of Information Systems, France, and by the Information Systems Group Committee, on which the Group's subsidiaries are also represented, with the exception of the regulated subsidiaries.

The Group IS Division, which reports to the General Secretariat, is also responsible for ensuring the strategic consistency of the information systems in the medium term: to this end, a vision of the information systems for 2020, along with the associated strategic policies, is currently being designed with the assistance of the Service Lines.

2.1.7 External controls

As is the case for all listed companies, EDF is subject to the regulatory control of the French financial markets authority (*Autorité des Marchés Financiers* – AMF).

Due to the French State being a majority shareholder in EDF, the company can also be audited by the National Audit Office, State Auditors, the Inspectorate of Public Finances, the French National Assembly and Senate Commissions for Economic Affairs or ad hoc investigative commissions, and the Public Procurement Contracts Commission.

As required by French law, the Statutory Auditors certify the annual financial statements (parent company and consolidated statements) and carry out a limited review of the Group's summary consolidated half-year financial statements. They also issue an opinion on the annual report by the Chairman of the Board of Directors that is prepared pursuant to Article L. 225-37 of the French Commercial Code.

Owing to the nature of its business activities, EDF is also subject to control by the French Energy Regulation Commission (*Commission de Régulation de l'Énergie* – CRE) and by the Nuclear Security Authority (*Autorité de Sûreté Nucléaire* – ASN).

The findings of these various external reviews bodies are incorporated into the internal control and audit programmes, in particular.

1. Out of the 84 cases opened in 2014 (of which 79 were actual alerts and 5 "consultations"), around 85% were closed during 2014.

2.2 Risk management and control

2.2.1 Risk management and control policy

The objectives of the risk control policy are to:

- contribute to securing the Group's strategic and operating trajectory, and in order to do so:
 - identify and grade risks in all areas (operational risks, external risks, strategic risks, including risks that are linked to the consistency of actions with the Group's values, and those linked to protecting the Group's value, assets and reputation), with a view to ensuring a constant increase in the robustness of risk management,
 - ensure the Group's entities are made responsible and accountable for identifying, assessing and handling risks, so that each executive is aware of the risks inherent in his or her activities and implements the action required to control these risks;
- ensure that EDF senior executives and governance bodies have an aggregated and regularly-updated picture of the major risks and their level of control;
- meet the increasing information requirements of external stakeholders with regard to the management of risks across the organisation.

NB: the operating and functional entities are responsible for managing the risks that fall within their scope of activity, under the responsibility of Group Executive Management.

The Group's risk control policy is either implemented directly (for EDF and the controlled subsidiaries), or through governance bodies (for regulated subsidiaries and jointly-controlled affiliates).

This policy is supported by a risk control function that is separate¹ from the risk management functions. This function provides, inter alia, a consistent approach to the identification, assessment and management of risks.

2.2.2 Risk mapping process

In accordance with these principles, in line with the annual reporting schedules for the publication of the half-yearly consolidated financial statements, the EDF group issues consolidated mapping of its major risks for the EDF scope and that of its controlled and jointly-controlled affiliates. This consolidated risk mapping is based on maps established by each operating or functional entity using a common methodology (typology, identification and assessment principles, risk control measures, etc.). Each risk identified must be the subject of a detailed action plan. Responsibility for the major risks falls to a project leader appointed by the Executive Committee.

In-depth discussions concerning the up-dating of risk mapping are regularly held between the Group Risk Control Division (see § 2.1.3.1) and each of the contributing operating or functional entities. These discussions aim to review the relevance of the risk identification, as well as the robustness of the management initiatives taken.

At the end of each year, the consolidated risk mapping is submitted for approval by the Executive Committee and, following review by the Audit Committee, is presented to the EDF Board of Directors.

The risk mapping and management initiative is one aspect of the strong complementarity with Group internal control and with internal audit, for which the programme is designed on the basis of, inter alia, the major risks identified. Moreover, the risk mapping process also provides a foundation for a number of other processes: the Insurance Strategy and its implementation,

the analysis of risks involved in projects reviewed by EDF's decision-making bodies (the Executive Committee, the Commitments Committee that reports to the Group Executive Committee (CECEG), etc.); in particular, through risk mapping, the risk control process helps secure the long-term investments and commitments process by monitoring the quality of the risk analysis of projects submitted to the CECEG. Lastly, the main risks to which the Group is exposed are described in section 4.1 of the 2014 Reference Document, in compliance with the consolidated risk mapping for the Group at the end of 2014.

2.2.3 Crisis management policy

The crisis management policy, which was formalised by a decision of the Chairman and Chief Executive Officer in June 2005, defines the organisational and crisis management principles for the perimeter formed by EDF and its controlled subsidiaries, and describes all the procedures required to implement it. The primary focus of the policy is:

- ensuring the existence of crisis management structures and standing reporting procedures for alerts, in all Group entities;
- verifying the existence of and regular updating of appropriate crisis management procedures, in light of the risks incurred in each EDF Division and in the controlled subsidiaries;
- defining, for crisis periods, the procedures for coordinating with all subsidiaries² – potentially via the Divisions to which they report;
- ensuring that feedback from crises and crisis exercises is systematically taken into account, so as to avoid or limit the consequence of similar future crises;
- verifying the existence of professionalization initiatives for all crisis management stakeholders.

The internal control procedure for the crisis management policy is incorporated into the Group's internal control system. Moreover, a programme of crisis exercises enables the effectiveness of these procedures and their overall consistence to be regularly stress-tested. Finally, the crisis management organisation is regularly readjusted to reflect any significant changes in internal organisation or the external environment, as well as in the light of lessons learned following a major crisis.

2.3 Group control activities

2.3.1 Control procedures relating to the effective functioning of internal processes

2.3.1.1 Sectoral risk control systems

2.3.1.1.1 Energy market risk control

Each year the Executive Management approves the entities' hedging strategies, as well as the associated risk limits, which are presented to it by the Corporate Risk Management Division (DCRG) in accordance with the budget process. These strategies are based on a Group energy market risk policy, which was approved by a decision of the Chairman and Chief Executive Officer during the Executive Committee meeting of 30 April 2013. This policy defines how these risks should be managed for the perimeter formed by EDF and the subsidiaries over which it exercises operating control

1. Function comprising the establishment managers for risk mapping and control (see § 2.3.1.1).

2. For RTE, coordination during crisis periods is organised under the aegis of the authorities.

and stipulates all the necessary procedures for its implementation and the control of its application. Concerning jointly-controlled affiliates and companies over which there is no operations control¹, the Energy Market Risks Policy and the associated control procedure are reviewed within the framework of the governance bodies of these companies.

This policy describes:

- the governance and measurement system, clearly separating the risk management and risk control responsibilities and enabling the tracking of exposure within the perimeter defined above;
- the risk control procedures involving EDF Executive Management in the event that risk limits are exceeded. Particularly rigorous risk control procedures are in operation at EDF Trading, given the specificity of the business activities and the fast reaction time required;
- the function responsible for controlling Energy Market Risks, which has a two-tier organisational structure, as well as the entities that ensure operating control and the Control department within Corporate Risk Management ensuring the second level of control.

The EDF Audit Committee issues an opinion to the Board of Directors on the Energy Market Risks Policy and the proposed changes to be made to it by the DCRG.

2.3.1.1.2 Financial and investment risk control

The Corporate Risk Management Division, among other things, is responsible for controlling market risks (interest rate, foreign exchange, equity and credit risks), liquidity risk and counterparty risk for EDF and the controlled subsidiaries. This control is exercised through:

- verifying the proper application of financial risk management principles described in the framework and of the Group's policy on counterparty default risk, in particular through control missions (methodology, organisation, exposure monitoring, regular calculation of risk indicators and control of compliance with Group risk limits);
- controlling market positions in EDF's trading room, which is responsible for cash management. For these activities, a system of indicators and risk limits, which is verified daily, is used to track and control financial risk exposure. This involves the Finance and Investments Division (DFI), the trading room and the Corporate Risk Management Division, which are expected to take immediate action if a limit is exceeded. The Markets Committee (on which the various DFI entities concerned and the DCRG are represented), checks and reviews monthly, as required, requests for exemptions from the framework and investment requests for new products;
- controlling the financial and counterparty risks associated with investments made for the "Dedicated Assets" portfolio (within the Corporate Finance Division), for which management responsibility is assumed by the Listed Asset Management (financial portfolio) and EDF-Invest (non-listed portfolio: private equity, infrastructure and real estate) sections of the Finance and Investments Division. Specific working environments have been implemented by the Corporate Risk Management Division to define the risk management principles and the acceptable risk limits for both portfolios, as well as the overall risk limits. The Operations Management Committee chaired by the Senior Vice President, Finance and Investments is the steering organisation for the financial portfolio (listed assets), whereas the Investment Committee chaired by the Group Senior Executive Vice President, Finance is the structure that oversees the private equity portfolio. Representatives of the Corporate Risk Management Division attend these two committees in order to design the risk management strategy for the two portfolios with the managers. Moreover, the Monitoring Committee for Dedicated Assets, which is chaired by the Group Senior Executive Vice President, Finance, is responsible for the overall monitoring of the portfolio;

- controlling the completeness and relevance of the risk analysis performed on long-term investment projects and commitments, which are submitted for decisions at Executive Committee-level bodies.

In order to guarantee the independence of the financial risk control structure vis-à-vis the activities responsible for managing these risks, the Financial Risk Control department reports to the Corporate Risk Management Division.

2.3.1.2 Specific controls

2.3.1.2.1 Procedure for approving commitments

In accordance with the Group's «commitments process», for which the framework is provided by a procedure dating from September 2011, the Commitments Committee, which reports to the Group Executive Committee (CECEG), reviews potential Group commitments, excluding regulated subsidiaries and jointly-controlled affiliates, once the Executive Committee has adopted a favourable position in principle with respect to the commitment concerned. This review covers, in particular:

- investment, disinvestment, merger and acquisition projects in excess of €50 million²;
- expenditure on supplies, works or services for an amount in excess of €200 million;
- long-term purchase or sale contracts that exceed annual limits of 5TWh for electricity, 10TWh for gas and €150 million for coal, fuel oil, CO₂ emission credits and allowances;
- the multi-year supply programme for reactors and back-end nuclear fuel cycle services;
- operations to transfer obligations regarding decommissioning or the back-end of the nuclear fuel cycle.

Group Executive Committee meetings are systematically preceded by meetings attended by experts at corporate level (Group Risk Management Division, Legal Affairs Division, Corporate Finance Division, Upstream-Downstream Optimization & Trading Division, Sustainable Development Division, Strategy Division, Procurements Division, etc.) and project managers in order to verify the exhaustiveness and depth of the risk analysis on the projects submitted. This work is based on methodology standards for the analysis of the risks involved in development projects, which take into account the full impact of a project.

Where necessary, planned commitments are then reviewed by the Board of Directors, as described in paragraph 1.2.4.

The "Investments Steering" Guide states that planned commitments below the threshold for referring matters to the Group Executive Committee will be reviewed by the governance bodies that are specific to each entity.

In addition, and in order to improve the industrial and financial control of operations projects and activities in France and abroad, "golden rules" that are applicable to all contracts signed by the Group were approved by the Chairman and Chief Executive Officer in January 2013 and have been implemented. These "golden rules" constitute a framework, which, when associated with a monitoring process, make it possible to measure the risks taken by the Group within the scope of its operations.

2.3.1.2.2 Information Systems (IS) control

Organisation of the internal control of the Information Systems function

The internal control system for the Information Systems function is part of the Group's Internal Control Policy (that contains proposed control area standards, which the operating entities adapt to their specificities) and covers the implementation of the function's policies and management of the main crosscutting risks. These policies address, in particular, infrastructures and shared services, Information Systems security, IS project governance, IS risk management and compliance with the French Data Protection Act.

1. For regulated subsidiaries, these responsibilities are exercised within the limits laid down by the regulations in force.

2. Excluding financial investments and disinvestments linked to the management of dedicated assets and pension assets, for which the governance is specific. See § 1.4.2.

EDF group internal control

For the record, EDF's Information Systems internal control standards are based on the COBIT (Control Objectives for Information and related Technology) external standards.

The Group Information Systems Division (Group DSI) has coordinated the internal control and coverage of risks that are specific to Information Systems issues since 2009 at two levels within the function's organisation: a network of IS Risk and Internal Control Officers and the Committee of the Heads of Information Systems who represent the divisions. The interlinking of the IS Risk and Internal Control Officers' and the IS Security Managers' networks makes it possible to achieve even better coordination between risk coverage and internal control for EDF. These networks will be progressively extended to include the subsidiaries.

Actions in the field of IS security

The EDF group's Information Systems Security Policy (PSSI) structures the information system security policies and organisation for the Group's IS. For EDF, the adjustment of these policies, as well as the level of security, are monitored:

- for EDF, on a monthly basis by a Security Committee (COSEC), which is chaired by the EDF group's Head of IS Security, and brings together the Heads of Information Systems Security from all the entities within the EDF scope;
- for the main subsidiaries, on a quarterly basis by the European Security Working Group, which is chaired by the Group Information Systems Director, and brings together the Heads of Information Systems Security from the subsidiaries.

The Information Systems Strategy Committee reviews, as required (at least once a year), in consultation with the Directors of the Group Divisions, the Heads of the Corporate Risk Management Division and the Security Division ("DIRSEC"), adjustments to the Group IS Security policy that are found to be necessary, without replacing the existing technical bodies. This ensures that a consistent, strategic vision is shared of IS security and IS key issues in terms of system availability and continuity, information and processing integrity, and the protection of sensitive information.

Key points for 2014 were:

- the design of new strategic policies (which are currently being approved) in the field of IS security, for implementation by 2020, in order to adapt the IS vision for 2020 mentioned in paragraph 2.1.6;
- the publication of two internal directives on IS security:
 - an IS Scientific Security Directive, which is designed to take into account the specificities of the EDF scientific IS, in terms of IS security,
 - a "Risk Management and IS Security Control" Directive, which aims to improve monitoring of activities that contribute to the security of the information systems, in light of the IS risks and security requirements; this Directive applies to all EDF Divisions and constitutes a recommendation for the subsidiaries;
- the updating of the IT crisis plan organisation at EDF;
- the implementation of a "Business Continuity Plan" exercise for the two EDF data centres, and the preparation of business continuity plans in most of the subsidiaries;
- regular meetings by the Review Board for Service Outsourcing Requests (BIPSE), which has been tasked with performing security analyses on outsourced services, since it was set up in 2012;

- the design of a 2014-2015 Internal Control Plan for the IS function that contains several second level controls that are associated with IS security, and in particular a control of the application of the IS Security Policy within the EDF group.

2.3.1.2.3 Administration and monitoring of subsidiaries

Under the "Corporate Officers" policy signed by the Chairman and Chief Executive Officer on 1 March 2013, each EDF subsidiary or shareholding (with the exception of the regulated subsidiaries) reports to a Senior Executive who is a member of the Executive Committee or to his or her delegated representative. These Senior Executives, or their representatives, put forward the corporate officers who will represent EDF on the governance bodies of these companies; final approval for appointments is given by the Chairman and Chief Executive Officer of EDF.

In May 2014, this policy was expanded to include a requirement to obtain the agreement of the Executive Management prior to incorporating any subsidiaries or acquiring any shareholdings, both in and outside France.

The Directors and Companies Delegation, which was set up in 2002, pays particular attention to:

- updates to company reporting line mapping, in the light of decisions taken by the Executive Management concerned;
- the tracking of "target composition profiles" which foresee the assembly of the necessary collective skills, as well as the profiles necessary to represent EDF effectively on the governance bodies of subsidiaries and shareholdings;
- compliance with the appointment process for corporate officers;
- improving the professional standards of corporate officers (induction training seminar for new officers with the support of the Corporate University, information through the intranet site for the directors' community).

2.3.1.3 Other control policies

The EDF group's insurance policy, which was approved by the CFO in October 2012, was implemented in 2013.

This new policy, which is a genuine integration tool for the Group's entities and subsidiaries, specifies the insurance scope, which covers all the Group's activities and perimeter. It was distributed along with an Insurance Procedure Handbook, which is in the process of being finalised.

In addition to these governance documents:

- since 2004, in an Audit Committee meeting, the Director of the Group's Insurance Division gives a situation report on the scope and the cost of insuring EDF's risks with a policy or by transferring the risks to the financial markets;
- since 2011, a Strategic Insurance Guidelines Committee (COSA), which is chaired by the Group Senior Executive Vice President, Finance, stimulates discussions between business lines and investors on changes to and methods for implementing the Insurance Strategy, in particular the main characteristics of the coverage schemes for insurance risks.

A control mechanism for consultants (i.e. "intermediaries and business providers") has been implemented at EDF; it falls under the responsibility of the Economic Intelligence Division, under the supervision of the EDF Director of Security. It also includes analysis of the status and probity of Group counterparties. The Director of Economic Intelligence is a stakeholder in the procedure for handling alerts concerning procurement corruption and fraud.

2.3.2 Internal control procedures relating to the reliability of accounting and financial information

2.3.2.1 AMF Reference Framework

The section of the Internal Control Manual that covers control over accounting and financial information was completely restructured in 2011 in order to conform to the AMF Reference Framework, as revised in 2010.

2.3.2.2 Group accounting standards and principles

The accounting standards used by the EDF group¹ conform to the international accounting standards as published by the International Accounting Standards Board (IASB), and approved by the European Union, which have been applicable as of 31 December 2014. These international standards comprise IAS (International Accounting Standards), IFRS (International Financial Reporting Standards) and SIC and IFRIC interpretations. The accounting rules and methods are described in the Group manual on accounting principles and summarised in the notes to the consolidated financial statements.

A network of correspondents in the Operating Divisions and subsidiaries facilitates sharing instructions and consistent accounting implementation from one Group entity to another.

2.3.2.3 Procedures for preparing and controlling the consolidated financial statements

The Consolidation Department (part of the Accounts Consolidation Division) prepares the consolidated financial statements based on data input locally by each entity (parent company entities and subsidiaries), in accordance with Group standards and instructions, using a single chart of accounts.

The half-yearly consolidated financial statements are presented to the Audit Committee then to the Board of Directors, and closed off on 30 June of each fiscal year.

The annual consolidated financial statements are presented to the Audit Committee, then closed off on 31 December of the fiscal year by the EDF Board of Directors and approved by the general shareholders' meeting.

Each time the half-yearly and annual financial statements are closed off, instructions are issued that specify all the deliverables expected from each person who plays a role in the publication of the financial statements, and in preparing the management report and the reference document used for annual closings. Meetings between the EDF divisions and the subsidiaries are used to prepare for each half-yearly closing and anticipate any changes in certain forms of accounting treatment in order to ensure that the financial and accounting information published is reliable. Subsequent analysis of the conditions under which the deliverables were produced (compliance with deadlines, quality of information, etc.) allows for a steady improvement in the process for preparing and analysing the consolidated financial statements.

A monthly reporting package containing information on the balance sheet and income statement accounts has been used since 2011. This has made it possible to anticipate the recognition of complex operations and helped make balance sheet flows more reliable.

The use of a common financial language by Accounting and Management Control contributes to the consistency of the Group's steering. This common language is one of the ways of ensuring continuity between:

- actual data obtained from accounting and the data produced during the forecasting phases;
- external financial communication and internal steering.

This common language facilitates dialogue and cooperation between these two functions at all levels of the organisation and helps ensure the exchange of information between those who play a key role and the quality of the information produced.

2.3.2.4 Procedures for preparing and controlling the parent company financial statements

The parent company financial statements are prepared on a half-yearly and annual basis by the Parent Company Accounts Department (part of the Accounts Consolidation Division).

The parent company financial statements are closed off on 31 December of the fiscal year by the EDF Board of Directors and then approved by the general shareholders' meeting.

The half-yearly parent company financial statements are closed off on 30 June of the fiscal year by the Board of Directors. EDF's transactional accounting (excluding the Financing and Investments Division, the Nuclear Fuel Department, Island Energy Systems and the Senior Executive Development Division for payroll accounting) is entrusted to an "Accounting" shared services centre within the Shared Services Division. The handling of transactional accounting is organised by process. "Governance pacts" establish the respective responsibilities of the operating branches and divisions, the "Accounting" shared services centre and the Accounting Consolidation Department.

Each operating branch and division Head makes a formalised annual commitment to respecting the internal control rules and ensuring the reliability of the financial information for which he or she is responsible via a letter of commitment addressed to the Head of Accounting.

The accounting internal control system is incorporated into the Group internal control system. EDF uses benchmark indicators, which make it possible to measure the extent to which certain aspects of accounting information are compliant, by process.

2.3.3 Internal control procedures relating to compliance with laws and regulations

The Legal Affairs Division has a remit to track changes in the law and regulations. It issues warnings and raises awareness within the relevant Divisions in light of any changes that are liable to impact the Group.

Pursuant to a joint decision of 1 June 2007, completed by a decision of 12 May 2011, the Legal Affairs and Corporate Audit Divisions adopted an action plan aimed at formalising the role of Legal Affairs in defining the control objectives mandated in the different EDF entities, so that they can be taken into account in the entities' own internal control plans. These control objectives aim to ensure that these entities:

- inform the Legal Affairs Division of the regulatory areas that particularly concern them, to ensure that the Division can perform its monitoring assignment optimally, without forgetting crosscutting legal issues (e.g. anti-competitive practices and insider trading);
- systematically involve the Legal Affairs Division as early as possible in matters involving significant strategic issues and legal risks;
- check that their delegations of power effectively reflect their organisation and are updated as required;
- check that draft "major contracts" are written with the assistance of lawyers, then, once signed, are sent to the Legal Division for inclusion in the Group's contract library;
- check that the lawsuits brought by the entities are periodically reviewed by the Legal Division;

1. The scope of the Group's consolidated financial statements is detailed in the notes to the consolidated financial statements (cf. chapter 20 of the 2014 Reference Document).

- identify their needs in terms of legal awareness within the fields that concern them, including crosscutting needs, and notify them to the Legal Affairs Division.

Since 2010 the Legal Affairs Division has implemented a Competition Law Compliance Programme, with three objectives: (i) raising awareness of competition rules through training, information and practice; (ii) enabling employees to acquire competition law expertise (for preventive, defensive and offensive use); and (iii) reviewing compliance with competition rules.

Moreover, by decision of 22 January 2014, the Chairman and Chief Executive Officer launched an anti-corruption compliance programme that is applicable to all service lines, divisions and subsidiaries controlled by the EDF group. A working group, which includes members of the Legal Affairs Division in particular, is tasked in 2015 with formalizing a policy for the prevention of corruption, organising legal counsel and support for the entities, and training employees via an e-learning tool, boosted by specific programmes for the most exposed employees.

2.3.3.1 Regulations relating to industrial operations

Numerous control procedures exist in the field of industrial operations, in particular for nuclear facilities. The nuclear sector regulations in force are specific to each country where facilities are located. External controls are organised by the relevant national authorities (the Nuclear Safety Authority in France (ASN), the Health and Safety Executive Nuclear Directorate, which is now part of the Office for Nuclear Regulation in the United Kingdom, the Nuclear Regulatory Commission in the United States, the National Nuclear Safety Administration in China, etc.).

Within EDF, this responsibility falls to the following executives and/or entities:

- the Nuclear Safety Council, which is chaired by the EDF group Chairman, meets several times a year and in February reviews the annual "Nuclear Safety and Radioprotection" report;
- the General Inspector for nuclear safety and radioprotection (IGSNR) who, on behalf of the Chairman, ensures that all aspects of safety and radiation protection issues in the nuclear facilities for which EDF has operating responsibility are fully taken into account and whose annual report is made public;
- the Nuclear Inspectorate, a department that reports directly to the Senior Vice President, Nuclear Operations (DPN), and the Audit Assessment Taskforce, which functionally reports to the Senior Vice President, Nuclear Engineering (DIN), the verification work of which makes it possible to regularly assess the level of safety in all the various DPN and DIN entities and their work;
- the Audit function carries out several dozen audits per year in the nuclear field (engineering, fuels and operations).

The Law of 28 June 2006, as amended by NOME Act of 7 December 2010, and its implementation regulations (Decree of 23 February 2007 and Order of 21 March 2007) on securing financing for nuclear expenses, require the Company to produce a report on the procedures and systems used to assess the expenses linked to the sustainable management of radioactive matter and waste. This report must specify the methods applied to calculate the related provisions and the choices made for the composition and management of the assets allocated to covering the provisions.

Since June 2007, and in accordance with the legislative and regulatory framework, EDF files a report with the administrative authority every three years and sends an update letter yearly. These reports and update letters are given an in-depth review by the Nuclear Commitments Monitoring Committee, which then reports to the EDF Board of Directors before sending the reports and letters to the administrative authority. The report on internal control that is appended to the updating letter was deliberated by the Board of Directors.

The Basic Nuclear Facilities (BNF) order, which is part of the recasting of the general regulations that are applicable to BNF, was enacted on 7 February

2012 (and amended by an Order of 26 June 2013). Along with the "procedures" decree of 2 November 2007, this order is a major implementing piece of legislation for the Nuclear Transparency and Safety Act, which is now incorporated into the French Environment Code. Most of the articles entered into effect on 1 July 2013. Further details on implementation will be provided in the future by around twenty ASN decisions and guides. Key events of 2014 included sustained activity in the field of "ASN regulations", in particular:

- the publication of three generic decisions by the ASN ("Fire", "Material Modifications" and "PWR Shutdown" Decisions) as well as three Internal Authorisation Systems (SAI) in the areas of "fuel", "dismantling" and "temporary changes to the specifications for operating techniques".
- six public consultations held by the ASN on draft Decisions (a Decision concerning the policy on the protection of interests and the integrated management system (PPI & SMI), a Decision on the content of the Safety Report, a Decision on Criticality, a Decision on waste management studies, a Decision on the transportation of radioactive substances, a Decision on Internal Authorisation Systems (SAI) concerning the area of "temporary changes to STE") as well as a draft guide to the Management of Incidents and Accidents during the Transportation of Radioactive Substances.

Immediately following the Fukushima accident of 11 March 2011, EDF acted responsibly in its capacity as a nuclear operator by applying the lessons learned to its own facilities the same month.

The ASN notified its findings to the French government in a report dated 3 January 2012, which contains an opinion (no. 2012-AV-0139) in which the ASN states, in particular:

"Following the complementary safety assessments of the priority nuclear facilities, ASN considers that the facilities examined offer a sufficient level of safety for it not to request the immediate shutdown of any of them. At the same time, ASN considers that for the continuation of their operation, an increase in the robustness of the facilities to extreme situations, beyond their existing safety margins, is necessary, as rapidly as possible."

The schedule for the implementation of the technical requirements that were issued by the ASN on 26 June 2012 was adhered to strictly in 2014. In particular, the plants implemented the post-Fukushima crisis management benchmark (that takes into account the Nuclear Rapid Action Force (FARN)) and since 1 January 2015 the FARN is in a position to intervene in four units on the same site in less than 24 hours, in order to provide and implement additional human and material resources to cool the reactors and pools.

