

Reference Document 2015 Annual Financial Report



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 chapter 2 ("Risk factors and control framework"). 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 1.3 ("Group 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 chapter 2 ("Risk factors and control framework").

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.



French société anonyme with a share capital of €960,069,513.50 Registered head office: 22-30, avenue de Wagram 75382 Paris cedex 08 552 081 317 RCS Paris

EDF group REFERENCE DOCUMENT **2015 Annual Financial Report**



This Reference Document was filed with the Autorité des marchés financiers (the "AMF") on 29 avril 2016 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 2015, prepared in
 accordance with international accounting standards, as well as the accompanying Statutory Auditors' reports,
 set forth respectively in Chapter 6, sections 6.1 (pages 306 to 412) and 6.2 (pages 413 and 414) of the EDF
 group's 2015 Reference Document;
- consolidated financial statements of the EDF group for the fiscal year ended 31 December 2014, 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 2014 Reference Document;
- the review of the financial position and results of the EDF group for the fiscal year ended 31 December 2015, presented in Chapter 5 (pages 262 to 301) of the EDF group's 2015 Reference Document;
- the review of the financial position and results of the EDF group for the fiscal year ended 31 December 2014, presented in Chapter 9 (pages 176 to 210) of the EDF group's 2014 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).



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Financial and non-financial **KPIS**



EBITDA⁽¹⁾ in billions of euros



(1) Organic growth at constant scope and exchange rates.

Sales in billions of euros

(2) Organic gr

Net income excluding non-recurring items in billions of euros



Consolidated data at 31 December 2015.

4

Net financial debt/EBITDA ratio





$\label{eq:Group CO2} Group \ CO_2 \ emissions \ \mbox{in g/kWh}$

France CO₂ emissions⁽¹⁾ in g/kWh



(1) Mainland France and island energy systems.

25% Group Development 12,672 49% Group Maintenance

(1) Net investments including Linky and new developments net of disposals.

2015 net investments⁽¹⁾ in millions of Euros

Financial and non-financial **KPIS**

Gross operating investments⁽¹⁾



Gross operating investments for development⁽¹⁾



(1) Gross operating investments including Linky and new developments.

6

Net installed capacity



Net electricity output



Governance

BOARD OF DIRECTORS

ATTRIBUTION

The Board of Directors determines the Company's business policies and ensures that these policies are implemented. The Board deliberates on all Company's or Group's strategic, economic, financial or technology policies, as well as on matters that the law expressly entrusts to the Board or that the Board has reserved for itself.

COMPOSITION

Chaired by Jean-Bernard Levy, the Board of Directors is composed of:

11 director	rs appointed	by the	EDF'	Shareholde	rs'
Meeting:					

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

Olivier APPERT, Délégué Général de l'Académie des Technologies

Philippe CROUZET, Chairman of the Management Board of Vallourec

Bruno LAFONT, Chairman and Chief Executive Officer of Lafarge, Honorary Chairman of Lafarge

Bruno LECHEVIN, Chairman and Chief Executive Officer of the French Environment and Energy Management Agency (ADEME)

Marie-Christine LEPETIT, Head of Inspectorate General of Finance reporting to Minister for the Economy, the Industry and the Digital Sector and the Minister for Finance and Public Accounts

Colette LEWINER, Professional director

Gérard MAGNIN, Member of the Bourgogne Franche-Comté Economic, Social and Environmental Council

Christian MASSET, Secretary General of the ministry of Foreign Affairs and International Development

Laurence PARISOT, Vice-Chairman of the IFOP Group

Philippe VARIN, Chairman of the Board of Directors of AREVA*

Representative of the French State:

Martin VIAL, Commissioner for French Government Shareholding Agency reporting to the Minister for the Economy, Industry and the Digital Sector and the Minister for Finance and Public Accounts

6 Directors elected by the employees:

Christine CHABAUTY, sponsored by CGT Jacky CHORIN, sponsored by FO Marie-Hélène MEYLING, sponsored by CFDT Jean-Paul RIGNAC, sponsored by CGT Christian TAXIL, sponsored by CFE-CGC Maxime VILLOTA, sponsored by CGT

Additionally the Government Commissioner and Head of the French State General Economic and Financial Supervisory Mission to the Company as well as the Secretary of the Central Works Council attend the meetings of the Board of Directors, but only with an advisory vote.

* Taking account of the discussions entered into between EDF and AREVA in 2015 (see section 1.4.1.2.3.2 "Memorandum of understanding with AREVA"), Mr. Philippe Varin temporarily suspended, from 9 June 2015, his attendance of the meetings of EDF's Board of Directors for the duration of these discussions. Additionnaly, Mr. Varin notified 31 March 2016 his decision to resign from his Director office, taking effect at the date of the General Meeting of 12 May 2016.

EXECUTIVE MANAGEMENT

01 Jean-Bernard LÉVY

Chairman & Chief Executive Officer, Chairman of the Executive Committee

02 Marc BENAYOUN

Group Executive Vice President with responsibility for Gas and Italy, Chief Executive Officer of Edison. He supervises Fenice and Dunkerque LNG

03 Antoine CAHUZAC

Group Senior Executive Vice President, Renewable Energies, Chief Executive of EDF Énergies Nouvelles

04 Marianne LAIGNEAU Group Senior Executive Vice President, Human Resources

05 Henri LAFONTAINE

Group Senior Executive Vice President, Customers, Services and Regional Action. He supervises Dalkia, Tiru, Citelum and Commercial Division

06 Dominique MINIÈRE

Group Senior Executive Vice President, Nuclear and Thermal

- **07 Xavier GIRRE** Group Senior Executive Vice President, in charge of the Group's Finance Division
- **08 Vincent DE RIVAZ** Group Senior Executive Vice President, Chief Executive Officer of EDF Energy
- 09 Simone ROSSI Group Senior Executive Vice President, International Division
- **10 Pierre TODOROV** Group Senior Executive Vice President, Group General Secretary
- 11 Philippe TORRION Group Senior Executive Vice President, Innovation,
- Strategy and Planning. He supervises EDF Trading 12 Xavier URSAT
- Group Senior Executive Vice President, New Nuclear Projects and Engineering. He supervises Sofinel
- 13 Alexandre PERRA

Director and Special Advisor to the Chairman and CEO, is the Executive Committee Secretary

EDF Lab Paris Saclay site ©EDF

Presentation of EDF group

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1.1 History and development of the Company

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.

In 1946, the electricity and gas sectors were nationalized. The Act of 8 April 1946 created EDF as a State-owned industrial and commercial establishment 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 were built until 1988; then, 20 generation units totalling 1,300MW, which were commissioned in 2000 and 2002.

Beginning in the 1990s, EDF embarked on significant expansion abroad in particular with, in December 1998 the acquisition of 100% of London Electricity (which was renamed EDF Energy on 30 June 2003). This policy was pursued in 2001 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 Engie).

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

In 2005, EDF and A2A SA (formerly AEM SpA) entered into agreements for a joint takeover of Edison following the launch of a tender offer. 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.

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 2008-2009, 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, and acquiring nearly half of the nuclear assets of US-based Constellation Energy. EDF also acquired a 51% stake in the Belgian company EDF Luminus, and subsequently raised its stake in EDF Luminus to 63.5% in 2010.

EDF finalised in 2010 the sale of its British distribution networks to the Cheung Kong group of Hong Kong and, in 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.

In 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.

In 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.

In 2014, EDF has delegated to Exelon, the leading American nuclear operator, the operational management of the five nuclear reactors owned by CENG, held by EDF (49.99%) and Exelon (50.01%). Furthermore, 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. Finally, F2i, Edison and EDF Énergies Nouvelles created the third largest Italian operator in the renewable energy sector, with an installed capacity of approximately 600MW, owned by F2i (70%) and an holding company (30%) owned by Edison and EDF Énergies Nouvelles.

On 10 December 2015, EDF International (EDF I) and EP Energy, a.s., through its subsidiary company EP Hungary, completed the transaction for the sale of EDF's majority stake in Hungary-based Budapesti Erőmű Zrt, that owns three gas-fired cogeneration (combined heat & power) plants.

On 21 December 2015, EDF and Macquarie European Infrastructure Fund IV (MEIF4) completed the transaction for the sale of EDF's minority stake of 25% in Energie Steiermark AG to MEIF4. EDF announced on 10 July 2015 it had entered into an agreement with MEIF4.

1.2 Organisation of the Group

1.2.1 ORGANISATIONAL CHART

A simplified organisational chart for the Group, as of 31 December 2015, 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 2015.



(1) Including 0.01% hold by employees (see section 1.4.1.4.3 "EDF Énergies Nouvelles").

PRESENTATION OF EDF GROUP ORGANISATION OF THE GROUP





1.2.2 **INTRA-GROUP CONTRACTS**

Cash pooling agreements entered into between EDF and its susidiaries

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 2015 amounted to €217 million. In 2015, EDF received a total of €2,066 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, EDF created a subsidiary located in Belgium, EDF Investissements Groupe, which aims to grant medium- and long-term intra-group financing.

In addition, the nuclear fuel purchases are managed centrally by EDF SA, including the purchases intended to its subsidiary EDF Energy.

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.

1.3 Group strategy

1.3.1 ENVIRONMENT AND STRATEGIC CHALLENGES

The market and the regulatory environment are currently constraining the economic model of European electricity producers, at a time when significant investment is required to maintain existing assets and, over the longer-term, to renew the generation fleet:

- electricity demand in Europe is subdued (annual average of +0.6% between 2000 and 2014¹) but significant subsidised energy capacity has been connected to the grids (+45GW of wind between 2010 and 2014, representing +53%²), creating over-capacity in the European generation fleet;
- fuel prices have fallen (oil, gas, coal) and this intensified at end-2015;
- the price of CO₂ is very low, which is inconsistent with the low carbon and energy transition goals in Europe;
- the upshot is lower prices in the electricity market, which fell at a quicker pace at end-2015;
- this overcapacity of the European generation fleet may continue (except in the United Kingdom (UK)) if the public authorities do nothing to alter the market environment.

By way of contrast, electricity consumption is rising fast in emerging markets, especially in Asia, benefiting the electricity producers in these regions with forecasts¹ of around +190TWh per year in China between 2013 and 2040 (+2.5% per year on average) and +50TWh/year in Africa (+3.9% per year), versus +7TWh per year in the European Union (+0.2% per year).

In Europe, France and the United Kingdom are developing low-carbon energy independence policies, primarily built around a mix combining energy efficiency, renewable and nuclear energies, with an additional gas component offering flexibility to electricity systems. In France, electricity is also used as a means of migrating to low carbon, and the United Kingdom has established a market model consistent with this policy (Carbon Price Floor, Contracts for Difference, capacity market, etc.).

The agreement reached in Paris at the 21st session of the Conference of Parties (COP 21) confirms the effort being made to combat climate change and the ramping up of energy transitions beyond Europe.

Furthermore, local communities and customers are looking to increasingly take ownership of their consumption and of their energy policy. These new expectations are forcing energy producers to come up with new solutions and new more decentralised models, facilitated by innovations in telecommunications and digital technologies, and the emergence of new uses.

The electricity sector is thus changing more than ever, at the centre of medium and long-term societal and technological trends. Against this background, and with this in mind, European electricity producers have scaled back their investments and focussed them on targeted segments, particularly renewable energy, growth areas, distribution, network and services.

EDF is thus faced with specific strategic challenges:

 to play a responsible role in combating climate change: to contribute to the achievement of the goals set out in the Energy Transition and Green Growth Law in France, in the Climate Change Act in the UK, and more broadly in the 2020 and 2030 Energy and Climate Change Packages in the European Union;

^{1.} Source: AIE, World Energy Outlook, November 2015.

^{2.} Source: Enerdata.

- to ensure the economic performance and safety of the nuclear assets;
- to innovate in order to set itself apart and to have the technological and economic capabilities to renew and expand its generation and its services to customers, in particular digital, and thereby play a role in energy security;
- to ensure that the EDF group is consistency a stellar public service operator, in particular in terms of solidarity and the fight against energy poverty, respect, responsibility and ethics in the way it runs its business;
- to adapt to put the Group on a sustainable value creation path for all stakeholders;
- to mobilise employees and create an environment that hitches each person's development to the Group's transformation.

1.3.2 STRATEGIC VISION

A responsible, efficient electricity producer that champions low carbon growth: this is the goal of the EDF group, driven by the CAP 2030 strategy. This goal can be split into three priorities, which combine the search for growth drivers with the optimisation of existing assets:

- proximity to customers and local communities;
- low carbon generation, with a balanced mix of nuclear and renewable energy;
- international expansion.

1.3.2.1 **Proximity to customers and local** communities

In order to support customers and local communities with their energy transition, the EDF group is already developing competitive low carbon energy solutions for its customers and the local communities, and is an industrial leader in smart grids.

The Group's strong position in energy services in France via Dalkia should provide a basis to support companies and local authorities in achieving energy performance and developing decentralised, local generation. A range of digital energy services for residential customers will be rolled out by 2018 in France and in the core European countries (real time consumption monitoring amongst others). In parallel, relationship with these customers will be enhanced thanks to new digital technologies and functionality, particularly downstream with smart metering systems rolled out in a number of countries.

The EDF group is achieving the energy transition:

- by developing energy saving solutions for its customers (insulation, highefficiency solutions, deployement of digital tools as e.quilibre enabling customers to pilot their consumptions...);
- by working to replace fossil fuels with new efficient uses of electricity, so that they represent an additional 15 to 30TWh in France by 2030 (electric mobility, low carbon habitat, etc.);
- by developing and operating heating networks that use renewable and recovery energies;
- by leveraging the specific experiences from island regions.

Finally, the development of renewable energies, the roll-out of Linky smart meters and the emergence of metropolitan areas are putting the distribution networks at the heart of the electricity system. The distributor plays a key role, making it a facilitator of the energy transition.

To support the energy transitions, the Group accelerates Research & Development on storage, solar, electric mobility and new networks. It also redoubles its efforts in terms of innovation to offer to its clients solutions and services that best meet their needs.

1.3.2.2 Low carbon generation: nuclear and renewable energies

To remain the leader in large low carbon electricity generation facilities, the Group is looking to balance its generation mix by accelerating the development of renewable energy and by ensuring the safety and performance of the existing nuclear fleet and of nuclear new build. In fact, EDF's nuclear fleet is already giving France a major lead vis-à-vis its neighbours in terms of limiting greenhouse gas emissions.

The low carbon generation goal requires the development of the Group's renewable energy and hydropower asset base, with the aim of almost doubling its installed capacity: from 28GW in 2014 to 50GW in 2030. The development of these assets outside France will be done in line with the Group's international strategy.

Subject to the necessary approvals, EDF will invest to extend, under the highest safety conditions, the operating life of the French nuclear fleet beyond 40 years, the economic and carbon competitiveness of this fleet being in fact proven. In this context, the "Grand Carénage" principle has already been approved on 22 January 2015 by the Board of Directors of EDF. There will also be investment to extend the operating life of the existing UK fleet by an average of 8 years. The Group also wants to ensure the competitiveness of the nuclear new build to offer an option to renew all or part of its European fleets. As a responsible electricity producer, the Group of the nuclear fleet and for the management of waste in France and the UK.

In line with the priority of having low carbon generation, EDF supports changes to electricity market design in Europe, in particular an increase in the CO₂ price in order to send a strong economic signal regarding the competitiveness of low carbon investments.

1.3.2.3 International expansion

The EDF group wants to be a key player in the energy market in France and in its core countries by playing a role in energy security, in the enhancing of economic competitiveness and in the migration of the European economy to low carbon, in line with public policy.

The Group is also looking to expand outside the European plate, now highly exposed to the market prices decrease and whose growth prospects are limited. In this context, it focuses on a limited number of international target countries, on which it can deploy its industry expertise alongside partners in organic growth projects.

The Group will call upon all of its areas of expertise that can contribute to this growth: renewables, energy services, nuclear new build but also other engineering (network, thermal, hydropower, etc.), trading and gas delivery capabilities in Europe and worldwide.

1.3.2.4 Broad principles of CAP 2030

1.3.2.4.1 Transformation

The Group is mobilising employees around a new human vision that reflects its challenges and the expectations of its employees: health & safety, digital and new work practices, responsibility and streamlining, skills, recognition model.

In order to further this human vision, the Group is adapting its managerial practices, streamlining its organisations and modus operandi and enhancing cross-disciplinarity and promotion of innovation.

EDF's digital transformation is accelerating: for employees and internal modus operandi, for customers, for the management and the design of industrial assets.

As both an input and outcome of the transformation programme, improved performance is a priority. The Group is strengthening control of its costs to bring them into line with its environment. The approach is adjusted depending on the scopes involved (cross-disciplinary segments, operating entities, etc.).

1.3.2.4.2 EDF in 2030

The CAP 2030 goal allows the Group to develop an asset portfolio built around low carbon energy: services for customers, decentralised energy solutions, nuclear and renewables. The key factors to the success of CAP 2030 are:

- the control of major projects and the success of "design to cost" (*i.e.* a design that ensures both safety and competitiveness) of new nuclear reactor models;
- the selectiveness of international investments;
- the leveraging of the customer portfolio;
- the transformation of the Group's modus operandi and the collective commitment.

1.3.3 INVESTMENT POLICY

1.3.3.1 Investments in 2015

The Group continued its programme of gross operating investments totalling €14.8 billion in 2015, versus €13.7 billion in 2014. Gross operating

investments for development represented €5.1 billion in 2015, including €1.8 billion in renewable energies (including hydropower) and €1.7 billion in New Nuclear. Net investments, including Linky and new developments net of assets disposals, totalled €12.7 billion in 2015, versus €11.9 billion in 2014, split across regulated (26%) and non-regulated activities (74%).

In the non-regulated field, net investments of development of new capacities (in particular renewable energy and nuclear new build in France and the UK) amounted to \in 3.2 billion. Investments in maintenance totalled \in 6.2 billion, including \in 3.6 billion for nuclear maintenance in France.

Net investments in France (€9.1 billion) were up 3.5%, reflecting the Group's desire over the past years to invest in the industrial facilities. The Group continued its efforts made in international investments (€3.1 billion), in particular through its EDF Energy subsidiary in the UK for close to €1.8 billion, and via its Italian subsidiaries (Edison and Fenice) for €0.6 billion. €0.5 billion was also invested in other activities (EDF Énergies Nouvelles, gas business and Dalkia in particular), mostly located in France.

1.3.3.2 Investments over 2016-2018

For the 2016-2018 period, the Group will deliver large industrial projects, some of which are already at an advanced stage, such as the LNG terminal in Dunkirk or the EPR (European Pressurized water Reactor) of Flamanville 3. The Group also plans to continue investing in nuclear new builds in the UK, distribution networks in France, and in renewable energy in accordance with its integrated electricity producer strategy and in light of the CAP 2030 programme. Thus, the Group reached an amount of net investment peak in 2015 of \in 12.7 billion, *i.e.* \in 12.4 billion excluding new developments net of assets disposals. These investments should reduce gradually as significant projects are commissioned, to attain a maximum of \in 10.5 billion in 2018, excluding new developments net of assets disposals. The development projects will have to be financed through the sale of non-strategic assets, in line with the CAP 2030 strategy.

1.4 **Description of the Group's activities**

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

With a global installed net generation capacity of 134.2GWe¹ as at 31 December 2015 producing 619.3TWh¹, the 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 generated ² 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 37.6 million customer accounts ³ worldwide (of which 27.8 million in France).

Electricity generation is a non-regulated activity, which is open to competition in the same way as the sale of electricity and gas (see section 1.4.2 "Sales and supply activities") and upstream/downstream optimisation (see section 1.4.3 "Optimisation and trading activities"). The Group is thus 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 and market risks and with a view to maximising gross margin.

In addition, the Group is also active in regulated sectors such as electricity transmission and distribution (see section 1.4.4 "Regulated activities in France").

^{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.



1.4.1 ELECTRICITY GENERATION ACTIVITIES IN FRANCE

In mainland France, the electricity generation activities have been split since 2015 across the Nuclear and Thermal Fleet Department and the Renewable Energy Division. In addition to these two departments, the Engineering and Nuclear New Build Project Department is responsible for the development projects for the Group's new nuclear generation assets, in France and abroad. Each of these three departments has all the expertise and performance drivers required to operate the leading European electricity generation fleet and ensure its development and sustainability, and offer their technical and industrial expertise to the whole Group in these three areas (also see section 1.4.5 "Group's international business").

Strengths of the generation fleet

The Group's generation fleet has significant strengths:

- 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 UK).

Composition and specifications of the installed fleet

With a total installed generation capacity of 95.2GW in mainland France² at 31 December 2015, 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 Spain³).

In 2015 in France, EDF's generation fleet produced 455.7TWh excluding pumped storage hydropower, and 462.5TWh including pumped storage hydropower.

At 31 December 2015, the capacity of EDF's generation fleet in mainland 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 1,500MW and are spread out over 19 sites, with an average age of 30 years;
- 27 functioning thermal units, with those in service having an average age of approximately 24 years;
- 433 hydropower plants, with an average age of 71 years ⁴ (see section 1.4.1.4.1 "Hydropower generation in France");
- the wind power generation capacities of EDF Énergies Nouvelles in France (see section 1.4.1.4.3 "EDF Énergies Nouvelles") and the incineration plants of the Tiru group in France (see section 1.4.6.1.3 "Tiru");
- 81 hydropower plants owned by Group subsidiaries: SHEMA (100%), FHYM (98.82%), CERGA (owned 50/50 with the German electricity company EnBW). These plants represent a total of approximately 184MW of installed capacity in 2015 and approximately 951GWh of energy production⁵.

2015 INSTALLED CAPACITY AND OUTPUT IN MAINLAND FRANCE



- NB: Expressed in MW of maximum capacity attached to the network.
- Excluding Corsica and overseas departments, 440 MW in 2015.
 Excluding Corsica and overseas departments, 874 MW in 2015.
- Not including Consta and overseas departments, 674 MW in 2013.
 Not including wind generation capacities of 12 MW, and including tidal capacity of 240 MW.



- (1) Excluding Corsica and overseas departments, 1.3 TWh in 2015.
- (2) Net pumped storage generation: the electricity consumption needed for the operation of pumped storage power plants (STEP) amounted to 6.8 TWh in 2015, resulting in hydropower generation (including pumped storage consumption) of 38.9 TWh, including generation from the tidal power plant on the Rance river (530 GWh).
- (3) Excluding Corsica and overseas departments, 1.7 TWh in 2015.

- 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.
- 2. For Corsica and the French overseas departments, see section 1.4.4.3 ("Island Energy Systems").

4. Arithmetic mean.

^{3.} Calculation based on the ENTSO-E statistics for the year 2014, as the statistics for the year are only available on 30 April of the following year.

^{5.} Generation and capacity are indicated in proportion to participation.

1.4.1.1 Nuclear electricity generation

The electricity generated by EDF from its fleet of nuclear power plants represented 91.4% of its total electricity generation in 2015 excluding pumped storage hydropower.

1.4.1.1.1 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 34 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 27 years;
- the N4 series, which is the most recent with an average age of 15 years, consisting of 4 units of approximately 1,500MW (for a total power capacity of 5,990MW);

for a total of 58 units spread over 19 sites owned by EDF, and constituting a total installed capacity of 63,130MW as at 31 December 2015. With an average age of approximately 30 years for an estimated technical operating life of over 40 years (benchmark time for accounting purposes and corresponding to the initial nuclear unit design), the EDF's nuclear fleet is in the average of the fleets installed worldwide.