The WANO (World Association of Nuclear Operators) carried out four international peer reviews on French nuclear power stations in 2014, at Chooz, Belleville, Bugey and Dampierre. The annual programme involves reviewing each power station on average every four years. These reviews allow experienced professionals from around the world to observe our working practices in the field for themselves. A comparison can thus be made with the best international practices in all fields of nuclear power station operation. Since 1 January 2014, WANO uses the new international benchmarks for its reviews (PO&C's: Performance Objectives and Criteria), which now focus more on the safety of nuclear facilities. Following a review, the Unit Director of the site commits to implementing an action plan drawn up in consultation with the WANO team. The aim of these actions is to respond to the recommendations that were made. Two years after the review, a team of around ten WANO experts assesses the effectiveness of the action plan implemented by the site through a follow-up review. The recommendations made during the Peer Review are thus assessed a second time. In 2014, five follow-up reviews were conducted at Chinon, St Laurent, Tricastin, Cruas and St Alban. This follow-up allows a site to step up its actions in any areas where it is found to be lacking, with the assistance of international experts who, at the site's request, can also come to the site to carry out technical support missions (TSMs). All these actions enable sites to benefit from an outside expert review and align themselves with international best practices.

An OSART¹ (IAEA review of a nuclear power station) conducted a review of Flamanville 1-2 in 2014. A Corporate OSART (core review by the IAEA of EDF as a nuclear operator) took place from 23 November to 9 December 2014. During these two weeks, thirteen experts interviewed 250 Group employees. This is the second review of this type performed by the IAEA after that carried out at CEZ (in the Czech Republic) in 2013. In its public findings, the AIEA stated that EDF fully meets its standards and identified seventeen best practices that will be useful for operators throughout the world.

In other operations-related fields (such as reviews of pressure reactors and dam monitoring), each entity is responsible for defining and implementing the adequate control procedures.

2.3.3.2 Other regulations

Control procedures are also used for the application of labour and employment regulations.

The implementation of management systems, particularly with regard to environmental considerations (see § 2.1.5.2) and Health and Safety, has enabled tighter control of regulations.

2.3.4 Internal control procedures relating to the application of Executive Management instructions and policies

As part of the deployment of internal control within the Group, the monitoring of the effective implementation of major decisions and policies is taken into account by their inclusion in the Internal Control Reference Manual. Moreover, audits may be included in the corporate audit programme in order to check the correct implementation of these decisions and policies, and that the targets set within this framework are attained.

2.4 Information communication and circulation

In addition to the communication and reporting initiatives outlined within this report, the following specific initiatives are noteworthy:

- Since EDF shares were listed for trading in 2005, EDF has established procedures that aim to provide a framework for and ensure the reliability of EDF financial disclosure processes and content, as well as to prevent market abuse. Accordingly, a procedure has been defined to organise the respective roles within the Company with regard to the preparation, validation and dissemination of financial disclosure data. A system for validating financial information, designed to ensure the validation and consistency of EDF's different financial communication sources, to review and validate the contents of all financial communication channels has been set up. This Committee comprises representatives from the Corporate Finance, Communication and Legal Affairs Divisions. Furthermore, since 2006 the EDF group has adopted principles and rules that are applicable to transactions involving EDF securities or those of the EDF group's listed subsidiaries. These rules have been compiled in an Ethics Code that was updated in March 2011, in order to take into account the AMF recommendations of November 2010, and was presented to the EDF Executive Committee on 4 April 2011. In parallel with the publication of this Code, initiatives to raise awareness of stock market rules have been taken vis-à-vis Group employees, in particular concerning the precautions and obligations associated with holding inside information and the blackout periods during which senior executives and certain employees who are party to insider information may not trade in the Company's shares.
- The Code of Conduct: compliance with the codes of conduct for the regulated subsidiaries is monitored annually by these subsidiaries, and verified by the French Energy Regulation Commission, which publishes the results of its checks in its annual report.

This report was approved by the Board of Directors' meeting of 10 March 2015, in accordance with Article L. 225-37 of the French Commercial Code.

1. OSART: Operational Safety Review Team.

B

Statutory Auditors' Report, prepared in accordance with Article L. 225-235 of the French Commercial Code (Code de commerce), on the Report prepared by the Chairman of the Board of Directors

This is a free translation into English of the statutory auditors' report issued in French prepared in accordance with Article L. 225-235 of French company law on the report prepared by the Chairman of the Board of Directors on the internal control and risk management procedures relating to the preparation and processing of accounting and financial information issued in French and is provided solely for the convenience of English speaking users.

This report should be read in conjunction and construed in accordance with French law and the relevant professional standards applicable in France.

Year ended 31 December 2014

To the shareholders,

In our capacity as Statutory Auditors of Électricité de France SA ("the Company"), and in accordance with Article L. 225-235 of the French Commercial Code (Code de commerce), we hereby report on the Report prepared by the Chairman of your Company in accordance with Article L. 225-37 of the French Commercial Code for the year ended 31 December 2014.

It is the Chairman's responsibility to prepare, and submit to the Board of Directors for approval, a report on the internal control and risk management procedures implemented by the Company and containing the other disclosures required by Article L. 225-37 of the French Commercial Code particularly in terms of the corporate governance measures.

It is our responsibility:

- to report to you on the information contained in the Chairman's Report in respect of the internal control and risk management procedures relating to the preparation and processing of the accounting and financial information, and
- to attest that this Report contains the other disclosures required by Article L. 225-37 of the French Commercial Code, it being specified that we are not responsible for verifying the fairness of these disclosures.

We conducted our work in accordance with professional standards applicable in France.

Information on the internal control and risk management procedures relating to the preparation and processing of accounting and financial information

The professional standards require that we perform the necessary procedures to assess the fairness of the information provided in the Chairman's Report in respect of the internal control and risk management procedures relating to the preparation and processing of the accounting and financial information. These procedures consisted mainly in:

- obtaining an understanding of the internal control and risk management procedures relating to the preparation and processing of the accounting and financial information on which the information presented in the Chairman's Report is based and existing documentation;
- obtaining an understanding of the work involved in the preparation of this information and the existing documentation;
- determining if any significant weaknesses in the internal control procedures relating to the preparation and processing of the accounting and financial information that we would have noted in the course of our engagement are properly disclosed in the Chairman's Report.

On the basis of our work, we have nothing to report on the information in respect of the Company's internal control and risk management procedures relating to the preparation and processing of accounting and financial information contained in the Report prepared by the Chairman of the Board in accordance with Article L. 225-37 of the French Commercial Code.

Other disclosures

We hereby attest that the Chairman's Report includes the other disclosures required by Article L.225-37 of the French Commercial Code.

Paris La Défense and Neuilly-sur-Seine, 10 March 2015.

The Statutory Auditors

KPMG Audit
Department of KPMG SA
Jacques-François Lethu

Deloitte & Associés
Patrick E. Suissa



Statutory Auditors' Reports on Regulated Agreements and Commitments

This is a free translation into English of the Statutory Auditors' special report on regulated agreements and commitments with third parties that is issued in French language and is provided solely for the convenience of English speaking readers. This report on regulated agreements and commitments should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France. It should be understood that the agreements reported on are only those provided by the French Commercial Code and that the report does not apply to those related party transactions described in IAS 24 or other equivalent accounting standards.

Statutory Auditors' Report on Regulated Agreements and Commitments

Year ended 31 December 2014

To the shareholders,

In our capacity as Statutory Auditors of your Company, we hereby present to you our report on the regulated agreements and commitments.

The terms of our engagement require us to communicate to you, based on information provided to us, principal terms and conditions of those agreements and commitments brought to our attention or which we may have discovered during the course of our audit, without expressing an opinion on their usefulness and appropriateness or identifying such other agreements and commitments, if any. It is your responsibility, pursuant to Article R. 225-31 of the French Commercial Code (Code de Commerce), to assess the interest involved in respect of the conclusion of these agreements and commitments for the purpose of approving them.

Our role is also to provide you with the information stipulated in Article R. 225-31 of the French Commercial Code, relating to the implementation during the past year of agreements and commitments previously approved by the Shareholders' Meeting, if any.

We conducted the procedures we deemed necessary in accordance with the professional guidelines of the French National Institute of Statutory Auditors (Compagnie nationale des commissaires aux comptes), relating to this engagement. These procedures consisted in agreeing the information provided to us with the relevant source documents.

Agreements and Commitments submitted to the General Shareholders' Meeting approval

We hereby inform you that we have not been advised of any agreement and commitment authorized during the year to be submitted to the approval of the Shareholders' Meeting pursuant to Article L. 225-38 of the French Commercial Code.

Agreements and Commitments already approved by the general Shareholders' Meeting and having effects during the year

Pursuant to Article R. 225-30 of the French Commercial Code, we have been informed that the following agreements and commitments, previously approved by Shareholders' Meeting of prior years, were applicable during the year:

■ Public Service Contract

On 24 October 2005, the French State and Électricité de France SA signed a public service contract whose purpose is to form the framework for the Company's public service mission and duties.

This contract sets out the commitments undertaken by the Company over the period 2005-2006-2007 and defines the financial compensation payable for public service obligations, in particular the principles set for the calculation of and the change in electricity sales tariffs.

In the absence of a new agreement, the performance of certain provisions of this contract was continued in 2014. However, in accordance with Article 16 of Order no. 2014-948 dated 20 August 2014 relating to the governance and share capital operations with public entities, the acts by which the State determines public service missions are no longer regarded as regulated agreements within the scope of Article L. 225-38.

■ Final processing-recycling agreement entered into by EDF and AREVA for the period 2008-2012

In application of the agreement of 19 December 2008 setting forth the principles governing back-end cycle contracts for the post-2007 period, EDF and AREVA signed on 12 July 2010, the contract "Processing-Recycling Agreement" which lays down (i) the principles of an industrial cooperation until 2040, governing the transport, processing and recycling of spent nuclear fuel from EDF's nuclear power stations, and (ii) the application conditions of these principles for the 2008-2012 period. The performance of certain measures of this application contract for the 2008-2012 period was continued in 2014.

STATUTORY AUDITORS' REPORTS ON REGULATED AGREEMENTS AND COMMITMENTS

Statutory Auditors' Report on Regulated Agreements and Commitments

■ Agreements with the AREVA Group

Your Company entered into three agreements with the AREVA Group in 2007 with respect to the following services:

- construction of the nuclear boiler for the Flamanville 3 EPR nuclear plant;
- maintenance and servicing of boilers as part of the third ten-year inspection of the 900MW-type nuclear plants in France;
- advance booking of forged parts for EPR reactors constructed abroad.

Total consideration for these agreements and their amendments amounted respectively to €1.465 million (of which €267 million recorded in 2014), €122 million (of which €8 million recorded in 2014) and €212 million (no amount recorded in 2014).

Paris La Défense and Neuilly-sur-Seine, 11 February 2015

The Statutory Auditors

KPMG Audit
Department of KPMG SA
Jacques-François Lethu

Deloitte & Associés
Patrick E. Suissa

Statutory Auditors' report on the regulated commitment referred to in Article L. 225-42-1 of the French Commercial Code and authorized after year-end

Statutory Auditors' report on the regulated commitment referred to in Article L. 225-42-1 of the French Commercial Code and authorized after year-end

This is a free translation into English of the Statutory Auditors' special report on the regulated commitment referred to in article L. 225-42-1 of the French Commercial Code and authorized after year-end that is issued in French language and is provided solely for the convenience of English speaking readers. This report on the regulated agreement and commitment should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France. It should be understood that the details of the agreement reported on are only those provided by the French Commercial Code.

Year ended 31 December 2014

To the Shareholders,

In our capacity as Statutory Auditors of your Company, we hereby present to you our report on a regulated commitment referred to in article L. 225-42-1 of the French Commercial Code, which was subject to prior authorization by the Board of Directors on 8 April 2015, and of which we have been informed pursuant to Article L. 225-40 of the French Commercial Code.

The terms of our engagement require us to communicate to you, based on information provided to us, principal terms and conditions of the commitment brought to our attention since the issuance of our report on regulated agreements and commitments dated 11 February 2015 without expressing an opinion on its usefulness and appropriateness or identifying such other agreements and commitments, if any. It is your responsibility, pursuant to article R. 225-31 of the French Commercial Code (*Code de Commerce*), to assess the interest involved in respect of the conclusion of this commitment for the purpose of approving it.

We conducted the procedures we deemed necessary in accordance with the professional guidelines of the French National Institute of Statutory Auditors (*Compagnie nationale des commissaires aux comptes*), relating to this engagement. These procedures consisted in agreeing the information provided to us with the relevant source documents.

The regulated commitment referred to in article L. 225-42-1 of the French Commercial Code made in favor of Mr. Jean-Bernard Lévy in case of termination of his office as Chairman and Chief Executive Officer of your Company:

Following the decision of the Board of Directors on 8 April 2015 pursuant to article L. 225-42-1 of the French Commercial Code and subject to the approval of the Minister for the Economy, Mr. Jean-Bernard Lévy will receive, in case of termination of his office as Chairman and Chief Executive Officer of EDF, a severance payment subject to the following terms and conditions:

- payment of severance upon decision of the Board of Directors and only in the event of a compulsory departure (dismissal with an exception in case of dismissal for wrongful misconduct (*faute grave ou lourde*));
- initial amount of the severance payment of €200,000 (gross amount) after one year of seniority computed as from the date of the first appointment, ie. 23 November 2014, increased afterwards by an amount of €60,000 (gross amount) for each additional quarter of seniority, subject to a cap set at one year of compensation, the latter being set at €450,000 (gross amount) for the year 2015;
- performance criteria based on the achievement of 80% of the budgeted Group EBITDA for at least two fiscal year out of the previous three years of the termination of the office; if the termination of the office occurs during the second year after the appointment, the Board of directors will assess if the performance criterion is met by reference to the latest fiscal year; if the termination of the office occurs during the third year after the appointment, the assessment will be performed by reference to the previous two fiscal years.

Your Board of Directors concluded that this severance payment was compliant with the provisions of the French Commercial Code and the recommendations of the AFEP-MEDEF code.

Paris - La Défense and Neuilly-sur-Seine, 8 April 2015

The Statutory Auditors

KPMG Audit
Department of KPMG SA
Jacques-François Lethu

Deloitte & Associés

Patrick E. Suissa

**STATUTORY AUDITORS' REPORTS
ON REGULATED AGREEMENTS AND COMMITMENTS**

Statutory Auditors' report on the regulated commitment referred to in Article L. 225-42-1 of the French Commercial Code and authorized after year-end

D

EDF's financial statements and Statutory Auditors' Report on the financial statements

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Income statements

(in millions of Euros)	Notes	2014	2013
SALES ⁽¹⁾	4	41,717	43,423
Change in inventories and capitalised production		820	814
Operating subsidies	5	5,912	5,117
Reversals of provisions and depreciation	6	2,752	3,073
Other operating income and transfers of charges	7	715	847
I TOTAL OPERATING INCOME		51,916	53,274
Purchases and other external expenses	8	31,930	34,089
Fuel purchases used		3,173	4,298
Energy purchases		9,792	10,311
Services and other purchases used		18,965	19,480
Taxes other than Income taxes	9	2,615	2,518
Personnel expenses	10	6,604	6,457
Depreciation, amortisation and provisions		5,989	4,857
Depreciation and amortisation	11	3,149	2,723
Provisions, impairment and write-down	12	2,840	2,134
Other operating expenses		905	944
II TOTAL OPERATING EXPENSES		48,043	48,865
OPERATING PROFIT (I-II)		3,873	4,409
III JOINT OPERATIONS		7	3
IV FINANCIAL RESULT	13	(3,096)	(890)
PROFIT OR LOSS BEFORE INCOME TAXES AND EXCEPTIONAL ITEMS (I-II+III+IV)		784	3,522
V EXCEPTIONAL RESULT	14	1,442	164
VI INCOME TAXES	15	577	748
PROFIT OR LOSS (I-II+III+IV+V-VI)		1,649	2,938

(1) Production of goods for export in 2014: €4,682 million; production of services for export in 2014: €431 million.

Balance sheets

ASSETS

		31/12/2014			31/12/2013
(in millions of Euros)	Notes	Gross values	Depreciation or impairment	Net values	Net values
Intangible assets	16-17	1,387	610	777	713
Property, plant and equipment owned by EDF	16-17	74,870	49,799	25,071	24,323
Property, plant and equipment operated under concession	16-17	13,385	7,959	5,426	5,326
Tangible and intangible assets in progress	16-17	14,535	100	14,435	12,703
Investments and related receivables		56,627	171	56,456	59,541
Investment securities		12,799	55	12,744	12,461
Loans and other financial assets		8,229	–	8,229	7,665
Financial assets	18	77,655	226	77,429	79,667
TOTAL I FIXED ASSETS		181,832	58,694	123,138	122,732
Inventories and work-in-progress	19	9,953	200	9,753	9,660
Advances on orders	20	1,136	2	1,134	1,055
Trade and other receivables	20	19,402	397	19,005	17,528
Marketable securities	21	8,819	4	8,815	10,312
Cash instruments	20	3,913	–	3,913	1,627
Cash and cash equivalents	22	6,583	–	6,583	5,066
Prepaid expenses	20	1,294	–	1,294	1,295
TOTAL II CURRENT ASSETS		51,100	603	50,497	46,543
Deferred charges (III)		286	–	286	258
Bond redemption premiums (IV)		640	132	508	456
Unrealised foreign exchange losses (V)	23	1,146	–	1,146	261
TOTAL ASSETS (I+II+III+IV+V)		235,004	59,429	175,575	170,250

EQUITY AND LIABILITIES

(in millions of Euros)		Notes	31/12/2014	31/12/2013
Capital			930	930
Capital-related premiums			7,205	7,205
Revaluation surplus			669	670
Reserves				
Legal reserves			93	92
Other reserves			3,000	3,000
Retained earnings			5,598	4,988
Profit or loss for the financial year			1,649	2,938
Interim dividend			(1,059)	(1,059)
Investment subsidies			174	178
Tax-regulated provisions			6,324	6,401
EQUITY	24		24,583	25,343
Additional equity	25		10,688	6,120
Special concession accounts	26		2,045	2,016
TOTAL I EQUITY AND CONCESSION ACCOUNTS			37,316	33,479
Provisions for risks	27		1,933	536
Provisions related to nuclear generation – Back-end of the nuclear cycle, plant decommissioning and last cores	28		34,060	32,658
Provisions for decommissioning of non-nuclear facilities	29		589	572
Provisions for employee benefits	30		10,795	10,691
Provisions for other expenses	31		982	924
Provisions for expenses			46,426	44,845
TOTAL II PROVISIONS			48,359	45,381
Financial liabilities	33		47,053	45,280
Advances and progress payments received	32		6,433	6,279
Operating, investment and other liabilities	32		28,821	33,375
Cash instruments	32		3,337	1,973
Deferred income	32		4,065	4,273
TOTAL III LIABILITIES	32		89,709	91,180
Unrealised foreign exchange gains (IV)	34		191	210
TOTAL EQUITY AND LIABILITIES (I+II+III+IV)			175,575	170,250

Cash flow statements

(in millions of Euros)	Notes	2014	2013
Operating activities			
Profit/(loss) before income tax		2,226	3,686
Amortisation, depreciation and provisions		5,897	3,107
Capital (gains)/losses		(1,092)	213
Financial income and expenses		102	(623)
Changes in working capital		(1,127)	(528)
Net cash flow from operations		6,006	5,855
Net financial expenses, including dividends received		(187)	1,074
Income taxes paid		(2,219)	(1,727)
(A) Net cash flow from operating activities		3,600	5,202
Investing activities			
Investments in property, plant and equipment and intangible assets		(5,832)	(5,656)
Proceeds from sale of property, plant and equipment and intangible assets		13	15
Changes in financial assets		5,249	(203)
(B) Net cash flow used in investing activities		(570)	(5,844)
Financing activities			
Issuance of borrowings and underwriting agreements		7,109	3,288
Repayment of borrowings and underwriting agreements		(7,247)	(6,296)
Dividends paid		(2,327)	(2,145)
Issuance of perpetual subordinated bonds	25	3,973	6,135
Funding contributions received for assets operated under concessions		7	12
Investment subsidies		5	1
(C) Net cash flow from financing activities		1,520	995
(A)+(B)+(C) Net increase/(Decrease) in cash and cash equivalents		4,550	353
CASH AND CASH EQUIVALENTS – OPENING BALANCE*	22	(3,310)	(3,699)
Effect of currency fluctuations		(57)	5
Financial income on cash and cash equivalents		43	31
CASH AND CASH EQUIVALENTS – CLOSING BALANCE*	22	1,226	(3,310)

* "Cash and cash equivalents – opening balance" and "Cash and cash equivalents – closing balance" do not include investment funds, nor negotiable debt instruments maturing in more than three months. Details of the variation in cash and cash equivalents are presented in note 22.

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Notes to the financial statements

Électricité de France SA (EDF), the parent company of the EDF group, is a French *société anonyme* operating in electricity generation and electricity and gas supply. EDF also covers all the business activities of Island Energy Systems (IES, located in Corsica and France's overseas departments).

➤ Note 1 Accounting principles and methods

1.1 Accounting standards

EDF's financial statements are prepared in accordance with the accounting principles and methods defined by the French national chart of accounts, as presented by Regulation 2014-03 concerning the chart of accounts issued by the *Autorité des Normes Comptables* (ANC), the France's Accounting Standards Authority, on 5 June 2014, which repealed CRC (French accounting committee) Regulation 99-03 of 29 April 1999 on annual financial statements.

ANC Recommendation 2013-02 of 7 November 2013 on the rules for measuring and recognising pension obligations applies for financial years beginning on or after 1 January 2014. No change has been applied in EDF's financial statements as a result of this recommendation.

The accounting and valuation methods applied are therefore identical to those used in the financial statements for the year ended 31 December 2013.

1.2 Management judgments and estimates

The preparation of the financial statements requires the use of judgments, best estimates and assumptions in determining the value of assets and liabilities, income and expenses recorded for the period, considering positive and negative contingencies existing at year-end. The figures in EDF's future financial statements could differ significantly from current estimates due to changes in these assumptions or economic conditions.

In the specific case of useful life, EDF's industrial strategy is to continue operation of the French nuclear power plants beyond their current accounting depreciation period of 40 years, in optimum conditions as regards safety and efficiency.

EDF has been making preparations for extending the useful life of its power plants for several years, and is now making the necessary investments under the industrial programme called "*Grand carénage*". Adjustment of the useful life of the nuclear power plants to bring it into line with this industrial strategy will be reflected in EDF's financial statements as soon as all the required technical, economic and governance conditions are in place.

The other principal sensitive accounting methods involving use of estimates and judgments are described below.

In a context characterised by financial market volatility, the parameters used to prepare estimates are based on macro-economic assumptions appropriate to the very long-term cycle of EDF's assets.

1.2.1 Nuclear provisions

The measurement of provisions for the back-end of the nuclear cycle, decommissioning and last cores is sensitive to assumptions concerning

costs, inflation rate, long-term discount rate, and disbursement schedules. A revised estimate is therefore established at each closing date to ensure that the amounts accrued correspond to the best estimate of the costs eventually to be borne by EDF. Any significant differences resulting from these revised estimates could entail changes in the amounts accrued.

The main assumptions and sensitivity analyses are presented in note 28.5.

1.2.2 Pensions and other long-term and post-employment benefits

The value of pensions and other long-term and post-employment benefit obligations is based on actuarial valuations that are sensitive to all the actuarial assumptions used, particularly concerning discount rates, inflation rates, and wage increase rates.

The principal actuarial assumptions used to calculate these post-employment and long-term benefits at 31 December 2014 are presented in note 30.4. These assumptions are updated annually. EDF considers the actuarial assumptions used at 31 December 2014 appropriate and well-founded, but future changes in these assumptions could have a significant effect on the amount of the obligations and EDF's net income.

1.2.3 Energy supplied but not yet measured and billed

The quantities of energy supplied but not yet measured and billed are calculated at the reporting date based on consumption statistics and selling price estimates. Determination of the unbilled portion of sales revenues at the year-end is sensitive to the assumptions used to prepare these statistics and estimates.

1.3 Sales

Sales essentially comprise income from energy sales (to final customers and as part of trading activities), and services sales. Services for delivery through the energy distribution network purchased from the subsidiary ERDF and invoiced to end-customers contribute to EDF's energy sales.

EDF accounts for sales when:

- there is a proven contractual relationship;
- delivery has taken place (or the service has been completed);
- a quantifiable price has been established or can be determined; and
- the receivables are likely to be recovered.

Delivery takes place when the risks and benefits associated with ownership are transferred to the buyer.

The quantities of energy delivered to EDF customers but not yet measured and billed at the end of the period are calculated based on the quantities used by the sites of the EDF balance responsible entities less the quantities billed, after losses measured by a statistical method presented to the *Commission de Régulation de l'Énergie* (CRE), the French Energy Regulation Commission. These quantities are valued using an average price determined by reference to energy invoiced in the previous month.

Sales of goods and revenues on services not completed at the balance sheet date are valued by reference to the stage of completion at that date.

Sales of energy to EDF Trading, the Group's trading company, are recorded at their contractually stipulated amount.

1.4 Intangible assets

1.4.1 Research and development expenses

Research expenses are recognised as expenses in the financial period incurred.

Project development expenses are capitalised as an intangible asset when EDF can demonstrate:

- the technical feasibility of making the intangible asset ready for commissioning or sale;
- its intention to complete the intangible asset and use or sell it;
- its ability to use or sell the intangible asset;
- how the intangible asset will generate likely future economic benefits;
- the availability of the appropriate resources (technical, financial or other) to complete development and use or sell the intangible asset; and
- its ability to provide a reliable estimate of expenses attributable to the intangible asset during its development.

Capitalised development costs are amortised on a straight-line basis over their foreseeable useful life.

1.4.2 Other intangible assets

Other intangible assets mainly consist of software, leasehold rights, and storage capacity reservation costs.

They are amortised on a straight-line basis over their useful life regardless of whether they are generated in-house or purchased.

1.5 Property, plant and equipment

EDF's property, plant and equipment is reported under two balance sheet headings, as appropriate to the business and contractual circumstances of their use:

- property, plant and equipment owned by EDF, essentially nuclear generation facilities;
- property, plant and equipment operated under concession.

1.5.1 Initial measurement

Property, plant and equipment is recorded at acquisition or production cost.

The initial value in the assets is the acquisition or production cost (including external costs as well as costs incurred directly by EDF).

The cost of facilities developed in-house includes all labour and materials costs, and all other production costs attributable to the construction of the asset.

EDF capitalises safety expenses incurred as a result of legal and regulatory obligations sanctioning non-compliance by an administrative ban from operation.

The cost of property, plant and equipment also includes decommissioning costs for generation plants, and last core costs for nuclear facilities. These assets are associated with the provisions recorded to cover these obligations. At the date of commissioning, they are measured and recorded in the same way as the corresponding provision (see note 1.15). They are depreciated in the same way and over the same useful life as the relevant facility. The asset ceases to be recognised when the associated facility has been totally depreciated.

When some of the decommissioning costs for a plant are to be borne by a partner, the expected reimbursement is recognised as accrued income in the assets. The difference between the provision and the accrued income is recorded as a tangible asset, and subsequent payments by the partner are deducted from the accrued income.

The value of property, plant and equipment therefore includes the following:

- the discounted cost of decommissioning the facilities; and
- for nuclear facilities, the discounted cost of last core nuclear fuel, including:
 - the cost of the loss on reactor fuel that will not be fully irradiated when production shuts down and cannot be reused because of technical and regulatory constraints,
 - the cost of processing this fuel, and
 - the cost of removing and storing waste resulting from these operations.

Strategic safety spare parts for production facilities are treated as property, plant and equipment, and depreciated over the residual useful life of the installations.

When a part of an asset has a different useful life from the overall asset's useful life, it is identified as an asset component and depreciated over a specific period. This mainly concerns the costs of major inspections, which are amortised over a period corresponding to the time elapsing between two inspections.

Borrowing costs attributable to the financing of an asset incurred during the construction period, and pre-operating expenses, are recognised as expenses.

1.5.2 Depreciation

Items of property, plant and equipment are depreciated on a straight-line basis over their useful life, defined as the period during which the company expects to draw future economic benefits from their use.

The expected useful lives for the main facilities are as follows:

- | | |
|---|----------------|
| ■ hydroelectric dams: | 75 years |
| ■ electromechanical equipment used in hydropower plants: | 50 years |
| ■ thermal power plants: | 25 to 45 years |
| ■ nuclear generation facilities: | 40 years |
| ■ transmission and distribution installations (lines, substations): | 20 to 45 years |

1.5.3 Concession agreements

In France, EDF is the operator for two types of public service concessions:

- public electricity distribution concessions in which the grantors are local authorities (municipalities or syndicated municipalities);
- hydropower concessions with the French State as grantor.

1.5.3.1 Public electricity distribution concessions

EDF is the concession operator for the island networks located in Corsica and France's overseas departments, generally under concession agreements using standard concession rules deriving from the 1992 Framework Contract (updated in 2007) negotiated with the National Federation of Licensing Authorities (*Fédération Nationale des Collectivités Concédantes et Régies* – FNCCR) and approved by the public authorities.

The accounting treatment of concessions is based on the 1975 accounting guide for concession operator firms, as there are no specific instructions in the national chart of accounts (*plan comptable général*).

Assets used under concessions are reported in the balance sheet assets as property, plant and equipment operated under concession, regardless of their initial financing, at acquisition cost or their estimated value at the transfer date when supplied by the grantor. An offsetting liability is recognised for any assets supplied for nil consideration by concession grantors.

1.5.3.2 Hydropower concessions

Hydropower concessions follow standard rules approved by decree.

Assets attributed to the hydropower concessions comprise hydropower generation equipment (dams, pipes, turbines, etc) and, in the case of recently-renewed concessions, electricity generation and switching facilities (alternators, etc). Assets used in these concessions are recorded under "Property, plant and equipment operated under concession", at acquisition cost. Depreciation is calculated over their useful life, which is generally identical to the term of the concession.

Additional depreciation is booked in complement to industrial depreciation for assets operated under concession that are to be returned for nil consideration at the end of the concession but whose useful life extends beyond the concession term.

1.6 Long-term asset impairment

At each reporting date, EDF assesses whether there is an indication that an asset could have significantly lost value. If so, an impairment test is carried out as follows:

- EDF measures any long-term asset impairment by comparing the carrying value of these assets, grouped into cash-generating units where necessary, and their recoverable amount, usually determined using the discounted future net cash flow method. When this recoverable value is lower than the value in the balance sheet, an amount equivalent to the difference is written off under "Depreciation and impairment";
- the discount rates used for these purposes are based on the weighted average cost of capital (WACC) for each asset or group of assets concerned;
- future cash flows are based on medium-term plan projections over three years, and assumptions validated by the management.

1.7 Financial assets

1.7.1 Investments

Investments are carried at acquisition cost.

Gains and losses on sales of investments are valued using the FIFO (first in first out) method.

In accordance with the CNC (French accounting council) Emergency Committee opinion 2007-C of 15 June 2007, transfer duties, fees and commissions and legal fees related to acquisitions of investments are included in the cost of acquisition of the asset. Expenses of this type relating to other shares are charged to expenses. Tax-regulated amortisation of acquisition costs is recorded in an excess depreciation account.

When the book value of investments is higher than their value in use, an impairment is recorded equivalent to the difference.

The value in use of listed securities in non-consolidated entities is based on stock market price.

For unlisted and listed securities in companies included in the EDF group consolidation, the value in use is determined by reference to equity or net adjusted consolidated assets, taking into account expert valuation information and information that has become known since the previous year-end when necessary.

1.7.2 Investment securities

EDF has set up two investment portfolios:

- the first comprises dedicated financial assets intended to finance the end of nuclear fuel cycle operations, for which provisions have been accrued. These assets are managed separately from other financial assets and investments in view of their specific objective, and comprise bonds, equities, collective investment funds and reserved funds built up by EDF solely for its own use;
- the second comprises securities acquired to generate a satisfactory return on investment in the medium to long term, without participating in the management of the companies concerned.

Investment securities also include treasury shares that cover obligations relating to debt instruments providing access to the company's capital, acquired under a liquidity contract with an investment services company or through an external operation or capital reduction.

Shares are recorded at acquisition cost. In compliance with Article 213-8 of ANC Regulation 2014-03 on the national chart of accounts, transfer duties, professional fees, commissions, legal expenses and purchasing costs are all charged to expenses, under the option used for other investments.

Investment securities (shares and bonds) are recorded at acquisition cost. If the carrying amount of a security is lower than the book value, the unrealised capital loss is fully written off without being netted against potential gains on other securities. The carrying amount of listed securities is assessed individually, taking the stock market price into account. For unlisted securities, the carrying amount is also assessed individually, mainly in consideration of the growth prospects of the companies concerned and their share prices.

1.7.3 Other financial assets

As part of Group activities, EDF grants short-term loans in foreign currencies to its subsidiaries. In order to reduce exposure to foreign exchange risks, the Group mainly finances these loans by short-term commercial paper issues in foreign currencies and in Euros, together with the use of currency hedging derivatives.

1.8 Inventories and work-in-progress

The initial cost of inventories includes all direct material costs (including the effect of hedging), labour costs and a share of indirect production costs. Inventory consumption is valued under the weighted average unit cost method, except for greenhouse gas emission rights, for which the FIFO (first in first out) method is used.

Inventories are carried at the lower of historical cost or net realisable value.

1.8.1 Nuclear fuel and materials

Inventory accounts include:

- nuclear materials, whatever their form during the fuel production cycle;
- fuel components in the warehouse or in the reactor.

The stated value of nuclear fuel and materials and work-in-progress is determined based on direct processing costs including materials, labour and subcontracted services (e.g. fluorination, enrichment, production, etc.).

In accordance with the notion of "loaded fuel" as defined in the decision of 21 March 2007, the cost of inventories for fuel in reactors but not yet irradiated includes expenses for spent fuel management and long-term radioactive waste management. The corresponding amounts are taken into account in the relevant provisions.

Nuclear fuel consumption is determined by component (natural uranium, fluorination, enrichment, fuel assembly production) as a proportion of the expected output when the fuel is loaded in the reactor. These quantities are valued at weighted average cost of inventories, applied to each component. Inventories are periodically corrected in view of forecast spent quantities based on neutronic measurements and physical inventories.

1.8.2 Other operating inventories

These inventories include:

- fossil fuels required for operation of thermal power plants;
- operating materials and equipment such as spare parts supplied under a maintenance programme (excluding capitalised strategic safety spare parts);
- greenhouse gas emission rights acquired for the generation cycle (see note 1.19.1);
- gas stocks, valued at weighted average cost, including direct and indirect purchase costs, especially transport costs.

Impairment of spare parts depends on the turnover of these parts.

1.9 Accounts receivable and marketable securities

1.9.1 Trade receivables

Trade receivables are initially stated at nominal value. They also include the value of unbilled receivables for energy already supplied.

A write-down is recorded when, based on the probability of recovery assessed according to the type of receivable, the carrying amount of receivables falls below their book value. Depending on the nature of the receivable, the risk associated with doubtful receivables is assessed individually or by experience-based statistical methods, bearing in mind that EDF does not bear the risks of non-payment for the delivery portion of these receivables, which is borne by ERDF.

1.9.2 Marketable securities

Marketable securities are initially recorded as assets at acquisition cost, and restated at the lower of historical cost or present value at year-end.

For listed securities, the present value is equal to the year-end stock market price. For unlisted securities, the value in use is the probable trading value taking the company's growth prospects into consideration.

An impairment is recorded to fully cover any unrealised losses, without netting against unrecorded unrealised gains.

Gains and losses on sales of marketable securities are valued using the FIFO (first in first out) method.

1.10 Bond issuance expenses and redemption premiums

Bond redemption premiums are amortised on a straight-line basis over the term of the related bond (or each tranche of the bond to maturity in the case of serial bonds).

Commissions and external costs paid by EDF upon issuance of borrowings and included in "deferred charges" are spread on a straight-line basis over the term of the related instruments.

1.11 Unrealised foreign exchange gains and losses

Foreign currency receivables and payables are translated into Euros at the year-end exchange rates. The resulting translation differences are recorded in the balance sheet under "Unrealised foreign exchange gains" and "Unrealised foreign exchange losses". Provisions are recorded to cover all unrealised exchange losses on foreign currency borrowings not hedged for exchange risks. Unrealised gains are not recognised in the income statement.

Translation differences with respect to swaps hedging foreign currency borrowings are recorded under "Unrealised foreign exchange gains" and "Unrealised foreign exchange losses" as an offsetting entry to "Cash Instruments".

1.12 Tax-regulated provisions

This item mainly includes excess depreciation recorded for tax purposes and relates to:

- depreciation of generation and distribution facilities;
- exceptional depreciation of desulphurisation systems implemented on thermal plants, and software developed in-house by the company.

1.13 Additional equity

Perpetual subordinated bonds issued by EDF in Euros and other currencies are recorded in compliance with the French Chartered accountants' body *Ordre des experts comptables* opinion 28 of July 1994, taking their specific characteristics into consideration.

As a result, they are classified as "Additional equity", since redemption is exclusively controlled by EDF.

Issuance expenses and premiums are amortised through the income statement.

Interest paid on these bonds is recorded in financial result.

1.14 Special concession accounts

These liabilities relate mostly to public electricity distribution concessions for the Island Energy Systems (IES), and hydropower concessions.

1.14.1 Special public distribution concession liabilities – IES

These liabilities represent the contractual obligations specific to the concession rules for public electricity distribution concessions, recognised in the liabilities as:

- rights in existing assets: these correspond to the grantor's right to recover all assets for nil consideration. This right comprises the value in kind of the facilities - the net book value of assets operated under concession - less any as yet unamortised financing provided by the operator;
- rights in assets to be replaced: these correspond to the operator's obligation to contribute to the financing of assets due for replacement. These non-financial liabilities comprise:
 - depreciation recorded on the portion of assets financed by the grantor,
 - the provision for renewal, exclusively for assets due for renewal before the end of the concession. This provision is included in provisions for expenses.

When assets are replaced, the provision and amortisation of the grantor's financing recorded in respect of the replaced item are eliminated and transferred to the rights in existing assets, since they are considered as the grantor's financing for the new asset. Any excess provision is taken to income.

During the concession, the grantor's rights in assets to be replaced are thus transferred upon the asset's renewal to become the grantor's rights in existing assets, with no outflow of cash to the benefit of the grantor.

1.14.2 Special hydropower concession liabilities

These liabilities comprise:

- the value of assets remitted for nil consideration and contributions received;
- differences arising from revaluations in accordance with French legislation for fixed assets commissioned before 1 January 1959 and before 1 January 1977;
- and since 1 January 2009 (when implementation of the decree 2008-1009 of 26 September 2008 came into force) additional depreciation booked for facilities that are to be returned for nil consideration at the end of the concession but whose useful life extends beyond the concession term. This additional depreciation is based on the share of the assets' net book value at the end of the concession financed by the concession operator.

Following the changes made to the accounting treatment of hydropower concessions at 1 January 2009, the 1959 revaluation reserve is transferred to equity when the assets concerned are retired.

The net revaluation reserve generated by the 1976 revaluation is taken to income over the residual useful life of the assets concerned.

The value of assets remitted for nil consideration and contributions received are transferred to the income statement over their useful lives.

1.15 Provisions other than employee benefit provisions

A provision is booked if the following three conditions are met:

- EDF has a present obligation (legal or constructive) towards a third party that arises from an event prior to the closing date;
- it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation;
- the obligation amount can be estimated reliably.

Provisions are determined based on EDF's estimate of the expected cost necessary to settle the obligation. Estimates are based on management data from the information system, assumptions adopted by EDF, and if necessary experience of similar transactions, or in some cases based on independent expert reports or contractor quotes. The various assumptions are reviewed for each closing of the accounts.

The relevant expenses are estimated based on year-end economic conditions, then spread over a forecast disbursement schedule and adjusted to Euros of the year of payment through application of a forecast long-term inflation rate. To determine the provisions, these amounts are discounted to present value using a nominal discount rate.

Provisions to cover back-end nuclear cycle expenses, expenses related to the decommissioning of power plants and last cores, and loss-making contracts are estimated based on discounted future cash flows. The rate of inflation and the discount rate are based on the economic and regulatory parameters of France, considering the long operating cycle of assets and the maturities of commitments. The discount effect generated at each closing to reflect the passage of time is recorded in financial expenses. If it is anticipated that all or part of the expenses covered by a provision will be reimbursed, the reimbursement is recognised under receivables if and only if EDF is virtually certain of receiving it.

In extremely rare situations, a provision cannot be booked due to lack of a reliable estimate. In such cases, the obligation is mentioned in the notes as a contingent liability, unless there is little likelihood of an outflow of resources.

Changes in provisions resulting from a change in discount rates, a change in the disbursement schedule or a change in contractor quote are recorded:

- as an increase or decrease in the corresponding assets, up to the net book value, if the provision was initially covered by balance sheet assets (decommissioning of plants still in operation, long-term management of the radioactive waste resulting from such decommissioning, and last cores), as required by CRC Emergency Committee opinion 2005-H of 6 December 2005 on recognition of decommissioning, removal and site rehabilitation costs in individual financial statements, incorporated into Article 213-8 of ANC Regulation 2014-03 on the national chart of accounts;
- in the income statement in all other cases.

1.15.1 Provisions related to nuclear generation

These provisions mainly cover the following:

- back-end nuclear cycle expenses: provisions for spent fuel management and long-term radioactive waste management are established for all fuels. This provision concerns all fuel in reactors, regardless of the extent of irradiation; it also covers management expenses for radioactive waste resulting from decommissioning of nuclear plants;

- costs for decommissioning power plants and losses relating to fuel in the reactor when the reactor is shut down (provision for last cores).

1.15.2 Other provisions

These provisions mainly concern:

- multi-year agreements for the purchase and sale of energy:
 - losses on energy purchase agreements are measured by comparing the acquisition cost under the contractual terms with the forecast market price,
 - losses on energy sale agreements are measured by comparing the estimated income under the contractual terms with the cost of the energy to be supplied;
- unrealised foreign exchange losses;
- costs of decommissioning of thermal and hydropower plants;
- costs of renewal of facilities operated under distribution concessions.

In extremely rare cases, description of a specific litigation covered by a provision may be omitted from the notes to the financial statements if such disclosure could cause serious prejudice to the company.

1.16 Employee benefits

In accordance with the statutory regulations for companies in the electricity and gas sector (IEG), EDF's employees are entitled to post-employment benefits (pensions plans, retirement indemnities, etc) and other long-term benefits (e.g. long-service awards).

1.16.1 Calculation and recognition of employee benefits

In application of the CNC Emergency Committee opinion 2000-A issued on 6 July 2000, incorporated into Article 324-1 of ANC Regulation 2014-03 on the national chart of accounts, EDF opted for recognition of post-employment benefits granted to personnel as of 1 January 2005.

Obligations under defined-benefit plans are calculated by the projected unit credit method, which determines the present value of entitlements earned by employees at year-end to post-employment benefits and long-term benefits, taking into consideration the prospects for wage increases and the country's specific economic conditions.

Post-employment benefit obligations are valued mainly using the following methods and assumptions, in compliance with Article 324-1 of ANC regulation 2014-03:

- retirement age, determined on the basis of the applicable rules, and the requirements to qualify for a full pension;
- career-end salary levels, with reference to employee seniority, projected salary levels at the time of retirement based on the expected effects of career advancement, and estimated trends in pension levels;
- forecast numbers of pensioners, determined based on employee turnover rates and mortality data;
- reversion pensions where relevant, taking into account both the life expectancy of the employee and his/her spouse and the marriage rate for IEG sector employees;

- a discount rate that depends on the duration of the obligations, determined at the year-end date by reference to the market yield on high quality corporate bonds or the rate on government bonds whose duration is coherent with EDF's commitments to employees.

The amount of the provision takes into account the present value of the assets that cover these benefits, which is deducted from the value of the benefit obligation.

Any actuarial gain or loss on post-employment benefit obligations in excess of 10% (the "corridor") of the obligations or fund assets, whichever is the highest, are recognised in the income statement progressively over the average residual working life of the company's employees.

For other long-term benefits, actuarial gains and losses and the full past service cost are directly included in the provision, without application of the *corridor* rule.

The net expense booked during the year for employee benefit obligations includes:

- the current service cost, corresponding to additional benefit entitlements earned during the year;
- the net interest expense, corresponding to interest on obligations net of the return on fund assets;
- the income or expense corresponding to the actuarial gains and losses on long-term benefits and amortisation of actuarial gains or losses on post-employment benefits;
- the past service cost, including the income or expense related to amendments or settlements of benefit plans or introduction of new plans.

1.16.2 Post-employment benefit obligations

Since the financing reform for the IEG sector system took effect on 1 January 2005, the CNIEG (*Caisse Nationale des IEG*, the sector's specific pension body) has managed not only the special IEG pension system, but also the industrial accident, invalidity and death insurance system for the sector.

The CNIEG is a social security body governed by private law, formed by the law of 9 August 2004. It has legal entity status and reports to the French government, operating under the joint supervision of France's ministers for the Budget, Social Security and Energy.

Under the funding arrangements introduced by the law, EDF establishes pension provisions to cover entitlements not funded by France's standard systems (CNAV, AGIRC and ARRCO), to which the IEG system is affiliated, or by the CTA (*Contribution Tarifaire d'Acheminement*) levy on gas and electricity transmission and distribution services.

As a result of this funding mechanism, any change (whether favourable or unfavourable to employees) in the standard French pension system that is not passed on to the IEG pension system is likely to cause a variation in the amount of the provisions recorded by EDF to cover its obligations.

The obligations concerned by the pensions and for which a provision is recorded thus include:

- specific benefits of employees in the deregulated or competitive activities;
- specific benefits earned by employees from 1 January 2005 for the regulated activities (distribution) (benefits earned before that date are financed by the CTA levy).

CNIEG management expenses payable by EDF for the administration and payment of retired employees' pensions are also included.

In addition to pensions, other benefits are granted to IEG status former employees (not currently in active service), as detailed below:

- benefits in kind (energy): Article 28 of the IEG National Statutes entitles such employees and current employees to benefits in kind in the form of supplies of electricity or gas at preferential prices. The obligation for supplies of energy to employees of EDF and GDF Suez corresponds to the probable present value of KWh to be supplied to beneficiaries or their dependants during their retirement, valued on the basis of the unit cost. It also includes the payment made under the energy exchange agreement with GDF Suez;
- retirement gratuities: these are paid upon retirement to employees due to receive the statutory old-age pension, or to their dependants if the employee dies before reaching retirement. These obligations are almost totally covered by an insurance policy;
- bereavement benefit: this is paid out upon the death of an inactive or disabled employee, in order to provide financial assistance for the expenses incurred at such a time (Article 26, § 5 of the National Statutes). It is paid to the deceased's principal dependants (statutory indemnity equal to three months' pension) or to a third party that has paid funeral costs (discretionary indemnity equal to the costs incurred);
- bonus pre-retirement paid leave: all employees eligible to benefit immediately from the statutory old-age pension and aged at least 55 at their retirement date are entitled to 18 days of bonus paid leave during the last twelve months of their employment;
- other benefits include help with the cost of studies, time banking for pre-retirement leave, and pensions for personnel sent on secondment to companies not covered by the IEG system.

1.16.3 Other long-term benefit obligations

These benefits concern employees currently in service, and include:

- annuities following incapacity, invalidity, industrial accident or work-related illness; like their counterparts in the general national system, IEG employees are entitled to financial support in the event of industrial accident or work-related illness, and invalidity and incapacity annuities and benefits. The obligation is measured as the probable present value of future benefits payable to current beneficiaries, including any possible reversions;
- long-service awards;
- specific benefits for employees who have been in contact with asbestos.

1.17 Derivatives

EDF uses derivatives in order to minimise the impact of foreign exchange risks and interest rate risks.

These short-term and long-term derivatives comprise interest rate and currency derivatives.

Hedging derivatives correct the foreign exchange result and interest income or expense of the corresponding asset or liability. If the foreign exchange risk is fully hedged, no provision is recorded. If it is only partly hedged, a provision is recorded for the entire unhedged portion of the unrealised foreign exchange loss.

For derivatives traded over the counter, when there is no hedging relationship, a provision is recorded for unrealised losses and unrealised gains are not recognised.

Instruments in the portfolio at the year-end are included in off balance sheet commitments at the nominal value of the contracts.

1.18 Commodity contracts

Forward financial instruments on commodities are traded for hedging purposes. Gains and losses on these operations are included in sales or in the cost of energy purchases, depending on the nature of the hedged item.

Instruments in the portfolio at the year-end are included in off balance sheet commitments at the quantities to be delivered or to be received under the contracts.

1.19 Environment

1.19.1 Greenhouse gas emission rights

The third phase of the Kyoto protocol began on 1 January 2013, introducing changes to the methods for allocation of greenhouse gas emission rights which in France put an end to free allocation of emission rights for electricity generating companies.

EDF applies the accounting methods for greenhouse gas emission rights in accordance with France's Accounting Standards Authority (ANC) Regulation 2012-04 of 4 October 2012, incorporated into Articles 615-1 to 615-22 of ANC Regulation 2014-03.

The accounting treatment of emission rights depends on the holding intention. There are two economic models, both of which coexist at EDF.

Emission rights held under the "Trading" model are included in inventories at acquisition cost. A write-down is recorded when the present value of emission rights is lower than the book value.

Emission rights held to comply with regulatory requirements on greenhouse gas emissions (the "Generation" model) are included in inventories at acquisition cost, and the FIFO (first in first out) method is applied. A write-down is recorded when the generation cost of the electricity that includes the cost of the rights is higher than the present value of that electricity. At year-end, a "net presentation" principle is applied as follows:

- an asset is recognised (in inventories) if the quantities of greenhouse gas emissions are lower than the number of emission rights held in the portfolio. This corresponds to the rights available to cover future greenhouse gas emissions;
- a liability is recorded (in debts) in the opposite situation equivalent to the rights still needed to cover emissions already produced, valued at contractualised acquisition price for forward purchases deliverable before surrender, and at market value for the balance.

The net reporting principle assumes that the emission rights held in the portfolio will be the rights used to offset emissions produced. However, there is a limit to the fungibility of rights at EDF, as there are no transfers of rights between the island and mainland activities. This can lead to concurrent recognition of an asset and a liability.

1.19.2 Energy savings certificates

In application of French Law 2005-781 of 13 July 2005 defining the major lines of the national energy policy, which introduced a system of energy savings certificates for legal entities selling electricity, gas, heat or cold to end-users, and CNC Emergency Committee opinion 2006-D of 4 October 2006 defining the relevant accounting treatment under French GAAP, EDF's financial statements reflect the management of energy savings certificates.

Expenses incurred to meet the cumulative energy savings obligation are treated as:

- tangible assets, if the action taken by the company concerns its own assets and the expenses qualify for recognition as an asset;
- expenses for the year incurred, if they do not meet the requirements for capitalisation or if the action taken is to encourage third parties to save energy.

Under the general framework of an energy savings certificate system:

- certificates obtained from the State after the action taken are not recognised in the accounts;
- purchases of energy savings certificates are included in:
 - expenses, if the purchases are made to meet the obligation,
 - intangible assets, if the certificates are purchased for resale (as there is no active market).

Certificates purchased, obtained or receivable from the State are recorded in specific commodities off-balance sheet accounts.

➤ Note 2 Significant events and transactions

The main events and transactions in 2014 with a definite or potential significant impact on the financial statements are as follows:

2.1 Dalkia

On 25 March 2014 EDF and Veolia Environnement (VE) announced that they had finalised the discussions begun in October 2013 and signed an agreement regarding their joint subsidiary Dalkia. Under the terms of this agreement, the EDF group was to take over all the Dalkia group's activities in France (including Citelum), while Dalkia International's activities were taken over by VE.

Following European Commission approval and fulfilment of the other conditions, EDF finalised the operation with VE on 25 July 2014, on the terms laid down in the agreement of 25 March 2014.

EDF sold all the shares of Dalkia Holding and Dalkia International to VE for a total amount of €1,776 million. A gain on sale of €454 million was recorded in exceptional result.

As the acquisition of exclusive control over Dalkia in France took place at the same time, EDF acquired all the shares in Dalkia for the sum of €967 million.

2.2 Transalpina di Energia SpA and Wagram 4

As part of the reorganisation of the EDF group's Italian subsidiaries in the first half-year of 2014, EDF's fully-owned subsidiary Wagram 4 merged with the fully-owned subsidiary TdE SRL, which holds the shares of Edison. Following this merger in which TdE was absorbed by Wagram 4, the new entity's name is Transalpina di Energia SpA (TdE SpA). On 1 July 2014 EDF sold the shares of TdE SpA to EDF International at their net book value of €4,273 million.

2.3 Issuance of perpetual subordinated bonds

On 15 January 2014 EDF launched several tranches of a perpetual subordinated bond in Euros, US dollars and sterling (a "hybrid" bond):

- US\$1,500 million at 5.625% coupon with a 10-year first call date;
- €1,000 million at 4.125% coupon with an 8-year first call date;
- €1,000 million at 5% coupon with a 12-year first call date;
- £750 million at 5.875% coupon with a 15-year first call date.

Given its characteristics (see note 1.13), this issue is recorded in "Additional equity" from reception of funds at the amount of €3,973 million (net of redemption premium).

This bond is the second issue in the financing programme launched in January 2013 with the aim of building up an amount of subordinated instruments coherent with the portfolio of industrial assets in development.

2.4 Agreement between EDF and Exeltium

On 27 October 2014 the Exeltium consortium and EDF signed an agreement to adjust Exeltium's electricity supply contract and restore competitiveness to the electro-intensive companies concerned, following the significant unexpected drop in market prices.

Under this agreement, the price paid for electricity supplies will be decreased initially, before a subsequent adjustment based on changes in the market price for electricity. The whole mechanism thus makes the contract more flexible while retaining its overall economic balance.

The other contractual parameters (delivery volumes, opt-out options and industrial risk sharing) are unchanged. The contract's philosophy, approved at the outset by the European Commission, remains the same: offering long-term visibility to the companies belonging to the consortium and ensuring competitive prices over the whole period, while allowing EDF to share part of its generation costs in the long run.

➤ Note 3 Regulatory events in 2014 with an impact on the financial statements

3.1 Regulated tariffs

3.1.1 Cancellation of regulated sales tariffs by the Council of State

In a decision of 11 April 2014, France's Council of State partly cancelled the regulated electricity sales tariffs for the period 23 July 2012 to 31 July 2013, following a petition for cancellation brought by the ANODE (French association of energy retail operators). It had decided that the rises in the "yellow" and "blue" tariffs for the period, which were limited to 2% by the ministerial decision of 20 July 2012, were insufficient to cover EDF's electricity generation costs, and also too low in view of the legislator's aim to bring tariffs into line with supply costs for electricity distributed at market prices by 31 December 2015. The corrected 2012 sales tariffs were published in the official journal on 31 July 2014.