The commissioning and most recent ten-year inspection (VD) dates for these units as of end-2015 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	2015	VD4*	Cattenom 3	1991	2011	VD3
Blayais 4	1983	2015	VD4 *	Golfech 1	1991	2012	VD3 *
Saint-Laurent 1	1983	2015	VD4 *	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	2015	VD4 *	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 must give its approval – just like after any shutdown – to restart the reactor, and then issue, where applicable, technical recommendations determining the conditions for the continuing operation for another ten-year period).

** The third ten-year inspections are ongoing at Paluel unit 2.

EDF first-generation design plants have been gradually shut down and are currently being decommissioned (see section 1.4.1.1.6 "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 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, 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 CNP (21.8%).

1.4.1.1.2 Operation and technical performance of the nuclear fleet

Nuclear power is a means of generation whose variable cost, mainly fuelrelated costs, is low since it represents less than 30% of operating costs³. 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 1.4.1.1.4 "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 2015, 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, for a standard period ⁴ of approximately 35 days, 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;
- a partial inspection for refuelling and maintenance, for which the standard period ⁴ lasts approximately 70 days.

Every ten years, the power plant is shut down for a standard period ⁴ 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 leak 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 (summerwinter, 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 require that planned 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.

^{1.} Axpo Group.

^{2.} Engie Group.

^{3.} Operating costs 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 or decommissioning expenses.

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

Generation and technical performance

The nuclear fleet produced 416.8TWh in 2015, up 0.9TWh compared to that of 2014.

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 × Ku):

- the availability factor, "Kd" (the available energy ¹ as a percent 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 2015 the Kp factor was 75.4%, up compared to 75.2% in 2014. This results from a Kd of 80.8%, almost unchanged compared to 2014 (80.9%) and a Ku of 93.3%, up 0.3 points compared to 2014.

The year 2015 is characterised by:

- ongoing good performance in terms of unplanned outages (a rate of 2.5% in 2015 compared to 2.4% in 2014), thanks to the proactive maintenance strategy implemented in 2007 for renovation and replacement of major components;
- managed outage periods, with average planned outage times cut in half between 2013 and 2014 and down 0.4 days between 2014 and 2015. This is the result of the procedures for managing planned outages implemented in 2013 and strengthened since then, 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 coming years, including a substantial volume of work resulting in extended outage times, the challenge in future 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 and of the state of development of renewable energies, the challenges have moved. Today, EDF's 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 2015-2016², this reached 93.4%.

Investment programme for the existing nuclear fleet in France

On 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, involving total investment of up to ϵ_{2013} 55 billion by 2025 for the 58 reactors currently operating. This figure represents ongoing maintenance investment of around ϵ 3 billion a year (including ongoing maintenance, ten-year inspections and periodic safety review) together with additional investment of between ϵ 1 and ϵ 2 billion a year on average, reflecting the extraordinary nature of the "Grand Carénage" (such as renovation of large components, replacing of steam generators at

midlife and incorporating Fukushima's feedback). Beyond 2025, investments will gradually return to former levels. The figures presented by the French Cour des Comptes in its report of 10 February 2016 cover a longer time horizon, up to 2030, and a wider scope including, beyond the investment, some operating expenses. Both assessments are consistent, as stated by the Cour des comptes in its report. Indeed, in the comprehensive program of the Cour des Comptes close to €2013100 billion for the 2014-2030 period, it distinguishes investment expenditures estimated at \in_{2013} 74.73 billion and operating expenditures estimated at €201325.16 billion. Within the €201374.73 billion of investment expenses between 2014 and 2030, about $€_{2013}$ 20 billion are dedicated to the 2026-2030 period, which allows connecting the two estimates established by the EDF group and the Cour des Comptes. This indicative number will be confirmed at a later date following optimisation of the solutions used to implement the programme, additional assessment work and consideration of the multi-year energy plan together with the resulting strategic plan, provided for in the Energy Transition for Green Growth Law. The optimisation work undertaken in 2015 has already lead to a downward revision of the overall cost of the programme to $€_{current}$ 51 billion over the 2014-2025 period, which represents a $€_{2013}$ 9 billion decrease. This revision was obtained mainly through continued efforts of optimisation regarding the adopted technical solutions, as well as their finest deployment including the capacities of industrial frame.

This industrial programme will be gradually implemented, in compliance with the objectives of the Energy Transition for Green Growth Law, multiyear 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 1.4.1.1.5 "Preparing for the future of the nuclear fleet in France").

EDF will thus continue a large volume of work, aiming in particular to sustain and develop its technical and industrial assets through 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 2015:

- the alternator stators were renovated on 42 units, for a total of 49 units to renovate;
- the programme for preventive replacement of the poles in the main transformers is ongoing. 78 main transformer poles out of 174 were replaced, *i.e.* approximately 45% of the programme;
- between 1990 and the end of 2015, steam generators were replaced in 27 units, of which 1 in 2015. Amongst these, the replacement of three steam generators in Blayais 3 was completed during the third ten-year inspection of the unit. This had been delayed in the expectation that AREVA, supplier of this equipment, would provide proof of meeting all requirements required by the Decree of 12 December 2005 on nuclear equipment under pressure (the "ESPN" Decree), in view of its assembly and commissioning.

Concerning the organisational aspects of routine maintenance, EDF continues to deploy the AP 913³ procedure 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 Unit 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.

^{1.} 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.

^{2.} Period from 1 December 2015 to 14 February 2016.

^{3.} See glossary.



The average time of extension of planned outages has been halved between 2013 and 2014, and decreased by 0.4 days between 2014 and 2015.

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 1.4.1.1.5 "Preparing for the future of the nuclear fleet in France").

1.4.1.1.3 Environment, nuclear safety, radiation protection

Environmental protection

EDF bases its environmental procedure on an ISO 14001-certified management system (see section 3.2.2.1.1 "Environmental management system (SME)"), rolled out in 2002 at a number of sites and then extended to all nuclear generation units.

In terms of the radioactive waste management, 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), where the melting oven was restarted in April 2015 and which is now once again operating normally.

For a description of radioactive waste processing downstream of the fuel cycle as well as decommissioning, see sections 1.4.1.1.4 "The nuclear fuel cycle and related issues" and 1.4.1.1.6 "Decommissioning of nuclear power plants".

An ever-present nuclear safety procedure

EDF, in its capacity as a nuclear operator, takes responsibility for nuclear safety and, in a rapidly-changing context (market competition, environmental issues, etc.), reaffirms as its absolute priority the protection of human health and the environment through the prevention of accidents and the limiting of their consequences as regards nuclear safety, especially as the Codified Law of 13 June 2006 on nuclear transparency and safety (see section 1.5 "Legislative and regulatory environment") grants public access to information regarding in particular the nuclear safety measures taken by the operator and establishes a formal basis for transparency on nuclear safety.

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 1,700 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;

- benefits from integrated nuclear engineering and Research & Development 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:

- scheduled or unannounced regulatory inspections carried by the ASN (473 inspections in 2015 over all EDF nuclear facilities);
- a periodic (ten-year) review process designed to improve the compliance of operating nuclear plants with safety standards, and to reassess these standards based on feedback and new knowledge. The targets 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 1.4.1.1.1 "EDF's nuclear fleet"). The periodic safety review is an important step in extending the operating life of power plants (see sections 1.4.1.1.5 "Preparing for the future of the nuclear fleet in France" and 1.5.6.2.2 "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. In 2015, they amounted to 38.

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, prepared by EDF; and
- the Special Intervention Plan, 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 in particular take into account external risks (flooding, etc.) and internal risks (fire, etc.). The relevance of the system for warning, informing and protecting people is regularly assessed through accident simulation exercises. 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 2015, 4 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 and can be sent to a unit at any site in difficulty. The FARN is capable of a simultaneous response at six units on a single site.

Significant events regarding 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 employees 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 WANO and OSART, and audits conducted by experts from the 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 scale ¹). 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.

The ASN also approved the creation of an additional crisis management system, the Nuclear Rapid Action Force (FARN) following additional safety evaluations carried out by EDF after the Fukushima accident.

Results for 2015

As in 2014, no major safety or radiation protection event was recorded in France in 2015 and, for the second consecutive year, the EDF group did not experience a significant safety event (ESS) classified at INES 2 or higher.

Following on from the results obtained in 2014, the 2015 results were relatively stable with an average of 1.16 level 1 event per reactor (*i.e.* 67 events) versus 1.14 a year earlier, and the average number of unclassified events (level 0) falling to 8.88 ESS per reactor (*i.e.* 515 events), versus 9.66 in 2014. Since 2002, for its entire fleet, EDF has recorded a yearly total of at most one level 2 event (incident with a significant failure in safety systems).

The number of automatic reactor trips was 0.66 per reactor (0.53 in 2014).

The 2015 detailed results on nuclear safety are published in the annual report created by the General Inspector for Nuclear Safety and available on the Internet.

Radiation protection

Work by field operatives has enabled continuous improvement of performance in terms of 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 2015, the average individual dose was 0.71 man-Sievert per reactor (or a collective annual dose of 41.2 man-Sieverts in 2015). The collective dosimetry in 2015 is down compared to 2014 (41.6 man-Sieverts). 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.

EDF is furthermore committed to continuing to lower exposure to radiation below the regulatory limit of 20mSv over 12 rolling months for the whole body. Accordingly, throughout 2015 and over 12 rolling months, none of the participants, neither EDF employees nor contractors, was exposed to an individual dose of higher than 14mSv.

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.

1.4.1.1.4 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), 120 tonnes to MOX fuel (fuel produced from reprocessed plutonium) and 30 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 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.

^{1.} International Nuclear Event Scale.

THE DIFFERENT STAGES OF THE NUCLEAR FUEL CYCLE IN FRANCE



Front-end (upstream)

To ensure the continuity and security of the supply of its reactors in France and the UK, EDF retains overall control of all operations at each stage of the cycle, through a portfolio of contacts and by stockpiling at different stages of the front-end stage of the fuel cycle (natural uranium, fluorinated enriched or unenriched uranium, and warehousing of new assemblies).

The AREVA group is in this respect an important supplier (see section 2.3 "Dependency factors").

Natural uranium supply

Most of EDF's uranium supplies are guaranteed by long-term contracts for periods of 7 to 20 years with a policy of diversification in terms of sources and suppliers.

In 2015, EDF continued the securing of its long-term supplies with a number of major market suppliers, including Kazatomprom.

In addition, EDF signed in February 2016 a uranium supply contract with AREVA enhancing its coverage in the period beyond 2020.

Indexation formulas for portfolio contracts of natural uranium supply include fixed prices (base 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, Converdyn in the United States and Tenex in Russia.

In February 2016, EDF signed a conversion services supply contract with AREVA, to enhance coverage of its long-term needs.

Enriching natural uranium into uranium 235

With respect to supplies of enrichment services, EDF's needs have been significantly covered by enrichers such as Urenco (UK, Germany, the Netherlands, United States) and Tenex (Russia), primarily through fixed-price contracts, decreasing on a constant currency basis.

In February 2016, EDF signed an agreement with AREVA that helps secure its long-term supplies.

Enriched reprocessed uranium

Since the 1990s, reprocessing has made it possible to recycle within the reactors all or part of the uranium from processing spent fuel, which represents approximately 95% of the spent fuel mass.

This reprocessing was suspended in 2013, given the lack of economic incentive in light of the significant oversupply of natural uranium and pending the availability of a new industrial scheme. EDF is currently examining the conditions for restarting reprocessing by 2020.

Reprocessed uranium 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, covering most of EDF's needs, were renewed in 2014 to secure provisions at least until 2020.

Back-end (downstream)

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 for the management of the long-term storage of final waste, in accordance with the Codified Law of 28 June 2006 on the long-term 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 ("equal flows principle"). The recycling capacity of nuclear units in the French fleet has allowed the processing of up to 1,100 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 long time periods. 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.

In May 2015, EDF and AREVA signed an implementation agreement covering the 2013-2015 period. In February 2016, EDF and AREVA also signed an implementation agreement covering the 2016-2023 period as well as the associated supply contracts for the MOX assemblies.

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.

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 (see note 29 to the consolidated financial statements for the year ended 31 December 2015 in section 6).

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. 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 cooling.

HLW-LL and ILW-LL from the reprocessing of spent fuel is temporarily stored in dedicated facilities in La Hague, pending decisions on storage in deep geological layers, as is currently envisaged as part of ANDRA's *Centre industriel de stockage géologique* (Cigéo) project.

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

LLW-LL comes from the decommissioning of the old NUGG reactors (graphite, processing waste – see section 1.4.1.1.6 "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. In July 2015, ANDRA issued the progress report on the 2013-2015 national plan for themManagement of radioactive materials and waste. This report contains the safety assessment associated with the various sub-surface components in the area under investigation (*communauté de communes de Soulaines*). For graphite waste, the results open up the possibility to storage on the site investigated.

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

Short-Lived Low- and Intermediate-Level Waste comes from nuclear facilities (gloves, filters, resins, etc.) and from their decommissioning (concrete, scrap, lagging, piping, etc.). It is stored on the surface at the Soulaines and Morvilliers storage facilities managed by ANDRA, and its radioactivity is very close to natural radioactivity.

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.

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 2015 in section 6).

1.4.1.1.5 Preparing for the future of the nuclear fleet in France

EDF's industrial goal for the preparation for the future of the nuclear fleet rests primarily 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.



Continued operation of the operating units well beyond 40 years

Additional Safety Assessments (ASA) following the Fukushima accident

On 15 September 2011 and in light of the accident at the Fukushima nuclear plant in Japan, 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.

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. 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 incidents and accidents that may occur in 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 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 recommended the "hard core" concept and the FARN system (see section 1.4.1.1.3 "Environment, nuclear 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. On 26 June 2012, the ASN made 19 decisions requiring EDF to follow over 600 technical requirements, which set regulatory requirements according to the post-Fukushima action plan. 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 at each of the 58 units in 2013. The complete definition of the "hard core" was covered in technical rules issued by the ASN in January 2014.

Operating life of EDF's PWR fleet

The provisions of the French Environmental Code 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.

At end-2015, 27 of the 34 900MW units had passed their third ten-year inspection. Nine of these (Fessenheim 1 & 2, Bugey 2, 4 & 5, Tricastin 1, 2 & 3 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 beyond 40 years in the best conditions of safety and performance, particularly in view of the significant investment linked to the third ten-year inspections on the one hand and to post-Fukushima improvements on the other. 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 1.4.1.1.2. "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, the ASN indicated that it would issue, following the April 2015 meeting of the Permanent Strategic Decisions Group, an initial position 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, the final authorisation for use beyond 40 years being made on a reactor by reactor basis. On 20 April 2016, the ASN sent a letter to EDF in which it defines its expectations to authorize a potential lifetime extension of the 900MW French nuclear reactors. After reviewing the file delivered by EDF's group in which it presents its approach and its methodology to extend the use of 34 reactors of this technology beyond 40 years, the ASN considers that the topics selected by EDF in its programme respond to safety issues and do not call any comments. However, the ASN asked EDF to complete its programme on several aspects, including the scope of control programme and the goals of investigation improvements.

An extension to the lifespan of the current nuclear fleet would enable, whilst respecting the absolute priority of nuclear safety and as part of the multi-year energy programme (see section 1.4.1.1.2 "Operation and technical performance of the nuclear fleet"), better use of the industrial base it represents, the deferral of financial flows associated with decisions for investment in new plants beyond 2025 and the spreading of the commissioning of new plants over time.

1.4.1.1.6 Decommissioning of nuclear power plants

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

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 on acceptable economic terms and in line with the principles set out in Article L. 1333-2 of the French Public Health Code and Article L. 110-1 II of this Code"* (see Article L. 593-25 of the French Environment Code).

The regulatory process for decommissioning is governed by the French Environment Code and Decree 2007-1557 of 2 November 2007 (see section 1.5.6.2.2 "Specific regulations applicable to basic nuclear facilities"). It is characterised, for a given site, by:

- a shutdown declaration at least two years prior to the planned shutdown date;
- a decommissioning request resulting, following examination by the authorities and a public inquiry, in a single decree allowing for decommissioning;
- key progress reviews with the ASN, included in a safety reference system relative to 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;
- finally, once the work has been completed, the declassification of the facility to remove it from the legal regime governing basic nuclear facilities.

Decommissioning of shut down power plants

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 in line with the principles of the French Public Health Code and the French Environment Code while ensuring that the technical risks associated with these activities are managed. 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. Mid-2017 has been set as the target commissioning date for this facility;
- 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. Following an unsuccessful initial site search by ANDRA in 2008, and the sending of a report to the government at end-2012, in 2013 ANDRA restarted the search and in July 2015 issued the progress report on the 2013-2015 National Plan for the Management of Radioactive Materials and Waste (see section 1.4.1.1.4 "The nuclear fuel cycle and related issues"). This report contains the safety assessment associated with the various sub-surface components in an area under investigation. For graphite waste, the results open up the possibility to storage on the site investigated.

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 $^{\rm t}$ agreement with the CEA, EDF has become fully responsible for its decommissioning. The decommissioning

work included in the scope of the original 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. 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 could not be pursued in its current state due to the cancellation of the ICEDA building permit (see section 2.4.1 "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 reglementation.

As for the six NUGG reactors, EDF's decommissioning programme involves directly removing graphite from these power plants to its storage facility in the Aube (CSA). 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 6.1 "EDF's consolidated financial statements", notes 29.1.3 and 29.1.5 to the consolidated financial statements for the year ended 31 December 2015).

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 considered 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.

Furthermore, EDF relies on national and international feedback (OCDE, AIEA, European Union, etc.), taking account of the following elements:

- differences in the estimate scopes;
- national and regulatory contexts;
- difficulties in comparing estimates in different monetary units;
- the irrelevance of using a comparison based on €/kWe.

EDF's benchmarking shows that the estimate of dismantling costs of French power plants is in the upper end of the funded costs range.

These benchmark elements were audited as part of the audit commissioned by the DGEC (General Division for Energy and Climate - *Direction Générale de l'Energie et du Climat*) on the decommissioning costs of pressurized water reactors (PWR), conducted between July 2014 and August 2015. The main conclusions are:

- overall, the audit supports the estimate of EDF for the dismantling cost of its nuclear fleet;
- the auditors confirmed that restatements are required to make international comparisons, and that direct comparison of cost expressed in € per installed kWe is inappropriate;
- the auditors conducted an independent comparison in men/year that reflects the cost of dismantling, as manpower is a major factor in this activity, and is not sensitive to monetary effects. In terms of international benchmarking, the DGEC audit concluded that the men/year amounts converge when adjustments to homogenize the scope are performed, and that the French quote offers the highest estimate of overall needs.

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

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 to finance the decommissioning of the Phénix power plant, which has been shut down, and the La Hague power plant.

1.4.1.1.7 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. Article L. 594 of the French Environment Code and its implementing laws defined provisions that are not associated with the operating cycle and must therefore be covered by dedicated assets (see section 6.1 "EDF's consolidated financial statements", note 47.5 to the consolidated financial statements for the year ended 31 December 2015).

1.4.1.2 New Nuclear projects

1.4.1.2.1 Organisation

2015 saw the establishment of the New Nuclear Projects and Engineering Department, part of EDF group's CAP 2030 strategy which sets out the strategy for the future.

This department brings together the engineering units that play a role in the preparation of the reactors of the future, ongoing construction projects and supporting the operating fleet. It encompasses the Group's key priorities:

- improving the performance of nuclear new build projects (primarily Flamanville 3 and Hinkley Point C);
- preparing the reactors of the future;
- working more closely with the AREVA teams in order to increase efficiency.

1.4.1.2.2 Update on the Flamanville EPR project

Architect-assembler engineering

To complete the Flamanville 3 EPR (European Pressurized water Reactor) 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.

Interactions with the Nuclear Safety Authority (ASN)

EDF filed a request for authorisation to commission Flamanville 3 in March 2015 with the ASN, which acknowledged receipt in June and began the technical examination of the dossier, while identifying additional necessary information.

At the same time, EDF also filed a request for authorisation for partial commissioning with the ASN in March 2015 designed to authorise delivery of fuel to the site, which is also being examined.

In addition, EDF sent in October 2015 the French Ministry of the Environment, Sustainable Development and Energy a request to extend to April 2020 the deadline for commissioning Flamanville 3 as specified in the building authorisation Decree of 10 April 2007, the initial period of validity being 10 years from 2007.

Supply and work contracts

Nearly 70% of the construction budget represented by the six main contracts (boiler, civil engineering, control systems, piping, generator - condenser - water station, electricity) were, with the exception of the boiler contract signed with AREVA, awarded following international calls for tender.

Equipment manufacturing

The manufacture of the equipment required for construction is now well advanced. Most of the equipment for the nuclear section was available in 2015, 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.

A programme of further testing to demonstrate the compliance of the reactor vessel and lid was approved by the ASN. In addition, the technical examination of the evaluation of the pressuriser valves is ongoing (final tests for the evaluation of the design and durability testing of the valve to be done).

Work on site

Several important steps of the construction of the Flamanville 3 reactor were completed in 2014 and 2015, marking the progressive transition of the project towards the testing phases:

- civil engineering finished (completion of concreting for the internal and external domes of the reactor building and prestressing operations);
- four boiler units brought in and primary circuit assembled;
- the command room of the EPR 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 main diesel motors brought in and assembly commenced, as well for the final emergency diesel motors;
- first liquid tests of the 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 2015, electromechanical assemblies had significantly progressed (65%), and the test phase was launched on site, for the conventional island and for the nuclear island.

On 24 March 2016, the Group announced the achievement of the 1st milestone, with finalisation of the primary circuit mechanical erection (see section 5.2 "Subsequent events").

Commissioning schedule and budget

In September 2015, EDF released a new schedule and revised construction costs for the Flamanville 3 project of \in_{2015} 10.5 billion.

EDF and its partners undertook a full review of the Flamanville EPR project and of its organisation to improve the industrial control of the project up to its commissioning.

A new organisational structure has been set up:

- complete review of the project organisation and working methods, centred around streamlined management reporting directly to the Group Senior Executive VP in charge of New Nuclear Projects and Engineering and the EDF Chairman and CEO;
- setting up of new ways of connecting EDF with its partners, to provide close leadership, coordination and monitoring of the project;
- enhanced accountability on site and stronger managerial presence as the construction phase comes to a close and test preparation gets underway;
- new contractual frameworks with key suppliers;
- enhanced dialogue with the Nuclear Safety Authority (ASN), particularly in respect of the new regulation on nuclear pressure equipment.

The new roadmap, to which EDF and its partners are committed, aims to optimise the management of the project. The new timetable sets outs three key milestones:

- primary circuit mechanical erection to be finalised in the first quarter of 2016;
- electromechanical erection to be completed and system performance testing to begin in the first quarter of 2017;
- first fuel loading and start-up of the reactor in the fourth quarter of 2018.

1.4.1.2.3 Progress on other New Nuclear Projects

1.4.1.2.3.1 Hinkley Point C EPR

On 21 October 2015, EDF and China General Nuclear Power Corporation (CGN) signed a non-binding strategic investment agreement in London for the construction and operation of the proposed Hinkley Point C nuclear power plant in Somerset. This will enable the project to move forward and lay the groundwork for a final investment decision, which remains subject in particular to the following conditions:

- approval by the Boards of Directors of EDF and of CGN;
- finalisation of all the contractual documentation based on the agreements of 21 October 2015.

The approvals from competition authorities under the control of concentrations and other governmental authorities in China and Europe were obtained in the first quarter 2016.

EDF Energy also signed two other non-binding agreements with CGN relating to two nuclear construction projects in the United Kingdom: Sizewell C and Bradwell B (see section 1.4.5.1.2.5 "Nuclear New Build Division").