Based on those corrections, an additional €908 million of sales revenues was recorded in 2014. After inclusion of various costs associated with this retroactive tariff adjustment, the impact on the operating profit for 2014 amounts to €731 million.

3.1.2 Regulated electricity sales tariffs in France

The tariff decision of 26 July 2013 provided for an average 5% rise in the "blue" regulated sales tariffs from 1 August 2014. On 4 July 2014, the French government announced that this rise was to be cancelled, and a decision to this end was published.

The government also decided to amend decree 2009-975 of 12 August 2009 in order to introduce before 31 December 2015 a method for constructing regulated sales tariffs by "stacking" or adding up the price of regulated access to nuclear energy, the cost of the electricity supply complement which includes the capacity guarantee, electricity delivery costs and selling costs, and a normal level of return. The new decree was published on 28 October 2014. On this basis, an official decision set the new tariff scales as of 1 November 2014. The tariff rises were lower than the 5% announced in 2013, at an average 2.5% for the "blue" tariff for residential customers, 3.7% for the "green" tariff, and 2.5% for the "yellow" tariff. The "blue" tariff for non-residential customers was reduced by an average 0.7%.

3.2 The NOME Law and the ARENH system

Supplies of electricity to EDF's competitors under the ARENH scheme for regulated access to nuclear power supplies concerned a volume of 71.3TWh for 2014 (36.8TWh of which were for the first half-year). The annual volume sold under this scheme cannot exceed 100TWh, plus a progressive increase from 1 January 2014 by the amounts sold to network operators to compensate for their power losses, according to a timetable set by government decision. Applications by suppliers in November 2014 to benefit from the ARENH tariff for the first half of 2015 (15.8TWh) were down substantially compared to first-half 2014, principally because wholesale market prices had fallen and became a more attractive source of energy supplies.

The ARENH price was set at €42/MWh from 1 January 2012, and is subsequently intended to reflect the economic conditions of generation by the existing nuclear fleet. The draft decree stipulating the valuation method

for costs making up the ARENH price was examined by France's Higher Energy Board (CSE) on 19 June 2014, and has also been examined by France's Competition Authority and the CRE. It is currently under examination by the European Commission, which must approve the price formula. The French government has announced that this formula will apply from 1 July 2015. On 15 October 2014 the CRE stated in its report on regulated electricity sales tariffs that based on the information in its possession at that date, application of that formula would result in a rise of approximately €2/MWh in 2015.

3.3 Energy transition bill

On 14 October 2014, the French National Assembly adopted the bill of law on the energy transition for green growth, on its first reading. This bill sets medium and long-term objectives.

The main objectives are to reduce greenhouse gas emissions from their 1990 levels by 40% by 2030 and 75% by 2050, and to halve final energy consumption by 2050, with an intermediate target of a 20% reduction by 2030.

The bill also aims to bring about changes in the French energy mix, reducing the share of nuclear electricity production from its current 75% to 50% by 2025, cutting primary consumption of fossil-based energy by 30% between 2012 and 2030, and increasing the share of renewable energies in final consumption to 32% by 2030.

Regarding nuclear power, the bill proposes to limit total nuclear generation capacity to 63.2GW, which is equivalent to the production capacity of the nuclear power plants currently in operation.

The bill also introduces a new governance structure for climate and energy policies. EDF would be required to prepare a strategic corporate plan compatible with the multi-year energy programme, giving the government commissioner the power to oppose investment decisions that are not compatible with the strategic plan.

The other key points of the bill include a reform of the support system for renewable energies and a reform to the governance of the CSPE (Contribution to the Public Electricity Service) system.

The legislative process is now continuing with the Senate's review of the bill in early 2015.

3.4 Pension reforms – Law of 20 January 2014

The French Law 2014-40 of 20 January 2014 amended the regulations governing pensions in France. The two principal measures introduced by the law apply to the special pension system for companies in the electricity and gas sector (IEG). The contribution period required to qualify for a full pension will be progressively extended to 43 years starting with employees born in 1973. This applies to France's standard national pension system and public sector pension system, and was transposed to the IEG pension system by Decree 2014-698 of 25 June 2014. Also, the date for the annual review of pension values is deferred from 1 April to 1 October as of the 2014 financial year.

Since the bill for this law was adopted by Parliament on 18 December 2013, its impact has been taken into account in valuing EDF's pension obligations from 31 December 2013.

Income statements

➤ Note 4 Sales

Sales are comprised of:

(in millions of Euros)	2014	2013
Sales of energy ⁽¹⁾	39,616	41,234
Sales of goods and services	2,101	2,189
SALES	41,717	43,423

(1) Including a share of delivery costs for sales of electricity and gas.

The change in sales observed in 2014 was principally due to the lower volumes sold as a result of unfavourable weather effects, which was partly offset by tariff increases of 3.6% in August 2013 and 2.3% in

November 2014. Energy sales in 2014 include the €908 million effects of the retroactive tariff adjustment (see note 3.2).

➤ Note 5 Operating subsidies

(in millions of Euros)	2014	2013
OPERATING SUBSIDIES	5,912	5,117

Operating subsidies mainly comprise the subsidy received or receivable by EDF in respect of the Contribution to the Public Electricity Service (CSPE). In the financial statements, this compensation results in recognition of income of €5,888 million for 2014 (€5,103 million for 2013). The increase

is mainly explained by lower market prices for electricity and the rise in purchase volumes for photovoltaic energy, which lead to an increase in the subsidy receivable for purchase obligations in mainland France, and higher fuel purchases in non-interconnected zones.

➤ Note 6 Reversals of provisions and depreciation

(in millions of Euros)	2014	2013
Reversals of provisions for risks	100	227
Pensions and similar obligations ⁽¹⁾	1,127	1,407
Spent fuel management	648	637
Long-term radioactive waste management	240	137
Decommissioning of nuclear power plants	164	171
Decommissioning of thermal and hydropower plants	36	37
Other provisions for expenses	170	188
Reversals of provisions for expenses	2,385	2,577
Reversals of depreciation	267	269
TOTAL REVERSALS OF PROVISIONS AND DEPRECIATION	2,752	3,073

(1) In 2013, this includes the €393 million impact of the pension reform (see note 3.4).

➤ Note 7 Other operating income and transfers of charges

(in millions of Euros)	2014	2013
Other operating income	585	719
Transfers of charges	130	128
TOTAL	715	847

➤ Note 8 Purchases and other external expenses

(in millions of Euros)	2014	2013
Fuel purchases used ⁽¹⁾	3,173	4,298
Energy purchases ⁽²⁾	9,792	10,311
Services and other purchases used ⁽³⁾	18,965	19,480
PURCHASES AND OTHER EXTERNAL EXPENSES	31,930	34,089

(1) Fuel purchases used include costs relating to raw materials for energy generation (nuclear fuels, fissile materials, coal, oil, and gas), and purchases of services related to the nuclear fuel cycle. This item also includes greenhouse gas emission rights consumed (see note 1.19.1).

(2) These purchases include electricity purchase obligations.

(3) Service purchases include distribution network access fees invoiced by the subsidiary ERDF.

➤ Note 9 Taxes other than income taxes

Details of taxes other than income taxes are as follows:

(in millions of Euros)	2014	2013
Taxes on salaries and wages	162	157
Energy-related taxes	1,231	1,124
Local Economic Contribution	516	530
Property taxes	382	374
Other taxes	324	333
TOTAL TAXES OTHER THAN INCOME TAXES	2,615	2,518

➤ Note 10 Personnel expenses

(in millions of Euros)	2014	2013
Salaries and wages	3,905	3,843
Social contributions	2,699	2,614
PERSONNEL EXPENSES	6,604	6,457

The increase in personnel expenses results primarily from changes in the workforce and the Basic National Salary.

	2014			2013
	Executives	Non Executives	Total	Total
IEG Status	29,340	36,360	65,700	64,374
Other	257	4,196	4,453	4,269
AVERAGE WORKFORCE	29,597	40,556	70,153	68,643

Average workforce numbers are reported on a full-time equivalent basis.

In 2014, the scope of the workforce was broadened (mainly to include apprentices). The figures published for 2013 are the annual average workforce numbers, and have been adjusted accordingly.

➤ Note 11 Depreciation and amortisation

(in millions of Euros)	2014	2013
Amortisation of intangible assets	153	123
Depreciation on property, plant and equipment:		
■ owned by EDF	2,747	2,358
■ operated under concessions ⁽¹⁾	218	207
Total depreciation and amortisation on fixed assets	3,118	2,688
Other depreciation and amortisation and deferred income	31	35
TOTAL DEPRECIATION AND AMORTISATION	3,149	2,723

(1) This depreciation concerns the Island Energy System's public distribution concessions and hydropower concessions.

➤ Note 12 Provisions and impairment

(in millions of Euros)	2014	2013
Provisions for risks ⁽¹⁾	608	137
Pensions and similar obligations	733	810
Management of spent nuclear fuel	457	417
Long-term management of radioactive waste ⁽²⁾	29	228
Decommissioning of nuclear power plants and last cores ⁽³⁾	423	–
Decommissioning of thermal and hydropower plants	–	1
Other provisions for expenses	166	222
Provisions for expenses	1,808	1,678
Impairment	424	319
TOTAL PROVISIONS AND IMPAIRMENT	2,840	2,134

(1) Most of the increase concerns supply contracts.

(2) Including €208 million in 2013 to reflect the ANDRA's new financing requirements for studies concerning the geological storage plan.

(3) An increase of €388 million for decommissioning of permanently shut-down nuclear power plants was recorded in 2014 (see note 28.3).

➤ Note 13 Financial result

(in millions of Euros)	2014	2013
Income from investments ⁽¹⁾	1,295	2,116
Income from other securities and receivables related to fixed assets ⁽²⁾	370	377
Interest and similar income and expenses ⁽³⁾	(1,639)	(2,007)
Reversal of provisions and impairment and transfers of charges ⁽⁴⁾	415	1,187
Foreign exchange result	(129)	137
■ Gains	2,160	1,835
■ Losses	(2,289)	(1,698)
Result on sales of marketable securities	51	(26)
■ Net income	51	7
■ Net charges		(33)
Financial amortisation, provisions and impairment ⁽⁵⁾	(3,459)	(2,674)
FINANCIAL RESULT	(3,096)	(890)

(1) The change in dividends received principally concerns:

- ERDF (€427 million in 2014 and €535 million in 2013);
- EDF International (€202 million in 2014 and €394 million in 2013);
- C3, the holding company which carries EDF Investissements Groupe (€129 million in 2014 and €514 million in 2013);
- EDEV (€58 million in 2014 and €146 million in 2013).

(2) In 2014, this item includes income of €87 million (€83 million in 2013) for the cost of bearing the CSPE financial receivables.

(3) The change essentially results from changes in the unrealised foreign exchange gain or loss on currency instruments and the interest expense on perpetual subordinated bonds.

(4) Reversals of impairment were recorded in 2013 in respect of dedicated assets (€176 million) and shares in Veolia Environnement (€327 million) following sale of all those shares.

(5) These charges chiefly includes the discount expenses on provisions for the back-end of the nuclear cycle, decommissioning and last cores and provisions for long-term and post-employment benefits. They also reflect the unfavourable foreign exchange effect on unhedged borrowings in foreign currencies and perpetual subordinated bonds.

➤ Note 14 Exceptional result

At 31 December 2014, exceptional items resulted in net income of €1,442 million, the main items of which are the following:

- net gains of €934 million on sales of investment securities included in dedicated assets;
- a net gain of €454 million following the sales of Dalkia International and Dalkia Holding.

At 31 December 2013, exceptional items resulted in net income of €164 million, the main items of which are the following:

- gains of €622 million on sales of investment securities included in dedicated assets, especially sales undertaken after the CSPE receivable was allocated to those assets;
- a loss of €266 million on sale of the shares in Veolia Environnement, offset by a €327 million reversal from impairment included in the financial result;
- excess tax depreciation amounting to €222 million relating to a new information system commissioned in the nuclear activities in 2013.

➤ Note 15 Income taxes

15.1 Tax group

Since 1 January 1988, EDF and certain subsidiaries have formed a group subject to the tax consolidation system existing under French tax legislation (Articles 223A to 223U of the French Tax Code). The tax consolidation group comprises 83 subsidiaries in 2014, including RTE Réseau de Transport d'Électricité, ERDF, EDF International and the EDF Énergies Nouvelles subgroup.

15.2 Income tax payable

Under Article 223A of the French Tax Code, EDF, as the head of the tax consolidated group, is the sole entity responsible for payment of income taxes and additional related contributions (social contributions, exceptional contribution equal to 10.7% of income taxes, and 3% contribution on dividend distributions).

The tax consolidation agreement between the members of the tax group stipulates that the arrangement must be neutral in effect. In application of this principle, each subsidiary pays the consolidating company a contribution to group income tax equivalent to the tax it would have paid if it had been taxed separately.

The tax consolidation agreement between EDF and the subsidiaries included in the tax group requires EDF to reimburse loss-making subsidiaries for the tax saving generated by their losses, as and when the entities concerned make taxable profits, in compliance with the standard rules for use of taxable losses.

Changes in deferred taxes are as follows:

(in millions of Euros)

	31/12/2014	31/12/2013	Change
1. Timing differences generating a deferred tax asset			
■ Non-deductible provisions ⁽¹⁾	(12,403)	(10,316)	(2,087)
■ Financial instruments and unrealised exchange gains	(5,151)	(3,780)	(1,371)
■ Other	(324)	(337)	13
Total deferred tax assets subject to the standard rate	(17,878)	(14,433)	(3,445)
2. Timing differences generating a deferred tax liability			
■ Financial instruments and unrealised exchange losses	4,657	2,883	1,774
■ Other	1,014	727	287
Total deferred tax liabilities subject to the standard rate	5,671	3,610	2,061
■ Capital gains not yet taxed, net of capital losses	79	79	–
Total deferred tax liabilities subject to reduced rate	79	79	–
BASIS FOR DEFERRED TAXES	(12,128)	(10,744)	(1,384)
Net future tax asset at standard rate	(4,203)	(3,726)	(477)
Net future tax liability at reduced rate	3	1	2

(1) Mainly concerning post-employment benefits for personnel.

The company at the head of the tax group, EDF, recorded an income tax expense of €577 million for 2014. The breakdown is as follows:

- €217 million for the taxable profit for 2014;
- €376 million for the net exceptional result;
- €(16) million for adjustments resulting from the tax consolidation.

15.3 Tax credit for competitiveness and employment (CICE)

The amounts received in 2014 under the French CICE tax credit scheme for 2013 were to fund the company's investment and recruitment efforts.

15.4 Deferred taxes

Deferred taxes are not recognised in EDF's individual financial statements. Deferred taxes result from differences between the accounting bases and tax bases of items. They generally arise as a result of timing differences in the recognition of income and expenses:

- deferred tax assets reflect expenses which will be tax deductible in future years or losses carried forward which will reduce taxable income in the future;
- deferred tax liabilities reflect either advance tax deduction of future accounting expenses or accounting revenues that will be taxable in future years and will increase the tax basis.

Balance sheets

➤ Note 16 Gross values of intangible and tangible fixed assets

<i>(in millions of Euros)</i>	Gross value at 31/12/2013	Increases	Decreases	Gross value at 31/12/2014
Software	942	210	16	1,136
Other	243	9	1	251
Intangible assets	1,185	219	17	1,387
Land	117	8	3	122
Buildings	9,374	358	61	9,671
Nuclear power plants	49,522	2,665	948	51,239
Machinery and plant other than networks	11,286	509	241	11,554
EDF-owned networks	886	34	1	919
Other	1,313	138	86	1,365
Property, plant and equipment owned by EDF	72,498	3,712	1,340	74,870
Land	39	–	–	39
Buildings	9,359	154	5	9,508
Machinery and plant other than networks	1,379	40	9	1,410
Concession networks	2,292	138	12	2,418
Other	11	–	1	10
Property, plant and equipment operated under concessions ⁽¹⁾	13,080	332	27	13,385
Tangible assets ⁽²⁾	9,220	5,163	3,912	10,471
Intangible assets	1,199	335	222	1,312
Advances and progress payments on orders	2,355	397	–	2,752
Assets in progress	12,774	5,895	4,134	14,535
TOTAL OF INTANGIBLE AND TANGIBLE FIXED ASSETS	99,537	10,158	5,518	104,177

(1) Assets operated under concession concern the Island Energy Systems and hydropower concessions.

(2) Investments during 2014 mainly concern equipment for existing power plants and construction of the EPR plant at Flamanville.

➤ Note 17 Depreciation and amortisation on intangible and tangible fixed assets

<i>(in millions of Euros)</i>	Gross value at 31/12/2013	Increases	Decreases	Gross value at 31/12/2014
Software	395	126	15	506
Other	77	27	–	104
Intangible assets	472	153	15	610
Buildings and land developments	6,265	277	58	6,484
Nuclear power plants	33,427	2,073	883	34,617
Machinery and plant other than networks	7,338	396	236	7,498
EDF-owned networks	364	27	–	391
Other	781	110	82	809
Property, plant and equipment owned by EDF	48,175	2,883	1,259	49,799
Buildings and land developments	5,855	135	5	5,985
Machinery and plant other than networks	980	24	7	997
Concession networks	909	66	8	967
Other	10	–	–	10
Property, plant and equipment operated under concessions	7,754	225	20	7,959
Tangible assets in progress	71	31	2	100
TOTAL DEPRECIATION AND AMORTISATION	56,472	3,292	1,296	58,468

➤ Note 18 Financial assets

18.1 Change in financial assets

<i>(in millions of Euros)</i>	Gross value at 31/12/2013	Gross value at 31/12/2014
Investments ⁽¹⁾	59,848	56,577
Receivables related to investments	50	50
Investment securities ⁽²⁾	12,150	12,591
Other investments	349	208
CSPE receivable ⁽³⁾	5,053	5,140
Loans to subsidiaries and other financial assets ⁽⁴⁾	2,615	3,089
Total financial assets, gross	80,065	77,655
Impairment of investments and related receivables ⁽¹⁾	(357)	(171)
Impairment of investment securities	(41)	(55)
Total impairment	(398)	(226)
TOTAL FINANCIAL ASSETS, NET	79,667	77,429

(1) The change in investments essentially corresponds to:

- acquisition of the shares of Dalkia for €967 million (see note 2.1);
- sale of Dalkia Holding and Dalkia International for a net value of €1,322 million (see note 2.1);
- subscription to the capital increase of C3 (the holding company carrying EDF Investissements Groupe) for €1,300 million;
- sale of TdE SpA to EDF International, with a reversal of €220 million of the provision for impairment (see note 2.2).

(2) Changes in investment securities correspond to acquisitions and sales of dedicated assets over the period, generating net capital gains for 2014 (see note 14). The allocation to dedicated assets for 2014 was zero, as the realisable value of the assets now exceeds the value of the provisions they are intended to cover (see note 38.2.4).

(3) This receivable consists of the CSPE shortfall at 31 December 2012 and the associated financing costs borne by EDF. The CSPE (Contribution au Service Public de l'Électricité) is a contribution set by the French State and collected directly from the end-user of electricity to compensate for certain public service charges borne by EDF. It is intended to finance the development of renewable energies, social tariffs and tariff equalisation. Under the agreement reached with the French authorities announced on 14 January 2013, EDF is to receive reimbursement of the receivable consisting of the CSPE shortfall at 31 December 2012 (€4.3 billion) and the costs of bearing this shortfall for EDF (€0.6 billion). Following conclusion of this agreement, EDF transferred the CSPE receivable from "Other receivables" to "Financial loans and receivables". This receivable carries interests at market rates (1.72%) over the whole period.

(4) Loans to subsidiaries at 31 December 2014 total €3,002 million, including €1,175 million for EDF Energies Nouvelles, €670 million for RTE, €661 million for Dalkia and €450 million for EDF International.

18.2 Subsidiaries and investments of at least 50% of capital

(in millions of Euros)	Gross book value of shares owned	Impairment recorded at 31/12/2014	% capital owned	Equity at 31/12/2013	Net income 2013	Dividends received 2014	Sales 2013
I. Subsidiaries							
Holding companies							
EDEV	6,891	–	100	6,354	62	58	1,199
EDF International	25,930	–	100	23,959	213	202	–
EDF Production Électrique Insulaire SAS	711	–	100	664	10	–	174
EDF Holding SAS	1,950	–	100	2,260	231	219	–
Société C3	11,196	–	100	10,071	136	129	–
EDF Immo	1,361	–	100	1,383	46	–	–
Other companies	394	2	100	–	–	–	–
Industrial and commercial companies							
France							
Centrale Électrique Rhénane de Gambenheim	3	–	50	10	nm	–	7
Dalkia Investissement	200	62	100	263	38	–	nm
Dalkia	967	–	100	1,317	3	–	–
RTE Réseau de Transport d'Électricité ⁽¹⁾	4,030	–	100	5,861	417	250	4,652
Électricité Réseau Distribution France (ERDF)	2,700	–	100	4,324	781	427	13,811
Other countries							
Emonson	14	14	50	114	nm	–	31
Rheinkraftwerk Iffezheim (RKI)	3	–	50	117	3	–	17
Forces Motrices du Chatelôt	nm	–	50	7	nm	nm	4
Other entities (GIE EIFER)	94	93	–	–	–	–	–
TOTAL I	56,444	171				1,285	

nm: not material (less than €500,000)

(1) 50% of shares are allocated to dedicated assets

18.3 Subsidiaries and investments under 50% of capital

(in millions of Euros)	Gross book value of shares owned	Impairment recorded at 31/12/2014	% capital owned	Equity at 31/12/2013	Net income 2013	Dividends received 2014
I. Subsidiaries						
Total I Carried forward	56,444	171				1,285
II Investments						
II.1 Companies in which EDF has an interest of between 10% and 50%						
Industrial and commercial companies						
France						
Trimet France	130	–	35	243	nm	–
Total II.1	130	–				–
II.2 Companies in which EDF has an interest of less than 10%						
Other companies	1	–	–	–	–	–
Other countries						
Forces Motrices de Mauvoisin	1	–	10	97	4	nm
Total II.2	2	–				–
TOTAL II	133	–				–
TOTAL INVESTMENTS, GROSS	56,577	171				1,285
TOTAL INVESTMENTS, NET	56,406					

nm: not material (less than €500,000).

18.4 Investment securities portfolio

(in millions of Euros)	At start of year			At year-end		
	Gross book value	Net book value	Fair value	Gross book value	Net book value	Fair value
VALUE OF INVESTMENT SECURITIES	12,150	12,118	14,005	12,591	12,536	14,769

At 31 December 2014, the investment securities portfolio gross value comprises dedicated assets (€12,468 million) and €123 millions of shares in AREVA, against which impairment of €45 million was booked.

18.5 Variation in treasury shares

A share repurchase program authorised by the General Shareholders' Meeting of 9 June 2006 was implemented by the Board of Directors, within the limits of 10% of the total number of shares making up the Company's capital. The initial duration of the program was 18 months, renewed for 12 months then by tacit agreement every year.

A liquidity contract exists for this program, as required by the market regulator AMF.

(in millions of Euros)	Gross value at 31/12/2013	Increases	Decreases	Gross value at 31/12/2014
TREASURY SHARES	44	443	(449)	38

At 31 December 2014, treasury shares included in the investment securities portfolio represent 1,631,587 shares with total value of €38 million.

18.6 Financial loans and receivables related to investments

(in millions of Euros)	Liquidity			Gross value at 31/12/2014	Gross value at 31/12/2013
	< 1 year	1-5 years	> 5 years		
Receivables related to investments	2	–	48	50	50
CSPE receivable	638	4,502	–	5,140	5,053
Loans and other financial assets	792	717	1,580	3,089	2,615
FINANCIAL LOANS AND RECEIVABLES RELATED TO INVESTMENTS	1,432	5,219	1,628	8,279	7,718

➤ Note 19 Inventories and work-in-progress

(in millions of Euros)	31/12/2014			31/12/2013		
	Gross value	Provisions	Net value	Gross value	Provisions	Net value
Nuclear fuel	8,457	(14)	8,443	8,327	(14)	8,313
Other raw materials	334	–	334	487	–	487
Other supplies	1,144	(186)	958	1,038	(197)	841
Work-in-progress and other inventories	18	–	18	19	–	19
TOTAL INVENTORIES	9,953	(200)	9,753	9,871	(211)	9,660

➤ Note 20 Other current assets

(in millions of Euros)	Liquidity			Gross value at 31/12/2014	Gross value at 31/12/2013
	< 1 year	1-5 years	> 5 years		
Advances on orders	590	187	359	1,136	1,056
■ Trade receivables					
– Amounts billed	2,039	–	–	2,039	2,519
– Unbilled receivables ⁽¹⁾	12,060	243	–	12,303	11,102
■ Other operating receivables ⁽²⁾	4,923	56	81	5,060	4,170
Operating receivables	19,022	299	81	19,402	17,791
Cash instruments ⁽³⁾	1,618	1,041	1,254	3,913	1,627
Prepaid expenses	481	169	644	1,294	1,295
TOTAL CURRENT ASSETS	21,711	1,696	2,338	25,745	21,769

(1) Mainly receivables for energy supplied and not billed, including the amount recognised in 2014 for the retrospective tariff adjustment (see note 3.1).

(2) Including €2,460 of receivables on the State related to taxes other than income taxes, and €2,056 million for the Contribution to the Public Electricity Service (CSPE) (€1,357 million in 2013). The rest of the CSPE receivable is recorded under "Financial assets" (see note 18.1).

(3) Unrealised gains on foreign exchange instruments.

➤ Note 21 Marketable securities

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013	Change
Treasury shares	3	3	–
Investment funds	1,637	2,844	(1,207)
Negotiable debt instruments (Euros or other currencies) maturing within 3 months	–	10	(10)
Negotiable debt instruments (Euros or other currencies) maturing after 3 months	1,914	2,599	(685)
Bonds	5,211	4,847	364
Accrued interest and other marketable securities	54	13	41
Total gross value	8,819	10,316	(1,497)
Provisions	(4)	(4)	–
TOTAL NET VALUE	8,815	10,312	(1,497)

The disposal of dedicated assets totalling €2.4 billion in 2013 after the CSPE receivable was allocated to dedicated assets explains why marketable securities have a higher value at 31 December 2013 than 31 December 2014.

➤ Note 22 Variation in cash and cash equivalents reported in the cash flow statement

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013	Change
Marketable securities	8,819	10,316	(1,497)
Cash and cash equivalents	6,583	5,066	1,517
Sub-total in balance sheet assets	15,402	15,382	20
Euro investment funds	(1,637)	(2,844)	1,207
Negotiable debt instruments (Euro) maturing after 3 months	(1,914)	(1,595)	(319)
Negotiable debt instruments (non Euro) maturing after 3 months	–	(1,004)	1,004
Bonds	(5,211)	(4,847)	(364)
Treasury shares	(3)	(3)	–
Accrued interest and other marketable securities	(54)	(13)	(41)
Marketable securities included in financial assets in the cash flow statement	(8,819)	(10,306)	1,487
Cash advances to subsidiaries (cash pooling agreements) included in "other operating receivables" in the balance sheet	12	4	8
Cash advances from subsidiaries (cash pooling agreements) included in "other operating liabilities" in the balance sheet	(5,369)	(8,390)	3,021
CASH AND CASH EQUIVALENTS, CLOSING BALANCE IN THE CASH FLOW STATEMENT *	1,226	(3,310)	4,536
Elimination of the effect of currency fluctuations			(57)
Elimination of net financial income on cash and cash equivalents			43
NET VARIATION IN CASH AND CASH EQUIVALENTS IN THE CASH FLOW STATEMENT *			4,550

* See the Cash flow statement.

➤ Note 23 Unrealised foreign exchange losses

The net unrealised exchange loss amounts to €1,146 million at 31 December 2014, reflecting the unfavourable effects related to the pound sterling and the US dollar.

➤ Note 24 Changes in equity

	Capital	Reserves and premiums	Retained earnings and interim dividends	Profit or loss for the financial year	Investment subsidies	Tax-regulated provisions	Total equity
<i>(in millions of Euros)</i>							
At 31 December 2012	924	10,802	2,660	3,566	190	6,323	24,465
Allocation of 2012 net income	–	–	2,309	(2,309)	–	–	–
Dividend distribution	–	–	1	(1,257)	–	–	(1,256)
Capital increase on 29 July 2013	6	165	–	–	–	–	171
2013 profit	–	–	–	2,938	–	–	2,938
Interim dividend	–	–	(1,059)	–	–	–	(1,059)
Other changes	–	–	18	–	(12)	78	84
At 31 December 2013	930	10,967	3,929	2,938	178	6,401	25,343
Allocation of 2013 net income	–	1	1,667	(1,668)	–	–	–
2014 profit	–	–	–	1,649	–	–	1,649
Dividend distribution	–	–	2	(1,270)	–	–	(1,268)
Interim dividend	–	–	(1,059)	–	–	–	(1,059)
Other changes	–	(1)	–	–	(4)	(77)	(82)
AT 31 DECEMBER 2014	930	10,967	4,539	1,649	174	6,324	24,583

24.1 Share capital

EDF's share capital amounted to €930,004,234 at 31 December 2014, comprising 1,860,008,468 fully subscribed and paid-up shares with nominal value of €0.50 each, owned 84.5% by the French State, 13.7% by the public (institutional and private investors), 1.7% by current and retired Group employees, and 0.1% held by EDF as treasury shares.

In 2013, payment of part of the 2012 dividends in the form of shares resulted in a €6 million increase in the capital, corresponding to issuance of 11,141,806 shares.

Under Article L. 111-67 of the French Energy Code, the French State must hold more than 70% of the capital of EDF at all times.

24.2 Dividends

The General Shareholders' Meeting of 15 May 2014 decided to distribute a dividend of €1.25 per share in respect of 2013.

In application of the amendment to the Company's articles of association proposed at the General Shareholders' Meeting of 24 May 2011, shareholders who had held their shares continuously for at least 2 years at the year-end and still held them at the dividend distribution date benefit from a 10% bonus on their dividends. The number of shares carrying an entitlement to the bonus dividend cannot exceed 0.5% of the company's capital. The bonus dividend amounts to €1.375 per share.

As interim dividends of €0.57 per share had been paid out on 17 December 2013, the balance payable for 2013 amounted to €0.68 per share benefiting from the ordinary dividend and €0.805 per share benefiting from the bonus dividend. The balance of the dividend was paid out on 6 June 2014, amounting to a total €1,268 million.

On 10 December 2014, EDF's Board of Directors decided to distribute an interim dividend of €0.57 per share in circulation in respect of 2014. This interim dividend was paid out in cash on 17 December 2014, amounting to a total of €1,059 million.

➤ Note 25 Additional equity

Additional equity consists of the perpetual subordinated bonds issued by EDF in January 2013 and January 2014 at the value of €6,135 million and €3,973 million respectively (net of redemption premiums).

After adjustment for foreign exchange variations and amortisation of the redemption premium over the year, additional equity amounts to €10,688 million at 31 December 2014.

➤ Note 26 Special concession accounts

<i>(in millions of Euros)</i>	31/12/2014	31/12/2013
Value in kind of assets	103	103
Revaluation difference	945	971
Additional depreciation	108	88
Rights in hydropower assets	1,156	1,162
Value in kind of assets	1,517	1,441
Unamortised financing by the operator	(915)	(860)
Amortisation of grantor financing	279	264
Contributions received for concessionary plant assets under construction	8	9
Rights in public distribution concession assets ⁽¹⁾	889	854
TOTAL SPECIAL CONCESSION ACCOUNTS	2,045	2,016

(1) Rights in public distribution concession assets concern the Island Energy Systems (IES).

➤ Note 27 Provisions for risks

	31/12/2013	Increases		Decreases			31/12/2014
<i>(in millions of Euros)</i>		Operating ⁽¹⁾	Financial	Utilisations	Reversals	Financial	
Provisions for unrealised exchange losses	262	–	922	–	–	(37)	1,147
Provisions for losses on contracts	97	444	4	(56)	–	–	489
Provisions for other risks	177	164	–	(37)	(7)	–	297
PROVISIONS FOR RISKS	536	608	926	(93)	(7)	(37)	1,933

(1) Mainly concerning supply contracts.

➤ Note 28 Provisions related to nuclear generation – back-end of the nuclear cycle, plant decommissioning and last cores

The provisions established by EDF for the nuclear generation fleet result from the Law of 28 June 2006 on long-term management of radioactive materials and waste, and the associated implementing provisions concerning secure financing of nuclear expenses.

In compliance with the accounting principles described in note 1.15:

- EDF books provisions to cover all obligations related to the nuclear facilities it operates;
- EDF holds dedicated assets for secure financing of long-term obligations (see note 38).

The calculation of provisions incorporates a level of risks and unknowns as appropriate to the operations concerned. The valuation of costs also carries uncertainty factors such as:

- changes in the regulations on safety, security and environmental protection;
- changes in the regulatory decommissioning process and the time necessary for issuance of administrative authorisations;
- future methods for storing long-lived radioactive waste and provision of storage facilities by the French agency for radioactive waste management ANDRA (*Agence nationale pour la gestion des déchets radioactifs*);
- changes in certain financial parameters such as discount and inflation rates, and changes in the contractual terms of spent fuel management.

Details of changes in provisions for the back-end of the nuclear cycle, decommissioning and last cores are as follows:

	31/12/2013	Increases		Decreases	Other changes ⁽²⁾	31/12/2014
		Operating	Financial ⁽¹⁾	Utilisation		
<i>(in millions of Euros)</i>						
Provisions for spent fuel management	9,779	457	462	(648)	55	10,105
Provisions for long-term radioactive waste management	7,542	29	346	(240)	(1)	7,676
Provisions for the back-end of the nuclear cycle	17,321	486	808	(888)	54	17,781
Provisions for nuclear plant decommissioning	13,024	423	625	(164)	(42)	13,866
Provisions for last cores	2,313	–	111	–	(11)	2,413
Provisions for decommissioning and last cores	15,337	423	736	(164)	(53)	16,279
TOTAL PROVISIONS RELATED TO NUCLEAR GENERATION	32,658	909	1,544	(1,052)	1	34,060

(1) Financial discounting expenses.

(2) A corresponding amount is recognised in the balance sheet assets: for provisions for the back-end of the nuclear cycle, the changes in nuclear fuel inventories (see note 1.8.1) and for provisions for decommissioning and last cores, the change in property, plant and equipment (see note 1.15.1).

28.1 Provisions for spent fuel management

EDF's currently adopted strategy with regards to the fuel cycle, in agreement with the French State, is to process spent fuel and to recycle the separated plutonium in the form of MOX fuel (mixed oxide of plutonium and uranium).

The quantities processed – approximately 1,000 tonnes per year – are determined based on the quantity of recyclable plutonium in the reactors that are authorised to load MOX fuel.

Consequently, provisions for spent fuel cover the following services:

- removal of spent fuel from EDF's generation centres, as well as reception and interim storage;
- processing, including conditioning and storage of recyclable matter and waste resulting from this processing.

The processing expenses included in the provision exclusively concern spent fuel that can be recycled in existing facilities, including the portion in reactors but not yet irradiated.

Expenses are measured based on forecast physical flows at the year-end, with reference to the contracts currently in effect with AREVA following the framework agreement of December 2008.

28.2 Provisions for long-term radioactive waste management

This includes future expenses for:

- removal and storage of radioactive waste resulting from decommissioning of regulated nuclear installations operated by EDF;
- removal and storage of radioactive waste packages resulting from spent fuel processing at La Hague;
- long-term and direct storage of spent fuel that cannot be recycled in existing installations: plutonium fuel (MOX) or uranium fuel derived from enriched processing, and fuel from Creys-Malville and Brennilis;
- EDF's share of the costs of studies, construction, shutdown and surveillance of existing and future storage centres.

The volumes of waste concerned by provisions include existing packages of waste and all waste to be conditioned, resulting from plant decommissioning or spent fuel processing at La Hague (comprising all fuel in reactors at 31 December, irradiated or otherwise). These volumes are regularly reviewed, in keeping with the data declared for the purposes of the national waste inventory undertaken by the French agency for radioactive waste management ANDRA.

The provision for long-term radioactive waste management breaks down as follows:

(in millions of Euros)	31/12/2014	31/12/2013
Very Low-Level and Low and Intermediate-Level Waste	997	967
Long-lived Low-Level Waste	521	499
Long-lived medium and high-level waste	6,158	6,076
PROVISIONS FOR LONG-TERM RADIOACTIVE WASTE MANAGEMENT	7,676	7,542

Very low-level and low and medium-level waste

Very low-level waste mainly comes from nuclear plant decommissioning, and generally takes the form of rubble (concrete, scrap metal, insulating materials and piping). This type of waste is stored at surface level at the Morvilliers storage centre managed by ANDRA.

Low and medium-level waste comes from nuclear facilities (gloves, filters, resins). This type of waste is stored at surface level at the Soulaïnes storage centre managed by ANDRA.

The cost of removing and storing short-lived waste (very low-level and low and medium-level) is assessed on the basis of current contracts with transporters and contracts with ANDRA for operation of the existing storage centres.

Long-lived low-level waste

Long-lived low-level waste belonging to EDF essentially consists of graphite waste from the ongoing decommissioning of the former UNGG (natural uranium graphite gas-cooled) reactors.

Given its lifetime, this type of waste cannot be stored in the existing surface storage centres, but since it is lower-level than long-lived medium and high-level waste, the French Law of 28 June 2006 requires specific subsurface storage for such waste.

An initial site search launched by ANDRA in 2008 was unsuccessful. ANDRA resumed this search in 2013 and is due to present the results to the authorities by the end of 2015. Other alternative management scenarios are also being examined, including sorting and processing solutions for graphite.

Long-lived medium and high-level waste

Long-lived medium and high-level waste essentially comes from processing of spent fuel, and to a lesser extent waste resulting from nuclear plant decommissioning (metallic components that have been inside the reactor).

The French Law of 28 June 2006 requires reversible storage in deep geological layers.

Since 2005, the gross value and disbursement schedules for forecast expenses have been based on a scenario of industrial geological waste storage, following conclusions presented in the first half of 2005 by a working group formed under supervision of the State involving representatives of the administrations concerned, ANDRA and the producers of waste (EDF, AREVA, CEA). EDF has applied a reasonable approach to information from this working group, leading to a benchmark cost, for storage of waste from all producers, of €14.1 billion under the economic conditions of 2003 (€20.8 billion under 2011 economic conditions).

In the partnership set up in 2011 between ANDRA and waste producers to contribute to the success of the geological storage project (CIGEO project), ANDRA has carried out preliminary conceptual studies since 2012, and analysed the technical optimisations proposed by the producers. The cooperation between ANDRA and producers provided a forum for formal technical discussions that have optimised the waste storage design (including for example new sizing for the above-ground installations, a significant reduction in the length of underground buildings, thinner coatings, etc) and operating conditions (such as new timetables for package transfer, which substantially reduces the numbers of operating staff).

On this basis, ANDRA drew up provisional figures in a report sent to EDF on 18 July 2014. In compliance with the law of 2006, a consultation process was started by the French Department for Energy and Climate (*Direction générale de l'énergie et du climat* or DGEC) on 18 December 2014, when ANDRA's consolidated figures were submitted to the waste producers for their comments. The consultation should focus on methods for incorporating risks, opportunities and uncertainties, and on unit costs, which are still a point of significant divergence between ANDRA and the producers. EDF and the other producers have 2 months to issue their observations, which will be included in the report to be submitted to the Minister for Ecology, Sustainable Development and Energy, who will then set the new benchmark cost for storage of long-lived medium and high-level waste after consulting the French Nuclear Safety Authority (*Autorité de sûreté nucléaire* or ASN).

In view of the uncertainties over the level of costs to use and the corresponding impact for provisions, the provision recorded by EDF at 31 December 2014 continues to be based on the benchmark cost defined by the working group in 2005.

Ongoing discussions between the DGEC, ANDRA and producers concern the cost under 2011 economic conditions of storage based on a forecast inventory of all final waste from all producers.

The measurement of the provision is sensitive to the gross cost of storage, but also to key assumptions concerning disbursement schedules, cost allocations between the producers (EDF, AREVA, CEA), and the opportunities, risks, unknowns and uncertainties of the project. Using identical assumptions to those applied for the current provision, a €1 billion rise in the gross contractors' quotes under 2011 economic conditions would have an estimated impact of approximately €200 million (present value) on the provision at 31 December 2014.

If the valuation set by the minister deviates from EDF's estimates, EDF will reflect the effects in its financial statements.

28.3 Decommissioning provisions for nuclear power plants

EDF takes full technical and financial responsibility for decommissioning for the nuclear plants it operates. The decommissioning process is governed by French Law of 13 June 2006 and its implementing decree.

There are three levels of nuclear power plant decommissioning, according to a classification defined by the International Atomic Energy Agency (IAEA) in 1980:

- level 1: final shutdown of the power plant (fuel unloading, draining of circuits, etc);
- level 2: complete dismantling of nuclear buildings excluding the reactor building, dismantling of equipment and removal of waste;
- level 3: complete dismantling of the reactor building and its equipment, and removal of waste.

The decommissioning scenario adopted by EDF is for decommissioning immediately after shutdown, with no waiting period for radioactive decay, in compliance with French regulations, which require the period between final shutdown and dismantling to be as short as possible. While level 1 operations must be carried out first, certain level 2 and level 3 operations can be carried out in parallel.

The end-state is industrial use: the sites will be restored to their original condition and will be reused for industrial facilities.

EDF is currently conducting an inventory to identify any ground pollution at plants currently being dismantled and plants still in operation. At this stage, provisions only cover decontamination of the buildings; any accidental ground pollution at plants currently in operation is dealt with as soon as it

arises. Feedback available to date on the facilities being decommissioned and the first soil analyses, mainly for the Brennilis site, support this approach.

Provisions for decommissioning cover the future decommissioning expenses described above (except for removal and storage of waste, which is covered by the provision for long-term waste management).

Details of changes in decommissioning provisions for nuclear power plants are as follows:

	31/12/2013	Increases		Decreases	Other changes ⁽²⁾	31/12/2014
		Operating	Financial ⁽¹⁾	For utilisation		
<i>(in millions of Euros)</i>						
Provisions for decommissioning of nuclear power plants in operation	10,907	35	522	–	(42)	11,422
Provisions for decommissioning of permanently shut-down nuclear power plants	2,117	388	103	(164)	–	2,444
TOTAL PROVISIONS FOR DECOMMISSIONING OF NUCLEAR POWER PLANTS	13,024	423	625	(164)	(42)	13,866

(1) Financial discounting expenses.

(2) With an associated asset recognised in property, plant and equipment (see note 1.15).

For nuclear power plants currently in operation (PWR plants with 900MW, 1,300MW and N4 reactors)

Until 2013, provisions were estimated based on a 1991 study by the French Ministry of Trade and Industry, which set an estimated benchmark cost for decommissioning expressed in €/MW, confirming the assumptions defined in 1979 by the PEON commission.

In 2009, EDF carried out a detailed study of decommissioning costs, using Dampierre (four 900MW units) as a representative site. This study involved the following steps:

- measurement of the decommissioning cost for the Dampierre site, taking into consideration the most recent developments in regulations, past experience in decommissioning of shut-down plants and recommendations issued by the ASN;
- a review of the timeline for decommissioning operations (the total duration of decommissioning for one reactor is estimated at 15 years following shutdown);
- determination of the rules for extrapolation of cost estimates for the entire fleet of PWR plants in operation.

An intercomparison with the study carried out by consultants La Guardia, based mainly on the Maine Yankee reactor in the US which is comparable in terms of technology and capacity, subsequently corroborated the results of EDF's study.

The Dampierre study did not result in any change to the amount of provisions based on the benchmark cost, and until 2013 provisions for all 58 reactors were based on a forecast amount equivalent to €₂₀₁₃309 per kilowatt installed.

In 2014 the Dampierre study was reviewed by EDF to make sure that the previous calculations were still valid in view of recent developments and experience, both internationally and internally. This review reinforced the amounts of decommissioning provisions for plants in operation based on costs resulting from the Dampierre study, incorporating best estimates and feedback in and outside France.

This change of estimate has no significant impact on the level of provisions at 31 December 2014.

For permanently shut-down nuclear power plants

Unlike the PWR fleet currently in operation, the first-generation reactors now shut down used a range of different technologies: UNGG (natural uranium graphite gas-cooled) reactors at Bugey, Saint-Laurent and Chinon, a heavy water reactor at Brennilis, a PWR reactor at Chooz A, and a fast-neutron reactor at Creys-Malville. Decommissioning costs are therefore estimated individually for each site.

EDF has chosen to fully dismantle first-generation plants by 2040, in line with the future availability of solutions for the resulting waste:

- for long-lived medium-level waste, the packaging and interim storage installation for radioactive waste (ICEDA) due to open in 2017, until it can be placed in deep underground storage;
- for long-lived low-level waste, the facility for storing graphite waste, due to open by 2025.

The amount of the provision also depends on issuance of the decree for full dismantling of Brennilis by the end of 2018.

The decommissioning costs are based on contractor quotes, which in principle are fully revised every 3 years. The quotes established in 2008 were revised in 2012 to take account of accumulated industrial experience, unforeseen and regulatory developments, and the latest available figures.

Full revision of these quotes is due in 2015, but preparatory work has led to a €388 million re-estimation at 31 December 2014 to reflect delays in physical progress at the sites, and cost reassessments for certain contracts. This change has led to recognition in the income statement of an expense included in "Other external expenses".

28.4 Provisions for last cores

These provisions cover the future expenses resulting from scrapping fuel that will only be partially irradiated when the reactor is shut down. It is measured based on:

- the cost of the loss on fuel in the reactor that is not totally spent at the time of final reactor shutdown and cannot be reused due to technical and regulatory constraints;
- the cost of fuel processing, disposal and waste storage operations. These costs are valued in a similar way to provisions for spent fuel management and long-term radioactive waste management.

These unavoidable costs are components of the cost of nuclear reactor shutdown and decommissioning. As such, they are fully covered by provision from the commissioning date and an asset associated with the provision is recognised.

28.5 Discounting of provisions related to nuclear generation and sensitivity analyses

28.5.1 Discount rate

Calculation of the discount rate

The discount rate is determined based on long-series data for a sample of bonds with maturities as close as possible to that of the liability. However, some expenses covered by these provisions will be disbursed over periods significantly longer than the duration of instruments generally traded on the financial markets.

The benchmark used to determine the discount rate is the sliding 10-year average of the return on French OAT 2055 treasury bonds, which have a similar duration to the obligations, plus the spread of corporate bonds rated A to AA, which include EDF.

The assumed inflation rate is determined in line with the forecasts provided by consensus and expected inflation based on the returns on inflation-linked bonds.

The discount rate determined in this way is 4.6% at 31 December 2014, assuming inflation of 1.7% (4.8% for assumed inflation of 1.9% at 31 December 2013).

Revision of the discount rate and regulatory limit

The methodology used to determine the discount rate, particularly the reference to sliding 10-year averages, is able to prioritise long-term trends in rates, in keeping with the long-term horizon for disbursements. The discount rate is therefore revised in response to structural developments in the economy leading to medium and long-term changes.

The discount rate applied must also comply with the two limits laid down by the Decree of 23 February 2007 and the decision of 21 March 2007. This means it must be lower than:

- a regulatory maximum "equal to the arithmetic average over the forty-eight most recent months of the constant 30-year rate (TEC 30 years), observed on the last date of the period concerned, plus one point";
- and the expected rate of return on assets covering the liability (dedicated assets).

The ceiling rate based on the TEC 30-year rate is 4.31% at 31 December 2014.

The work undertaken by nuclear operators together with the French government since 2013 on regulations governing the discount rate applicable for provisions has now been completed, and the results should be transposed into regulations during the first quarter of 2015. Under the expected new rules, the ceiling for the discount rate would have been approximately 4.8% at 31 December 2014.

Until the new regulations are issued, the Minister for Ecology, Sustainable Development and Energy, the Minister for Finance and Public Accounts, and the Minister for the Economy, Productive Recovery and Digital affairs have granted EDF an extension until 31 March 2015 to apply a discount rate that complies with the regulations in force.

Consequently, the discount rate applied at 31 December 2014 was determined under the Company's usual method, and amounts to 4.6%.

28.5.2 Analyses of sensitivity to macro-economic assumptions

Sensitivity to assumptions concerning costs, inflation rate, long-term discount rate, and disbursement schedules can be estimated through comparison of the gross amount estimated under year-end economic conditions with the present value of the amount.

	31/12/2014		31/12/2013	
	Costs based on year-end economic conditions	Amounts in provisions at present value	Costs based on year-end economic conditions	Amounts in provisions at present value
<i>(in millions of Euros)</i>				
Spent fuel management	16,463	10,105	15,868	9,779
Long-term radioactive waste management	26,159	7,676	25,578	7,542
BACK-END NUCLEAR CYCLE EXPENSES	42,622	17,781	41,446	17,321
Decommissioning provisions for nuclear power plants in operation	19,298	11,422	19,558	10,907
Decommissioning provisions for permanently shut-down nuclear power plants	3,310	2,444	2,890	2,117
Provisions for last cores	4,050	2,413	3,979	2,313
DECOMMISSIONING AND LAST CORE EXPENSES	26,658	16,279	26,427	15,337

This approach can be complemented by estimating the impact of a change in the discount rate on the present value.

In application of Article 11 of the Decree of 23 February 2007, the following table reports these details for the main components of provisions for the back-end of the nuclear cycle, decommissioning of nuclear plants and last cores for EDF:

(in millions of Euros)	Amounts in provisions at present value 31/12/2014	Sensitivity to discount rate					
		Balance sheet provision			Pre-tax net income		
		0,20%	-0,20%	-0,30%	0,20%	-0,20%	-0,30%
Back-end nuclear cycle expenses							
■ spent fuel management	10,105	(171)	180	274	141	(149)	(227)
■ long-term radioactive waste management	7,676	(381)	425	657	327	(368)	(568)
Decommissioning and last core expenses							
■ decommissioning of nuclear power plants	13,866	(431)	449	681	52	(54)	(82)
■ last cores	2,413	(64)	68	103	–	–	–
TOTAL	34,060	(1,047)	1,122	1,715	520	(571)	(877)

➤ Note 29 Provisions for decommissioning of non-nuclear facilities

These provisions principally concern thermal power plants.

The costs of decommissioning thermal power plants are calculated using regularly updated studies based on estimated future costs, measured by reference to the charges recorded on past operations and the most recent estimates for plants still in operation.

➤ Note 30 Provisions for employee benefits

Changes in provisions for employee benefits were as follows:

(in millions of Euros)	31/12/2013	Increases		Decreases		31/12/2014
		Operating ⁽¹⁾	Financial	Operating ⁽²⁾	Financial ⁽³⁾	
Provisions for post-employment benefits	9,794	562	804	(1,039)	(336)	9,785
Provisions for long-term benefits	897	171	30	(88)	–	1,010
PROVISIONS FOR EMPLOYEE BENEFITS	10,691	733	834	(1,127)	(336)	10,795

(1) Including past service cost of €382 million, amortisation of actuarial losses amounting to €340 million, and unvested benefits of €11 million.

(2) Including €1,061 million for employers' contributions, €25 million for actuarial gains and €41 million for complementary pensions.

(3) For the expected return on fund assets.

Details of changes in provisions:

	Obligations	Fund assets	Obligations net of fund assets	Unrecognised past service cost	Unrecognised actuarial gains and losses	Provision in the balance sheet
<i>(in millions of Euros)</i>						
Balance at 31/12/2013	24,020	(8,253)	15,767	(107)	(4,969)	10,691
Net expense for 2014	1,174	(336)	838	(30)	357	1,165
Unrecognised actuarial gains and losses	5,538	(1,601)	3,937	42	(3,979)	–
Contributions to funds	–	(337)	(337)	–	–	(337)
Benefits paid	(1,063)	339	(724)	–	–	(724)
BALANCE AT 31/12/2014	29,669	(10,188)	19,481	(95)	(8,591)	10,795

The actuarial gains and losses on obligations in 2014 amount to €(5,538) million, comprising €(5,707) million of losses resulting from revision of assumptions (particularly the lower discount rate and changes to measurement assumptions for benefits in kind in the form of energy) and €169 million in gains from experience adjustments.

Post-employment and long-term employee benefit expenses:

	31/12/2014	31/12/2013
<i>(in millions of Euros)</i>		
Current service cost	382	514
Interest expenses (discount effect)	834	851
Expected return on fund assets	(336)	(314)
Amortisation of unrecognised actuarial gains and losses – post-employment benefits	151	188
Change in actuarial gains and losses – long-term benefits	164	71
Past service cost – vested benefits	–	(393)
Past service cost – unvested benefits	(30)	11
NET CHARGES RELATED TO POST-EMPLOYMENT BENEFITS AND LONG-TERM BENEFITS	1,165	928
including:		
Operating expenses ⁽¹⁾	667	391
Financial expenses	498	537

(1) In 2014 this amount corresponds to operating increases (€733 million) net of reversals for actuarial gains and losses (€25 million) and additional pensions (€41 million).

30.1 Provisions for post-employment benefits

Details of these provisions are shown below:

	31/12/2013	Increases		Decreases		31/12/2014
		Operating	Financial	Operating	Financial	
<i>(in millions of Euros)</i>						
Provisions for post-employment benefits						
Pensions	7,838	364	645	(828)	(320)	7,699
CNIEG expenses	421	7	15	(14)	–	429
Benefits in kind (energy)	1,029	131	103	(81)	–	1,182
Retirement gratuities	(5)	36	20	(50)	(15)	(14)
Other benefits	511	24	21	(66)	(1)	489
TOTAL	9,794	562	804	(1,039)	(336)	9,785

	Obligations	Fund assets	Unrecognised past service cost	Unrecognised actuarial gains and losses	Provision in the balance sheet
<i>(in millions of Euros)</i>					
Provisions for post-employment benefits at 31/12/2014					
Pensions	22,385	(9,683)	–	(5,003)	7,699
CNIEG expenses	511	–	–	(82)	429
Benefits in kind (energy)	4,355	–	–	(3,173)	1,182
Retirement gratuities	620	(491)	(50)	(93)	(14)
Other benefits	788	(14)	(45)	(240)	489
TOTAL	28,659	(10,188)	(95)	(8,591)	9,785

	Obligations	Fund assets	Unrecognised past service cost	Unrecognised actuarial gains and losses	Provision in the balance sheet
<i>(in millions of Euros)</i>					
Provisions for post-employment benefits at 31/12/2013					
Pensions	18,540	(7,810)	–	(2,892)	7,838
CNIEG expenses	424	–	–	(3)	421
Benefits in kind (energy)	2,929	–	–	(1,900)	1,029
Retirement gratuities	575	(429)	(57)	(94)	(5)
Other benefits	655	(14)	(50)	(80)	511
TOTAL	23,123	(8,253)	(107)	(4,969)	9,794

The increase in obligations between 2013 and 2014 is principally related to the change in discount rate (3.5% at 31 December 2013, and 2.2% at 31 December 2014).