1.4.1.2.3.2 Memorandum of understanding with AREVA

On 30 July 2015, EDF and Areva signed a non-binding memorandum of understanding that formalised the status of the progress of discussions concerning their contemplated partnership. This memorandum has 3 sections:

 EDF's acquisition of an exclusive control of AREVA NP. In this regard, EDF would take majority control of AREVA NP (at least 51%), AREVA would have a maximum stake of 25% as part of a strategic partnership, and the potential participation of other minority partners. This project enables to better secure the most critical activities of the "Grand carénage" for the existing fleet in France, and to improve the efficiency of engineering services, project management, and some manufacturing activities through EDF's experience feedback;

- the creation of a dedicated company, 80% owned by EDF and 20% by AREVA NP, aimed at optimising the design and management of new reactors projects. The purpose of this company is to improve the preparation and management of projects as well as the export offering of the French industry by improving the coordination of strategic marketing to draw up offers in the upstream project phase, by developing offers that are more competitive and adapted to client needs, and by harmonising and expanding the range of reactors, all while ensuring the continuation of partnerships with the major industrial companies in Japan and China. This company will form part of an integrated generator/supplier model, which has been tried and tested in several countries;
- the signing of a strategic and overall industrial partnership, encompassing for example the promotion of integrated offers (fuel assemblies and material) in the case of the sale of new reactors for export, cooperation in the field of decommissioning (methods, tools, expertise, etc.) and in the intermediate storage of spent fuel (joint export offers), further studies into 4th generation reactors (boiler and fuel) and cooperation in R&D.

At its meeting held on 27 January 2016, following due diligence conducted during the second half of 2015, EDF Board of Directors reviewed the outcome of discussions with AREVA regarding the acquisition by EDF of exclusive control of AREVA NP activities.

The Board agreed on the final valuation of the operations to be acquired by EDF, which comes to ≤ 2.5 billion for 100% of AREVA NP's share capital ¹. This amount is likely to be adjusted, firstly, upward or downward depending on the financial statements prepared on the date of completion of the transaction, and secondly, with a possible price earn-out of up to ≤ 350 million, subject to the achievement of certain performance objectives measured after the closing date. This ≤ 2.5 billion valuation corresponds to a valuation of 8 times the normalised EBITDA.

With a contemplated EDF participation of between 51% and 75%, EDF will be in a position to make a binding offer, after consultation with the Central Works Council and authorisation by the Board of Directors, once the arrangements to completely immunise EDF against the costs and risks of the OL3 project and all the final contractual documentation are finalised.

1.4.1.2.3.3 Taishan EPR

EDF is a shareholder in TNPJVC (Taishan Nuclear Power Joint Venture Company Limited), which was set up to build and operate two EPR nuclear reactors in Taishan, in the province of Guangdong in China.

In 2015, unit 1 moved into test phase and unit 2 into mass assembly phase. The following milestones were achieved in 2015:

- July 2015: completion of concreting of the external dome of unit 1;
- September 2015: completion of the vessel mould block for unit 1;
- November 2015: first start of one of the four main diesel motors for unit 1 and completion of concreting of the external dome of unit 2;
- end December 2015: start of the hydropower test of the primary circuit of unit 1.

The project momentum will continue in 2016 with ongoing testing of all of unit 1 and the assemblies of unit 2 with a view to moving into the test phase.

Within EDF, structures were put in place to provide the Taishan project with technical support from EDF and to draw on the experience of these activities.

1. On a debt-free, cash-free basis.

1.4.1.2.3.4 EPR New Model

In early 2015, EDF and AREVA jointly launched the "EPR New Model" (EPR NM) project designed to develop the basic design for a new thirdgeneration nuclear reactor – an improvement on the EPR – that incorporates lessons from ongoing projects.

EDF and AREVA decided to develop the project together, as part of an integrated plan, to make the most of the synergies that exist between the two engineering firms.

The design of this new reactor is based on the EPR one and will satisfy the third-generation safety goals. It will be the first reactor to incorporate from initial design phase the lessons of the Fukushima accident and the resulting new international and French safety standards.

The EPR NM project aims to optimise this reactor on the basis of lessons learnt from ongoing projects and construction. To achieve this goal, three types of levers are employed:

- the incorporation, very early in development, of industrial aspects to take full advantage of the nuclear industry's industrial base;
- the development of methods and tools to make the engineering teams more efficient;
- the optimisation of some of the EPR's technical options.

The EPR NM model is intended to play a role in the renewal of the nuclear fleet currently operating in France and to enhance the nuclear industry's export business.

1.4.1.3 Thermal generation in mainland France

EDF's electricity generation from its thermal power plants in mainland France represented approximately 1.5% of its total electricity generation in 2015. This fleet, which has an average age of 24 years, had a total installed operating capacity of 9,970MW.

Thermal generation assets 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 assets are one of the key components of the energy mix to ensure the balance of generation and consumption in real time and to accommodate fluctuations in electricity consumption. Together with some hydropower facilities (lakes, pumped storage plants), they are used to meet mid-merit and peak demand electricity requirements. They also play an important role in adjusting EDF's generation capacities in response to changes in its customers' needs.

1.4.1.3.1 EDF's thermal generation fleet

At 31 December 2015, the thermal generation facilities operated by EDF were of different types, both in terms of fuel and power:

Unit	Number of units	Total	Year commissioned	Output (in TWh)		
apacity (in MW)	in operation capacity at 31/12/2015 (in MW)			At 31 December 2015	At 31 December 2014	
580	3	1,740	in 1983 and 1984	4.6	5.9	
535	1	535	in 1974			
585	3	1,755	from 1968 to 1975			
685	4	2,740	in 1976 and 1977	0.1	0.1	
85	4	340	in 1980 and 1981			
203	1	203	in 1992			
134	1	134	in 1996			
125-129	2	254	in 1998 and 2007			
185	2	370	in 2010			
179-182	3	542	in 2008 and 2009	0.1	0.1	
427	1	427	in 2011			
465	2	930	in 2012 and 2013	2.0	1.1	
1	Unit apacity (in MW) 580 535 685 685 203 134 25-129 185 179-182 427 465	Unit apacity (in MW)Number of units in operation at 31/12/201558035351585368548542031134125-1292185342714652	Unit apacityNumber of units in operation at 31/12/2015Total capacity (in MW)58031,74053531,75558531,75568542,7408542,7408542,74013411342031203134113425-12922541852370179-182354242714274652930	Unit apacity (in MW)Number of units in operation at 31/12/2015Total capacity (in MW)Year commissioned58031,740in 1983 and 198453531,740in 1983 and 19845351535in 197458531,755from 1968 to 197568542,740in 1976 and 1977854340in 1980 and 19812031203in 19921341134in 1996125-1292254in 1998 and 20071852370in 2010179-1823542in 2008 and 20094271427in 20114652930in 2012 and 2013	Number of units apacity (in MW)Total capacity (in MW)Year commissionedOutputAt 31 December 201558031,740in 1983 and 19844.653531,740in 1983 and 19844.653531,755from 1968 to 1975668542,740in 1976 and 19770.1854340in 1980 and 198142031203in 1976 and 19770.1134134in 1980 and 1981425-1292254in 1998 and 200721852370in 20100.1179-1823542in 2008 and 20090.14652930in 2012 and 20132.0	

1.4.1.3.2 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 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), as well as dust collectors that trap virtually all the dust. These processes enable the units to comply with environmental restrictions applicable since 2008, as well as to meet new regulatory requirements 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 efficiency.

However, due to environmental regulation constraints (see section 1.5.6.2.3 "Regulations applicable to thermal energy generation"), EDF completed the final shutdown of its oldest coal-fired fleet, with the shutdown of the last five units in 2015 (La Maxe 1 & 2, Vitry-sur-Seine 3 & 4 and Bouchain 1). Overall, since 2013, EDF has shut down 2,835MW of coal-fired plants.

Optimisation of the oil-fired fleet through seasonal shutdowns

To reflect the very low usage of oil-fired plants, EDF has carried out since 2014 a seasonal shutdown of this fleet (guaranteed long-term shutdown) from April to October.

EDF also decided to permanently shut down the thermal plant in Aramon on 1 April 2016, this plant scarcely being used over the past number of years.

Commissioning of a combustion turbine centralised remote control centre

Since April 2015, the thermal fleet combustion turbines have been run from a remote control centre based in Vaires-sur-Marne, headquarters of the Combustion Turbine Operation Centre. This innovative system enables the remote control of the 13 turbines spread across six generation sites: 4 in Île-de-France and 2 in Brittany.

Modernising the thermal generation fleet with natural gas combined cycle turbines

In 2011, EDF commissioned a first natural gas combined cycle turbine (GCCT) in France on the Blénod site, followed by a first combined-cycle turbine in Martigues in 2012 and a second in 2013. The GCCTs 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 return is over 50%, markedly higher than the return from traditional thermal units. This modernisation of the thermal generation fleet enables EDF to reduce atmospheric emissions of CO_2 , nitrogen oxides and sulphur oxides.

On the Bouchain site, EDF is building, in partnership with General Electric, a next-generation GCCT, equipped with the new General Electric high-capacity turbine, the "9HA". This combined cycle turbine, with innovative characteristics in terms of capacity (575MW achievable in less than 30 minutes) and return (61% versus average return for a standard GCCT of 57 to 58%), offering good environmental performance with CO_2 emissions of on average around 360g/KWh, 55% below those of the old neighbouring coalfired plant shut down in 2015, is expected to be commissioned in summer 2016. The prototype will be tested for two years and then transferred to EDF, provided that the tests are conclusive.

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 1.5.6.1 "Basic regulations applicable to the environment, health, hygiene and safety"). EDF set itself

the goal of cutting CO_2 emissions in mainland France by 30% (measured in tonnes) between 1990 and 2020, and of cutting SO_x , NO_x and dust emissions by at least 65% between 2005 and 2020 (see section 1.5 "Legislative and regulatory environment").

Thanks to the shutdown of the oldest thermal power plants, the updating of the most recent plants, the implementation of pollution-reducing procedures, the use of low sulphur fuel ¹ and lastly the commissioning of natural gas combined cycle turbines, the environmental performance of the thermal fleet in mainland France has improved significantly:

- total CO₂ emissions of the EDF fleet in 2015 came to 5.3 million tonnes², thereby confirming the improvement in the carbon footprint with CO₂ emissions down over 50% since 1990;
- The NO_x and dust emission targets set for 2020 have already been achieved. SO_x emissions have fallen by close to 55% since 2005, and it should be possible to achieve the 2020 target in the near future.

1.4.1.3.3 Generation and technical performance

Thermal generation accounted for 6.8TWh in 2015. It represents about 1.5% of EDF's 2015 generation in mainland France.

The reliability of all components of the thermal generation fleet was confirmed in 2015 and is in line with European standards. The response rate achieved by combustion turbines to requests from optimisation services was very good. 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 2015, coal units supplied 4.6TWh, GCCT plants supplied 2.0TWh, oil-fired units 131GWh and combustion turbines 101GWh.

The Martigues site was hit by a fire on 5 February 2015, which damaged unit 6, in particular the steam turbine, and caused collateral damage to unit 5. Unit 5 came back into service in June 2015, and unit 6 is scheduled to come back into service during the second quarter of 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 6.1 "EDF's consolidated financial statements", note 30 to the consolidated financial statements for the year ended 31 December 2015).

In 2015, EDF continued the decommissioning work on sites that have been definitively shut down.

1.4.1.4 Generation from renewable energies

Renewable energies³ (hydropower, wind, solar, biomass, geothermal, marine energy, etc.), have seen robust growth worldwide.

The combined installed onshore wind capacity totalled worldwide 420GW at the end of 2015, almost 74GW of which was in the US and around 137GW in Europe. In 2015, more than 60GW of wind energy was commissioned worldwide, including around 30GW in China⁴.

^{1.} The oil-fired units use fuel with an ultra-low sulphur content (less than 0.4% sulphur).

^{2.} Within the Company's scope (EDF SA, i.e. including SEI and excluding PEI), total emissions amounted to 6.7 million tonnes in 2015.

^{3.} Renewable, or "green" energies, are derived from natural resources that are replenished quickly enough to be considered non-depletable in human terms.

^{4.} Source: Global Wind Statistics 2015; GWEC.

In solar photovoltaic power, total global installed capacity stood at close to 242GWp at the end of 2015, of which nearly 56GWp was from new capacity built in 2015 $^{\rm 1}$.

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 111GW of new renewable capacity development expected worldwide each year, around a quarter is hydropower capacity²).

The EDF group is now the leading producer of renewable energies in Europe and specifically the leading supplier of hydropower in the European Union; hydropower represents the Group's leading renewable energy, with an installed capacity of 20GW, 239 dams, 436 production sites worldwide). The Group plays a role in the rise of competitive sectors, particularly wind and solar.

In 2015, the Renewable Energy Division was established to manage and promote the EDF group's renewable energy activities, namely hydropower and the activities of EDF Énergies Nouvelles. This division also oversees all renewable projects (wind, solar, marine energy, etc.) undertaken by the Group, including those run by the foreign subsidiaries.

The EDF group's commitments in terms of developing renewable energy are described in section 3.1 "Corporate responsibility commitments".

1.4.1.4.1 Hydropower generation in France

The electricity generated by EDF from its fleet of hydropower plants in 2015 totalled 38.9TWh, 8.5% of its total electricity output.

1.4.1.4.1.1 EDF's hydropower generation fleet

EDF's hydropower fleet in mainland France comprises 433 plants:

- approximately 11% of these plants have a unit capacity above 100MW. They account for around 60% of total generation;
- approximately 51% of these plants have a unit capacity under 12MW. They account for around 6% of total generation.

The average age of the fleet is over 71 years³.

	31/12/2015	31/12/2014
Hydropower plants with capacity lower than or equal to 12MW		
Maximum capacity (MW)	989.3	997.5
Net pumping output (TWh)	2.4	2.8
Consumption by pumping operations (GWh)	32.7	40.0
Output including pumping (TWh)	2.4	2.9
Hydropower plants with capacity greater than 12MW		
Maximum capacity (MW)	18,939.4	18,949.2
Net pumping output (TWh)	29.7	34.7
Consumption by pumping operations (TWh)	6.8	7.8
Output including pumping (TWh)	36.5	42.5
TOTAL MAXIMUM CAPACITY (GW)	19.9	19.9
TOTAL NET PUMPING OUTPUT (1) (TWH)	32.1	37.5
TOTAL OUTPUT INCLUDING PUMPING ⁽²⁾ (TWH)	38.9	45.4

(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 2015).

Within mainland France, 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 of around 40TWh.

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.

1. Source: Bloomberg New Energy Finance.

^{2.} Source: International Energy Agency, World Energy Outlook 2015 - New Policies Scenario.

^{3.} Arithmetic mean.

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 generation of 4.72TWh in 2015. The generation capability of these plants tied to natural water supply from upstream reservoirs is 1.1TWh on average.

1.4.1.4.1.2 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 2.2.6.2 "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 prefectoral authority.

EDF performs regular monitoring and maintenance of its dams, in particular by means of continuous structural health assessments.

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*, and STEEGBH, the central French government agency specifically responsible for large dams and hydropower facilities).

Furthermore, carrying out exhaustive studies that contribute to safety is a regulatory requirement for dam owners and operators: 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 120 reviews delivered in 2015 out of the 157 expected by 2017. They consolidate a satisfactory overview of the structures and associated countermeasures ¹.

In 2015, the hydropower safety of EDF's fleet remained good with no hydropower safety incident (EISH) classified as "orange" (an incident that placed people in danger, within the meaning of the Decree dated 21 May 2010). 23 EISH classified as "yellow" (incidents reflecting non-compliance without putting anyone in danger) were recorded this year. The key indicators are still at good levels:

 increased detection of significant (non-serious) events (ESSH level 0) by the local teams, with 3,409 events detected;

- low number of incidents with external effects (ESSH level ≥ 1). 32 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 11 in 2015 (18 in 2014, 19 in 2013). Although it was marked by low hydraulicity levels (the 4th lowest since 1948 according to EDF data), 2015 saw a number of periods of high levels in the Northern Alps and on the Rhine (with occasional historically high levels in certain catchment areas such as the Arve). 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. With more than €800 million spent on hydropower safety between 2007 and 2014, EDF has undertaken the largest hydropower facility renovation programmes of recent decades. In 2015, safety work continued and a significant portion of the maintenance budget was dedicated thereto.

In 2006, EDF launched the "SuPerHydro" hydropower facility renovation programme (Safety and Performance) with a total budget of \in 1,122 million (current euro value). In 2015, this programme was superseded by the safety and performance components of the engineering programmes for the hydropower fleet in operation while carefully monitoring safety-related activities. The goal is the technical updating and improved maintenance of the facilities, in order to maintain a high level of hydropower safety and preserve the technical performance of the fleet over the long-term. At the end of 2015, 579 specific systems and measures were carried out and monitored in five priority facility groups: galleries, pipes, dams, penstocks and floodgates ¹.

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. The tools, methods and works defined as part of the "RenouvEau" project are currently being rolled out to all major facilities in the hydropower fleet (see section 1.4.1.4.1.3 "Performance of the hydropower generation fleet").

1.4.1.4.1.3 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 2015 hydropower conditions

Hydropower generation may witness substantial variations from one year to the next, depending on climatic fluctuations in water resources. Hydrological conditions in 2015 were unfavourable.

1. For further details, see the 2015 report of the Inspector of Hydropower Safety, available on EDF's website.
Hydropower electricity generation before the deduction of the power needed to operate pumped-storage plants was 38.91TWh in mainland France and 32.1TWh 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 80.38% in 2015, up compared to 2014. In 2015, 15.88% of the unavailability of EDF's hydropower fleet was due to asset maintenance work (planned unavailability) mainly as part of the "SuPerHydro" renovation programme (see above), while 3.7% 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.

In 2011, EDF also began an ambitious modernisation project to improve the industrial performance of its hydropower fleet, for an overall amount of \in_{2010} 840 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, in order to improve the operating performance of the hydropower fleet. The full rollout of the project will run from 2014 to 2020.

1.4.1.4.1.4 Hydropower generation issues

The hydropower segment is currently working to address the following issues: implementation of the Energy Transition for Green Growth Law, managing access to water, and development.

Concessions renewal

Hydropower generation facilities are operated through concessions granted by decree for facilities exceeding 100MW, by prefectoral order for facilities whose capacity is between 4.5MW and 100MW, and under prefectoral authorisation for facilities under 4.5MW (see section 1.5.6.2.4 "Regulations applicable to hydropower facilities").

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.

Under the current regulation, the former concession holder does not receive any compensation if an expiring concession is not renewed. Article L. 521-15 of the French Energy Code enacted by the amended Finance Act for 2006 provides for the reimbursement of unamortised expenses related to modernisation works or to works that enable 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 by anticipation 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, 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.

The European Commission (EC) initiated proceedings against the French State regarding hydropower concessions in France, based on Article 106 § 1 of the Treaty on the Functioning of the European Union (TFEU) read in conjunction with Article 102 of the same treaty. In this respect, on 22 October 2015 the EC sent the French State a letter of formal notice, in which it stated that the

awarding to and reservation for EDF of most of the hydropower concessions in France represented a breach of the aforementioned provisions in that such measures would strengthen EDF's dominant position in the French retail electricity market. The State responded to this formal notice, beginning a series of submissions and responses by the French State and the EC, which in no way prejudices the latter's final decision. As the chief interested party, EDF received a copy of the formal notice and sent its observations to the EC on 4 January 2016.

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 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. Agreements are entered into with local elected officials, farmers, fishermen, managers of tourist sites and manufacturers (see section 3.2.2.6 "Protection of biodiversity").

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 flows ¹ and the flexibility of hydropower plant operations). EDF estimates that these provisions have limited medium-term consequences for its hydropower activities (see section 1.5 "Legislative and regulatory environment").

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.

A micro-power plant project is in progress close to the Kembs dam on the Rhine, for a capacity of 8MW and a generation capability of 28GWh, with commissioning planned for 2016.

The Rondeau hydropower plant was inaugurated on 1 October 2015 in Isère in the Échirolles municipality near Grenoble. It is the most powerful of EDF's hydropower micro-plants. The plant uses water from a small 4.30 metre high waterfall near the end of the Drac tail race, an artificial canal bringing water from up the river. To make use of this small waterfall, it was necessary to have recourse to new "made in France" technology, the Very Low Head (VLH) turbine, designed and assembled by the Aveyron-based French SME, MJ2 Technologies. The installed capacity is 2.2MW with a generation capacity of 13.7GWh.

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 2015, five reserved-flow turbine sets were installed. Units were commissioned during the year at the Beaumont-Moneteux dam on the river lsère, the Notre-Dame-de-Commiers dam on the Drac river, the La Chatre dam on the Creuse river and the Prétière dam on the Doubs river. These five sets generated total actual capacity of 3,323kW in 2015. Projects are under consideration or in progress for a total capacity of some 10MW and generation capability of about 70GWh, with expected commissioning dates ranging from 2016 to 2020.

In addition, EDF's objective is to use all available opportunities for expansion, and in particular to:

 optimise the potential of energy transfer by pumped-storage hydropower plants in France (STEPs);

^{1.} Minimum flow maintained downstream of dams to protect aquatic life.

- look into the possibilities for "surplus generation" (for instance, by increasing the capacity of existing hydropower plants) detailed in Article L. 511-6 of the French Energy Code enacted by the Law of 13 July 2005 setting out the guidelines for the energy policy (provision repealed from 1 April 2016 by Order no. 2016-65 of 29 January 2016 on concession contracts), to contribute to the development of means to respond to peak demand. Construction is already ongoing at the La Coche and La Bâthie plants. The Decree of 17 June 2013 authorised EDF to build a new 240MW turbine generator set at La Coche STEP in Savoy. This Pelton set, construction of which began in 2016, will increase the capacity of the existing facility by 20% and will generate approximately an additional 100GWh every year. For the La Bâthie plant, excess output has been achieved by replacing the six generation sets and should total around 50MW. At end-2015, three sets were put in place;
- take the opportunity during facility upgrades to increase their capacities;
- 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;
- develop "small-scale" hydropower plants (with capacity under 12MW).
 One of the aims 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,
 - forging partnerships for project development.

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 seven agencies around France by the end of 2015.

1.4.1.4.2 New renewable energies

1.4.1.4.2.1 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 in certain areas. It benefits from economic incentives in various countries, although an increasing number of projects are developed without a financial support mechanism (see section 1.5.3 "Electricity market legislation"). On average, the rated capacity of onshore wind turbines installed worldwide is around 2MW, a figure which is increasing steadily. The subsidiary responsible for developing wind power within the Group is EDF Énergies Nouvelles. The subsidiaries EDF Luminus and Edison also have wind farms in service. The EDF group generated 10.7TWh of wind-based electricity in 2015;

offshore wind turbines: a less mature, high-growth sector, it currently requires a higher initial investment and is more expensive to connect to the grid than onshore wind power. Offshore operation and maintenance are also more difficult. The advantages of this sector are the higher rated capacity of each wind turbine (typically over 3MW) and increased productivity due to more reliable winds. 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.

1.4.1.4.2.2 Solar photovoltaic power

The operating principle of solar photovoltaic power is to convert sunlight directly into electricity. 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.

Since 2014, the photovoltaic market in France has surged once more, with 950MW connected to the grid in 2014 and 880MW in 2015 (compared with 650MW in 2013) 1 .

The cost of generating solar power has fallen considerably in recent years. However, innovation offers considerable room for improvement. 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).

1.4.1.4.2.3 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.