30.2 Provisions for other long-term benefits for current employees

The amount of obligations for other long-term benefits awarded to current employees is identical to the corresponding balance sheet provisions. Details are as follows:

	31/12/2013	Increases		Decreases	31/12/2014
(in millions of Euros)		Operating	Financial	Operating	
Provisions for other long-term benefits for current employees					
Annuities following work-related accident and illness	777	152	26	(76)	879
Long service awards	95	15	3	(8)	105
Other	25	4	1	(4)	26
TOTAL	897	171	30	(88)	1,010

30.3 Fund assets

Fund assets amount to €10,188 million at 31 December 2014 (€8,253 million at 31 December 2013). Fund assets are principally allocated to coverage of the past specific benefits earned under the special pension system (€9,683 million) and retirement gratuities (€491 million).

Investments under these contracts break down as follows:

(in millions of Euros)		31/12/2014	31/12/2013
Assets funding special pension benefits		9,683	7,810
(%)			
Equities		29%	31%
Bonds and monetary instruments		71%	69%
Assets funding retirement gratuities		491	429
(%)			
Equities		31%	32%
Bonds and monetary instruments		69%	68%
Assets funding other benefits		14	14
TOTAL FUND ASSETS		10,188	8,253

30.4 Actuarial assumptions

The main actuarial assumptions used for provisions for post-employment benefits and long-term employee benefits under the IEG system are summarised below:

- the discount rate is 2.2% at 31 December 2014 (3.5% at 31 December 2013);
- the inflation rate is estimated at 1.7% at 31 December 2014 (1.9% at 31 December 2013);
- the average residual period of employment is 18 years;
- the staff turnover rate is considered non-significant;
- the "tarif agent" (special energy price for EDF employees) at 1 January 2014 includes changes in taxes based on that tariff;

- the expected return on fund assets covering past specific benefits under the special pension system is 2.93%;
- the expected return on fund assets covering retirement gratuities is 2.43%.

The discount rate used for employee benefit obligations is determined by applying the yield rate on high-quality corporate bonds based on their duration to maturities corresponding to the future disbursements resulting from these obligations.

The obligations are based on wage increase assumptions that are differentiated by age group and employee category, leading to an average annual rise of 1.7% excluding inflation (3.4% including inflation).

➤ Note 31 Provisions for other expenses

	31/12/2013	Operating increases	Decreases		Other	31/12/2014
(in millions of Euros)			Utilisations	Reversals		
Provisions for:						
Personnel expenses	108	90	(85)	(4)	–	109
Renewal of facilities operated under concession	254	13	–	(1)	(5)	261
Other expenses	562	150	(78)	(22)	–	612
PROVISIONS FOR OTHER EXPENSES	924	253	(163)	(27)	(5)	982

➤ Note 32 Liabilities

(in millions of Euros)	Maturity			Gross value at 31/12/2014	Gross value at 31/12/2013
	< 1 year	1-5 years	> 5 years		
Bonds	1,477	8,085	31,431	40,993	39,341
Borrowings from financial institutions	–	–	500	500	500
Other borrowings	3,054	956	4	4,014	3,738
Other financial liabilities:					
■ Advances on consumption	2	14	19	35	42
■ Other	1,509	1	1	1,511	1,659
Financial liabilities (see note 33)	6,042	9,056	31,955	47,053	45,280
Advances and progress payments received ⁽¹⁾	6,433	–	–	6,433	6,279
Trade payables and related accounts	6,368	5	1	6,374	7,306
Tax and social security liabilities ⁽²⁾	6,760	–	–	6,760	7,235
Liabilities related to fixed assets and related accounts	2,133	–	–	2,133	2,067
Other liabilities ⁽³⁾	13,554	–	–	13,554	16,767
Operating, investment and other liabilities	28,815	5	1	28,821	33,375
Cash instruments ⁽⁴⁾	2,365	422	550	3,337	1,973
Deferred income ⁽⁵⁾	756	1,204	2,105	4,065	4,273
TOTAL LIABILITIES	44,411	10,687	34,611	89,709	91,180

(1) Advances and progress payments received principally include monthly standing order payments by EDF's residential and business customers, amounting to €6,340 million (€6,129 million at 31 December 2013). The increase over 2014 is mainly explained by the growing number of customers that opted to pay their bills this way.

(2) In 2014 this item includes an amount of €1,122 million for the CSPE income to be collected by EDF on energy supplied but not yet billed (€984 million at 31 December 2013).

(3) Mainly the amount of cash pooling and cash management agreements with subsidiaries, i.e. €11.3 billion in 2014 (€14.8 billion in 2013).

(4) Essentially unrealised losses on foreign exchange instruments.

(5) Deferred income at 31 December 2014 comprises the partner advances made to EDF under nuclear plant financing plans and the associated long-term contracts, amounting to €1,989 million (€2,112 million in 2013). Deferred income on long-term contracts also includes the advance paid to EDF in 2010 under the agreement with the Exeltium consortium. The clauses of the agreement signed by the two parties on 27 October 2014 (see note 2.4) do not provide for any additional payment or reimbursement in connection with this advance.

➤ Note 33 Financial liabilities

(in millions of Euros)	Balance at 31/12/2013	New borrowings	Repayments	Translation adjustments	Other	Balance at 31/12/2014
Bonds in Euros	1,013	–	–	–	–	1,013
Bonds in other currencies	6,477	3,464	1,281	1,038	–	9,698
Euro-Medium Term notes (EMTN) in Euros	24,107	–	3,640	–	–	20,467
Euro-Medium Term notes (EMTN) in other currencies	7,744	1,639	178	610	–	9,815
Bonds	39,341	5,103	5,099	1,648	–	40,993
Long-term loans in Euros	500	–	–	–	–	500
Borrowings from financial institutions	500	–	–	–	–	500
Negotiable debt instruments (Euro) ⁽¹⁾	269	381	–	–	–	650
Negotiable debt instruments (non-Euro) ⁽¹⁾	3,463	–	644	538	–	3,357
Contractual financial borrowings	6	2	1	–	–	7
Other borrowings	3,738	383	645	538	–	4,014
Total borrowings	43,579	5,486	5,744	2,186	–	45,507
Advances on consumption	42	–	7	–	–	35
Miscellaneous advances	74	–	–	–	3	77
Bank overdrafts	355	–	–	–	(234)	121
Deferred bank debits	34	–	–	–	5	39
Interest payable	1,196	–	–	–	78	1,274
Total other financial liabilities	1,659	–	–	–	(148)	1,511
TOTAL FINANCIAL LIABILITIES	45,280	5,486	5,751	2,186	(148)	47,053

(1) Issues net of repayments.

On 13 January 2014 EDF issued several tranches of a senior bond in USD:

- USD750 million with 3-year maturity at floating rate;
- USD1,000 million with 3-year maturity and coupon of 1.15%;
- USD1,250 million with 5-year maturity and coupon of 2.15%;
- USD1,000 million with 30-year maturity and coupon of 4.875%;
- USD700 million with 100-year maturity and coupon of 6%.

On 17 January 2014, EDF also issued a £1,350 million bond with 100-year maturity and coupon of 6%.

These issues enabled the Group to prepare for redemption of bonds maturing in 2014, taking advantage of good market conditions to pursue its financing policy aim of extending the average maturity of debt and bringing it closer to the useful life of its long-term industrial assets.

Redemption of bonds totalled €5,099 million concerned bonds in Euros and US dollars that reached maturity.

33.1 Breakdown of loans by currency, before and after hedging instruments

(in millions of Euros)	Structure of liability in balance sheet				Impact of hedging instruments		Structure of liability after hedging			
	Non-Euro	In Euros	% Non-Euro	% of debt	Non-Euro	In Euros	Non-Euro	In Euros	% Non-Euro	% of debt
TOTAL I - EUROS		22,637		50		17,240		39,877		88
CHF	730	607	2.7	1	(730)	(607)	–	–	–	–
GBP	7,385	9,481	41.5	21	(3,000)	(3,851)	4,385	5,630	100	12
HKD	1,216	129	0.7	0.2	(1,216)	(129)	–	–	–	–
JPY	54,100	373	1.6	1	(54,100)	(373)	–	–	–	–
NOK	1,000	111	0.5	0.2	(1,000)	(111)	–	–	–	–
USD	14,775	12,169	53.2	27	(14,775)	(12,169)	–	–	–	–
TOTAL II - NON-EURO CURRENCIES		22,870	100	50		(17,240)		5,630	100	12
TOTAL I+II		45,507		100		–		45,507		100

The nominal value of hedging instruments included in off balance sheet commitments (see note 35.1) has no effect on loans in the balance sheet.

33.2 Breakdown of loans by type of interest rate before and after hedging instruments

(in millions of Euros)	Structure of liability in balance sheet			Impact of hedging instruments		Structure of liability after hedging		
	Total	% 31/12/2014	% 31/12/2013	Total	Total	% 31/12/2014	% 31/12/2013	% 31/12/2013
Long-term borrowings and EMTN	40,304			(17,573)	22,731			
Short-term borrowings	4,006			–	4,006			
Borrowings at fixed rate	44,310	97	99	(17,573)	26,737	59	79	
Long-term borrowings and EMTN	1,197			17,573	18,770			
Short-term borrowings	–			–	–			
Borrowings at floating rate	1,197	3	1	17,573	18,770	41	21	
TOTAL	45,507	100	100	–	45,507	100	100	

➤ Note 34 Unrealised foreign exchange gains

Unrealised foreign exchange gains in 2014 include an unrealised gain of €191 million, of which €128 million concerned a borrowing in pounds sterling partly hedged by foreign exchange swaps.

Other information

➤ Note 35 Financial instruments

35.1 Off-balance sheet commitments related to currency and interest rate derivatives

EDF uses financial instruments to limit the impact of foreign exchange rate risks and interest rate risks.

	31/12/2014		31/12/2013	
	To be received (notional)	To be given (notional)	To be received (notional)	To be given (notional)
<i>(in millions of Euros)</i>				
1 – Interest rate transactions				
Short-term interest rate swaps				
EUR	14,348	14,348	1,988	1,988
Long-term interest rate swaps				
EUR	7,916	7,916	7,215	7,215
USD	1,112	1,112	979	979
GBP	4,276	4,276	2,070	2,070
JPY	96	96	325	325
Sub-total	27,748	27,748	12,577	12,577
2 – Exchange rate transactions				
Forward transactions				
EUR	16,736	18,774	18,532	21,640
CAD	1,354	1,354	1,026	1,026
USD	11,704	9,065	9,970	6,698
GBP	8,005	8,363	11,338	11,466
CHF	36	36	–	–
HUF	350	385	419	410
PLN	865	864	968	1,050
JPY	25	32	21	122
MXN	79	79	254	254
Other	117	117	308	311
Long-term currency swaps				
EUR	8,572	28,807	7,226	23,565
JPY	372	–	837	–
USD	12,149	3,336	6,566	1,273
GBP	17,107	5,370	14,913	5,721
CHF	607	–	619	–
HUF	5	5	14	14
CAD	47	47	131	131
ILS	126	126	132	132
PLN	337	337	–	53
NOK	111	–	120	–
HKD	129	–	114	–
Sub-total	78,833	77,097	73,508	73,866
3 – Securitisation swaps	591	591	734	734
TOTAL FINANCIAL OFF-BALANCE SHEET COMMITMENTS	107,172	105,436	86,819	87,177
4 – Commodity swaps				
Coal <i>(in millions of tonnes)</i>	2	2	4	4
Oil products <i>(in thousands of barrels)</i>	5,475	5,475	5,776	5,776

The amounts shown in the above table are the nominal value of contracts, translated where necessary using 2014 year-end exchange rates (regardless of whether they are classified as hedges).

35.2 Impacts of financial instrument transactions on net income

(in millions of Euros)	2014	2013
Instruments not classified as hedges		
Realised gains and losses	(55)	142
Unrealised gains and losses	320	(100)
Interest rate instruments (swap, cap and floor, FRA, option) ⁽¹⁾	(3)	78
Instruments classified as hedges		
Interest rate instruments (swap, cap and floor, FRA)	253	134
Exchange rate instruments (currency swap)	276	67

(1) Including interest on swaps.

35.3 Fair value of derivative financial instruments

The fair value of currency and interest rate swaps was calculated by discounting future cash flows using year-end market exchange and interest rates, over the remaining term of the contracts (market value includes accrued interest).

The book value of off-balance sheet derivatives includes accrued interest, equalisation payments and premiums paid or received, and translation adjustments, which are already booked in EDF's accounts. The difference between book value and market value is the unrealised gain or loss.

The fair value of derivative financial instruments reported off-balance sheet at 31 December 2014 as calculated by EDF is as follows:

(in millions of Euros)	Book value	Fair value
Interest rate hedges		
Long-term swaps	116	2,012
Short-term swaps	(3)	(5)
Exchange rate hedges		
Forward exchange transactions	185	197
Long-term currency swaps	1,660	1,228
Commodity hedges		
Coal	–	(37)
Oil products	–	(165)
TOTAL	1,958	3,230

➤ Note 36 Other off-balance sheet commitments and operations

At 31 December 2014, off-balance sheet commitments related to operations, financing and investments (other than electricity supply commitments and partnership agreements) comprise the following:

(in millions of Euros)	Maturity				31/12/2014	31/12/2013
	< 1 year	1-5 years	5-10 years	> 10 years		
Off-balance sheet commitments given	11,716	18,781	12,201	11,029	53,727	53,604
Operating commitments	5,355	12,702	11,645	11,008	40,710	38,701
■ Commitments related to fuel and energy purchases	2,793	10,377	9,929	10,684	33,783	31,644
■ Other operating commitments	2,562	2,325	1,716	324	6,927	7,057
Investment commitments	3,301	6,057	285	9	9,652	8,949
Financing commitments	3,060	22	271	12	3,365	5,954
Off-balance sheet commitments received	1,041	10,391	248	211	11,891	11,934
Operating commitments	1,036	646	248	211	2,141	2,354
Investment commitments	5	–	–	–	5	–
Financing commitments	–	9,745	–	–	9,745	9,580

36.1 Commitments given

In almost all cases, these are reciprocal commitments, and the third parties concerned are under a contractual obligation to supply to EDF with assets or services related to operating, investment and financing activities.

36.1.1 Fuel and energy purchase commitments

In the course of its ordinary generation and supply activities, EDF has entered into long-term contracts for purchases of electricity, gas, other energies and commodities and nuclear fuels, for periods of up to 20 years.

At 31 December 2014, these commitments mature as follows:

(in millions of Euros)	Maturity				31/12/2014	31/12/2013
	< 1 year	1-5 years	5-10 years	> 10 years		
Electricity purchases and related services	1,034	3,369	4,483	6,936	15,822	14,015
Nuclear fuel purchases	1,759	7,008	5,446	3,748	17,961	17,629
FUEL AND ENERGY PURCHASE COMMITMENTS	2,793	10,377	9,929	10,684	33,783	31,644

Electricity purchases and related services

Electricity purchase commitments mainly concern:

- Island Energy Systems (IES), which has given commitments to purchase electricity generated from bagasse and coal, and electricity generated by the plants of EDF's Island Electricity Production subsidiaries;
- hedging contracts: these are forward purchases, for which the volumes and prices are set in contracts with EDF Trading.

In addition to the obligations reported above and under Article 10 of the law of 10 February 2000, in mainland France EDF is obliged, at the producer's request and subject to compliance with certain technical features, to purchase the power produced by co-generation plants and renewable energy generation units (wind turbines, small hydro-electric plants, photovoltaic power, etc.).

The additional costs generated by this obligation are offset, after validation by the CRE, by the Contribution to the Public Electricity Service (Contribution au Service Public de l'Électricité or CSPE). These purchase obligations total 35TWh for 2014 (34TWh for 2013), including 5TWh for co-generation (7TWh for 2013), 16TWh for wind power (15TWh for 2013), 6TWh for photovoltaic power (4TWh for 2013) and 3TWh for hydropower (3TWh for 2013).

Nuclear fuel purchases

Commitments for purchases of nuclear fuel arise from supply contracts for the nuclear plants intended to cover EDF's needs for uranium and fluorination, enrichment and fuel assembly production services.

36.1.2 Other operating commitments

These are mostly commitments undertaken by EDF through signature of orders relating to operations or contracts in progress, related guarantees, and commitments as lessee under irrevocable operating lease contracts principally for premises, equipment and vehicles. The corresponding rents are subject to renegotiation at intervals defined in the contracts.

36.1.3 Investment commitments

Investment commitments are mostly commitments for acquisition of property, plant and equipment. The increase in these commitments is largely explained by the signature of contracts for the supply of "last resort" diesel generators for the nuclear power plants.

36.1.4 Financing commitments

These are commitments by EDF to its subsidiaries, primarily €799 million to Edison and €730 million to EDF Énergies Nouvelles.

36.2 Commitments received

36.2.1 Operating commitments

These commitments mainly comprise:

- guarantees received in connection with sales under the ARENH system. Electricity supplied by EDF to operators under the NOME Law is covered by a stand-alone guarantee enforceable on demand. This guarantee amounts to 1.5 times the average monthly volume of electricity as stated in the CRE's notification of the annual volume of electricity to be sold, valued at the ARENH price in force;
- operating lease commitments received as lessor;
- operating guarantees received.

36.2.2 Financing commitments

These commitments correspond to the total value of credit lines available to EDF from various banks.

36.3 Other types of commitment

36.3.1 Electricity supply commitments

In the course of its business, EDF has signed long-term contracts to supply electricity as follows:

- long-term contracts with a number of European electricity operators, for a specific plant or for a defined group of plants in the French nuclear generation fleet, corresponding to installed power capacity of 3.5GW;
- in execution of France's NOME Law on organisation of the French electricity market, EDF has a commitment to sell some of the energy generated by its "traditional" nuclear power plants to other suppliers. This covers volumes of up to 100TWh each year until 31 December 2025;

- EDF is still committed to supplying the residual volumes of 345GWh until March 2015, in application of the rights acquired at VPP or Virtual Power Plant capacity auctions, which ended in 2011.

36.3.2 Gas purchases and related services

Gas purchase commitments are given by EDF in connection with its expanding gas supply business. EDF and Gazprom signed an agreement in 2013 defining the essential conditions of a gas supply contract.

Gas purchases for supply and delivery are mostly undertaken through long-term contracts and forward purchases from EDF Trading.

In 2011, EDF signed a capacity subscription contract for the Dunkirk methane terminal, which is due to be commissioned in late 2015.

➤ Note 37 Contingent liabilities

Individual training entitlement (*droit individuel à la formation* or DIF)

The French Law of 4 May 2004 allows each employee an individual entitlement to a minimum of 20 hours of training per year, which may be accumulated over 6 years. The company agreement with unions signed on 24 February 2006 defines the conditions for exercising this entitlement, listing the types of training eligible. Expenses for such training are recorded as incurred.

DIF entitlements earned at 31 December 2014 total 6,753,661 hours, including 6,682,138 for which no application has been made.

General Network – Rejection of the European Commission's appeal

On 15 December 2009 the European Union Court cancelled the European Commission's decision of 16 December 2003 that had classified the tax treatment of provisions created for the renewal of the General Network at the time of EDF's capital increase in 1997 as state aid, and ordered repayment to the French State of the updated value, i.e. €1,224 million (paid by EDF in February 2004). The State therefore reimbursed this amount to EDF on 30 December 2009, then in February 2010 the European Commission filed an appeal before the Court of Justice of the European Union.

On 5 June 2012, the Court of Justice of the European Union rejected the European Commission's appeal and upheld the European Union Court's decision of 15 December 2009.

The European Commission then decided in May 2013 to reopen the proceedings. As a result, a further adversarial exchange of positions has begun between the French state and the European Commission.

Tax inspections

Following inspections of previous years' accounts, the French tax authorities are challenging the tax-deductibility of the provision for annuities following work-related accidents and illness. As this is an issue that relates to the special gas and electricity (IEG) statutes, it also concerns RTE, ERDF and Électricité de Strasbourg. EDF is contesting the tax authorities' position on this question. In late 2014 the National Commission of direct taxes and sales taxes issued several opinions that were favourable to RTE and EDF. The subsidiaries RTE and Électricité de Strasbourg also received favourable rulings from Montreuil Administrative Court. If the outcome of this dispute is unfavourable, the financial risk for EDF (payment of back income taxes) could amount to some €150 million.

EDF was notified in late 2011 of a proposed rectification for 2008, particularly concerning deductibility of certain long-term liabilities. During 2013, EDF received a letter from the tax administration accepting some of its arguments, which reduces the risk to €600 million. The Company considers it is likely to win this dispute, and no provision has been recorded in connection with this matter.

The tax administration has also proposed a reassessment concerning an interest-free advance made by EDF to its indirect subsidiary Lake Acquisitions Ltd. in connection with the acquisition of British Energy. EDF is contesting this reassessment.

Labour litigation

EDF is party to a number of labour lawsuits with employees, primarily regarding the implementation of legislation regarding working hours. EDF estimates that none of these lawsuits, individually, is likely to have a significant impact on its profits and financial position. However, because they relate to situations likely to concern a large number of EDF's employees in France, any increase in such litigations could present a risk with a potentially significant negative impact on the company's financial results.

➤ Note 38 Dedicated assets

38.1 Regulations

The French Law of 28 June 2006 and the implementing regulations require assets (dedicated assets) to be set aside for secure financing of nuclear plant decommissioning expenses and long-term storage expenses for radioactive waste (spent fuel and fuel recovered from decommissioning). The regulations govern the way dedicated assets are built up, and the management and governance of the funds themselves. These assets are clearly identified and managed separately from the company's other financial assets and investments. They are also subject to specific monitoring and control by the Board of Directors and the administrative authorities.

The initial aim of these laws and regulations was to cover the full discounted cost of long-term nuclear obligations by 29 June 2011. The NOME Law enacted in 2010 introduced a 5-year extension, subject to certain conditions, of the deadline for constitution of dedicated assets.

The Decree of 29 December 2010 made RTE shares eligible for inclusion in dedicated assets subject to certain conditions and administrative authorisation. The Decree of 24 July 2013 revised the list of eligible assets by reference to the insurance code, and unlisted securities are also now eligible subject to certain conditions.

38.2 Portfolio contents and measurement

Given the applicable regulations, these dedicated assets are a highly specific category of assets.

The dedicated assets are structured and managed according to a strategic allocation defined by the Board of Directors and reported to the administrative authorities. The strategic allocation is designed to meet the overall objective of long-term coverage of obligations, and determines the structure and management of the portfolio as a whole. It takes into account regulatory constraints concerning the nature and liquidity of the dedicated asset, the financial outlook for the equity and bond markets, and the diversifying contribution of unlisted assets.

As part of the strategic allocation review process and in order to pursue the diversification into unlisted assets begun in 2010 with the shares in RTE, in 2013 the Board of Directors approved the introduction of an unlisted asset portfolio alongside the diversified equity and bond investments. This portfolio is managed by EDF Invest, which was formed following the Decree of 24 July 2013 on securing the funding for nuclear expenses. EDF Invest has three target asset classes: principally infrastructures, and also real estate and private equity. EDF Invest's objective is ultimately to have some €5 billion of unlisted investments under management, representing approximately a quarter of the total dedicated assets.

Following the French government's authorisation issued on 8 February 2013, and the approval of the Nuclear Commitments Monitoring Committee and the Board of Directors' decision of 13 February 2013, EDF allocated the entire receivable representing the accumulated shortfall in CSPE financing at 31 December 2012 to its dedicated assets. This financial asset is considered as a risk-free asset, expected to be repaid by late 2018.

38.2.1 Diversified equity and bond investments

Certain dedicated assets take the form of bonds held directly by EDF. The rest comprise specialised collective investment funds on leading international markets, managed by independent asset management companies. They take the form of open-end funds and "reserved" funds established solely for the use of EDF (which does not participate in the fund management).

These investments are structured and managed in line with the strategic allocation, which takes into consideration international stock market cycles, for which the statistical inversion generally observed between equity market cycles and bond market cycles – as well as between geographical areas – has led EDF to define an overall composite benchmark indicator that can guarantee continuation of the long-term investment policy.

38.2.2 Unlisted assets (EDF Invest)

The assets managed by EDF Invest consist of unlisted securities related to investments in infrastructures, real estate, and private equity.

At 31 December 2014, the assets managed by EDF Invest represent a value of €3,264 million, mainly including:

- 50% of EDF's investment in RTE, with a value of €2,555 million at 31 December 2014 (€2,567 million at 31 December 2013). This value is the net consolidated value of 50% of EDF's investment in RTE, as presented in the EDF group's consolidated balance sheet;
- EDF's investment in TIGF; and
- since October 2014, the investment in Porterbrook Rail Finance Limited (Porterbrook).

38.2.3 Valuation of dedicated assets

Dedicated assets are classified in the balance sheet according to their accounting nature: investments, investment securities, marketable securities. They are valued under the accounting principles presented in note 1.

Details of the portfolio at 31 December 2014 are as follows:

	31/12/2014		31/12/2013	
	Net book value	Fair value or realisable value	Net book value	Fair value or realisable value
<i>(in millions of Euros)</i>				
RTE shares	2,015	2,555	2,015	2,567
Investment Securities	12,458	14,691	11,994	13,842
Other financial investments	553	657	273	265
Dedicated assets – investments	15,026	17,903	14,282	16,674
CSPE receivable	5,140	5,144	5,053	5,051
Total dedicated assets before hedging	20,166	23,047	19,335	21,725
Hedging instruments and other	(10)	(14)	1	12
TOTAL DEDICATED ASSETS AFTER HEDGING	20,156	23,033	19,336	21,737

Net book value and fair value include unmatured accrued interest.

38.2.4 Changes in dedicated assets in 2014

At 31 December 2014, the objective of 100% coverage of long-term nuclear provisions was still achieved, ahead of the legal June 2016 deadline (set by the NOME Law).

Withdrawals totalled €403 million, equivalent to payments made in respect of the long-term nuclear obligations to be covered in 2014 (€326 million in 2013). The allocation to dedicated assets for 2014 was zero, as the realisable value of the assets now exceeds the value of the provisions they are intended to cover (in 2013 a net amount of €2,591 million was allocated).