Lastly, through its holdings, the Group owns shares in France (notably through its subsidiary Dalkia, see section 1.4.6.1.1 "Dalkia"), and abroad in several dozen heating networks and small-scale, mainly wood-fired generating plants. It also has a majority interest in Tiru, which is active in waste recovery (see section 1.4.6.1.3 "Tiru").

1.4.1.4.2.4 Geothermal energy

The temperature of the rocks in the earth's crust increases with depth (3° C on average every 100 metres). In some regions, 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

^{1.} Source: Wind and solar energy scorecard, French Commission on sustainable development (Commissariat général au développement durable).



develop this type of energy, EDF has joined forces with several partners (including Électricité de Strasbourg 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 1.4.6.4 "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.

1.4.1.4.2.5 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.

Two marine energy projects are currently in development:

- tidal turbines, which are 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. This prototype should shortly move into a second test phase with the first electricity generation. The prototype was immersed on 20 January 2016 and should shortly be connected to the grid. EDF Énergies Nouvelles, in partnership with DCNS, Europe's leading manufacturer of naval vessels, is working on the "Normandie Hydro" project, a larger-capacity tidal current turbine farm at Raz Blanchard, at the tip of the Cotentin peninsula in Normandy;
- floating offshore wind turbines: EDF Énergies Nouvelles plans to bid in partnership to the call for proposals launched by the French government in August 2015 for pilot farms. The call for tenders is for farms with between three and six turbines, each with a rated capacity of at least 5MW, which should be located in one of the following four areas: in the waters off île de Groix (Brittany), the Faraman lighthouse (Provence - Alpes - Côte d'Azur), the marshes in Leucate and in the Gruissan municipality (Languedoc-Roussillon).

1.4.1.4.3 EDF Énergies Nouvelles

The EDF group's involvement in renewable energies is undertaken mainly by the EDF Énergies Nouvelles (EDF EN) subsidiary, which is 99.99% owned (0.01% being owned by the employees ¹). The companies in the EDF EN group had a combined 3,029 employees at 31 December 2015.

The company, which is the Group's centre of expertise and development, particularly in the fields of wind and photovoltaic solar power, is one of the major players in electricity generation from renewables particularly in the major regions in which it is based: North America and western and southern Europe.

EDF EN generates electricity from renewable energy sources and is involved in every stage of the value chain. It 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 projects to be sold, in whole or in part, sooner or later, to third parties interested in such infrastructure assets.

With development focussing on wind and photovoltaic solar power (which represent around 97% of its installed capacity), EDF EN is also present in other renewable energy segments, primarily marine energy. Lastly, EDF EN is also present in the decentralised renewable energy sector (rooftop solar power).

Historically, EDF EN has primarily 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, Poland, Morocco in wind power, and Israel and India in photovoltaic solar power. This expansion continued in 2015 with new facilities in Chile and Brazil. At end-2015, EDF EN teamed up with a wind developer in India (SITAC Group) to develop this technology.

At 31 December 2015, EDF EN had a gross installed capacity of 9,063.3MW, a net installed capacity of 6,131.5MW and a gross capacity under construction of 1,408.8MW.

^{1.} Following the alternative cash or exchange tender offer for EDF EN shares realised by EDF in 2011, EDF implemented a mechanism designed to ensure the liquidity of bonus shares granted to EDF EN 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 EN employees.

INSTALLED CAPACITY BY SEGMENT AND BY COUNTRY

	At 31 December 2015		At 31 Decer	At 31 December 2014	
(in MW)	Gross ⁽¹⁾	Net ⁽²⁾	Gross ⁽¹⁾	Net ⁽²⁾	
Wind power					
USA	2,818.2	2,233.4	1,983.1	1,695.0	
France	1,040.4	754.0	952.2	665.8	
Italy	440.4	246.6	440.4	246.6	
Portugal	507.0	314.1	495.8	302.9	
Greece	384.3	358.0	340.5	314.2	
Canada	589.7	565.7	464.4	440.4	
UK ⁽³⁾	589.7	208.1	542.9	184.7	
Turkey	612.8	250.7	566.8	228.2	
Mexico	391.5	229.5	391.5	229.5	
Poland	106.0	106.0	48.0	48.0	
Belgium (4)	325.2	29.7	325.2	29.7	
Germany	3.0	3.0	3.0	3.0	
South Africa	104.1	50.0	_	-	
Total wind power ⁽⁵⁾	7,912.3	5,348.8	6,553.7	4,388.1	
Solar power					
France	209.2	153.1	209.7	153.6	
USA	160.3	88.7	160.3	88.7	
Italy	79.5	76.8	79.3	76.7	
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	108.5	66.2	68.5	48.8	
India	180.5	46.9	30.0	7.8	
Renewable energy (France)	86.8	58.3	86.4	57.8	
Total solar power ⁽⁵⁾	917.6	572.4	727.0	515.7	
Other segments					
Hydropower	77.2	74.4	77.2	74.4	
Biogas	51.0	51.0	78.0	73.2	
Biomass/Cogeneration	85.2	64.9	80.8	60.5	
Other	20.0	20.0	0.0	0.0	
Total other segments ⁽⁵⁾	233.4	210.3	236.0	208.1	
TOTAL ⁽⁵⁾	9,063.3	6,131.5	7,516.7	5,112.0	

(1) Gross capacity: total capacity of the facilities in which EDF EN has a stake.

(2) Net capacity: capacity corresponding to EDF EN's stake.

(3) EDF EN owns 50% of EDF Energy Renewables (the other 50% is owned by EDF Energy). The net capacity shown of 208.1MW 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.



Wind power

Onshore wind power

EDF EN actively pursued growth in onshore wind energy in 2015, increasing its wind generation capacity by 1,358.6MW gross, bringing its total operating capacity of onshore wind energy to 7,525.1MW gross at end-2015.

Onshore wind farms with a gross capacity of 1,614.9MW were commissioned in 2015, onshore wind farms under construction representing a gross capacity of 1,060.2MW at 31 December 2015.

As part of its DSSA operations, 543.3MW of onshore wind power was sold in North America (Canada and United States).

France

In 2015, EDF EN went over one Gigawatt of wind power in service (gross capacity of 1,040.4MW at 31 December 2015). It was a year that saw the acquisition of new farms located in eastern France totalling 44MW, and the commissioning of the first phase of the Pézilla wind farm (44MW). At 31 December 2015, 146.4MW of onshore wind power was under construction in France.

United Kingdom

EDF Energy Renewables (50/50 joint-venture with EDF Energy) operated a total gross capacity of 589.7MW of wind power at end-2015 (a net capacity of 208.1MW).

At end-2015, the Burnhead Moss (26MW), Park Spring (8.6MW) and Rhodders (12.3MW) projects had been commissioned with the acquisition in November of the Dorenell wind farm project located in the Scottish Highlands. It has been granted permission by the Scottish government for a potential capacity of 177MW. At present, 67.2MW of onshore wind power is under construction in the United Kingdom.

Turkey

Located in western Turkey, the Soma wind farm (240MW), which previously had two phases of 79.2MW and 60.9MW, now has a third phase consisting of 50 Enercon turbines with a unit capacity of 2MW each (*i.e.* 100MW) which was commissioned in July 2015. To date, EDF EN has built eight wind farms in the country, representing a total gross installed capacity of 612.8MW.

South Africa

The first three wind farms won in the second call for tenders – Chaba (21MW), Grassridge (59.8MW) and Waaineck (23.3MW) – were commissioned in 2015. Moreover, EDF EN was selected for an additional 33MW of wind power, during the fourth round (part b) of the call for tenders by the Ministry of Energy in June 2015. It also participated in the Round 4c call for tenders, the results of which are expected to be announced in mid-2016.

United States

The Group operates in the United States through EDF Renewable Energy (EDF RE), an independent renewable energy producer that is wholly owned by EDF EN.

At end-2015, EDF RE had a gross installed capacity of 2,818.2MW (or 2,233.4 net) of onshore wind power in the United States.

At 31 December 2015, EDF Renewable Energy went over 1GW of installed capacity in Texas and had commissioned net wind power capacity of 987MW with in particular the Spinning Spur 3 (194MW) and Longhorn (200MW) wind farms in Texas, the Pilot Hill (175MW) wind farm in Illinois, the Slate Creek (150MW) wind farm in Kansas and the Roosevelt (250MW) wind farm in New Mexico.

Innovative partnerships have been established. A purchase price agreement was signed with Google for the construction of the Great Western wind farm (with a capacity of 225MW) and a similar agreement was put in place with Procter & Gamble to supply wind power electricity for the group's laundry and household product manufacturing facilities in North America.

EDF RE also commissioned a battery project (McHenry) designed to help stabilise the grid (20MW). 737.7MW in onshore wind power is currently under construction with in particular the Kelly Creek, Salt Fork and indeed the Great Western wind farms.

In 2015, 394.5MW was sold, primarily involving 50% of the Hereford and Longhorn North wind farms and 100% of Chanarambie.

Canada

At end-2015, the Group's total gross installed wind power capacity in Canada was 589.7MW (or 565.7MW net).

In 2008, EDF EN won a call for tenders issued by Hydro-Québec to build five wind farms in Quebec with a total capacity of 954MW. All of the wind farms have now been built with the commissioning in 2015 of the Mont Rothery (74MW) wind farm as well as phase II of the wind farm at Rivière du Moulin (200MW).

A new project (Nicolas Riou, 225MW) was won following a call for tenders. Construction should begin in 2016.

Thanks to the DSSA programme in Canada, which in 2015 involved 148.8MW (Rivière du Moulin), investment partnerships enabled portfolio disposals totalling more than 698.8MW.

Offshore wind power

Offshore wind power will be a 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. All three projects received favourable opinions from the public inquiries.

In the United Kingdom, through the subsidiary EDF Energy Renewables (a 50/50 joint-venture with EDF Energy), the Navitus Bay offshore project (630MW) continued its preliminary development phase in 2015. Following the refusal of the building permit, the project was suspended. The development rights were also obtained for the Blyth offshore prototype farm (41.5MW) in Northumberland. Comprising 5 turbines, it should allow new offshore technology to be tested in real conditions.

Photovoltaic solar power

EDF EN pursued growth in solar photovoltaics, its second area of growth. At end-2015, installed solar capacity totalled 917.6MWp gross (572.4MWp net), an increase of 190.5MWp gross from end-2014. EDF EN also has a portfolio of solar projects under construction comprising 329.6MWp gross.

North America

EDF RE commissioned and sold in 2015 the Cottonwood Solar (32.6MWp) and Catalina 2 Solar (25MWp) photovoltaic solar power projects in California. In North America, the Group has total photovoltaic solar power of 183.7MWp gross.

India

As part of the partnership with Acme Solar, in which EDF EN has a 25% interest, the NMS and Odisha solar farms were commissioned (150.5MWp gross). They are located in the Indian states of Rajasthan and Odisha, and were won in calls for tenders run by the Indian government for NSM and the State of Odisha for the project of that name.

In addition, 132MWp were under construction at 31 December 2015.

Israel

The Group operates photovoltaic projects with 108.5MWp gross in Israel and should shortly complete the construction of an additional 50MWp.

Chile

EDF EN established a new subsidiary in Chile in 2015 and is currently building a 146MWp photovoltaic solar farm in the Atacama desert.

Operating & Maintenance

As an integrated operator, EDF EN operates and maintains most of its own wind and solar facilities. This activity has grown significantly and is also carried out on behalf of third parties. Worldwide, EDF EN operated more than 13.9GW at end December 2015 in ten countries. In addition, EDF EN is the leading operation-maintenance company in the United States through its subsidiary EDF Renewable Energy Services, managing close to 11GW in North America. Its position in Europe has been enhanced, exceeding 3GW at end-2015.

The growth in this activity is driven by the commissioning of new wind farms and by taking over wind farms operated by turbine manufacturers whose contracts, under the warranty, ended.

In 2015, a new subsidiary was established in the UK in partnership with EDF Energy.

Decentralised Energy

EDF Énergies Nouvelles Réparties (EDF ENR) is wholly owned by EDF EN. 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 900 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.

In addition, 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 strong competition and low module prices. Faced with this situation, a proactive action plan was implemented to improve the product offering of EDF ENR PWT, with a view to continually improving the performance of modules that, thanks to the fact that they are 100% French-made, have a low carbon footprint.

Lastly, EDF ENR is the controlling shareholder of EDF Store & Forecast (51% owned by EDF ENR and 49% by EDEV). EDF Store & Forecast, founded in March 2014, markets software solutions to forecast, plan and optimise automatic control of renewable energy generation and storage.

1.4.2 SALES AND SUPPLY ACTIVITIES

1.4.2.1 Presentation of the market in France

1.4.2.1.1 Demand

Domestic electricity consumption in France (including Corsica) for the 2015 fiscal year stood at 475.4TWh¹, up 2.2% in comparison with 2014. After adjustments for the weather factor, it was up a modest 0.5%.

Domestic gas consumption amounted to 426.9TWh² in 2015, or a drop of 7.7% in comparison with 2014. After adjustment for the impact of climate, it was up 3.4%.

1.4.2.1.2 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 Engie, E.ON (Uniper, SNET), Enel and Direct Énergie. The main competitor, Engie, has more than 11 million gas and electricity customers in mainland France and is also the leading supplier of gas³. In the gas market and in the corporate and local authority customer segment, the other major gas suppliers are Tegaz, Eni, Gaz Natural, Gazprom, E. ON (Uniper, SNET) and Antargaz. In the gas residential customer segment, the principle suppliers are ENGIE, Direct Énergie and Eni.

As of 31 December 2015, according to the CRE, the electricity market shares in terms of sites of alternative suppliers, *i.e.* excluding historical suppliers, were 11.6% in the residential market, and 11.7% in the non-residential market, and a gas market share, in number of sites, respectively of 19.7% and 35.4%.

The 2010 NOME Law established 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 partially covered by provisions described for electricity in section 1.4.2.1.3 "Regulated electricity sales tariff contracts" below;
- regulated access to historic nuclear power (ARENH) was put into place to the benefit of EDF's competing electricity suppliers (see section 1.4.3.3 "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 2015:

- to their own generation capacities;
- to 16.1TWh under the ARENH mechanism;
- to 0.3TWh⁴ made available by the EDF group through the intermediary of "capacity auctions";
- to imports;
- to the wholesale electricity market.



^{1.} Source: 2015 Electricity report published by RTE.

^{2.} Source: GRT gaz, 2015 report of consumption.

^{3.} Source: engie. com website, presentation press kit of the Énergie Europe branch.

^{4.} Value corresponding to the sum of the specific values, rounded to one decimal place.

1.4.2.1.3 Regulated electricity sales tariff contracts

Access to regulated electricity tariffs

Since the NOME Law entered into force in 2011, 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;
- domestic and non-domestic final consumers who have subscribed power for their site(s) greater than or equal to 36kVA: since 1 January 2016, these customers no longer benefit from the regulated sales tariffs for consumption by these sites; any customer that hadn't switched to a market offering by that date is supplied by EDF, for a period of six months, in accordance with the conditions defined in chapter III of Article 25 of the Law of 17 March 2014 on consumption;
- 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.

Moreover, as part of its public service missions, EDF has, since 1 January 2005, been offering the electricity basic necessity tariff (*tarif de première nécessité*, or TPN), for which the eligibility criteria were altered in 2013 to open it up to more consumers and enable all electricity suppliers to offer it. The Energy Transition for Green Growth Law, provides certain provisions to combat energy poverty, with the practical details regarding implementation being left to decrees and orders:

- implementation of an energy cheque, on trial in certain regions from 2016, to replace the basic necessity tariff;
- enabling the remote display of electricity consumption.

At 1 August 2015, the increase, excluding taxes, of the regulated sales tariffs was on average 2.5% for the residential Blue Tariffs, 0.9% for the Yellow Tariffs, and 4% for the Green Tariffs, with the professional Blue Tariffs being unchanged, pursuant to the Order of 30 July 2015. 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 its opinion issued on 28 July 2015, the Energy Regulation Commission (CRE) disagreed with the level of the increase in the yellow and green tariffs, deemed insufficient to make up the under-coverage of costs in previous years prior to the end of regulated tariffs for sites that subscribed power greater than 36kVA. Moreover, another Order of 30 July 2015, which came into force on 1 August, relating to the tariffs of 3.64%, starting from 1 August 2015.

1.4.2.1.4 Market-rate electricity supply contracts

In France, customers are free to leave the regulated sales tariffs at any time and without advance notice for an offer proposed by any other supplier.

With the exception of customers directly 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.

1.4.2.2 The Customer Division

EDF's sales and supply activities in France are managed by the Customer Division.

1.4.2.2.1 Presentation and supply strategy

In France, EDF markets energy and services to nearly 26.7 million customer accounts (excluding overseas and Corsica), or almost 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 2015 were 355TWh, which represents a market share of 77.4%. In 2014, sales were 353.8TWh and market share 78.8%.

EDF provides gas supply to all types of customers. In 2015, EDF marketed 22.6TWh of gas, which represented a market share of 5%, to more than 1.2 million customers. At the end of 2015 year, EDF was supplying gas to more than 1.1 million residential customers (in comparison with 1 million at end-2014).

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. 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, and 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 1.5.6.1 "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'économies d'énergie*, or CEEs) in exchange for actions realised with all of its customers. Put into place in 2006, this 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. In addition, the Energy Transition for Green Growth Law places energy suppliers under an obligation to facilitate energy savings for households in energy poverty. The regulations published on 30 December 2015 set a target of 150TWhc over 2016-2017.

Moreover, EDF is positioning itself as a major player in energy transition by its visible and sustainable territorial action. Furthermore, EDF is also supporting the roll-out of smart meters and is committed to promoting the futur smart electrical systems.

1.4.2.2.2 Activity by customer category

1.4.2.2.2.1 Residential customers

At the end of December 2015, EDF had 27.1 million residential electricity sites and 1.1 million gas customers in France. For fiscal year 2015, the volume of its sales rose to 133.8TWh of electricity and 10.6TWh of natural gas.

EDF is striving to sustainably develop the confidence of its customers, by accompanying them in order to make energy savings. When contacting EDF, 9 out of 10 customers state they are satisfied with the response, regardless of the channel or why they contacted the company. The customer experience offered, underpinned by ongoing innovation, is a mix of digital and human. There are now over 10 million customer spaces with close to 5,000 advisers to serve them.

Energy supply

EDF supplies electricity at the regulated sales tariff and as part of market offerings.

EDF also supplies 1.1 million customers with natural gas as part of market offerings.

EDF innovates for its residential customers and at the end of 2015 year, EDF launched the renewable offering, under which EDF guarantees that enough electricity from renewable sources will be added to the grid to cover the consumption of customers taking up this offer. In addition, for every megawatt-hour consumed, EDF will contribute two euros to the "Previnergy" research programme, focussed on forecasting renewable energy generation.

Functionality and services

To facilitate the management of energy contracts, EDF offers digital tools and services: "EDF & Moi" application, electronic invoice, "Relevé confiance" service, etc. In March 2015, EDF launched a new digital solution "e.quilibre", designed to provide customers with greater transparency regarding their energy consumption in killowatt-hour and in euros (electricity and gas) and allowing them to compare it with similar homes.

EDF also offers energy savings advice on the website travaux. edf.fr, and has a network of almost 4,000 EDF home solutions partners to help residential customers to improve the energy efficiency of their homes. Customers can also access financing solutions from EDF's financial partner (Domofinance) to see through these plans.

Earning of energy savings certificates (CEE)

With respect to residential customers, CEEs are earned from the thermal renovation of the home, primarily based on a network of EDF home solutions partners.

For information relating to the regulatory framework concerning the CEEs, see section 1.5.6.1 "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 (see section 3.2.3.6.1 "Contributing to the fight against energy poverty and energy access").

1.4.2.2.2.2 Corporate and business customers

EDF, operating under the EDF Entreprises brand, has 1.6 million corporate and business customers. For the 2015 fiscal year, electricity sales were 175.8TWh at the regulated sales tariff and at market prices, and sales of natural gas were 10.6TWh.

EDF Entreprises supports businesses and professionals so as to make them more competitive, in particular by helping 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 also has as an objective to contribute to the performance of the French electricity system, in avoiding investments in order to cover spikes in electricity.

The range of offers

EDF Entreprises provides businesses and professionals with competitive tailor-made electricity and gas supply offers. Offers are varied depending on customer expectations and consumption patterns.

The electricity offers provided by EDF Entreprises enable small businesses, very small businesses and professionals to optimise their energy supply through simple contractual arrangements. They allow customers that consume more to choose the length of their commitment at the offered prices, depending on their needs in terms of budget visibility. Lastly, EDF Entreprises is able to tailor solutions for the heaviest users depending on the structure of their consumption.

EDF Entreprises, through the structure of its offers, encourages its customers to optimise consumption having regard to generation costs, by offering different prices at peak and off-peak hours, and even summer and winter prices for heavier users. For large customers with greater control over their consumption, EDF Entreprises offers to reward their ability to shed load on peak winter days, even including in certain instances remote management solutions.

EDF Entreprises allows all customers to choose electricity from renewable sources to cover their consumption, with a view to contributing to the energy transition. For small and medium sized enterprises and professionals, it involves a specific offer, the renewable energy contract, which guarantees that 100% of their consumption will come from electricity generated from renewable energy sources in France and facilitates their communication with their own customers regarding their commitment. In addition, for every megawatt-hour billed EDF will contribute one euro to fund renewable energy research projects or to develop new renewable energy electricity generation units. For larger customers, it involves an option that allows them to decide themselves what proportion of their consumption will come from guaranteed sources, between 20% and 100%.

EDF Entreprises also enhanced its range of services intended for all its electricity and gas customers, whether small companies or large industrial customers: online consumption monitoring, electronic invoice, assistance and troubleshooting, advice (optimisation of subscribed power, efficiency and reduction of energy expenses, etc.), in particular for customers who want to use an energy management system.

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, not only with tailor-made electricity and gas supply offers and offers that reward customers that can shed load, but also support controlling their energy consumption and their CO_2 emissions as well as CO_2 trading for businesses subject to the national quota allocation plan (see section 1.5.6.1 "Basic regulations applicable to the environment, health, hygiene and safety").

Customer satisfaction

EDF Entreprises includes in its goals the satisfaction of its customers, to whom it listens and surveys on a regular basis both in terms of how offers match needs, the monitoring of requests, and the information and advice offered. In 2015, overall satisfaction rose 2 to 9 points depending on the customer segment compared with 2014 to 80% of customers very satisfied and rather satisfied.

1.4.2.2.2.3 Local authorities, low-income housing agencies, Local Distribution Companies (LDCs) and public service providers

Against the background of regional reform and the energy transition, EDF offers customised solutions for local authorities and public institutions with decentralised decision-making powers (hospitals, universities and major graduate schools, chambers of commerce and industry, CROUS student service centres, ports and airports).

EDF is active for these customers in five areas:

- as a competitive market operator:
 - 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 development of offers and services with the sustainable city in mind: local climate plans, eco-districts, local generation, street lighting, electric mobility, energy efficiency of buildings, etc.,
 - the fight against energy poverty;
- with respect to its public service missions:
 - 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.



EDF manages over 56,000 customers in this market this way. These customers all together represent approximately 1.2 million electricity sites, more than 281,700 of which are for social-housing lessors, for an annual consumption of 29.3TWh and close to 8,000 natural gas sites for an annual consumption of 1.4TWh. In addition to that are the 16.1TWh of electricity sold to the Local Distribution Companies (LDCs) in 2015.

In 2015, satisfaction with EDF Collectivités ranged from 81% to 88% depending on the segment. The quality of the relations with a dedicated contact person, guidance, responses to claims, and actions in matters of poverty are well received. 92% of customers have confidence in EDF Collectivités.

Controlling energy

Agreements are signed with local authorities, pertaining to control of their energy consumption. In addition, 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 and renewable energies. A "Load Amount" device for social-housing lessors aims to improve the energy efficiency of social housing, and makes it possible for EDF to issue energy savings certificates. In 2015, over 173,000 social housing units were helped, more than 162,700 of which were for renovation work.

1.4.2.2.3 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 (see section 3.2.2.3.3 "Helping customers consume less, more efficiently").

1.4.2.2.4 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 1.4.4.2 "Distribution – Électricité Réseau Distribution France (ERDF)");
- the supply of electricity to customers benefiting from regulated sales 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 is carried out in compliance with the commitments of the concession specifications and general terms and conditions of sale (subscription terms, payment and delivery terms, contractualisation, etc.).

Each concession contract in mainland France is co-signed by EDF, ERDF and the licensing authority, and concerns a municipality or a grouping of municipalities. The public distribution of electricity is taking place in the framework of 580 concession contracts, 49 of which are at departmental level.

In 2014 and 2015, around twenty concession contracts were negotiated, in particular with the Seine-et-Marne and Vaucluse energy consortia, the Douaisis municipal association and the cities of Melun and Tours. Some twenty concession contracts will expire in 2016 and in 2017. An organisation and tools have been put into place, particularly in order to renew the concession contracts, mobilise both national and regional competences, develop the expertise of EDF's contacts in the contracting authorities, draw up each year the concession activity reports (CRAC) and respond to inspection requests from the granting authorities.

The upcoming period will be particularly marked by the implementation of the regulations on the content of concession activity reports set out in the Energy Transition for Green Growth Law (TEPCV) of 17 August 2015, and by work to modernise the model concession contract done in conjunction with national bodies representing the granting authorities.

The Energy Transition for Green Growth Law, together with the MAPTAM¹ and NOTRe² Laws, reaffirmed that metropolitan areas and urban communities can act as granting authorities for the distribution and supply of electricity at regulated sales tariffs. For the operator, this means broader dialogue on the concession contract, changes to said contract, its management with the urban communities, which now have an interest in such matters.

The Energy Transition for Green Growth Law in particular introduces provisions that rebalance the governance between rural and urban communities within departmental electricity consortia. EDF is preparing if needs be to renegotiate concession contracts at metropolitan area or urban community level should the latter wish to have a contract just for their area.

1.4.3 **OPTIMISATION AND TRADING ACTIVITIES**

1.4.3.1 Role and activities of the Upstream/ Downstream Optimisation & Trading Division (DOAAT)

DOAAT is responsible for managing the balance of EDF's upstream/ downstream electricity portfolio, optimising the electricity gross margin created by this portfolio, as well as managing the associated physical and financial risks.

Management of electricity supply/demand can be broken down from realtime 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 Department, and validated by its Executive Committee (see section 2.1.2 "Risks associated to the Group's activities"). For example, a drop in temperature of 1°C in winter leads to an increase in the consumption of electricity in France in the region of 2,400MW³, and the amplitude of hydraulic generation between two extreme years may reach around 20TWh. Thus, in order to address the "volume risk", DOAAT ensures that it has, in all time frames, sufficient power margins in order to enable it to meet its commitments in nearly all situations. It possesses a set of leverage actions: scheduling of maintenance operations of generation means (in particular nuclear), management of inventory (fossil fuels, hydraulic reserves and customer load shedding), purchases and sales in wholesale markets via EDF Trading, which is in charge of market access on behalf of DOAAT (see section 1.4.6.3 "Optimisation and trading: EDF Trading"). 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, with the assistance of EDF Trading.

With respect to RTE, DOAAT plays the role of "balance responsible entity" on EDF's perimeter in mainland France. In this regard, EDF is committed to financially compensate RTE in the case of a deviation onto its balance group. The optimisation consists of communicating to RTE 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 addition, DOAAT analyses and evaluates the impact on the physical and financial balance of the "generation-supply" portfolio (C+P) of regulatory and institutional changes.

^{1.} Modernisation of regional public action and the consolidation of metropolitan areas (MAPTAM – modernisation de l'action publique territoriale et d'affirmation des métropoles).

^{2.} New regional organisation of the French Republic (Nouvelle Organisation Territoriale de la République – NOTRe).

^{3.} Source: RTE.

1.4.3.2 Long-term electricity purchase and sales contracts

EDF maintains commercial relations through numerous energy purchase or sales contracts with European operators.

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 1.4.1.1.1 "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.

1.4.3.3 **Regulated access to historic nuclear** power (Accès Régulé à l'Énergie Nucléaire Historique, or ARENH)

Operational since 1 July 2011, the ARENH mechanism entitles competing suppliers to buy electricity from EDF, once they have signed a framework agreement, at a regulated price and at volumes determined by the Energy Regulation Commission (CRE). This mechanism can also be accessed by network operators for their losses. The CRE is responsible for managing the mechanism and for calculating entitlements of which it notifies the co-contracting parties. Thus, suppliers wishing to exercise their right to access the ARENH submit a request to the CRE, sending it forecasts of their customers' consumption. The detailed forecasts, along with the entitlements calculated for each supplier, are only known to the CRE and the supplier. The payments are managed by the *Caisse des Dépôts et Consignations*.

The ARENH price is regulated. A draft decree setting out the methodology for determining the ARENH price was reviewed by the Higher Energy Council (Conseil Supérieur de l'Énergie) on 19 June 2014, and subsequently sent to the European Commission where it is currently being examined. Pending the completion of this work, the government decided in its press release of 4 November 2014 to keep the current ARENH price at €42/MWh.

Article L. 336-8 of the Energy Code provides for an assessment of the implementation of the ARENH mechanism and of its impact on competition and the operation of the wholesale market, in 2015 and subsequently every five years. This assessment is presented by the government to the Parliament on the basis of the reports from the CRE and the Competition Authority. At 31 December 2015, the findings of this assessment hadn't been released by the competent authorities yet.

1.4.3.4 Balance group dedicated to the Purchase Obligations and selling on the wholesale market

EDF is a mandatory purchaser of the electricity generated by the generation facilities the government wishes to support and develop (renewable energy sources and energy efficient cogeneration). By law (Article L. 121-7 of the Energy Code), the additional costs stemming from this obligation are offset for EDF on the basis of an electricity market benchmark price (concept of "avoided cost").

At its meeting of 9 October 2012 on the costs for 2011, the CRE indicated that: "In theory, the avoided cost should be reduced by the imbalance costs borne by EDF due to the unpredictable nature of a portion of the generation covered by the purchase obligation. Such imbalances, which were negligible in past years compared with consumption-related imbalances, are becoming more significant."

With the development of renewable energies, the cost generated by the difference between anticipated generation and actual generation has become significant. As a result, at its meeting of 16 December 2014, the CRE changed the formula for calculating EDF's avoided costs to include such imbalance costs. In order to make objective and independently identify such imbalances, the CRE asked EDF to establish a balance group dedicated to the facilities subject to a Purchase Obligations contract.

This dedicated balance group was established on 1 July 2015, and DOAAT is now organising the sale of energy generated by the facilities under a Purchase Obligations contract directly on the energy markets. This allows such energy to be managed independently of EDF's own portfolio. Thus, since 4 November 2015, electricity volumes under Purchase Obligations that can be forecast over the short-term (one day for the next, known as the "random component of the Purchase Obligations") are sold on EPEX Spot. Since January 2016, volumes that can be forecast over the long-term (known as the almost certain component of the Purchase Obligations) are sold under transparent, non-discriminatory calls for tender.

1.4.3.5 **Preparation of the future capacity** mechanism

Articles L. 335-1 *et seq.* of the 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. Each supplier must therefore provide guarantees of load shedding and electricity generation capacities, which can be implemented to ensure balance between generation and consumption, in particular at peak periods.

To comply with this obligation, each supplier must therefore get capacity guarantees from producers, which must certify all their means of generation, or from demand response managers.

A new market will come into being to back such transactions with capacity guarantees. The mechanism thus creates a new commodity that, for EDF, is managed by DOAAT.

The first year of delivery is expected to be the 2017 calendar year, although there is currently a possibility that the implementation of the mechanism will be delayed.

In 2015, DOAAT certified most of EDF's means of generation for the 2017, 2018 and 2019 delivery years. Similarly, it is carrying out those for the means of generation under Purchase Obligations. DOAAT is preparing to operate in this newly created market in 2016 once the public authorities have approved the start of trading, against the background of the European Commission's announcement that it had started a formal investigation into the French capacity mechanism. This market will allow EDF to manage its annual positions established for each delivery year by its obligation volumes and its certified volumes.

1.4.4 **REGULATED ACTIVITIES IN FRANCE**

1.4.4.1 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 owner and operator of the French electricity transmission network, which it operates, maintains and develops. With over 100,000 kilometres of high and extra high voltage circuits and 50 cross-border lines, this is Europe's largest network. Its geographical location places it at the core of the European electricity market. RTE guarantees the correct operation and safety of the electricity system, and provides free and fair access to all the network users. The company also pays special attention to supporting the development of renewable sources of energy in France and their integration into the electricity system, which requires the development of the transmission network and interconnections.

RTE is wholly owned by EDF, but due to its specific conditions of governance (see section 1.4.4.1.2 "Organisation of RTE"), RTE wasn't fully consolidated by the Group but rather consolidated using the equity method. It should be noted that 50% of its shares were allocated to the asset portfolio dedicated to financing the dismantling of nuclear power plants.

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(1) Provisional data (the final data on electricity generation for 2015 will be available on RTE's website in July 2016: www.rte-france.com). (2) Including water rights and exchanges via distribution network.

2015 energy balance

2015 was generally a warm year in France, although less than in 2014. Accordingly, gross consumption in mainland France settled at 475.4TWh, a 2.2% increase on 2014.

The peak annual electricity consumption occurred during a cold spell with 91.6GW on 6 February 2015, similar to levels in 2011 and 2013. Although the 2012 thermal regulations will moderate future temperature sensitivity, the sensitivity of consumption to temperature remains around 2,400MW/°C in winter.

Adjusted for climate factors, consumption outside the energy sector, which had been stable for three years, rose a modest 0.5% to 476.3TWh. Due to the growing penetration of renewable energies in the distribution networks, the change in withdrawals adjusted for climate factors on the RTE network no longer necessarily matches the consumption side, and has been falling since 2011 (-0.6% in 2015 compared with 2014).

Industrial consumption is similar to the past three years at 67.6TWh, masking varying trends across sectors.

1.4.4.1.1 Overall environment

Renewable energies continue to grow in order to foster the energy transition

Wind power exceeded the threshold of 10,000MW of installed capacity in 2015. Wind power generation was up 23.3% (to 21.1TWh) on 2014, and maximum wind power capacity exceeded 5,500MW every month of the year. A new record hourly wind generation was even set at 1 p.m. on 29 March 2015, with a capacity of 8,266MW, representing a load factor of 86.3%, while daily generation peaked on 29 November 2015 (at 184GWh).

In 2015, 895MW of solar capacity was connected in mainland France, raising installed solar capacity to 6,200MW. Around a quarter of this increase stems from the commissioning, in September 2015, on the RTE network of the Constantin farm at Cestas in Gironde, currently the largest photovoltaic solar farm in Europe.

French exports remain high due to continued low prices

The balance of trade is positive across all French borders. It totalled 61.7TWh, exceeding the 60TWh threshold for the third time in the past ten years. The new Baixas – Santa Llogaia interconnection, which has gradually been put into commercial operation since 5 October 2015, increases the transit capacities with Spain. France's trade surplus with Spain was 7.3TWh.

France continues to have a trade surplus with Switzerland (13.9TWh).

The trade surplus was 19.7TWh with Italy, where the interconnection is saturated 78% of the time, and 14.1TWh with the United Kingdom, where the interconnection is saturated 86% of the time. New interconnection projects are in particular being planned on these two borders.

1.4.4.1.2 Organisation of RTE

RTE is a public limited company (société anonyme) with an Executive Board and Supervisory Board.

RTE's Supervisory Board is comprised of twelve members appointed for five years:

- eight members appointed by the Shareholders' Meeting:
 - four government representatives, including the State as a legal entity, represented by an individual,
 - four representatives of the shareholder;
- four members elected by the staff.

A Government Commissioner was also appointed and attends Supervisory Board meetings in a consultative capacity.

RTE's Executive Board is made up of five 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.

1.4.4.1.3 **RTE's activities**

In France, RTE manages the public transmission network and carries out its missions under the conditions set out in model specifications approved by applicable decree until 2051. In accordance with the French Energy Code, transmission network operators must be certified according to a process associating the CRE and the European Commission, which aims to ensure that the entity concerned fulfils the conditions of independence set out by this text. RTE was certified by the CRE in 2012.

Thus RTE manages the transmission infrastructure, guarantees access to the transmission network and manages energy flows.

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 per year in 2014 and 2015. To perform its missions, 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 1.4.4.4 "Tariffs for Using the Public Electricity Transmission and Distribution Networks (TURPE)").

1.4.4.1.3.1 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, which is now almost complete. 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.

In 2015, equivalent outage time for RTE customers was 7mn 02s. This result incorporates the consequences of the heat wave that caused a whole series of faults on instrument transformers between 30 June and 4 July 2015, resulting in significant outages for customers. These events, which on their own accounted for 5mn 44s of outage time, obscure the good results achieved otherwise.

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. RTE draws up an annual investment programme that is submitted to the CRE. In 2015, RTE's total investments amounted to €1,402 million (within the scope regulated by the CRE). The main investments involved the reconstruction of the 400kV Charleville-Reims line, the commencement of construction work on the French side of the direct current link between France and Italy (Savoy-Piedmont) passing through the Fréjus safety tunnel, the completion of construction work on the direct current line reinforcing the interconnection between France and Spain in the eastern Pyrenees (the commercial capacity of which was put on the market in October 2015), along with the ongoing work to replace conductors making it possible to secure flows along the 400kV Montélimar-Lyon line. Almost 30% of investments in network structures involved restoration aiming at maintaining service quality.

RTE's 2016 investment programme approved by the regulator amounts to \in 1,550 million. The 2016 investment programme concerns the continuation of significant investment in developing and renewing the network, as well as developing and updating the IT systems, in particular in light of the changing environment associated with the energy transition and European market integration.

RTE's investments are also 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 2015, the Regulated Assets Base (RAB) increased by \notin 411 million, up from \notin 12,826 million as at 1 January 2015 to \notin 13,237 million as at 1 January 2016¹. 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 of April 2013).

1.4.4.1.3.2 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. These interconnections make it possible to ensure the transit of energy from one country to another and the operating safety of the electricity transmission networks, to develop the European electricity market, by enabling an electricity supplier to sell its energy to a customer in another European Union country, by taking advantage of the differences in the timing of peak load on either side of the border, and to better pool the means of generation at the European level.

France-Spain interconnection

INELFE (Electric interconnection between France-Spain), a Franco-Spanish company owned 50/50 by RTE and its Spanish counterparty REE (Red Electrica de España), was created in October 2008 to carry out the whole interconnection project between the two countries. A new \pm 320kV line was commissioned in October 2015, doubling the prior electricity exchange capacity between the Iberian peninsula and the rest of Europe, from 1,400MW to 2,800MW.

An agreement signed in 2011 between the European Investment Bank (EIB), INELFE, REE and RTE, provided for EIB's participation in financing the project through a €350 million loan granted to the two network managers, contributing half of the total €700 million budget. Furthermore, financing of the interconnection received a €225 million subsidy granted by the European Union in accordance with the EEPR programme (European Energy Program for Recovery).

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.

^{1.} Amounts still to be confirmed by the 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).

National Grid, the british network operator, Terna and 50 hertz, transmission network operators in Italy and Northern and Eastern Germany, and more recently REN, the Portuguese network operator, joined Coreso.

1.4.4.1.3.3 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.

1.4.4.2 **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 2015, ERDF provided electricity to over 35.6 million customers (delivery points) in mainland France through a network of about 1.3 million kilometres.

At 31 December 2015, ERDF employed 39,033 people.



Electrical losses are inherent to the distribution network and mainly result from physical 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 2015, losses amounted to 22.9TWh, *i.e.* a rate of 6.2% of electricity injected into the network. The cost borne by ERDF to offset losses in 2015 was €1,137 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, ERDF benefits from ARENH deliveries for its electricity purchases to offset its losses, up to around 6.4TWh in 2015.

Technical specifications: the distribution network ERDF is the concession holder of (see section 1.4.4.2.2 "Distribution activities") is, at 31 December 2015, made up of around:

- 631,400 kilometres of A-type high-voltage (HVA) lines of 20,000 volts;
- 709,500 kilometres of low-voltage (LV) lines of 400 volts;
- 2,251 HVB/HVA source substations;
- 774,500 HVA/LV transformer substations.

1.4.4.2.1 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 adopted by EDF and Gaz de France, now Engie, led them to spin out their distribution network. The two subsidiaries ERDF and GRDF share a "common service" pursuant to the legal framework (see section 1.4.4.2.3 "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.

In few months, ERDF will change its branding name. This new name will reflect the company's strong commitment to the energy transition in the wake of COP 21. This will also enable the electricity distribution network operator to raise its profile and clarify its mission, as intended by the CRE.

ELECTRICITY VOLUMES ON THE ERDF NETWORK

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 1.4.4.2.2 "Distribution activities"), performs its missions as the public distribution network operator in mainland France.

These missions are:

- define and implement operational, investment and development policies in relation to the electricity distribution network;
- 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.

1.4.4.2.2 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 2015, ERDF invested ≤ 3.2 billion, ≤ 1.4 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 ≤ 789 million in 2015. In all, almost ≤ 4 billion were invested on the distribution networks in 2015 in mainland France.

GROSS INVESTMENTS OF ERDF

(in millions of euros)	2015	2014
Connections and reinforcement	1,396	1,501
Regulatory, safety and transmission channel obligations	370	397
Network modernisation	1,089	979
Work instruments and operational resources	315	330
Total ERDF investments	3,170	3,208
Work allowances by third parties and local authorities (1)	789	833
TOTAL NETWORK INVESTMENTS	3,959	4,041

(1) After deducting PCT¹ and Article 8².

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.

This level of investment allows ERDF to carry out asset renewal programmes.

To complement these investments, ERDF continues to increase the budgets for the preventative maintenance of networks, in particular for work relating to downsizing. This budget amounted to \in 342 million in 2015 (versus \in 334 million in 2014 and \in 273 million in 2013).

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.

^{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).

In 2015, ERDF built over 98.2% of new underground medium-voltage lines and over 80.8% 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.

Quality of service

Quality of service is one of ERDF's main objectives. In 2015, the average outage time excluding transmission incidents and excluding exceptional incidents was 61.1 minutes. This is the best result in ten years. 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.

As regards the quality of voltage, in 2015 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. In 2015, the FIRE team was mobilised in early July to repair the underground networks affected by the heat wave in the Île-de-France, Provence - Alpes - Côte d'Azur and Lyon regions, and subsequently at end-August, following the storms that affected the South-West.

As regards insurance cover for the protection of the overhead distribution network against the effects of large scale storms, see section 2.2.7.5.3 "Storm cover".

Development of renewable energies

Across the scope of ERDF activities, the number of photovoltaic generation facilities connected to the grid increased once again: at the end of 2015, 5,217MW from photovoltaic facilities were connected (compared with 4,590MW at the end of 2014), which represented around 338,000 facilities (versus 321,000 at end-2014). The development of wind power generation connected to the public distribution network also continued, and more than 9,191MW were connected at the end of 2015.

At end-2015, a total of 14.4GW in photovoltaic and wind power generation was connected to the ERDF grid, respectively made up of 5.2GW from photovoltaic plants and 9.1GW from wind power generation. To the power thus generated are added other sources of power generation, in particular "historical" hydropower plants (1.5GW), cogeneration (1.8GW), biogas, biomass and dispatchable fossil-fuel thermal. In all, at the end of 2015, the generation fleet connected to ERDF was around 19.3GW.

Electricity market

The French electricity sales market has been open to competition for all customers since $1^{\rm st}$ July 2007.

36 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.

ERDF took steps to achieve, for sites with subscribed power in excess of 36kVA, the end of regulated sales tariffs and their transition to market offers. To this end, ERDF put in place a national project structure designed to adjust metering to market offers by the deadline. The main projects underway involved the supplier change procedure, the roll-out of operating procedures, the roll-out of meters, the adaptation of IT systems and the preparation for a burst in activity at the end of 2015.

Concessions

At 31 December 2015, ERDF and EDF were co-concession holders of 580 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 property ¹. 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 mainland 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 1.5.6.2.7 "Regulations that are applicable to publics markets".

1.4.4.2.3 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 at local level. 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.

1.4.4.2.4 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" that can receive orders and send data without the physical involvement of a technician. This system is the first stage of the smart grids.

^{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.

After a successful pilot phase, which was validated by the public authorities, almost 300,000 Linky meters are in operation in Lyon and Touraine. On 1 December 2015, ERDF started the first phase of the Linky meter roll-out. The first phase consists of installing 3 million meters between December 2015 and the end of 2016 year. The goal is to replace 90% of the old meters in 35 million homes in France by 2021.

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.

1.4.4.3 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.

This situation notably implies that generation surcharges, which the legislator considers as a public service expense, are offset by the Contribution to the Public Electricity Service (see section 1.5.2 "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.

	At end-2015	
	Total	of which Corsica
Number of EDF employees (1)	3,374	750
Number of customers	1,119,620	249,209
Network length (in km)	35,869	11,461
Installed capacity of the EDF fleet (in MW)	2,123	585
of which hydropower fleet and other renewable energy sources	456	197
of which thermal fleet ⁽¹⁾	1,667	388
EDF output ⁽¹⁾	5,742	1,308
of which hydropower output	1,268	303
Energy purchases from third parties	3,966	918
of which renewable energies, including bagasse	1,281	226
of which other energies	2,684	691
TOTAL ENERGY PRODUCED BY EDF AND PURCHASED FROM THIRD PARTIES	9,708	2,226

(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 48MW reduction in the thermal installed capacity in 2015 compared with 2014 was due to the commissioning of the final engines at Pointe Jarry, offset by the complete decommissioning of the IES engines at Jarry Nord (Guadeloupe) and the decommissioning of combustion turbine 11 at Dégrad-des-Cannes (French Guiana).

MAIN CHARACTERISTICS OF THE IES



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 the Agency for Environment and Energy Management (*Agence de l'Environnement et de la Maîtrise de l'Énergie* or ADEME) and local institutions, energy efficiency actions.

Changes and outlook

Investments to modernise and reinforce the electricity generation fleet with guaranteed capacity

The 2009 Multi-year Electricity Generation Investment Programme (PPI) set the objective of implementing electricity generation at guaranteed capacity for Corsica and the overseas departments at 1,166MW by 2020. The 2009 PPI moreover foresaw the renewal of almost all the existing diesel plants.

The EDF group thus undertook to replace its main end-of-life plants, also built and operated by the EDF PEI subsidiary.

The four diesel plant construction projects were successfully completed between 2012 and 2015, involving a total capacity of close to 750MW: Port-Est in Réunion, Bellefontaine B in Martinique, Pointe-Jarry in Guadeloupe and Lucciana B in Northern Corsica. These new generation resources, equipped with innovative technologies, 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.

In addition, the Saint-Pierre-et-Miquelon plant (21MW), was refurbished in 2015 and inaugurated on 26 November 2015.

The extension to the Saint-Barthélemy plant (two new 16MW engines) has been operational since 2014.

The construction of the Saint-Martin plant is ongoing, with completion scheduled for the first half of 2016.

EDF invested €158 million in IES electricity generation 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 thus invested €175 million in networks 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 IES. 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 IES and is committed to experimental projects on smart grids in partnership with other industry actors, research laboratories and the ADEME.