For the financial portfolio, the allocation strategy focused on a conservative approach in a context of volatile but generally rising markets:

- in the bond portfolio, underweighting in Euro zone countries was maintained early in the year, followed by a gradual return to allocation in line with the benchmark index in core countries, and reinforcement of positions in non-core countries (principally Italy and Spain);

- in the equities portfolio, there was underweighting in the Pacific and Emerging countries zones at the start of the year, followed by lower overall allocation to equities, especially in the Euro zone from the summer onwards, in response to intensifying geopolitical tensions.

In 2014 EDF Invest acquired a minority interest in Porterbrook in a consortium with three other long-term infrastructure investors: Alberta Investment Management Corporation, Allianz Capital Partners and Hastings Funds Management. Porterbrook is one of the three main railway rolling stock leasing companies in the United Kingdom. This investment was allocated to EDF Invest's "Infrastructures" pocket alongside TIGF and RTE.

During the year, EDF Invest also continued to build up its real estate and investment fund portfolio. Amundi and EDF Invest created a non-exclusive real estate investment fund to invest at European level. This fund will raise EDF Invest's exposure to the real estate asset class, to complement its direct investment strategy. This initiative led to a first real estate investment in Germany in late 2014.

38.3 Present cost of long-term nuclear obligations

The long-term nuclear obligations concerned by the regulations for dedicated assets are included in EDF's financial statements at the following values:

	31/12/2014	31/12/2013
<i>(in millions of Euros)</i>		
Provision for long-term radioactive waste management	7,676	7,542
Provisions for nuclear power plant decommissioning	13,866	13,024
Provisions for last cores – portion for future long-term radioactive waste management	476	454
PRESENT COST OF LONG-TERM NUCLEAR OBLIGATIONS	22,018	21,020

➤ Note 39 Related parties

39.1 Relations with subsidiaries

	EDF's receivables ⁽¹⁾		EDF's liabilities ⁽¹⁾		Financial expenses	Financial income (excluding dividends)
	Loans	Trade receivables	Net liabilities included in current account	Trade liabilities		
<i>(in millions of Euros)</i>						
Companies						
C3						29
C31						12
EDF Energy		194		74		2
EDF Énergies Nouvelles	1,175					11
EDF International	450					2
EDF Trading		490		538		5
Edison Nouveau						3
ERDF		91		1,629		1
EDF Polska						3
Dalkia	661					7
Groupe PEI				59		–
RTE	670	160		146		37
Current account with ERDF				90		
Group cash management agreement with subsidiaries			5,369		(7)	
Tax consolidation agreement ⁽²⁾				1,282		
Agreement for investment of subsidiaries' cash surpluses			5,924		(28)	

(1) Receivables and payables of more than €50 million.

(2) Including €866 million concerning EDF International.

39.2 Relations with the French State and State-owned entities

39.2.1 Relations with the French State

The French State holds 84.5% of the capital of EDF at 31 December 2014, and is thus entitled in the same way as any majority shareholder to control decisions that require approval by the shareholders.

In accordance with the legislation applicable to all companies having the French State as their majority shareholder, EDF is subject to certain inspection procedures, in particular economic and financial inspections by the State, audits by the French Court of Auditors (*Cour des comptes*) or Parliament, and verifications by the French General Finance Inspectorate (*Inspection générale des finances*).

Under an agreement entered into by the French State and EDF on 27 July 2001 concerning the monitoring of external investments, procedures exist for prior approval by the French State or notification (advance or otherwise) of the State in respect of certain planned investments, additional investments or disposals by EDF. This agreement also introduced a procedure for monitoring the results of external growth operations.

The public service contract between the French State and EDF was signed on 24 October 2005. This contract is intended to form the framework for public

service missions assigned to EDF by the lawmaker for an unlimited period. The Law of 9 August 2004 does not stipulate the duration of the contract.

EDF, like other electricity producers, also participates in the multi-annual generation investment program defined by the minister in charge of energy, which sets objectives for the allocation of generation capacity.

Finally, the French State intervenes through the regulation of electricity and gas markets, particularly for authorisation to build and operate generation facilities, establishment of sales tariffs for customers that have stayed on the regulated tariffs, transmission and distribution tariffs, and also determination of the ARENH price in accordance with the NOME Law, and the level of the Contribution to the Public Electricity Service (CSPE).

39.2.2 Relations with public sector entities

The Group's relations with public sector entities mainly concern AREVA. Transactions with AREVA concern:

- the front end of the nuclear fuel cycle (uranium supplies, conversion and enrichment services and fuel assembly production);
- the back end of the nuclear fuel cycle (transportation, storage, processing and recycling services for spent fuel);
- plant maintenance operations and equipment purchases.

Front end of the cycle

In December 2008 EDF and AREVA signed an agreement for uranium enrichment services to cover the period 2013-2032, and in July 2012 two agreements were signed for supplies of natural uranium concentrate, covering the period 2014-2035.

In December 2014 EDF and AREVA NP signed a contract for supplies of enriched-uranium fuel assemblies from 2015.

As part of the plan to construct two EPRs in the United Kingdom (Hinkley Point 1 and 2), EDF and AREVA signed a letter of intent on 21 October 2013 defining the terms for supplies of fuel (components: uranium, fluorination, enrichment and production). This letter of intent will be applied through four contracts (one for each component) which are currently being signed.

Back end of the cycle

Relations between EDF and AREVA concerning transportation, processing and recycling of spent fuels are formally defined for the period 2008-2040 in a framework agreement signed on 19 December 2008. In execution of this

agreement, EDF and AREVA signed an application contract on 12 July 2010 setting the prices and quantities for these services, for the period 2008-2012.

The conditions for processing and recycling services over the period 2013-2020 are covered by general terms signed by EDF and AREVA in June 2014, and will be transposed into the application contract for 2013-2020 due to be signed in early 2015.

EDF and AREVA have signed the following contracts for 1,300MW nuclear power plants:

- a contract for supply of 32 steam generators and a contract for renewal of the control/command systems in 2011;
- a contract for services related to replacement operations for the first steam generators, in August 2012.

In 2013 EDF and AREVA signed two amendments to the initial 2007 contract for the Flamanville EPR boiler, covering the period from development studies to industrial commissioning.

EDF also holds shares in AREVA, amounting to €123 million at 31 December 2014.

➤ Note 40 Environment

40.1 Greenhouse gas emission rights

In application of the Kyoto protocol, the EU Directive aiming to reduce greenhouse gas emission levels by attributing emission rights came into effect in 2005, for an initial three-year period followed by a second period from 2008 to 2012, with progressive reduction of the emission rights allocated.

One of the main features of the third phase, running from 2013 to 2020, is the discontinuation of free allocation of emission rights in certain countries, including France. As a result, EDF was no longer allocated any emission rights in 2013.

In 2014, EDF surrendered 17 million tonnes in respect of emissions generated in 2013. In 2013, EDF surrendered 17 million tonnes in respect of emissions generated in 2012.

The volume of emissions at 31 December 2014 stood at 8 million tonnes (17 million tonnes at 31 December 2013).

40.2 Energy savings certificates

The French Law of 13 July 2005 introduced a system of energy savings certificates. Companies selling electricity, gas, heat or cold to end-users with sales above a certain level are subject to energy savings obligations for a defined period. They fulfil these obligations by making direct or indirect energy savings rewarded by certificates, or by purchasing energy savings certificates. At the end of the set period, the entities concerned must provide evidence of compliance with obligations by surrendering the certificates, or pay a fine to the Treasury.

In the second period, which began on 1 January 2011 and runs until 31 December 2014, the system was extended to new obligated actors (fuel distributors) and applies stricter requirements for obtaining energy savings certificates.

EDF is well-placed to meet its obligation thanks to energy-efficient offers for each market segment: residential customers, business customers, local authorities and organisations funding social projects.

EDF's obligation is calculated retrospectively, based on gas and electricity sales to households and service sector businesses for the period 2010-2013. The volumes of certificates obtained between the first two periods counted towards achievement of the obligation for the second period.

The energy savings certificate system has been renewed for a third period, from 1 January 2015 to 31 December 2017, by Decree 2014-1557 of 24 December 2014.

➤ Note 41 Management compensation

The Company's key management and governance personnel are the Chairman and CEO and the directors. Directors representing the employees receive no remuneration for their services.

The total gross compensation paid by EDF (salaries, all types of benefits and director's fees, excluding employer contributions) to the company's key management personnel was as follows:

<i>(in Euros)</i>	2014	2013
Chairman and CEO	415,818 ⁽²⁾	743,946 ⁽¹⁾
Directors	174,444	200,000

(1) This amount comprises the fixed salary, benefits in kind, and the balance of variable salary for 2012 paid during 2013 to Henri Proglio, Chairman and CEO until 22 November 2014.

(2) Remuneration and benefits in kind for Henri Proglio, Chairman and CEO until 22 November 2014. Jean-Bernard Lévy received no remuneration from the date of his appointment as EDF's Chairman and CEO by Decree of 27 November 2014.

Decree 2012-915 of 26 July 2012 sets a ceiling of €450,000 for the total annual gross remuneration paid to the Chairman and CEO.

➤ Note 42 Subsequent events

No significant event has occurred since the year-end.

Statutory Auditors' report on the financial statements

This is a free translation into English of the Statutory Auditors' Report issued in French and is provided solely for the convenience of English speaking readers.

The Statutory Auditors' Report includes information specifically required by French law in such reports, whether modified or not. This information is presented below the audit opinion on the financial statements and includes an explanatory paragraph discussing the auditors' assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the financial statements taken as a whole and not to provide separate assurance on individual account captions or on information taken outside of the financial statements.

This report also includes information relating to the specific verification of information given in the Group management report and in the documents addressed to shareholders.

This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

Year ended 31 December 2014

To the Shareholders,

In compliance with the assignment entrusted to us by your Annual General Meeting, we hereby report to you, for the year ended 31 December 2014, on:

- the audit of the accompanying financial statements of Électricité de France SA ("the Company");
- the justification of our assessments;
- the specific verification and information required by law.

These financial statements have been approved by the Board of Directors. Our role is to express an opinion on these financial statements based on our audit.

1. Opinion on the financial statements

We conducted our audit in accordance with professional standards applicable in France; those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit involves performing procedures, using sampling techniques or other methods of selection, to obtain audit evidence about the amounts and disclosures in the financial statements. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

In our opinion, the financial statements give a true and fair view of the assets and liabilities and of the financial position of the Company as at 31 December 2014 and of the results of its operations for the year then ended in accordance with French accounting principles.

Without qualifying our opinion, we draw your attention to the valuation of long-term provisions relating to nuclear electricity production, which results from management's best estimates and assumptions as described in notes 1.15 and 28 to the financial statements. This valuation is sensitive to the assumptions made concerning technical processes, costs, inflation rates, long-term discount rates and forecast cash outflows. Changes in these parameters could lead to a material revision of the level of provisioning.

2. Justification of our assessments

In accordance with the requirements of article L. 823-9 of the French Commercial Code (*Code de commerce*) relating to the justification of our assessments, we bring to your attention the following matters:

Accounting principles and policies

Notes 1.3 and 3.1, note 1.7 and note 1.16 to the financial statements describe the principles and policies used for the accounting and valuation of revenues related to energy delivered but not yet measured nor billed, the valuation of financial investments and the determination of provisions for employee benefits.

As part of our assessment of the Company's accounting principles and methods, we have verified the appropriateness of the accounting methods used by the Company and the information disclosed in the notes to the financial statements, as well as the accuracy of the implementation of these accounting methods.

Accounting estimates

Note 1.2 to the consolidated financial statements describes the main sensitive accounting policies for which management makes significant estimates and assumptions and exercises judgment based on macro-economic assumptions appropriate to the very long-term cycle of Company assets. It may be possible that future results could differ from those estimates which were made in a context of economic and financial crisis and significant market volatility, thus resulting in difficulties to assess the economic outlook in the medium term.

Particularly, the Company describes in the notes to the financial statements the information related to:

- the methods used to account for the shortfall in the compensation for the Contribution to the Electricity Public Service Costs (*Contribution au Service Public de l'Électricité*) as at December 31, 2012, subsequent to the agreement announced on 14 January 2013 with the French State and the allocation during the period ended 31 December 2013 of the related receivable held to the dedicated assets for secure financing of long-term nuclear expenses on 8 February 2013 (note 18.1);
- the valuation of investments (notes 1.7.1 and 18);
- the provisions for employee benefits (notes 1.16 and 30), other provisions and contingent liabilities (notes 1.15, 27 and 37).

Our procedures consisted in assessing these estimates, the data and assumptions, and as applicable, the legal opinions on which they are based, reviewing, on a test basis, the technical data and calculations performed by the Company, comparing accounting estimates of prior periods with corresponding actual amounts, reviewing the procedures for approving these estimates by management and finally verifying that the notes to the financial statements provide appropriate disclosures.

Verification procedures

The procedures we performed in relation to the regulatory framework related to the principle of regulated access to historical nuclear energy (*Accès Régulé à l'Énergie Nucléaire Historique* or ARENH) as established by the NOME Law in France, effective 1 July 2011, are based on the information available from the Company, or released by the Regulatory Energy Commission (*Commission de Régulation de l'Énergie*), and the findings resulting from agreed-upon procedures performed by independent third parties that had access to the underlying transactions.

These assessments were made as part of our audit of the financial statements, taken as a whole, and therefore contributed to the opinion we formed which is expressed in the first part of this report.

3. Specific procedures and disclosures

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by French law.

We have no matters to report as to the fair presentation and the consistency with the financial statements of the information given in the management report of the Board of Directors, and in the documents addressed to shareholders with respect to the financial position and the financial statements.

Concerning the information given in accordance with the requirements of article L. 225-102-1 of the French Commercial Code relating to remunerations and benefits received by the directors and any other commitments made in their favour, we have verified its consistency with the financial statements or with the underlying information used to prepare these financial statements and, where applicable, with the information obtained by your Company from companies controlling your Company or controlled by it. Based on this work, we attest the accuracy and fair presentation of this information.

In accordance with French law, we have verified that the required information concerning the purchase of investments and controlling interests and the identity of the shareholders and holders of the voting rights has been properly disclosed in the management report.

Paris - La Défense and Neuilly-sur-Seine, 11 February 2015

The Statutory Auditors

KPMG Audit
Department of KPMG SA
Jacques-François Lethu

Deloitte & Associés
Patrick E. Suissa



Five-year summary of EDF results

(Taken from EDF's corporate financial statements)

	2014	2013	2012	2011	2010
Capital at year-end					
Capital (in millions of euros)	930	930	924	924	924
Capital contributions (in millions of euros)					
Number of ordinary shares in existence	1,860,008,468	1,860,008,468	1,848,866,662	1,848,866,662	1,848,866,662
Number of priority dividend shares (with no voting rights) in existence	–	–	–	–	–
Maximum number of future shares to be created	–	–	–	–	–
by conversion of bonds	–	–	–	–	–
by exercise of subscription rights	–	–	–	–	–
Operations and results of the year (in millions of euros)					
Sales excluding taxes	41,717	43,423	44,106	41,950	40,906
Earnings before taxes, employee profit sharing, depreciation and provisions	8,252	6,782	7,978	5,417	4,906
Income taxes	577	748	460	356	660
Employee profit share for the year					
Earnings after taxes, employee profit sharing, depreciation and provisions	1,649	2,938	3,566	1,118	1,492
Earnings distributed		2,327 ⁽¹⁾	2,309 ⁽¹⁾	2,125 ⁽¹⁾	2,122 ⁽¹⁾
Interim dividend distributed	1,059	1,059	1,053	1,053	1,054
Earnings per share (€/action)					
Earnings after taxes and employee profit sharing, before depreciation and provisions	4.13	3.24	4.07	2.74	2.30
Earnings after taxes, employee profit sharing, depreciation and provisions	0.89	1.58	1.93	0.60	0.81
Dividend per share		1.25 ^{(1) (3)}	1.25 ⁽¹⁾	1.15 ⁽¹⁾	1.15 ⁽¹⁾
Interim dividend per share	0.57	0.57	0.57	0.57	0.57
Personnel					
Average number of employees over the year	70,153 ⁽²⁾	68,643 ⁽²⁾	64,303	62,479	60,380
Total payroll expense for the year (in millions of euros)	3,905	3,843	3,687	3,600	3,377
Amounts paid for employee benefits and similar (social security, company benefit schemes, etc) (in millions of euros)	2,699	2,614	2,551	2,161	2,125

(1) Including the interim dividend paid out.

(2) In 2014, the scope of the workforce was broadened (mainly to include apprentices). At constant scope, the figures are 66,876 for 2014 and 65,775 for 2013.

(3) I.e. €1.375 per share with loyalty dividend.

F

Information relating to the allocation of funds raised through the Green Bond issued by EDF in November 2013

On 25 November 2013, EDF issued its first Green Bond, with a maturity of 7.5 years (April 2021), for a total amount of €1.4 billion. EDF has committed to report annually on (i) the projects selected and financed by the funds raised by this bond issue and (ii) the total amounts allocated from it.

The commitments made by EDF concerning the allocation of the funds raised by the bond issue are as follows:

- the eligible projects are (i) new projects meeting the eligibility criteria defined below by EDF and approved by Vigeo (hereinafter the "Project Eligibility Criteria validated by Vigeo") and/or (ii) existing projects meeting the Eligibility Criteria which have not yet started or been externally

financed at the issue date that EDF Energies Nouvelles may develop or invest in after the issue date;

- upon receipt by EDF, the funds raised during the Issue are invested and followed in a dedicated portfolio of treasury liquidity assets until they are allocated to Eligible Projects selected by EDF Energies Nouvelles.

The Eligibility Criteria applicable to the development and construction phases of the projects are described hereinafter and are listed in section 6 of the final terms of the EMTN no. 19 – Green Bond issue, which are available in the section "Green Bond/Read more" of the EDF website.

Information relating to fund allocation and financed projects as of 31 December 2014

The Eligible Projects that were selected and have received funding as of 31 December 2014 under the November 2013 Green Bond issue are as follows:

Project	Technology and capacity	Location	Projected year of commissioning
La Mitis	Onshore wind, 24MW	Canada (Québec)	Commissioned
Le Granit	Onshore wind, 24MW	Canada (Québec)	Commissioned
Rivière du Moulin – phase 1/phase 2	Onshore wind, 150MW/200MW	Canada (Québec)	Commissioned/2015
Catalan wind farm	Onshore wind, 96MW	France (Pyrénées-Orientales)	2015
CID Solar	Solar PV, 20MWp	USA (Californie)	Commissioned
Cottonwood	Solar PV, 31MWp	USA (Californie)	2015
Hereford	Onshore wind, 200MW	USA (Texas)	Commissioned
Heartland	Biogas, 20MW	USA (Colorado)	2015
Longhorn North	Onshore wind, 200MW	USA (Texas)	2015
Pilot Hill	Onshore wind, 175MW	USA (Illinois)	2015
Roosevelt	Onshore wind, 300MW	USA (New Mexico)	2015
Spinning Spur 2	Onshore wind, 161MW	USA (Texas)	Commissioned
Spinning Spur 3	Onshore wind, 194MW	USA (Texas)	2015

These 13 selected projects meet the Eligibility Criteria presented herein. Once commissioned, they are expected to generate an annual renewable electricity output of around 7TWh.

The funds raised for the Issue were invested in an EDF dedicated portfolio and the total funds allocated to the 13 eligible projects presented above as of 31 December 2014 totalled €1,175 million. These funds were allocated to the various project companies of these projects and are intended exclusively for the funding of their construction and/or development costs.

Project Eligibility Criteria validated by Vigeo

1. Assessment of the countries in which projects are located based on human rights and governance

Eligible countries to host projects financed by the funds raised by the green bond issue must reach a minimum threshold scoring, set by EDF Energies Nouvelles, based on the Vigeo Country Rating evaluation¹.

This scoring is based on the following indicators:

Criteria	Indicators/Supporting evidence
Respect, protection and promotion of Freedom and Human Rights	Integration, signature or ratification of conventions relating to (i) Human Rights, and (ii) Labour Rights
Democratic institutions	Performance indicators on: Political Freedom and stability; Prevention of corruption; Press freedom; Independence of the judicial system; Legal certainty

2. Monitoring the environmental impact of the projects

Criteria	Indicators/Supporting evidence
Is an environmental impact study* undertaken? (= effects on environment and identified measures)	Existing impact study
Are environmental specifications of the projects monitored during the construction phase?	Existence of an internal reporting or signature of a contract with a third party to monitor environmental aspects
Has an environment referent been designated for every project?	Name/Function of the environment referent for each project
Are contracts established in compliance with the project's environmental specifications?	Environmental specifications specified in the contracts

3. Promote health and safety of all those involved in the projects

Criteria	Indicators/Supporting evidence
Is a Health/Protection/Safety coordinator or equivalent planned on the site of the construction project?	Name/Function of the coordinator for each of the sites of the project
Are risk prevention plans systematically provided for with each person on the project site?	Risk prevention plan for each firm working on the project site

1. Last update concluded on 1 July 2014. Validity: six months. In the area of Human Rights, the Vigeo scoring can be complemented with performance results indicators.

4. Promote responsible relationships with suppliers

Criteria	Indicators/Supporting evidence
Is the Sustainable Development Charter for EDF EN's suppliers and subcontractors signed by each supplier/subcontractor to ensure their knowledge of it?	Inclusion in the contract with suppliers and/or signature of the charter by suppliers/subcontractors
Is the project management by EDF EN compatible with the principles of the EDF group's ethical charter?	Instances of "non-compliance" (human rights, corruption, conflicts of interest, political actions, etc.)
Has a verification of good practices and of any reputational risk and controversial issues related to financial partner(s) been conducted before launching the project?	Legal/banking evidence as to the activities, especially as to social affairs, of the financial partner(s) (EDF risk control department)
Guarantee of the traceability of the use of proceeds in favour of the beneficiaries?	€ figures on use of funding/beneficiary
Is there a policy in terms of advantages and gifts received by EDF EN employees?	Policy relative to gifts and invitations applicable
Has a binding confidentiality clause (as between the suppliers and EDF EN) been included in the applicable contracts?	Confidentiality clause commitment
Is the consultation of suppliers systematic, except for justified cases of one to one negotiations?	Traceability of the project's purchasing process
Are the decisions on the awarding of contracts formalized on the basis of objective criteria, identical for every suppliers, in order to ensure a fair selection (cf. EDF EN Group Purchase Policy)	Traceability of the decision process for awarding contracts

5. Ensure the consultation with the territory's stakeholders

Criteria	Indicators/Supporting evidence
Are external stakeholders involved in the project put in place from the conception stage of the project?	List of discussions/consultations effected Examples: nbr of public meetings, information reports, etc.
Are stakeholders provided with information, at least for stakeholders surrounding the work area and site users, for the duration of the construction project?	Actions undertaken

This is a free translation into English of the attestation from one of the statutory auditors of EDF SA on the information related to the allocation, as of 31 December 2014, of funds raised for the "Green Bond" issued by EDF on 25 November 2013 originally issued in French and is provided solely for the convenience of English speaking readers.

This attestation should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

Attestation from one of the Statutory Auditors of EDF SA on the information related to the allocation, as of 31 December 2014, of funds raised for the "Green Bond" issued by EDF on 25 November 2013

To the Chairman and Chief Executive Officer,

In our capacity as statutory auditor of Electricité de France S.A. (the "Company") and in accordance with your request, we have prepared this attestation on the information related to the allocation, as of 31 December 2014, of funds raised for the "Green Bond" issued by EDF on 25 November 2013 (the "Issue"), which amounts to €1,400,000,000, contained in the attached document "Information relating to the allocation of funds raised for the "Green Bond" issued by EDF in November 2013", and prepared pursuant to the terms and conditions of the final terms of the Issue dated 25 November 2013 (the "Final Terms").

This document, prepared for the purposes of the information of the "Green Bond" debt securities holders, presents an allocation of the funds raised from the Issue to eligible projects from the period beginning as of the receipt of the funds raised from the Issue on 27 November 2013 to 31 December 2014, for an amount of €1.175 million.

This information was prepared under your responsibility based on the accounting records used for the preparation of the consolidated financial statements for the year ended 31 December 2014.

Our role is to report on:

- the compliance, in all material respects, of the eligible projects referred to in the attached document, with the eligibility criteria defined in the Final Terms (the "Eligible Projects");
- the tracking of the funds raised from the Issue, in a dedicated portfolio of financial assets, to the allocation of such funds to Eligible Projects and on the reconciliation of the amount of funds allocated to Eligible Projects as at 31 December 2014 as part of the Issue, with the accounting records and data underlying the accounting records.

However, we have no responsibility:

- for challenging the eligibility criteria defined as an appendix to the Final Terms and, in particular, we give no interpretation on the terms of the Final Terms;
- for forming an opinion on the use of the allocated funds to Eligible Projects after such funds have been allocated.

In the context of our role as Statutory Auditor, we have audited, jointly with the other Statutory Auditor, the consolidated financial statements of the Company for the year ended 31 December 2014. Our audit was conducted in accordance with professional standards applicable in France, and was planned and performed for the purpose of forming an opinion on the consolidated financial statements taken as a whole and not on any individual component of the accounts used to determine the information. Accordingly, our audit tests and samples were not carried out with this objective and we do not express any opinion on any components of the accounts taken individually. These consolidated financial statements, which have not yet been approved by the Shareholders' Meeting, have been audited and our report thereon is dated 11 February 2015.

Furthermore, we have not performed any procedures to identify events that may have occurred after the date of our report on the consolidated financial statements of the Company which was issued on 11 February 2015.

Our engagement, which constitutes neither an audit nor a review, was performed in accordance with professional standards applicable in France. For the purpose of this attestation, our work consisted, using sampling techniques or other methods of selection, in:

- understanding the procedures implemented by the Company for producing the information contained in the attached document;
- verifying the compliance, in all material respects, of the Eligible Projects referred to in the attached document, with the eligible criteria, as defined in the Final Terms;
- verifying the appropriate segregation of the funds raised from the Issue and their exclusive allocation to Eligible Projects;
- performing the necessary reconciliations between this information and the accounting records from which it is derived and verifying that the information agrees with the data used to prepare the consolidated financial statements for the year ended 31 December 2014.

On the basis of our work, we have no matters to report on:

- the compliance, in all material respects, of the Eligible Projects referred to in the attached document, with the eligible criteria, as defined in the Final Terms;
- the tracking of the funds raised from the Issue, in a dedicated portfolio of financial assets, to the allocation of such proceeds to Eligible Projects and the consistency of the amount of allocated funds to Eligible Projects as at 31 December 2014 in the context of the Issue, with the accounting records and data underlying the accounting records.

This attestation has been prepared solely for your attention within the context described above and may not be used, distributed or referred to for any other purpose.

Neuilly-sur-Seine, 10 April 2015

One of the statutory auditors

Deloitte & Associés

Patrick E. Suissa

Partner



Documentation related to the Shareholders' Meeting of 19 May 2015

Report of the Board of Directors on the draft resolutions in view of the annual ordinary Shareholders' Meeting of 19 May 2015 and draft resolutions

Report of the Board of Directors on the draft resolutions

First and second resolution

Approval of the reports and the annual financial statements and consolidated financial statements for the financial year ended on 31 December 2014

Both resolutions submit to your approval EDF's annual financial statements, which highlight a profit of €1,649,057,707.37 and the EDF group's consolidated financial statements, as approved by the Board of Directors at its meeting held on 11 February 2015.

It is emphasized that the overall sum of expenses and charges mentioned in article 223 quater of the French Tax Code is €2,539,543 for the 2014 financial year and that the corresponding amount of tax is €965,026.

Third resolution

Allocation of the net income for the year ended on 31 December 2014, and determination of the dividend

It is proposed to the Shareholders' Meeting to set the amount of the ordinary dividend for the 2014 financial year at €1.25. The loyalty dividend comes out to €1.375 per share.

In accordance with Article 24 of the articles of association, the registered shares continuously held in the name of the same shareholders since 31 December 2012 until the term of payment of the dividend for the financial year 2014, will benefit from a 10% dividend increase. For any shareholder, this increase is capped to a number of shares which may not exceed 0.5% of share capital.

Given that an interim dividend of €0.57 per share was paid out on 17 December 2014, the balance of the dividend to be distributed for the financial year 2014 amounts to €0.68 per share for the shares with ordinary dividend and to €0.805 per share for the shares which benefit from loyalty dividend.

In the event that the Company holds some of its own shares at the date of distribution of the dividend, these treasury shares will not be entitled to the dividend. The balance of the distributable profit would be allocated to the "Retained earnings" account.

The ordinary and loyalty dividends payment date is 5 June 2015. The ex date is therefore 3 June 2015.

Resolution A

Allocation of the net income for the year ended on 31 December 2014 and determination of the dividend - resolution submitted by the supervisory board of the FCPE actions EDF and reviewed and disapproved by the Board of Directors of EDF on 8 April 2015

The Supervisory Board of the FCPE Actions EDF has requested to the Company the registration in the agenda of the Shareholders' Meeting of a draft resolution in order to reduce the amount of the dividend for the 2014 financial year and suggests that this dividend amounts to 0.8 euro per share.

This draft resolution has been reviewed and disapproved by the Board of Director of EDF during its meeting held on 8 April 2015.

Fourth resolution

Payment of interim dividends in shares – delegation of authority to the Board of Directors

In accordance with article 25 of the Company's articles of association, it is proposed to authorise the Board of Directors, in the event that it decides to pay one or more interim dividends in respect of the 2015 financial year, to provide the shareholders with an option of payment in cash or in shares, for all or a portion of the interim dividends.

If the Board of Directors decides to propose an interim dividend in new shares, the shares would be issued at a price equal to the average of opening market prices of the Company's shares on Euronext Paris regulated market during the 20 trading days prior to the Board of Directors' decision to pay the interim dividend, reduced by the net amount of the interim dividend and, if so decided by the Board of Directors, by a discount of up to 10% of this average.

All powers would be granted to the Board of Directors, with right to delegate such powers to the Chairman of the Board of Directors and Chief Executive Officer under the terms and conditions provided for by the laws and regulations, to take all steps required for the payment of interim dividends in shares.

Fifth resolution

Agreements governed by article L. 225-38 of the French Commercial Code

It is required to the Shareholders' Meeting to consider the Statutory Auditors' special report on agreements governed by article L. 225-38 of the French Commercial Code and that no agreement has been entered into during the 2014 financial year

Report of the Board of Directors on the draft resolutions in view of the annual ordinary Shareholders' Meeting of 19 May 2015 and draft resolutions

Sixth resolution

Approval of commitments referred to in article L. 225-42-1 of the French Commercial Code granted to Mr. Jean-Bernard Lévy

The Shareholders' Meeting is required to approve the special report of the Statutory Auditors regarding the commitments governed by article L. 225-42-1 of the French Commercial Code for the benefit of Jean-Bernard Lévy in the event of termination of his function as Chairman and Chief Executive

Officer and the commitments described therein. These commitments consist in severance payment conditioned to performance criteria in the event of termination of his function and are detailed in the description of the eighth resolution.

Pursuant to article L. 225-42-1 and R. 225-34-1 of the French Commercial Code, the decision of the Board of Directors held on 8 April 2015 and approving these commitments has been published by a press release on the EDF website.

Seventh resolution

Advisory vote on the elements of compensation due or granted to Mr. Henri Proglio for the 2014 financial year as Chairman and Chief Executive Officer of the company until 22 November 2014

In accordance with the recommendations of the AFEP-MEDEF Code, it is proposed to the Shareholders' Meeting to give its opinion on the compensation components owed or awarded to Mr. Henri Proglio for the 2014 financial year in his capacity as Chairman and Chief Executive Officer of the Company until 22 November 2014 as described below:

Elements of the remuneration payable or allocated during the closed financial year (including the components that are subject to or have been submitted to the approval by the Shareholders' Meeting in relation to the regulated agreements and undertakings)	Amount subject to the vote of the Shareholders' Meeting
Fixed remuneration	€402,632
Variable annual remuneration	0
Benefits in kind	€13,186
Attendance allowances	N/A
Variable deferred remuneration	N/A
Variable multiannual remuneration	N/A
Exceptional remuneration	N/A
Stock options, performance shares or other long-term remuneration component	N/A
Severance payment	N/A
Non-competition indemnity	N/A
Supplementary pension scheme	N/A

All the components of the remuneration owed or awarded to Mr. Henri Proglio for the fiscal year 2014 and the terms and conditions of their determination are described in chapter 15 of the Company's 2014 reference document.

Eighth resolution

Advisory vote on the elements of compensation due or granted to Mr. Jean-Bernard Lévy for the 2014 financial year as Chairman and Chief Executive Officer of the Company

In accordance with the recommendations of the AFEP-MEDEF Code, it is proposed to the Shareholders' Meeting to give its opinion on the compensation components owed or awarded to Mr. Jean-Bernard Lévy for the 2014 financial year in his capacity as Chairman and Chief Executive Officer of the Company, as mentioned below:

Components of the remuneration owed or awarded during the closed financial year	Amount subject to the vote of the Shareholders' Meeting
Fixed remuneration	€47,368
Variable annual remuneration	0
Benefits in kind	None
Attendance allowances	None
Variable deferred remuneration	N/A
Variable multiannual remuneration	N/A
Exceptional remuneration	N/A
Stock options, performance shares or other long-term remuneration component	N/A

Report of the Board of Directors on the draft resolutions in view
of the annual ordinary Shareholders' Meeting of 19 May 2015 and draft resolutions

Components of the remuneration owed or awarded during the closed financial year (including the components that are subject to or have been submitted to the approval by the Shareholders' Meeting in relation to the regulated agreements and undertakings)

Amount subject to the vote of the Shareholders' Meeting

Severance payment	<p>Approval process: Decision of the Board of Directors held on 8 April 2015; regulated undertaking submitted to the Shareholders' Meeting to be held on 19 May 2015 (6th resolution).</p> <p>Triggering event of the severance payment: Payment only in the event of a compulsory departure (dismissal with an exception for a dismissal in case of wrongful misconduct (<i>faute grave ou lourde</i>)).</p> <p>Calculation and cap: Initial amount of the severance payment (<i>indemnité de rupture</i>) of €200,000 (gross amount) after one year of seniority computed after the date of the first appointment, i.e. 23 November 2014, increased afterwards by an amount of €60,000 (gross amount) each quarter of additional seniority (length of service), with a cap of one year remuneration.</p> <p>Performance criteria: The payment of the severance payment will only be owed if the budgeted Group EBIDTA is reached at 80% at least during 2 fiscal years amongst the previous 3 fiscal years at the time of the termination of the function; if the termination of his function occurs during the second year after his appointment, the Board of Directors will review if the performance criteria is met by using as reference the last fiscal year; if the termination of his functions occurs during the third year after his appointment, the fulfillment of the criteria will be analyzed by using as reference the previous two fiscal years.</p>
Non-competition indemnity	N/A
Supplementary pension scheme	N/A

All the components of the remuneration owed or awarded to Mr. Jean-Bernard Lévy for the fiscal year 2014 and the terms and conditions of their determination are described in chapter 15 of the Company's 2014 reference document.

Ninth resolution

Authorisation to be granted to the Board of Directors to carry out transactions on the Company's shares

It is proposed to the shareholders to renew the authorisation granted by the Combined Shareholders' Meeting of 15 May 2014 and to authorise the Board of Directors to set up a new repurchase programme of its own shares by the Company, for a period of 18 months, within the limit of 10% of the share capital in accordance with the maximum amount provided for by the laws and regulations.

The purchase price shall not exceed €45 per share, with a maximum aggregate purchase of 10% of the share capital during the period and a maximum holding of 10% of the share capital at any time. The maximum amount to be dedicated to these transactions over the period would be €2 billion.

Tenth resolution

Powers for completion of formalities

The shareholders are informed that in accordance with article L. 225-123 of the French Commercial Code as amended by the Act no. 2014-384 of 29 March 2014, the so-called "Florange Act", a double voting rights shall be automatically granted to all the fully paid-up shares for which it is justified that they are held in a registered form in the name of the same shareholder for at least 2 years. These provisions will be applied as of 3 April 2016, your Board of Directors having decided not to submit to your approval a resolution to amend the articles of association in order to prevent the implementation of the double voting right provided for by the article L. 225-123 of the French Commercial Code.

Draft resolutions in view of the Shareholders' Meeting of 19 May 2015

Ordinary resolutions

First resolution

(Approval of the reports and annual financial statements for the year ended on 31 December 2014)

The Shareholders' Meeting, voting in accordance with the quorum and majority rules applicable to ordinary shareholders' meeting, and having considered the management report of the Board of Directors and the statutory auditors' report, approves the annual financial statements for the financial year ended on 31 December 2014, comprising the balance sheet, the income statement and appendix, as they were presented, and the transactions reflected in these financial statements and summarized in these reports. It sets the profit for the financial year at €1,649,057,707.37.

The Shareholder's Meeting acknowledges that the overall amount of expenses and charges referred to in the Article 223 *quater* of the French Tax Code is €2,539,543 for the financial year 2014 and that the related tax amount is €965,026.

Second resolution

(Approval of the reports and consolidated financial statements for the year ended on 31 December 2014)

The Shareholders' Meeting, voting in accordance with the quorum and majority rules applicable to ordinary shareholders' meeting, and having considered the management report of the Board of Directors and the statutory auditors' report on the consolidated financial statements, approves the consolidated financial statements for the financial year ended on 31 December 2014, comprising the balance sheet, the consolidated income statement and appendix, as they were presented, and the transactions reflected in these financial statements and summarized in these reports.

Report of the Board of Directors on the draft resolutions in view of the annual ordinary Shareholders' Meeting of 19 May 2015 and draft resolutions

Third resolution

(Allocation of the net income for the year ended on 31 December 2014 and determination of the dividend)

The Shareholders' Meeting, voting in accordance with the quorum and majority rules applicable to ordinary shareholders' meeting, notes that the distributable profit for the financial year 2014, taking into account the positive amount of retained earnings of €5,599,209,318.73, before deducting the interim dividend paid out on 17 December 2014, amounts to €7,248,267,026.10.

The Shareholders' Meeting decides to set the ordinary dividend for the financial year 2014 at €1.25 per share and the loyalty dividend at €1.375 per share.

In accordance with Article 24 of the articles of association, the registered shares continuously held in the name of the same shareholders since 31 December 2012 until the term of payment of the dividend for the financial year 2014, will benefit from a 10% dividend increase. For any shareholder, this increase is capped to a number of shares which may not exceed 0.5% of share capital.

Given that an interim dividend of €0.57 per share was paid out on 17 December 2014, the balance of the dividend to be distributed for the financial year 2014 amounts to €0.68 per share for the shares with ordinary dividend and to €0.805 per share for the shares which benefit from loyalty dividend.

(in euros)

Profit for the financial year ended 31 December 2014	1,649,057,707.37
Retained earnings (before deduction of the 2014 interim dividend)	5,599,209,318.73
Total distributable profit	7,248,267,026.10
Total dividend for the financial year ended on 31 December 2014⁽¹⁾ (including loyalty dividend)	2,329,448,561.00
Interim dividend paid out on 17 December 2014 to be deducted from the 2014 dividend (i.e. €0.57 per share ⁽²⁾)	1,059,262,163.04
Balance of the dividend to be distributed for the financial year ended 31 December 2014⁽¹⁾	1,269,243,734.24

(1) On the basis of the number of shares constituting the share capital on 31 December 2014, i.e. 1,860,008,468 shares, including 35,503,808 shares entitled to a loyalty dividend on 31 December 2014.

(2) On the basis of the number of shares entitled to dividends at the date of payment of the interim dividend.

The ex-date for the ordinary and loyalty dividends is 3 June 2015, and the ordinary and loyalty dividends will be paid on 5 June 2015.

In the event that the Company hold some of its own shares at the date of distribution of the dividend, these treasury shares will not be entitled to the dividend.

The balance of the distributable profit will be allocated to the «Retained earnings» account.

It is mentioned that in accordance with applicable laws and regulations, when the dividend is paid to French tax resident individuals, the dividend is taxable as income subject to the progressive rate schedule (*barème progressif*) and is eligible for the allowance provided for in Article 158-3-2 of the French General Tax Code.

The Shareholders' Meeting acknowledges that the amount of dividends distributed over the past three years were as follows:

Financial year	Number of shares	Dividend per share (€)	Total dividend distributed ⁽¹⁾ (€)	Portion of the dividend eligible for the tax allowance ⁽²⁾
2011	1,848,866,662	1.15	2,124,757,978.20 ⁽³⁾	100%
2012	1,848,866,662	1.25	2,308,912,900.34 ⁽⁴⁾	100%
2013	1,860,008,468	1.25 ⁽⁵⁾	2,327,462,364.03 ⁽⁶⁾	100%

(1) After deduction of treasury shares.

(2) 40% tax allowance under paragraph 3-2° of Article 158 of the French Tax Code.

(3) Including €1,053,169,658.76 paid on 16 December 2011 for the 2011 interim dividend.

(4) Including €1,052,601,974.10 paid on 17 December 2012 for the 2012 interim dividend and €170,358,213.74 paid in newly-issued shares on 8 July 2013.

(5) I. e. €1.375 for shares benefiting from the loyalty dividend.

(6) Including €1,059,290,112.42 paid on 17 December 2013 for the 2013 interim dividend.

Resolution A

(Allocation of the net income for the year ended on 31 December 2014 and determination of the dividend - Resolution submitted by the Supervisory Board of the FCPE Actions EDF and reviewed and disapproved by the Board of Directors of EDF on 8 April 2015)

The Shareholders' Meeting, voting in accordance with the quorum and majority rules applicable to ordinary shareholders' meeting, notes that the distributable profit for the financial year 2014, taking into account the positive amount of retained earnings of €5,599,209,318.73, before deducting the interim dividend paid out on 17 December 2014, amounts to €7,248,267,026.10.

The Shareholders' Meeting decides to set the ordinary dividend for the financial year 2014 at €0.80 per share and the loyalty dividend at €0.88 per share.

In accordance with Article 24 of the articles of association, the registered shares continuously registered in the name of the same shareholder since 31 December 2012 until the term of payment of the dividend for the financial year 2014, will benefit from a 10% dividend increase. For any shareholder, this increase is capped to a number of shares which may not exceed 0.5% of share capital.

Given that an interim dividend of €0.57 per share was paid out on 17 December 2014, the balance of the dividend to be distributed for the financial year 2014 amounts to €0.23 per share for the shares with ordinary dividend and to €0.31 per share for the shares which benefit from loyalty dividend.

Report of the Board of Directors on the draft resolutions in view
of the annual ordinary Shareholders' Meeting of 19 May 2015 and draft resolutions

(in euros)

Profit for the financial year ended 31 December 2014	1,649,057,707.37
Retained earnings (before deduction of the 2014 interim dividend)	5,599,209,318.73
Total distributable profit	7,248,267,026.10
Total dividend for the financial year ended on 31 December 2014⁽¹⁾ (including loyalty dividend)	1,490,847,079.04
Interim dividend paid out on 17 December 2014 to be deducted from the 2014 dividend (i.e. €0.57 per share ⁽²⁾)	1,059,262,163.04
Balance of the dividend to be distributed for the financial year ended 31 December 2014⁽¹⁾	430,642,252.28

* On the basis of the number of shares constituting the share capital on 31 December 2014, i.e. 1,860,008,468 shares, including 35,503,808 shares entitled to a loyalty dividend on 31 December 2014.

** On the basis of the number of shares entitled to dividends at the date of payment of the interim dividend.

The ex-date for the ordinary and loyalty dividends is 3 June 2015, and the ordinary and loyalty dividends will be paid on 5 June 2015.

In the event that the Company holds some of its own shares at the date of distribution of the dividend, these treasury shares will not be entitled to the dividend.

The balance of the distributable profit will be allocated to the «Retained earnings» account.

It is mentioned that in accordance with applicable laws and regulations, when the dividend is paid to French tax resident individuals, the dividend is taxable as income subject to the progressive rate schedule (*barème progressif*) and is eligible for the allowance provided for in Article 158-3-2 of the French General Tax Code.

The Shareholders' Meeting acknowledges that dividends distributed over the past three years were as follows:

Financial year	Number of shares	Dividend per share (€)	Total dividend distributed ⁽¹⁾ (€)	Portion of the dividend eligible for the tax allowance ⁽²⁾
2011	1,848,866,662	1.15	2,124,757,978.20 ⁽³⁾	100%
2012	1,848,866,662	1.25	2,308,912,900.34 ⁽⁴⁾	100%
2013	1,860,008,468	1.25 ⁽⁵⁾	2,327,462,364.03 ⁽⁶⁾	100%

(1) After deduction of treasury shares.

(2) 40% tax allowance under paragraph 3-2° of Article 158 of the French Tax Code.

(3) Including €1,053,169,658.76 paid on 16 December 2011 for the 2011 interim dividend.

(4) Including €1,052,601,974.10 paid on 17 December 2012 for the 2012 interim dividend and €170,358,213.74 paid in newly-issued shares on 8 July 2013.

(5) I.e. €1.375 for shares benefiting from the loyalty dividend.

(6) Including €1,059,290,112.42 paid on 17 December 2013 for the 2013 interim dividend.

Fourth resolution

(Payment of interim dividends in shares – Delegation of authority to the Board of Directors)

In accordance with Article 25 of the Company's articles of association, the Shareholders' Meeting, voting in accordance with the quorum and majority rules applicable to ordinary shareholders' meeting and having reviewed the report of the Board of Directors, authorizes the Board of Directors, in the event that the Board decides to pay one or more interim dividends in respect of the 2015 financial year, to provide the shareholders with an option of payment in cash or in shares, for all or a portion of the interim dividends.

If the shareholders opt for the payment of the interim dividend in shares, the shares subscribed will be ordinary shares. These shares will have the same characteristics and will grant access to the same rights as the existing shares and will be issued with immediate dividend rights, i.e. they will be entitled to all dividends paid out as from their subscription.

The Board of Directors will set the period of time, following its decision to pay an interim dividend, during which the shareholders will be entitled to request the payment of this interim dividend in shares. Such a period may not, however, exceed 3 months.

The issue price of the new shares will be equal to the average of opening market prices of Company's shares on Euronext Paris' regulated market during the 20 consecutive trading days prior to the Board of Directors' decision to pay the interim dividend, reduced by the net amount of the interim dividend and, if so decided by the Board of Directors, by a discount of up to 10%, and rounded upwards to the nearest euro cent.

If the amount for which the option is exercised does not correspond to a whole number of shares, the shareholder will receive the nearest lowest number of whole shares, plus cash compensation for the difference.

All powers are granted to the Board of Directors, with right to subdelegate such powers to the Chairman of the Board of Directors under the terms and conditions provided for by the laws and regulations, to take all steps required for the payment of interim dividends in shares, if the decision to distribute an interim dividend was taken, to acknowledge the increase of capital resulting therefrom and to amend the articles of association accordingly and, more generally, to take all useful or necessary steps.

Fifth resolution

(Agreements governed by Article L. 225-38 of the French Commercial Code)

The Shareholders' Meeting, voting in accordance with the quorum and majority rules applicable to ordinary shareholders' meeting, having considered the statutory auditors' special report on agreements governed by Article L. 225-38 of the French Commercial Code, acknowledges the conclusions of this report and that no agreement has been entered into during the 2014 financial year.

Sixth resolution

(Approval of commitments referred to in Article L. 225-42-1 of the French Commercial Code granted to Mr. Jean-Bernard Lévy)

The Shareholders' Meeting, voting in accordance with the quorum and majority rules applicable to ordinary shareholders' meeting, having considered the statutory auditors' special report on agreements governed by article L. 225-42-1 of the French Commercial Code granted to Mr. Jean-Bernard Lévy in the event of termination of his function as Chairman and Chief Executive Officer of the Company, approve the abovementioned report and the commitments described therein.

Seventh resolution

(Advisory vote on the elements of compensation due or granted to Mr. Henri Proglio for the 2014 financial year as Chairman and Chief Executive Officer of the Company until 22 November 2014)

The Shareholders' Meeting, consulted in accordance with the provisions of the AFEP-MEDEF Corporate Governance Code for Listed Companies, voting in accordance with the quorum and majority rules applicable to ordinary shareholders' meetings, gives a favourable opinion on the compensation components due or granted to Mr. Henri Proglio for the 2014 financial year in his capacity as Chairman and Chief Executive Officer until 22 November 2014 as presented in the report of the Board of Directors and in the 2014 reference document, sub-section 15.1.1.

Eighth resolution

(Advisory vote on the elements of compensation due or granted to Mr. Jean-Bernard Lévy for the 2014 financial year as Chairman and Chief Executive Officer of the Company)

The Shareholders' Meeting, consulted in accordance with the provisions of the AFEP-MEDEF Corporate Governance Code for Listed Companies, voting in accordance with the quorum and majority rules applicable to ordinary shareholders' meetings, gives a favourable opinion on the compensation components due or granted to Mr. Jean-Bernard Lévy for the 2014 financial year in his capacity as Chairman and Chief Executive Officer as presented in the report of the Board of Directors and in the 2014 reference document, sub-section 15.1.1.

Ninth resolution

(Authorization to be granted to the Board of Directors to carry out transactions on the Company's shares)

The Shareholders' Meeting, voting in accordance with the quorum and majority rules applicable to ordinary shareholders' meeting and having reviewed the report of the Board of Directors,

- terminates, with immediate effect, for the unused portion, the authorization to purchase shares in the Company given by the Shareholders' Meeting of 15 May 2014 in the 7th resolution;
- authorizes the Board of Directors to purchase shares in the Company with a view to:
 - delivering shares when exercising rights attached to options or to securities giving access to the share capital by reimbursement, conversion, exchange, submission of a warrant or by any other means, immediately or at a later date, as well as carrying out all hedging transactions with respect to the Company's (or one of its subsidiaries') obligations in connection with such options or securities,
 - holding shares for their subsequent delivery as a mean of exchange or payment in the context of any external growth, contribution, merger or spin-off,
 - ensuring the liquidity of EDF's share by an investment service provider through a liquidity agreement that complies with the ethical code recognized by the French financial market authority (the *Autorité des Marchés Financiers*),

- allocating shares to employees of the EDF group, especially under any share purchase or free share allocation plan benefiting to current or former employees in accordance with applicable laws and regulations, in particular in accordance with Articles L. 225-197-1 *et seq* of the French Commercial Code, Articles L. 3332-18 *et seq* of the French Labor Code (including any transfer of shares provided for by these articles of the French Labor Code),
- reducing the Company's share capital by canceling all or some of the shares purchased, pursuant to the 16th resolution adopted by the Shareholders' Meeting of 15 May 2014,
- and more generally the carrying out of any other transaction that complies with current regulations.

Purchases of Company's shares may be made such that:

- the number of shares acquired by the Company during the repurchase program may not exceed 10% of shares which constitute the share capital, it being specified that (i) when shares are redeemed to ensure the liquidity of the EDF share under the conditions defined above, the number of shares taken into account for calculating this 10% cap is the number of shares purchased net of the number of shares sold during the term of this authorization, and (ii) this number may not exceed 5% in case of shares acquired by the Company with a view to deliver in connection with external growth;
- the number of shares the Company held, directly or indirectly, at any time must not exceed 10% of the shares which constitutes the share capital of the Company.

These percentages apply to an adjusted number of shares according to any transaction that could affect the share capital of the Company after this Shareholder's Meeting.

Acquisitions or transfers of these shares may be carried out, on one or more occasions, by all means, including over the counter transactions, block purchases or sales, use of derivative financial instruments or notes or securities giving access to the Company's shares, or by implementing stock option strategies, at such times that the Board of Directors or the person acting by delegation of the Board of Directors decide, excluding during the period of public tender offer on the Company's share capital.

The maximum amount to be dedicated to the share repurchase program above may not exceed €2 billion.

The purchase price shall not exceed €45 per share; it is however specified that the Board of Directors may adjust this maximum purchase price in the event of incorporation of premiums, reserves or profits resulting in either an increase of the nominal value of shares or in the issuance and allotment of free shares, and in the event of a share split or reverse share split, or any other transaction affecting shareholder's equity, so as to take account of the impact of such transactions on the value of the shares.

This authorization is granted for a period of 18 months from the date of this meeting.

The Shareholders' Meeting grants full power to the Board of Directors, with powers to subdelegate, to decide on and to implement the present authorization, in order to place all stock market or off-market orders, allocate or reallocate the shares acquired to the various objectives pursued, under the applicable legal and regulatory conditions, accomplish all formalities, and in general do all that is necessary.

The Board of Directors must inform the Shareholders' Meeting each year of the transactions undertaken pursuant to this resolution.

Tenth resolution

(Powers for completion of formalities)

The Shareholders' Meeting grants all powers to the bearer of an original, a copy or an extract of the minutes of this meeting to carry out any legal and administrative formalities including the filing and publications required by the applicable laws and regulations.



Concordance tables

Management report

This Reference Document includes the elements of the Board of Directors' management report related to the 2014 fiscal year as provided for in Articles L. 225-100 *et seq.* of the French Commercial Code. The management report is composed of the sections of the Reference Document referred to in the following table:

Topics	Reference document sections
Business activity and development / Comments on the results	Chapters 6 and 9
Description of the main risks and uncertainties	Chapter 4, sections 9.4 and 20.5
Research and development activity	Chapter 11
Subsequent events / Forward-looking information	Chapters 12 and 13
Amount of dividends paid within the last three fiscal years	Section 20.4
Terms of payment of trade payables	Section 9.6
Company shareholding and employee shareholding	Chapter 18
Report on the share repurchase programme	Section 21.1.3
Provisions having an impact in case of takeover	Section 21.2.8
Environmental and societal information	Chapter 17
Offices and positions of corporate officers	Chapter 14
Compensation of corporate officers	Chapter 15
Board of Directors and corporate governance	Chapter 16
Trading in the Company's shares by executives	Section 14.4
Table of the delegations and authorisations to increase the share capital	Section 21.1.4
Five-year summary table of the Company's results	Appendix E

Annual financial report

This Reference Document includes the 2014 annual financial report prepared pursuant to Articles L. 451-1-2 of the French Monetary and Financial Code (*Code monétaire et financier*) and 222-3 of the AMF General Regulations. The annual financial report is composed of the sections of the Reference Document referred to in the following table:

Topics	Reference document sections
Certification from the person responsible of the annual financial report	Section 1.2
EDF annual financial statements	Appendix D
Statutory Auditors' Report on the EDF annual financial statements	Appendix D
EDF group consolidated financial statements	Section 20.1
Statutory Auditors' Report on the EDF group's consolidated financial statements	Section 20.2
Management report	See the table above
Fees paid to Statutory Auditors	Section 20.3

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