1.4.4.4 Tariffs for Using the Public Electricity Transmission and Distribution Networks (TURPE)

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 CRE. The current tariff for using the public transmission network (TURPE 4 HVB), set by the CRE decision of 3 April 2013, came into force on 1 August 2013.

RTE's tariff revenues were thus up 2.4% at 1 August 2015. This tariff will be changed on 1 August 2016 taking account of the impact of the mechanisms created by the Energy Transition for Green Growth Law. As the TURPE 4 HVB was meant to apply for a period of around four years, the CRE began working on a new tariff for using the public electricity transmission network (TURPE 5 HVB), which will come into force in summer 2017.

Financial compensation of RTE's assets is obtained by multiplying the amount of the regulated assets base (RAB), estimated at $\leq 12,826$ million at 1 January 2015, by a fixed rate of compensation corresponding to a nominal rate before tax of 7.25% for the 2013-2016 tariff period. In addition, the repayment to network users of overpayments prior to 2013, via regulation mechanisms, moderates the tariff.

On this basis, in 2015, network access tariff revenues were around €4,085 million for the electricity transmission network, revenues from services €95 million and revenues from interconnections €460 million.

As regards the transmission and distribution of natural gas (Law no. 2003-08 of 3 January 2003), see section 1.5.3.2 "French legislation: Energy Code".

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 CRE in a transparent and non-discriminatory manner, in order to cover all the costs borne by the network operators.

At 1 August 2015, the TURPE increased 0.4%.

1.4.5 GROUP'S INTERNATIONAL BUSINESS

2015 INSTALLED CAPACITY AND OUTPUT OF THE INTERNATIONAL BUSINESS



NB: Excluding international data for EDF Energies Nouvelles, part of the "Other activities" segment. Technical data calculated by applying the consolidation method and consolidation percentage of entities in the EDF group's consolidated financial statements.

(1) Excluding 100MW drawing rights on Chooz B.

1.4.5.1 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 and production in the North Sea with EDF Production UK, a subsidiary of Edison (see sections 1.4.6.2.2.3 "Exploration and Production (E&P)" and 1.4.5.2.3.2 "Hydrocarbon business").

EDF Energy is one of the UK's largest energy companies and the largest producer of low-carbon electricity. The company produces around one-fifth of the nation's electricity from its nuclear power stations, wind farms, coal and gas power stations and combined heat and power plants.

The company supplies gas and electricity to 5.6 million business and residential customer accounts and is the biggest supplier of electricity by volume in Great Britain.

EDF Energy plans to build four new nuclear plants, subject to the right investment framework. These new plants could generate enough low carbon electricity for about 40% of Britain's homes.

It employs around 14,000 people at sites throughout the country. The workforce is highly engaged with 83% taking part in the annual employee survey with an engagement index score of 76%. 79% would recommend EDF Energy as a good place to work and are proud to tell people where they work. 90% of employees go the 'extra mile' to ensure the success of EDF Energy.

In 2015, EDF Energy maintained its position as the largest generator of electricity (by TWh produced) and of low carbon electricity ¹, and overall as the leading electricity supplier in Great Britain (by TWh sold ²).

2015 INSTALLED CAPACITY AND OUTPUT IN THE UNITED KINGDOM



- (1) The figures shown represent 100% of nuclear capacity and generation output, shared 80%/20% by EDF Energy and Centrica.
- (2) Coal capacity represents transmission entry capacity. Net power including Biomass.
 (3) Including 1 MW of Barkantine CHP.
- (4) When EDF Energy holds more than 50% of assets, the capacities shown are 100% of
- the installed capacity and generation output. Renewables output excluding Biomass. (5) Coal and gas data, excluding grid network losses, are respectively 15.6 TWh
- and 6.2 TWh. 2014 data adjusted to be comparable.

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^{1.} Source: Elexon Reporting.

^{2.} According to the available data, excluding Northern Ireland.

	31/12/2015	31/12/2014
Electricity supplied (1) (GWh)	48,683	51,247
Gas supplied (GWh)	27,693	27,803
Number of residential customer accounts (thousands)	5,301	5,592
Number of employees ⁽²⁾	13,920	14,716
Total Recordable Incident Rate ⁽³⁾	0.68	0.95

(1) Power supplied to final consumer including previous year metering cut-offs.

(2) Includes staff on maternity leave.

(3) 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.

1.4.5.1.1 Strategy

The vision for EDF Energy for 2030 starts with customers and their needs. Hence its strategy, which aims at ensuring a sustainable long-term business, is focused on supporting the transition to a lower-carbon economy through generation of safe, reliable and affordable low-carbon electricity. Equally, EDF Energy seeks to meet customer needs in an efficient, simple and responsible way, enabling customers to control their energy usage. All of their actions are underpinned by a focus on improving cost efficiency across the business.

In its customer-facing business, EDF Energy aims to be the energy partner of choice for residential and business customers, helping them to make the most of their energy consumption and production and of their increasingly connected, smart homes (and similarly connected public buildings, communities and cities), whilst providing excellent service and convenience. Through innovation and digitalisation, the company seeks to help customers control and save energy and to deliver attractive low-carbon solutions thus ensuring a competitive offering to customers is maintained in a rapidly evolving market.

In generation, EDF Energy seeks to create value through continued operational excellence of existing assets and by developing a portfolio of new investments. This includes leading the revival of nuclear new build in the UK. In partnership with China General Nuclear Corporation (CGN), EDF plans to build two new nuclear units at Hinkley Point in Somerset, and to work together to develop further new nuclear proposals at Sizewell in Suffolk and Bradwell in Essex. EDF Energy is also continuing to develop new renewable generation (mainly onshore wind) projects and maintains consideration of options for new, flexible gas-fired generation.

EDF Energy aims to secure value from its existing nuclear, coal and gas assets through continued safe and reliable generation. A key strategic programme is securing lifetime extensions for existing nuclear plant, when safe and commercially viable, to allow the UK to continue to benefit from nuclear energy until new low-carbon capacity can come online at scale. This will also provide ongoing nuclear employment opportunities and support the maintenance of skills in the UK nuclear industry. In February 2016, EDF Energy confirmed a five year life extension for Hartlepool and Heysham 1 nuclear power stations to 2024 and a further seven year life extension for Heysham 2 and Torness nuclear power stations to 2030. Other important strategic actions concerning the company's generation fleet include optimising the lifetime value of coal generation capacity under the UK capacity market mechanism and optimising the operations of the West Burton B Combined Cycle Gas Turbine (CCGT) power station.

EDF Energy is organised into three main business units: Generation, Customers, and Nuclear New Build.

1.4.5.1.2 **Activities**

1.4.5.1.2.1 Nuclear generation

EDF Energy owns and operates eight nuclear power stations in the UK with a total capacity of 8.9GW. The Nuclear Generation business unit employs over 5,500 people.

Since 2009, Centrica plc. ("Centrica") has held a 20% shareholding in Lake Acquisitions Limited, the company in which the nuclear generation assets sit (except Nuclear New Build).

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).

Safety and radiological protection

Nuclear safety is EDF Energy's overriding priority (see section 3.2.2.2.1 "Nuclear safety").

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. In 2015, the average individual dose received by all workers on EDF Energy's existing nuclear sites was 0.067mSv, the legal dose limit being 20mSv per year. The highest individual dose received in 2015 was 7.8mSv.

The operating lifetime of the nuclear power plants

The actual lifetime of each power station will be determined primarily by the technical and economic practicability of supporting its safety case. This is assessed at each statutory outage for the following operating period through inspection, maintenance, testing and assessment of plant performance. Following the outage, consent is required from the Office for Nuclear Regulation (ONR) before restarting the reactor. The operating period between statutory outages is normally three years for the AGR power stations and eighteen months for Sizewell B.

In addition, every ten years, the stations are subject to a more detailed and wide ranging Periodic Safety Review ("PSR"), which must also be accepted by the ONR in order to secure continued operation. Sizewell B was the last station to be assessed, and it received its 10 year consent in January 2015.

The AGRs were designed with a nominal 25 year lifetime, and Sizewell B with a 40 year lifetime. However, with the aggregation of technical information, and operational and safety experience, it has been possible to revise the expected AGR lifetimes. Prior to EDF Energy ownership, the AGRs had been extended by an average of 10 years, and it has been EDF Energy's intention, where possible and economic, to seek further lifetime extensions. This may require additional investment in the plant, and requires technical, safety, and economic justifications to be made; and since it may result in increasing the nuclear liabilities, the consent of the Nuclear Decommissioning Authority (NDA).

During EDF Energy ownership, the AGRs have been extended by an average of eight years. The most recent extensions were declared in February 2016. Hartlepool and Heysham 1 were extended by a further five years, and Heysham 2 and Torness were extended by seven years.

Although the work has not yet been carried out to support the extension of Sizewell B, the Company expects that it should be possible to extend it by c.20 years.

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
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	41 years	15 years	2024	2019
Hartlepool	AGR	Aug. 1983	41 years	15 years	2024	2019
Torness	AGR	May 1988	42 years	17 years	2030	2020
Heysham 2	AGR	Jul. 1988	42 years	17 years	2030	2020
Sizewell B	PWR	Feb. 1995	40 years	_	2035	2025

CAPACITY AND OUTPUT BY POWER PLANT

	Capacity ⁽¹⁾	Output	(2) (TWh)
Power Plant	(MW)		2014
AGR Power Plants			
Dungeness B	1,050	6.7	4.4
Hartlepool	1,180	6.2	5.8
Heysham 1	1,155	4.6	3.9
Heysham 2	1,230	9.4	10.4
Hinkley Point B	955	7.1	7.8
Hunterston B	965	7.5	6.6
Torness	1,185	8.7	8.5
PWR Power Plant			
Sizewell B	1,198	10.5	8.8
TOTAL	8,918	60.6	56.3
LOAD FACTOR ⁽³⁾		78%	72%

(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 2015. 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 by 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 2015 was 60.6TWh, which was 4.4TWh higher than 2014 nuclear output of 56.3TWh. The increase principally reflects lower unplanned losses across the fleet.

During 2015, a programme of planned outages was carried out on the nuclear generation fleet. Statutory outages were completed on Dungeness B Reactor 22, Heysham 1 Reactor 2, Heysham 2 Reactor 7, Hinkley Point B Reactor 4, Hunterston B Reactor 3 and Torness Reactor 2.

Plant status

Following the discovery of a defect in a boiler spine on Heysham 1 Reactor 1 in 2014, all four reactors at Heysham 1 and Hartlepool have been operating at reduced load to manage boiler temperatures in the affected area and in the case of Heysham 1 Reactor 1 on three out of four boiler quadrants.

During 2015, modifications were carried out to the boiler cooling on all four reactors to allow a return to full load. The boiler temperature constraint has now been lifted on all four reactors. Heysham 1 Reactor 1 continues to operate on three out of four boiler quadrants.

Radioactive Waste Management

In the UK, radioactive waste is classified as:

- Low Level Waste (LLW), for which a near surface disposal route exists for LLW – Including the LLW Repository at Drigg West Cumbria;
- Intermediate Level Waste (ILW), for which no disposal route is currently available 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 this factor has to be taken into account in the design of storage and disposal facilities.

These last two categories are merged under the Higher Activity Waste (HAW) category, their final storage solutions being geological storage in deep layers, that are not yet available in the UK.

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). The use of a range of waste recycling and disposal routes will help to make the best use of the UK's Low Level Waste Repository (LLWR) in Cumbria. 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 NDA) for reprocessing or long term storage. Heat generating HAW from the reprocessing of spent AGR fuel are converted into glass blocks for safe, long term storage.

Regarding Sizewell B, 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. 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 NDA. However EDF Energy has policies to continually improve and minimise 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

Restructuring Agreements were originally entered into in 2005 as part of the restructuring of the former British Energy Group of companies (hereafter referred to as "the EDF Energy Nuclear Generation Group") and were 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 EENGG, 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 EENGG'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 EENGG.

Certain companies in the EENGG, 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 EENGG 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 EENGG 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 EENGG.

Certain amendments have been made to the Restructuring Agreements, reflecting the EENGG's access to an improved credit rating following the acquisition. In particular, EENGG 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 if the EENGG achieves and maintains an investment grade rating or if 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 EENGG.

1.4.5.1.2.2 Renewable generation

Through EDF Energy Renewables (EDF ER), a joint venture between EDF Energy and EDF Énergies Nouvelles, 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 ensures a balanced approach for compliance with its Renewables Obligations (RO) and the provision of renewable electricity to its customer base.

EDF ER currently operates 31 wind farm sites with a total generation capacity of nearly 600MW. In 2015, EDF ER brought into operation three onshore

1.4.5.1.2.3 Thermal generation and gas storage

windfarms: Burnhead Moss (26MW), Rhodders (12.3MW) and Park Spring (8.6MW). In addition, EDF ER acquired during 2015 the development rights to build a windfarm at Corriemoillie (more than 45MW) and at Dorenell, which at 177MW is one of the largest onshore wind projects due to be built in Scotland.

EDF ER's pipeline of projects in the construction phase includes a windfarm at Pearie Law (19.2MW) and a windfarm at Beck Burn (18MW), both of which are onshore. They are expected to begin operation respectively during 2016 and 2017.

As part of the 80% sale of Glass Moor II, Rusholme and Green Rigg windfarms to China General Nuclear Power Corporation, completed in 2014, EDF ER continues to provide asset management and operation and maintenance activities for the wind farms.

EDF ER also has joint ventures in the renewables field with AMEC Foster Wheeler, a construction group, to develop a c.130MW windfarm near Stornoway on the Isle of Lewis in Scotland.

		Year	Number	Type of	Capacity	Output (TWh)	
Power plant	Location	commissioned	of units	station	(MW)	2015	2014
Cottam	Nottinghamshire	1970	4	Coal-fired	2,000	7.5	9.8
West Burton A	Nottinghamshire	1970	4	Coal-fired and OCGT ⁽¹⁾	1,987	8.3	10.0
West Burton B	Nottinghamshire	2013	3	CCGT	1,332	6.2	4.8

(1) Open Cycle Gas Turbine.

In 2015, Cottam and West Burton A coal-fired power plants generated 15.7TWh of electricity. Although lower than last year, this represents a good performance in a year of lower dark spreads, two major outages and a number of unplanned losses, notably at Cottam power station. West Burton B CCGT generated 6.2TWh, driven by strong availability performance and improved market spark spreads.

The coal plant strategy has been developed to provide flexible generation and meet EDF Energy's obligations of plant availability under the Capacity Market Auction held in 2014. The coal plants secured a capacity agreement of three years starting 2018 for seven of eight coal units at the clearing price of £19.40/kW per year (2012 prices). West Burton A Unit 3 participated in the 2015 Auction but did not secure a contract.

The decision regarding the Industrial Emissions Directive (IED) route has been taken and from 1 January 2016 both coal plants will operate under the UK Transitional National Plan (TNP) which requires coal power stations to comply with additional annual emissions limits for nitrogen oxides, sulphur dioxide and dust.

West Burton B CCGT was successful in the 2014 Auction and was awarded a 1 year contract for 2018-2019 at the clearing price of £19.40/kW per year (2012 prices). A further 1 year contract was secured in the 2015 Auction round for 2019-2020 at a lower clearing price of £18.00/kW per year (2014/15 prices). The same applies to the two OCGT units at West Burton A.

EDF Energy operates two fast cycle gas storage facilities in Cheshire. Hole House was purchased from EDF Trading in April 2014; the asset is fully operational with a total working gas capacity of c.18 million therms. Hill Top Farm became commercially operational in mid January 2015 with three cavities. The remaining two cavities are being developed and are scheduled to come on-line by mid next year. In 2015 integration of these gas storage activities into a single asset commenced and is continuing through 2016.

1.4.5.1.2.4 Customer business

The Customers business is responsible for the supply of gas and electricity to residential and business customers across the United Kingdom and the wholesale market optimisation of EDF Energy's generation and customer assets.

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). The size of business customers ranging from large industrial businesses to small privately owned businesses. EDF Energy adopts different risk management strategies for these two segments.

B2C

During the year, EDF Energy supplied 13.7TWh of electricity and supplied 27.6TWh of gas for the B2C segment. As at 31 December 2015, EDF Energy had 3.3 million electricity accounts and 2.0 million gas accounts on this segment.

Competition

The residential market has been exceptionally competitive in 2015, marked by steep falls in wholesale energy costs that has allowed new and smaller suppliers to offer a series of cheaper short term fixed priced tariffs. EDF Energy constantly reviews its prices to ensure that its tariffs attract new customers and offer good value to existing ones. During 2015 EDF Energy has continued to expand its portfolio of fixed price Blue tariffs, backed by low carbon nuclear generation. EDF Energy currently has 2.6 million product accounts on Blue tariffs.

Regulatory Change

Some suppliers have responded to the increasingly competitive market by attempting to segment their customer base through white label offers and/ or collective switches, the existence of which have not been notified to existing customers. The regulator has now clamped down on both of these practises to ensure that any cheaper tariff offered by a supplier is flagged to existing customers. The outcome of the CMA inquiry is expected to have a material impact upon the current regulations (see section 1.4.5.1.2.7 "United Kingdom Legal Environment").

Energy Company Obligation

The Energy Company Obligation (ECO) is an energy efficiency programme which has been extended and will end on 31 March 2017 (see section 3.2.3.6.1 "Contributing to energy access and the fight against energy poverty").

The government has announced a 5-year replacement programme which will aim to improve the energy efficiency of ~200,000 homes p.a. and will be targeted at fuel poor households. The government will consult on detailed implementation of the new ECO programme in 2016.

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 the equipment of 100% of residential and small business customers by the end of 2020.

The programme will require EDF Energy's supply business to install an estimated 5.5 million meters, including communications hubs and inhome displays, to all of its domestic and small business customers. Around 1.5 million smart meters are planned to be installed annually, a four-fold increase on the current planned volume of expired meter renewals each year. This is the biggest programme in the Customers business over the next few years. EDF Energy aims to deliver its obligation more effectively than its competitors, and to maximize the enduring benefit in order to transform the customer relationship. It has already commenced smart meter installations and is piloting operations using the first generation of compliant smart meters. This is ahead of a steady ramp up in volume and the years of mass roll-out which are from 2017 onwards.

B2C Customer Services

The B2C segment had an excellent year in 2015 with the improvement of the quality of its services, including the decrease of number of complaints, the rising level of recommendation by customers, its quality assurance and maintenance of control of its back office. During 2015 our Advisor Recommendation Score (derived from a post-call customer survey) has been increasing steadily and is now +53. Out of 19 suppliers, we have moved to second in the Citizens' Advice Complaints League Table. The Telephony Average Speed of Answer is currently 2 mn 9 s for the year with 52% of calls being answered within 60 seconds. Self-serve continues to improve with 64.2% of all transactions being self-serve in 2015.

B2B

In 2015 B2B retained its leadership position in volume, supplying a total of 35.0TWh of electricity; 1.8TWh to 182,382 Small and Medium Enterprise (SME) accounts and 33.2TWh to 113,409 Industrial and Commercial (I&C) accounts, reflecting an overall B2B market share of 19.3%. 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 as a new customer.

Competition across all 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 pure energy supply margins for business contracts. In addition, the UK government announced the removal of the exemption from the Climate Change Levy for renewable electricity from 1 August 2015. This will have significant implication on I&C margins for 2016 although is expected to deliver a more rational market for future years.

Optimisation and risk management activities

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. It 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.* NDA and Centrica.

Electricity sales and procurement

The power generated by the generation fleet is sold via the Optimisation division within EDF Energy's customers business. 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 2015, EDF Energy acquired approximately 6.5TWh through this channel.

For delivery in 2015, EDF Energy's net position on the wholesale market was a sale of approximately 24.3TWh (including structured trades). In 2015, EDF Energy sold approximately 83.3TWh and bought 59.0TWh.

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 requirements of its power plants and gas consumers.

Purchases are based on coal and gas asset generation forecasts and target coal stock levels. In 2015, 49% of EDF Energy's coal deliveries were from international suppliers and sourced through EDF Trading.

1.4.5.1.2.5 Nuclear New Build business

Nuclear New Build (NNB) activity

EDF aims to build up to four new EPR nuclear reactors in the UK: twin reactors at Hinkley Point and further twin reactors at Sizewell. The plans are conditional on the necessary consents being received and a robust investment framework being in place.

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The EPR technology is already being deployed at the new nuclear power station being constructed by EDF at Flamanville in France (see section 1.4.1.2 "New Nuclear Projects") and at Taishan in China. 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 to be realised.

EDF has also agreed Head of Terms with CGN (China General Nuclear Power Corporation) for the development of a further new nuclear project in the UK at Bradwell B in Essex.

Hinkley Point C (HPC)

Project update

The HPC project is well advanced. It has achieved planning consent, design approval for the EPR reactor and a nuclear site licence has been granted. There is a well-developed supply chain with identified preferred bidders who are already heavily involved in construction planning. Training for skills needed is underway and industrial agreements with trade unions are in place.

EDF will be the "responsible designer" for the HPC project, with a central role in the design and engineering of the power station.

As announced on 21 October 2015, total construction costs to first operation are forecast to be £18bn nominal. The construction costs have remained stable in real terms since they were announced, in October 2013.

Final terms for contracts with a number of key suppliers for HPC have also been agreed:

- AREVA NP (Nuclear steam supply system, instrumentation and control);
- Alstom France (turbines) and Alstom UK (services during operations);
- Bouygues TP/Laing O'Rourke (main civil works);
- BAM Nuttal/Kier Infrastructure (earthworks).

A number of 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 facilitate delivery of the construction schedule. Procurement also continues on other critical path contracts such as key installation and equipment supply contracts for the main site.

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 when a final investment decision is taken. These works include the construction of roundabouts and temporary construction roads to give access to the site for machinery needed for the main construction phase; remediation and enabling works for the earthworks, water management works, and the construction of office buildings and worker welfare facilities.

Contractual and commercial aspects have been carefully examined, especially by independent experts. A detailed review of the risk conducted at the end of 2015 established that risks are clearly identified and can be overcome through the implementation of a series of recommendations whose implementation has already begun. Other risk analyzes will take place throughout the project, which is a usual practice for projects of this magnitude.

First operation of HPC, initially scheduled in 2025, will depend on the date of the Final Investment Decision.

EDF's current investment programme to safely extend the lives of its existing power stations contributes to maintaining a secure supply of low-carbon electricity for the UK prior to HPC coming on-line.

Land Deals

Land acquisition has mirrored the planning progress and reflects those sites included in applications subject to the Planning Inspectorate process (PINS).

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. The majority of the land needed to assemble the associated development sites required to support the construction process has now been secured. A number of these development sites were secured through Option Agreements, therefore EDF 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.

Revenue Arrangements: Contract for Difference (CfD)

As announced on 21 October 2015, NNB (Nuclear New Built) and the Department of Energy and Climate Change (DECC) have agreed the full terms of the CfD for HPC, which had already been approved by the European Commission in October 2014 following a 12-month investigation.

The CfD will mean that from the plant's start 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 an additional payment and;
- if the reference price is higher than the strike price, the generator will be liable for the difference.

The key elements of the CfD are:

- the "strike price" for HPC is 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 £₂₀₁₂3/MWh upon a final investment decision being taken with respect to Sizewell C reflecting the fact that the first of kind costs of EPR reactors are shared across the HPC and Sizewell C sites;
- the strike price is fully indexed to inflation through the Consumer Price Index;
- the contract will last for 35 years;
- the project will be protected from certain changes in law;
- if savings are achieved in the construction of the HPC project, these will be shared with consumers through a lower strike price.

Financing

As announced on 21 October 2015, under the Strategic Investment Agreement signed by EDF and CGN, EDF's share in HPC will be 66.5% with CGN's share being 33.5%. Without reducing this initial stake below 50%, EDF intends to bring other investors into the project in due course.

The project will also benefit from the Government's Infrastructure Guarantee Scheme. The availability of the initial £2bn of the scheme was announced by the Chancellor in September 2015, subject to the conditions in accordance with market practices. The project should be financed with equity from each partner, at least in a first step. EDF will completely consolidate the project on its accounts.

Funded Decommissioning Programme (FDP)

Operators of new nuclear power stations are required under the Energy Act 2008 to have a FDP (Funding Decommissioning Programme) in place and approved by the DECC 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. NNB and DECC agreed the full terms of the FDP in 2015 and the final version was approved by the Secretary of State on 21 October 2015.

On 9 October 2015, the European Commission approved the pricing methodology for the UK's waste transfer contract scheme which will apply to HPC as part of the FDP. This innovative scheme means that the full costs of decommissioning and waste management associated with new nuclear power stations are set aside during generation.

Final Investment Decision

A final investment decision on HPC will only be taken by the Group once the following steps have been completed:

- finalisation of the long form equity documentation with CGN, based on the Head of Terms agreed on 21 October 2015;
- approval by the boards of EDF and CGN.

The approvals from competition authorities under the control of concentrations and other governmental authorities in China and Europe were obtained in the first quarter 2016.

Sizewell C

As announced on 21 October 2015, EDF and CGN have signed a Head of Terms for an agreement in principle to develop Sizewell C in Suffolk to a final investment decision with a view to building and operating two EPRs at the site. During the development phase, EDF will take an 80% share with CGN taking a 20% share.

As part of the planning process, EDF's initial proposals for Sizewell C were published in November 2012 and the first round of formal consultation with local communities has already taken place. Work has continued to prepare for the launch of the second formal stage of consultation with local communities and stakeholders. This is expected in 2016, once a final investment decision has been taken for HPC. Ground investigations, transport and environmental studies have helped refine the project's transport and accommodation strategies and the understanding of the engineering requirements for the development. These studies are also being used to support the nuclear site licence and environmental permits applications, which are at an early stage of development.

Discussions will commence in 2016 on the majority of the permanent and construction land. Work has begun to acquire the land that has been identified for accommodation and for transport infrastructure.

In April 2015, 67 hectares of land was acquired close to Sizewell C, to develop as wetland habitat to compensate for any potential land taken from the local site of special scientific interest during the main construction of the Sizewell project. Good progress was made on these works throughout the rest of 2015.

Bradwell B

EDF and CGN have also signed a Heads of Terms for an agreement in principle to seek the regulatory approval (via the Generic Design Assessment process), from the UK nuclear safety regulator, for a UK version of the third generation HPR1000 reactor called Hualong. The HPR1000 will be based on CGN's Fangchenggang Plant Unit 3/4 in China, the reference plant

for the UK-adapted Hualong design. Under the terms of the agreement, a joint venture company will undertake and manage the Generic Design Assessment process.

CGN and EDF have signed a Heads of Terms for an agreement in principle to develop Bradwell B in Essex to a final investment decision with a view to building and operating the UK-adapted Hualong reactor technology approved by the UK regulator through the Generic Design Assessment process. During the development phase, CGN will take a 66.5% share and EDF will take a 33.5% share.

The UK's robust nuclear regulation ensures that all developers and operators of reactors and nuclear plants must demonstrate that they meet strict compliance requirements for safety and security.

1.4.5.1.2.6 Commitments under European Commission Merger Regulation (ECMR)

EDF Energy has continued to comply in 2015 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 has now been completed and verified by the Monitoring Trustee who has notified the European Commission accordingly.

All other commitments agreed at the time of the purchase of British Energy have now been met.

1.4.5.1.2.7 United Kingdom Legal Environment

Competition and Markets Authority (CMA)

In June 2014, the Competition and Markets Authority (CMA) commenced its investigation into the "supply and acquisition of energy in Great Britain". The CMA is the UK's economy-wide competition and consumer authority with a primary duty "to promote competition for the benefit of consumers, both within and outside the UK".

In July 2015, the CMA published its Provisional Findings report, together with a Notice of Possible Remedies. The Provisional Findings report listed the features that the CMA had provisionally found as giving rise to adverse effects on competition (AECs) in the electricity and gas markets. The Notice of Possible Remedies set out possible actions that the CMA could take to remedy, mitigate or prevent the AECs it had provisionally identified (and the resulting detrimental effect on consumers). The CMA noted 9 AECs and identified 18 possible remedies in total. The possible remedies largely focused on the retail and regulatory framework, and in particular considered measures to improve customer engagement in the domestic and microbusiness markets.

The CMA published two further updates to the Provisional findings report and Notice of Possible Remedies:

- on 26 October 2015, the CMA published a Supplemental Notice of Possible Remedies which invited comments on a further possible remedy to encourage customer engagement by prohibiting the use of evergreen tariffs;
- on 16 December 2015, the CMA published an Addendum to provisional findings. The CMA stated that upon further consideration, it has provisionally found that a combination of features in the prepayment segment of the domestic retail supply of gas and electricity gives rise to an AEC. Alongside this document, the CMA published a Second supplemental notice of possible remedies. This sets out four additional possible remedies that the CMA may introduce to address the AEC it has provisionally identified in the Addendum.

On 21 September 2015, the CMA announced an extension to its statutory investigation deadline by six months from 25 December 2015 to 25 June

2016. It stated that this was necessary to allow sufficient time to take full and proper account of any comments received from stakeholders in response to the provisional findings and to reach a fully reasoned final decision. The CMA has announced its temporary decision about the corrective actions on 17 March 2016, earlier than its final report of June 2016.

Electricity Market Reform (EMR)

The three most significant elements of EMR are the carbon price floor, introduced under the Finance Act 2011, the Capacity Market and Contracts for Difference, introduced under the Energy Act 2013.

The carbon price floor, which sets the price that fossil-fired generators pay for their carbon emissions is an important driver of the profitability of low carbon generation such as EDF Energy's nuclear and renewable plants. The "carbon price support rate" that underpins the carbon price floor was capped in the Budget 2014 on 19 March 2014 at £18/tonne of CO2 for the four years, April 2016 to April 2020.

The Capacity Market is intended to ensure security of electricity supply. Annual auctions are held to procure capacity four years ahead of delivery with a subsequent auction one year ahead of delivery. The second capacity auction for delivery of capacity from October 2019 took place in December 2015 resulting in capacity agreements for 46,354MW of de-rated capacity at a price of $f_{2014/2015}$ 18/kW. EDF Energy's eight nuclear power stations, West Burton B CCGT plant and the open cycle gas turbines at West Burton A secured capacity agreements in the December 2014 auction for the period October 2019-September 2020. The four coal-fired units at Cottam and three of the four coal-fired units at West Burton A secured capacity agreements in the December 2015 auction for 2018 – September 2021. Unit 3 at West Burton A failed to secure a capacity agreement in both the December 2014 and December 2015 auctions.

Contracts for Difference are expected to support investment new low carbon generation including in particular the Hinkley Point C project. Results of the first Allocation Round (auction) for CfDs were announced in February 2015 with contracts awarded to 27 renewable energy projects, most of which were onshore or offshore windfarms. EDF Energy has subsequently acquired one of the successful projects from this auction, Dorenell Wind Farm, a 177MW onshore windfarm development, which was awarded a CfD with a strike price of f_{2012} 82.50/MWh). The Government has said that it will hold up to three further CfD auctions by 2020, the first of these to be in 2016, and that these will support further development of offshore wind, conditional on the achievement of cost reductions.

1.4.5.2 **Italy**

1.4.5.2.1 EDF group's strategy in Italy

The Italian energy market represents a strong strategic interest for EDF due to the magnitude of its importance in both the European electricity and gas markets, and its connection to the French markets.

Like the majority of European energy systems, the Italian market is currently facing a certain number of challenges. Thanks to its current position and to its integrated presence in the gas and electrical energy value chain, Edison is well-placed to seize opportunities created by market changes, in order to sustain its growth, all while pursuing efficiency and profitability, in line with CAP 2030 priorities.

Edison could play an active role in the process of consolidation of the Italian market, notably by benefiting from the streamlining of EDF's presence in the country.

The main development factors are:

- in order to optimise its portfolio of electricity generation in Italy, Edison aims to increase its production of renewable energy by the promotion of specific investments in hydroelectricity and the development of new renewable sources, in particular, by using new business models, while focusing the thermal generation portfolio on the most efficient assets;
- in relying on the strong positioning of its brand, Edison is well placed to grow its portfolio of individual gas and electricity customers, and to improve the value of its offering with added-value energy services;
- in the area of gas, beyond the optimisation of the current portfolio, Edison can contribute to the development of Italy as a gas hub, in order to reinforce its competitiveness and that of the EDF group, and the flexibility and security of supplies;
- in the area of E&P (Exploration & Production), Edison intends to modulate its activity, by pursuing a selective development of Italian E&P activities, in integration with the gas and electricity value chain, all while optimising international projects.

1.4.5.2.2 The EDF group's activities in Italy

As of the end of 2015, the Group was mainly present in Italy through its 97.405% shareholding in Edison, which is a major player in the Italian electricity and gas markets and a well-known Italian brand.

The EDF group is also present in Italy through subsidiaries and the following shareholdings:

- EDF Fenice, 100%-owned and specialised in environmental services and energy efficiency (see section 1.4.6.1.2 "EDF Fenice");
- EDF Énergies Nouvelles, which has one subsidiary located in Italy.

2015 INSTALLED CAPACITY AND POWER OUTPUT IN ITALY

Installed capacity 19.2% Hvdropowei 1,429 MW of which Edison 1,427 MW EDF Fenice 2 MW 8 2% 7,438 MW* Other renewables 608 MW 72.6% (Edison) Thermal 5,401 MW of which Edison 5,123 MW EDF Fenice 278 MW * Edison 7,158 MW. EDF Fenice 280 MW. Output 17.2% Hydropowe 3,384 GWh of which Edison 3.378 GWh EDF Fenice 6 GWh 5.2% Other renewables 19,647 GWh³ 1,029 GWh 77.6% (Edison) Thermal 15.234 GWh of which Edison 14,073 GWh EDF Fenice 1,161 GWh

* Edison 18,480 GWh. EDF Fenice 1,167 GWh

17.6Gm³ (13.2Gm³ in 2014). Edison imported 12.7Gm³ in 2015, *i.e.* 21%

of total Italian gas import, which represents 91% of national demand.



In 2015, the EDF group's net electricity output in Italy was 19.6TWh, which accounted for around 7.2% of net Italian electricity generation. Gas sales to end customers, wholesale markets and for thermal generation amounted

OUTPUT OF GAS AND HYDROCARBONS



(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 down compared to 2014, reaching 1.99Gm³ (-7.3% against the figure for 2014).

Oil and condensate output rose in 2015, with 4.35 million barrels produced (+4.6% compared with 2014), of which 2.5 million were produced in Italy.

1.4.5.2.3 Edison's activities

1.4.5.2.3.1 Electricity generation business

At 31 December 2015, the Edison's installed generation capacity in Italy was 7,158GW, with net electricity output of 18.5TWh over the year, representing an increase compared with 2014. This increase was mainly due to increased thermoelectric and wind-powered generation, as a result of the demand for electricity in Italy and arbitrage transactions carried out between proprietary production and market purchases. Edison's generation fleet is currently made up of 48 hydropower plants, 19 thermal power plants, 35 wind farms, 9 photovoltaic power plants and 1 biomass plant. Combined-Cycle Gas Turbines (CCGT) account for 76.4% of electricity generation, while hydropower accounts for 18.3% and combined wind and solar for 5.3%.

Edison operates approximately 1,427MW of hydropower facilities with an output of 3.38TWh (-32% compared with the exceptional production of 2014).

In December 2015, Edison reached an agreement to sell its equity interests in Hydros (40%) and in Sel Edison (42%), the two hydropower joint ventures, with the Alperia company in the Bolzano province, in exchange for 100% of Alperia's hydropower facilities situated on the Cellina River. Because of this transaction, Edison, which would have had to deconsolidate the two equity interests starting from 2016, will entirely consolidate the business, including the Cellina facilities, increasing its installed capacity by 90MW, while reducing the risk connected to the renewal of the concessions in its hydropower portfolio.

In the area of renewable energies, Edison also maintains a critical size, thanks to E2i Energie Speciali srl (E2i), a company created in 2014 in partnership with the F2i fund, which holds 70% of the share capital, the 30% remaining being held by a holding company between Edison and EDF Énergies Nouvelles.



E2i holds 594MW of renewable assets (contributed 82% by Edison and 18% by EDF EN Italia) and transfers 100% of the energy generated to Edison, which utilises it to the benefit of an integrated management of its production portfolio.

A company headed by EDF EN and dedicated to services was also set up for the operation and maintenance of this platform.

Moreover, outside of Edison and the partnership with F2i, EDF EN is present in Italy (see section 1.4.1.4.3 "EDF Énergies Nouvelles").

Internationally-speaking, Edison benefits from a well-established presence in Greece, where it is one of the main electricity operators of the country, through ElpEdison SA, with a 38% equity interest with Hellenic Petroleum, Hellenic Energy and Development (the Hellactor group) and Halcor. ElpEdison owns two CCGT plants: one in Thessaloniki (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.

1.4.5.2.3.2 Hydrocarbon business

For the implementation of its gas strategy, the EDF group, through Edison, benefits from experience developed along the entire value chain, from exploration-production through to the direct sale of natural gas.

Edison's gas supply portfolio is mainly based on long-term contracts and, in 2015, it included approximately 12.7Gm³ of imports via gas pipelines and LNG, with 0.49Gm³ of own production in Italy and 4.2Gm³ purchased on the market. Changes in inventory and network losses represent 0.20Gm³.

In 2015, in Italy, Edison delivered 3.4Gm³ of gas to the industrial sector, 2.6Gm³ to the residential sector, 5.7Gm³ to the thermoelectric sector (including Edison's own internal needs), and 5.9Gm³ to the wholesale 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.

The price-revision arbitrational proceedings were concluded on 27 November 2015, with the arbitral award rendered by the International Court of Arbitration of the International Chamber of Commerce in favour of Edison. It involved the dispute between Edison and ENI on the price revision of a long-term Libyan gas contract. Thus, Edison obtained a lowering of the gas price, effective retroactively.

In exploration and production, Edison possessed, at the end of 2015, 60 concessions and exploration permits in Italy and 66 abroad, and approximately 42 billion cubic metre equivalents in 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.

In 2015, Edison enriched its hydrocarbons development portfolio with the acquisition of Apache Beryl I (a subsidiary of Apache Corporation) and its interest in the share capital of the Scott and Telford deposits (10.5% and 15.7%, respectively), situated in the North Sea. This acquisition contributed to an increase of approximately 1.1 billion cubic metres equivalent (85% petroleum and 15% gas) in the Group's reserves.

Finally, Edison is pursuing its exploration activities in Italy and abroad, particularly in the United Kingdom and in Norway, and currently holds licenses in the North Sea, in the Norwegian Sea and in the Barents Sea.

Gas infrastructures

Edison holds an equity interest of 7.3% in the Adriatic LNG Terminal company, which manages the offshore regasification terminal of Rovigo (8Gm³ per year). This terminal is powered with Qatari gas. The other shareholders are ExxonMobil Italiana Gas (70.7%) and Qatar Terminal Company Limited (22%). Edison, according to the contract terms signed with Ras Laffan Liquefied Natural Gas Company Limited II (RasGas II), owns 80% of the terminal's capacity, or 6.4Gm³ per year.

Edison is involved in various gas import infrastructure projects (see section 1.4.6.2.2.2 "Infrastructure"), such as 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).

1.4.5.2.3.3 Sales and supply activities

In 2015, Edison sold 89.4TWh of electricity in Italy (compared with 95.5TWh in 2014, *i.e.* -6.4% compared with 2014), of which 18.5TWh were generated and 70.9TWh were purchased on the markets. Sales to end-customers amounted to 17.1TWh, down by 16.2% compared with 2014. At year-end 2015, Edison was serving 591,993 electricity customers and 521,399 gas customers, both in the business and residential segments.

In sales and marketing, Edison continues to grow its electricity and gas sales to individuals and to the SME segment, aiming for excellence in customer relationships and focusing on selected loyal customers. In parallel, Edison intends to maintain its position as a leader in the business-customer market, by developing an advisory approach in energy.

The Group will grow its presence in the region by reinforcing the cooperation between Edison and Fenice, in order to develop energy service offers for its customers.

1.4.5.2.3.4 Regulated activities

Gas transport and storage

Edison owns 100% of the Edison Stoccaggio company, dedicated to regulated gas-storage activities.

Edison also operates two storage sites in depleted reservoirs (fields which have been depleted of natural gas): Cellino (since 1984) and Collalto (since 1994), with a total volume of 700Mm³.

Moreover, Edison has been operating a third site, since 2013, San Potito & Cotignola, and is 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 AEEG, the electricity and gas authority that establishes, in particular, quality and safety parameters, as well as network access rules.

Infrastrutture Distribuzione Gas spa (previously called Edison Distribuzione Gas) is the company dedicated to the distribution of natural gas within the Edison group. In 2015, Edison DG distributed 257Mm³ of natural gas to 150,368 users in northern and central Italy.

1.4.5.2.4 **EDF Fenice**

EDF Fenice, which is wholly-owned by the EDF group, is based in Turin, and benefits from an international presence, with subsidiaries in Spain, Poland, and Russia. Its principal activities, intended for industrial clients, consist of the development of solutions in the energy efficiency domain (see section 1.4.6.1.2 "EDF Fenice").

1.4.5.2.5 EDF Énergies Nouvelles

Following the adoption of the new regulatory framework for renewable energy in Italy, EDF Énergies Nouvelles did not commission any additional capacity in 2015 in Italy. Thus, the capacities held by EDF EN Italia at 31 December 2015 totalled 440.4MW gross wind power (or 246.6MW net power) and 79.5MW gross photovoltaic power (or 76.8MW net power) (see section 1.4.1.4.3 "EDF Énergies Nouvelles").

1.4.5.3 **Other International**

2015 INSTALLED CAPACITY AND OUTPUT - OTHER INTERNATIONAL



 Excluding international data for EDF Énergies Nouvelles, part of the "Other activities" segment.

1.4.5.3.1 Northern Europe

Belgium

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 also constitutes an important link in the European gas market because of its numerous import and transit structures, such as the Zeebrugge hub and the Dunkirk LNG terminal nearby.

The EDF group is present in Belgium through its two subsidiaries, EDF Belgium and EDF Luminus.

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 which was renewed in late 2015 for 10 additional years.

Belgium's 2003 nuclear phase-out legislation originally provided for the closure of Tihange 1 on 1 October 2015. Nevertheless, it was finally decided to extend its operation upon 2025, following the adoption in 2012 by the Belgian government of the Equipment Plan, and the Law of 2013 amending the Law of 2003 pertaining to the timeframe for the phasing out of nuclear energy. This extension was the subject of an agreement concluded on 12 March 2014 between Electrabel, EDF and the Belgian State, defining its terms and conditions.

The extension of the life span of Tihange 1 requires significant investment, with EDF's share amounting to \in 300 million, spread over the period from 2011 to 2020.

EDF Luminus

At the end of 2015, the EDF group held 68.63% of the EDF Luminus company through its subsidiary EDF Belgium, with the remaining equity held by Belgian public shareholders (see below).

EDF Luminus is the second largest player in the Belgian energy market, holding a balanced upstream/downstream portfolio. The business accounts for nearly 10% of the country's output capacity, with an installed capacity of 1,955MW at end-2015. The electricity output of EDF Luminus reached 4,141GWh in 2015. The company employs 1,583 persons.

EDF Luminus worked to realise its strategic ambition, by reducing its costs while optimising its thermal production fleet, pursuing the development of wind farms, and launching the development of energy services.

Acquisition of ATS, a leading player in energy services for industrial clients

On 27 May 2015, EDF Luminus finalised the acquisition of a majority shareholding in ATS SA following the favourable opinion of the Belgian Competition Authority. In addition to the distribution of electrical equipment, ATS offers complete integrated solutions in electricity and heating: design and engineering, installation and maintenance of industrial electricity grids, automation, industrial cooling, fire detection, and hydraulics.

EDF Luminus and ATS can better assist their industrial clients and those from the tertiary and public sectors, thanks to an offer which has been enriched with energy-efficiency solutions and solutions to optimise their consumption.

New agreement on EDF Luminus shareholder agreement

On 26 October 2015, the shareholders of EDF Luminus, Publilec, Socofe, Ethias, Nethys and the EDF group signed an amendment to the EDF Luminus

shareholders' agreement, which extended the latter agreement up to 2025, and provides for the following reorganisation of the shareholding:

- the maintenance of four Belgian shareholders: Publilec (26.4%), Socofe (4.7%), Ethias (0.2%) and Nethys (0.1%) who, under the shareholders' agreement, benefit from a liquidity mechanism which makes it possible for them to withdraw from the share capital of EDF Luminus starting from the end of 2018;
- the acquisition by the EDF group of the equity interest of Publilum and VEH in EDF Luminus, representing in total 6.33%, which brings the equity interest of EDF in EDF Luminus up to 68.63% (instead of 62.3% as previously).

Consequently, the Board of Directors of EDF Luminus, which met on 26 October 2015, decided to cancel the planned initial public offering of EDF Luminus, initiated in May 2015. This change in the EDF Luminus shareholding made it possible for the Company to retain its local presence, thanks to an amendment of the agreement between EDF and its Belgian co-shareholders.

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.

The Doel 3 and Tihange 2 nuclear reactors, which represent approximately 20% of energy demand in Belgium, were shut down from 2012 to 2014, except for a brief period of relaunching between May 2013 and March 2014, following the detection of micro-cracks. On 17 November 2015, the Federal Agency for Nuclear Control authorised the return to production of these two reactors, following receipt of the final report of the US laboratory, Oak Ridge. Electrabel started the reactors back up at the end of December 2015.

Within the overall framework of the agreement concluded on 30 November 2015 between the Belgian State and Electrabel for the extension of the two Doel 1 and Doel 2 plants, an agreement was reached concerning the nuclear tax in Belgium for the years 2015 (200 million) and 2016 (130 million). The financial impact for the two Belgian subsidiaries of the EDF group was €34.2 million in 2015 and €13.2 million in 2016. A variable formula will apply from 2017 to 2019, with a minimum annual total of €150 million for the nuclear tax in Belgium.

Apart from the drawing rights in the nuclear fleet, EDF Luminus has a generation fleet consisting of power plants fired by natural gas, wind farms, and a few "run-of-river" hydropower plants.

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. In addition, the Angleur and Izegem power plants were also recently selected for Belgium's strategic reserve for the winters of 2015-2016. The Monsin power plant was definitively closed.

EDF Luminus is active in the renewable energy sector with 7 hydropower plants and 29 onshore wind farms, totalling 114 turbines spread across Wallonia and Flanders. As of 31 December 2015, the company became the leader in onshore wind-farming in Belgium, with an installed capacity de 254MW. In 2015, EDF Luminus built 16 wind turbines with a combined capacity of 42MW, and acquired a portfolio of 28MW of existing built capacity (13 wind turbines).

Sales and marketing

Under its "Luminus" brand, EDF Luminus supplies electricity and gas to more than 1.8 million residential and business customers (in delivery points) in Belgium, with a net gain of 85,000 customers in B2C (business-to-customer) in 2015. This excellent marketing achievement was awarded the top rating of "5" given by the Flemish regulator, VREG, for eight consecutive quarters.

EDF Luminus has pursued its strategy in pricing and services in order to better address customer expectations, and to affirm its price positioning in relation to its competitors, and has kept a stable market share of about 20%, in difficult market conditions marked by a relatively high attrition level.

Energy services

EDF Luminus has an expanded service offering, thanks to the recent acquisitions of three significant complementary energy service providers (Rami Services, Dauvister and ATS). The services offered to residential customers are, inter alia, installation and maintenance of boilers, sale and management of an intelligent thermostat (Netatmo), and comfort services in the event of unforeseen damages to housing during inclement weather. At the end of 2015, the B2C portfolio for these last three services exceeded 125,000 contracts. With close to 68,000 services sold during the course of the 2015 year, sales more than tripled in comparison to 2014. And thanks to cooperation with ATS, EDF Luminus can offer complete integrated electricity and heating solutions to industrial clients.

Moreover, EDF Luminus is exploiting new, innovative niches for the development of service activities. For example, with regard to electric mobility, EDF Luminus is investigating different business models which make it possible to offer its customers electric mobility services. Four rapid charging stations were installed on a Campus site in Hasselt. A special feature of these stations: they integrate a software which makes it possible to maximise the use of local photovoltaic generation during the recharge.

The Netherlands

Through a joint venture, Sloe Centrale BV, EDF and Delta (each holding 50%) own an 870MW CCGT power plant in the southwest Netherlands, whose two 435MW units were commissioned in 2009 and serviced in mid-2013. Thanks to its very high technical performance, the Sloe plant was called upon to operate in 2015 for close to 3,500 hours, a significant period of time, under conditions which were not very favourable to gas-powered plants.

Switzerland

The EDF group is present in Switzerland through its investments in Alpiq Holding SA (25%) and in hydropower generation facilities in Le Châtelot (50%), Emosson (50%) and Mauvoisin (10%).

Alpiq is a player of significant size in the European energy market, at the heart of European electricity exchanges, active in the generation, sale, and trading of energy as well as in energy services. Alpiq accounts for over one third of the electricity supplied throughout Switzerland.

On the basis of its 2015 sales (CHF6,715 million), Alpiq is top-ranked among Swiss electricity companies. The financial and non-financial transactions of energy trading, carried out with third parties and with other associated and connected businesses, accounted for respectively 11.4TWh and 89TWh (mainly in wholesale markets and with major European clients from Southern, Central, and Eastern Europe). Alpiq also provides services to around 100,000 customers in north-west Switzerland. This activity is supported by significant generation assets in Switzerland and in other countries where Alpiq is developing its presence.

Alpiq's activities rest primarily upon generation assets, which strongly exposes it to variations in market price. In order to address the new marketing environment, which has been strongly degrading since 2011, the Alpiq group launched a plan for significant cost reduction as well as in-depth strategic thinking, in order to best enhance the value of its assets and to seize market opportunities, particularly in the energy services sector. In an initiative to become debt-free and to streamline its portfolio, several equity interests, including hydropower, had already been disposed of, and other divestitures are still expected.

Austria

EDF had held up till now 25% of the Energie Steiermark AG (Estag) holding company, alongside Land of Styria. Within the framework of its strategic orientations, the EDF group initiated, at the end of 2014, a process for the disposal of that minority equity interest, which was completed on 21 December 2015 by the buyback of EDF shares by Macquarie Infrastructure and Real Assets, an investment fund specialised in infrastructures.

1.4.5.3.2 Central and Eastern Europe

Poland

The Group operates in Poland mainly through its EDF Polska SA subsidiary, which includes the following:

- the Krakow cogeneration plant, which has an installed capacity of 460MWe and 957MWth;
- the Wybrzeże cogeneration plant, comprising the Gdansk and Gdynia units with a total installed capacity of 333MWe and 1,134MWth;
- the Rybnik generation plant, with an installed capacity of 1,775MWe;
- the Warsaw plant, comprising the company headquarters and the Optimisation and Sales department, which is responsible for market sales and B2B customer sales of the electricity generated by all EDF group plants in Poland;
- the EDF Toruń company, a subsidiary of EDF Polska, which owns 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 and 2MWe, which powers the network. The replacement of the existing facility with a cogeneration facility equipped with two gas turbines and gas-fired boilers with a total capacity of 101MWe should take place from the winter of 2017-2018;
- the EDF Paliwa Sp. z o. o company, also a subsidiary of EDF Polska, responsible for the supply of coal and biomass for all of the EDF group sites in Poland.

The Group also controls ZEW Kogeneracja SA, the cogeneration company in Wroclaw. It has an installed capacity of 366MWe and 1,094MWth and owns 98.4% of the electricity and heat generation company EC Zielona Góra SA, powered entirely by a local gas source, the installed capacity of which 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, inaugurated on 19 November 2013 in Wroclaw. It will enable the operation of the existing generation plants to continue until 2035 at least.

Moreover, the Group is present in Poland through its subsidiary, EDF Énergies Nouvelles, which owns two wind farms, of 48MW in Linowo and 58MW in Rzepin. Other wind power projects are also under development (see section 1.4.1.4.3 "EDF Energies Nouvelles").

In October 2015, DK Energy Polska, a subsidiary of Dalkia SA in Poland, acquired 100% of the shares of the Zaklady Energetyki Cieplnej Katowice SA (ZEC), a company which is mainly specialised in generation and distribution of heat in the region of Katowice (Upper Silesia) and a leader in the area of mine gas recycling. This acquisition was intended to serve as a base for the development in the Polish market of the Dalkia offer in energy services for industrial businesses and local communities (heating networks and energy-efficiency) and to develop the use of mine gas as a substitute for coal.

In the framework of the CAP 2030 programme, a strategic review of the Group's thermal assets in Poland is currently underway.



Hungary

BE Zrt

On 30 June 2015, the Group has concluded an agreement for the sale of its shares (95.6%) in BE Zrt to EP Energy. After meeting the conditions precedent, in particular, the review by the competent Hungarian authorities, the transaction was finalised on 10 December 2015.

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 2009, the company has supplied electricity and, more recently, gas, throughout Hungary to customers who opted for the open market. In 2015, EDF Démász Zrt sold 3,040GWh to around 740,000 customers, including 1,440GWh on the open market.

Regarding its distribution business, the EDF Démász Hálózati Elosztó Kft company, a wholly owned subsidiary of EDF Démász Zrt, has been operating since 2007 in response to the legal requirement that network activities should 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 2015, it distributed 4.3TWh to 775,754 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.

The government announced its intention to progressively take back control of the utilities of the energy sector which had been privatised in the 1990s, and to create a sector under the control of the State. In 2015, the ENKSZ company was created to such end.

Russia

The EDF group is present in Russia in the area of energy services, through EDF Fenice and its Russian subsidiary, Fenice Rus (see section 1.4.6.1.2 "EDF Fenice").

1.4.5.3.3 Southern Europe

Spain

At 31 December 2015, the EDF group held 31.48% of the equity of the Elcogas company that operates a 320MW power plant of the ICCG (Integrated Combined-Cycle Gasification) type in Puertollano. The other shareholders are Endesa Generacion (40.99%) and Iberdrola Generacion (12%)

In 2015, Elcogas produced 909GWh¹, including 821GWh generated by ICCG.

The power plant, whose profitability was no longer assured as of 31 December 2014, the date upon which it ceased to collect a compensation supplement

under the Royal Carbon Decree, received administrative authorisation to close on 1 July 2015. The closure process of the power plant was to take place during the first half of 2016.

The Group is also present in the Spanish market through the local subsidiary of EDF Énergies Nouvelles (see section 1.4.1.4.3 "EDF Énergies Nouvelles") and that of Fenice (Fenice Instalaciones Iberica (see section 1.4.6.1.2 "EDF Fenice") and that of Citelum (see section 1.4.6.1.4 "Citelum").

EDF Trading operates in this market from its trading platform in London (see section 1.4.6.3 "Optimisation and trading: EDF Trading").

Lastly, in May 2015, EDF acquired, through its EDF Invest division, a minority shareholding in Madrileña Red de Gas, operator of the principal gas distribution network in the Madrid region.

1.4.5.3.4 North America

The EDF group operates throughout the North American continent, with a strong presence in the United States.

It has more than 5.2GW of installed capacity in North America. It also manages, on behalf of third parties, around 36GW 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 US, with a total installed capacity of 3.9GW (*i.e.* 1.95GW consolidated by the EDF group);
- renewable energies, with a net capacity of 3,251.7MW 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 contracts on its own account or on behalf of third parties;
- trading, throughout the entire value chain in North American gas and electricity markets through EDF Trading North America, and the supply of energy management products in the US and Canada through EDF Energy Services (a wholly-owned subsidiary of EDF Trading North America).

1.4.5.3.4.1 Nuclear activities in the United States

Nuclear generation: Constellation Energy Nuclear Group (CENG)

On 6 November 2009, the EDF group and CEG established CENG. Since the merger between Exelon and CEG, EDF and Exelon have owned stakes of 49.99% and 50.01% respectively in CENG. EDF and Exelon agreed in 2014 to transfer the operating licenses of CENG to Exelon, pursuant to this agreement, Exelon manages the day-to-day operations of the three CENG nuclear sites (five nuclear reactors).

As part of the transaction, CENG paid EDF US\$400 million in special dividends and EDF was granted a put option to sell its CENG shares to Exelon at fair market value exercisable between January 1, 2016 and June 30, 2022.

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.

^{1.} Figures on 100% basis.

CENG's nuclear activities

CENG's nuclear business is under the control of the US Nuclear Regulatory Commission (NRC).

CENG owns and operates five nuclear reactors, spread across three operating sites and representing a combined capacity of 4,167MW. The duration of licences for Units 1 and 2 of Calvert Cliffs, Unit 1 of Nine Mile Point and RE Ginna is 60 years.

	Capacity		Company-owned	Output ⁽²⁾ (in TWh)	
Reactors	(in MW)	% interest	capacity (in MW)	2015	2014
Calvert Cliffs 1	863	100	863	7.8	6.9
Calvert Cliffs 2	850	100	850	6.9	7.4
Nine Mile Point 1	630	100	630	4.9	5.4
Nine Mile Point 2 ⁽¹⁾	1,242	82	1,019	9.0	8.0
R.E. Ginna	582	100	582	4.8	4.7
TOTAL	4,167		3,944	33.4	32.5

(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.

(2) These values correspond to the sum of the exact values expressed to one decimal place after rounding.

Unistar Nuclear Energy (UNE)

In a letter to the U.S. NRC dated February 27 2015, UNE directed the NRC to suspend its review of the Calvert Cliffs 3 Combined Operating License Application (CC3 COLA). The suspension of CC3 COLA resulted to the write-off of UNE's forging assets amounting to \$50.3 M (\$55 M under USGAAP) and capitalized COLA costs of \$13.4 M (\$0 under USGAAP). In a letter dated June 8, 2015, UNE notified the NRC of the withdrawal of the CC3 COLA. On June 17, 2015 the NRC notified UNE of its decision to accept the withdrawal of the CC3 COLA, effective upon publication of notice in the federal register on Juney 18, 2015.

1.4.5.3.4.2 EDF Trading in North America

EDF Trading operates in the North American markets for electricity (including transmission rights), gas, coal and environmental products. EDF Energy Services is the commercial and industrial retail arm of EDF Trading and provides management and optimisation services to large-scale energy intensive commercial and industrial users throughout North America (see section 1.4.6.3 « Optimisation and trading: EDF Trading »).

1.4.5.3.4.3 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 1,338.6MW of wind, solar photovoltaic and biogas capacity in 2015.

EDF Renewable Services manages wind and solar projects, both for the company's own accord and on behalf of third parties (see section 1.4.1.4.3 « EDF Énergies Nouvelles »).

1.4.5.3.5 South America

In South America, the EDF group is present in the Brazilian market. Its ambitions extend to certain countries in the area where it anticipates opportunities for development, such as Chile.

1.4.5.3.5.1 Brazil

Since April 2014, the Group has held 100% of EDF Norte Fluminense, following the buyback of the 10% equity interest held by Petrobras in the share capital of EDF Norte Fluminense. The company, which built and operates since end of 2004 the Combined-Cycle Gas power plant of Norte Fluminense, with an installed capacity of 827MW, situated in the region of Macaé, sells 725MWh annually to the Light distribution company (pursuant to the terms of a 20-year PPA), corresponding to about 6.3TWh per year. The remaining balance is sold on the open electricity market. EDF Norte Fluminense sold 260GWh in 2015.

EDF Norte Fluminense has an additional solar power plant, intended for industrial consumption, comprising 1,764 photovoltaic modules which generated 428MWh in 2015, helping to reduce its CO_2 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 of an installed capacity of 400MW. 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 first half of 2018. 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. At year-end 2015, close to 50% of the civil-engineering work had been carried out on the project.

It should be noted as well that EDF Énergies Nouvelles has launched its operations in Brazil in February 2015, with the acquisition of 80% of the portfolio of Ventos da Bahia. The first electricity supply contract represented 66MW in wind projects situated in the State of Bahia, in partnership with Sowitec, a German group specialised in the wind energy development in the world. In November 2015, EDF Énergies Nouvelles won a second long-term 117MW electricity-supply contract, in the same portfolio of wind projects. The construction of these new capacities will begin in 2017, with commissioning expected at the end of 2018.



1.4.5.3.5.2 **Chile**

In 2013, EDF entered a Joint Development Agreement with the Chilean BBG project-development company and the U.S. company Cheniere, with the aim of developing a gas-to-power project, combining construction, operation andmaintenance of a CCGT electric power plant of approximately 600MW Installed capacity, with infrastructure for offshore LNG storage and regasification of the FSRU (Floating, Storage & Regasification Unit) type.

In 2014, EDF created a subsidiary, EDF Chile, responsible for the development of this project and to anchor EDF's presence on the Chilean energy market.

In 2015, EDF signed a new agreement (Restated and Amended Joint Development Agreement) with the Chilean development company Biobio Genera (formerly, Australis Power), for the pursuit of the development of this project. In parallel, EDF and its partners are negotiating the financing of this project with commercial banks, on the basis of project financing with limited recourse.

In September 2015, EDF also took a 25% stake in project company, in charge of the development of the terminal of Penco-Lirquén, and signed agreements with its partners Biobio Genera and the Cheniere group's Chilean subsidiary, intented to define their respective roles, rights and obligations in the future organisation to be set up upon the conclusion of the project financing (expected in 2016).

The EDF Énergies Nouvelles subsidiary is also present in Chile, with construction of a 146MW solar project in progress (see section 1.4.1.4.3, "EDF Énergies Nouvelles").

1.4.5.3.6 **Asia-Pacific**

The EDF group's activities in the Asia-Pacific region are focused on China and fast developing countries. The presence in the sectors of electricity generation, networks and services constitutes an industrial challenge for the Group. In nuclear power, in addition to the project to build and operate two EPR reactors in Taishan, China, new projects 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 focused on the global nuclear programme, the equipping of emerging countries, and the renewal of the French fleet.

1.4.5.3.6.1 Activities in China

The EDF group has been present in China for more than 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 6,260MW¹. With the Taishan project Phase I (two 1,750MW reactors), EDF also became an investor in an electricity-generation project involving an EPR nuclear power plant. Lastly, EDF is developing new partnerships, which are opening it up to new investment perspectives in nuclear power, gas power 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 the Ling Ao Phase I power plant (two 1,000MW reactors, commissioned in 2002 and 2003, respectively), and then Phase II (two additional 1,000MW reactors commissioned in 2010 and 2011), EDF now provides operational support to the CGN group and, in particular, to the 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. In addition, EDF owns a 30% shareholding in Taishan Nuclear Power Joint Venture Company Ltd., 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 represents the first foreign investor in Chinese nuclear power generation. The project's success will rest on the complementary expertise of the EDF and CGN groups. All of the equipment of Unit 1 has been installed, and the majority of that of Unit 2 has been delivered. The beginning of all testing for the commissioning of Unit 1 took place in December 2015.

Partnership agreements

The General Partnership Agreement between EDF and CGN was signed in 2007 and complemented in 2014 by implementation of agreements related to engineering, R&D, and plant operation. The EDF group has set up a facility based 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 and standards, as well as the Group's nuclear safety guidelines.

In 2010, the Group concluded a partnership framework agreement with China National Nuclear Corporation (CNNC), extended in March 2014, aimed at developing their cooperation along deeper, global lines. Also in 2013, the Group signed an agreement with CGN and AREVA, which prepared the terms for the construction of future reactors and provided for EDF's contribution to CGN's operating fleet and its evolution.

The partnerships with CGN and CNNC have allowed discussions to take place concerning their participation in the Hinkley Point C project: a protocol to encourage industrial cooperation between EDF, CGN and CNNC in the British nuclear market was signed in March 2014, and the agreement of 21 October 2015 between EDF and CGN complemented this partnership project (see section 1.4.5.1.2.5 "Nuclear New Build business").

Lastly, in the context of the Franco-Chinese governmental declaration of June 2015, tripartite agreements (EDF and AREVA with CGN and CNNC) were signed over 2015, providing for the continuance of the EPR construction in Taishan, the participation of the Chinese industrials in Great Britain, as well as a partnership for the development of medium- and large-sized reactors.

Coal-fired thermal power generation activities

French Investment Guangxi Laibin Electric Power Company, Ltd. (Figlec)

On 3 September 2015, the concession contract for the Laibin B power plant (2×360MW of installed capacity), signed in 1997 to the benefit of the EDF group in the framework of a BOT (Build, Operate and Transfer) project, expired. This power plant was thus transferred to the government of Guangxi.

Shandong Zhonghua Power Company Ltd. (SZPC)

The EDF group holds 19.6% of SZPC, a company which owns three coalfired power plants in the Shandong province, commissioned between 1987 and 2004, with a total capacity of 3,060MW. The other shareholders are the Guodian group and the Hong Kong electricity utility CLP.

^{1.} Figures on 100% basis.

Datang Sanmenxia Power Generation Company Ltd. (DSPC)

The EDF group holds 35% of DSPC, the company that owns the Sanmenxia 2 power plant in Henan province, 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)

The EDF group holds 49% of FPC, a joint-venture created in 2014 with a subsidiary of the Datang group to build and operate an "ultra-supercritical" coal-fired thermal power plant (2×1,000MW) in the Jiangxi province. The first unit was commissioned on 29 December 2015, the second group being expected in the spring of 2016. Fuzhou is thus the first power plant of the "ultra-supercritical" type (in other words, having increased output and a limited environmental impact) operated by the EDF group. This technology allows to reach high levels of temperature and pressure in the boiler, assuring a better output (close to 44% for Fuzhou) than a traditional power plant, while decreasing coal consumption and CO₂ per kWh emission.

As a result of this cooperation, the Group has broad involvement in the industrial process of building and operating the future power station. It will thus be in a position to build on its thermal engineering and operational skills and to establish new industrial synergies with global leaders in the thermal power generation segment, such as Guangdong Engineering and Design Institute (GEDI), the designer and builder of the power station, and Dongfang, the supplier of the boilers and turbines.

Hydropower generation activities

Present in this segment since 1985, the EDF group 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.

Research & Development (R&D) activities

Four 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 1.6.3 "International activity and partnerships"). The centre's activities involve the generation and storage of low-carbon electricity, tomorrow's electricity networks, sustainable cities and innovation, with digital simulation capacities being a strong component in each one of these fields.

Electricity distribution activities

Present in China since 2011, EDF International Networks has signed technical support contracts in China concerning the planning and performance improvement of the performance 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, particularly in a context of cooperation with the two major players in China, State Grid and Southern Grid.

Prospects for development and new projects

In energy services, the contract signed in 2013 with Dongfeng Peugeot Citroën Automobile (DPCA) concerning energy efficiency for lighting, was extended in 2014 and 2015.

The EDF group, Datang and the city of Sanmenxia signed a cooperation agreement in 2015 to study a project for a district heating network from the recovery of unavoidable heat emitted by thermal power plants. In January 2016, EDF was selected as a preferred partner for the development of the project.

It also works with the municipality of Wuhan for the planning, development and operation of energy services in the Franco-Chinese eco-districts of the Caidian district.

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).

1.4.5.3.6.2 Southeast and Southern Asia

The EDF group's activities in South-East Asia and in Southern Asia are focused on the development of the electricity sector, particularly through involvement in projects for the design, construction and operation of new thermal gas and hydropower plants in countries offering Independent Power Plant (IPP)-type opportunities.

Vietnam

As of 31 December 2015, EDF owned 56.25% of Mekong Energy Company Ltd. (MECO), the company which owns Phu My 2.2, a combined cycle gas power plant with a capacity of 715MW. The other shareholders are Tepco and Sumitomo Corporation. This is the first IPP project financed exclusively by foreign investors in Vietnam. 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.

Laos

At 31 December 2015, 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 company operates the power plant on a 25-year concession contract concluded with the government of Laos.

Research & Development

Following an agreement signed in 2013 with the Singapore Housing and Development Board, Singapore City's largest construction firm, in 2014, with the aim of developing an innovative urban modelling scheme, the EDF group opened a centre of excellence for sustainable cities in Asia: EDF Lab Singapore. This R&D centre dedicated to urban planning has as its mission to reinforce existing collaboration and to initiate new collaborative relationships with Singapore and other cities of the region.

1.4.5.3.7 Africa

In Africa, the Group intends to tailor its operations according to the specific features of each geographic region and thus to be present in high-growth countries offering new markets. Also, it is pursuing its operations in regards to decentralised production.

Cameroon

Power Company).

In the framework of a partnership with the State of Cameroon, the IFC (a World Bank group) and Rio Tinto Alcan (RTA), EDF is developing the Nachtigal 420MW hydropower project, situated on the Sanaga River, close to Yaoundé, for an investment decision aiming for mid-2017. A support feature, "Access to Energy", is being launched in order to for allow the populations in the environs of this project to receive better electrical service.

For over three years, EDF's operations have been focused on renovating

Republic of the Congo

In 2013 the Group signed a three-year term agreement with the Congolese Ministry of the Economy and Finance to reduce the technical and commercial losses of SNE, the national electricity company. This contract is being performed and expired at the end of March 2016. An amendment extending the contract for a six-month period has been signed in March 2016.

Ivory Coast

EDF is developing a project for a biomass electricity power plant with two 23MW units in partnership with SIFCA, an Ivorian agro-industrial group in West Africa. This project is already written into the Ivorian State's development master-plan, and negotiations are underway in order to reach a concession agreement and agreement on the transfer price of the generated energy. The investment decision is envisaged before the end of 2016.

1.4.5.3.8 Middle East

The EDF group is present in the Middle East region through its subsidiary, EDF Abu-Dhabi, which, in particular, provides engineering and consultancy services for the building of transmission facilities, dispatching and network studies in the United Arab Emirates.

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). 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 2014, EDF signed a partnership agreement with the Saudi Electricity Company (SEC), a benchmark electricity operator of the country, enabling a broad cooperation between the two groups, and including in particular, training initiatives.

Israel

In Israel, EDF supports the development initiatives of its Edison subsidiary in the gas sector. EDF's hydraulic engineering division (CIH) supplies services to the first Israeli project for the storage of electricity through pumping, on Mount Gilboa. EDF Énergies Nouvelles has also been present there since 2010 (see section 1.4.1.4.3 "EDF Énergies Nouvelles"): the subsidiary operates 109MWp of photovoltaic projects connected to the network, and is completing the construction of an additional 50MWp.

South Africa

The EDF group established a subsidiary in 2007 in Johannesburg, with a view to preparing the relaunching of the South African 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, confirming its commitment to the inclusion of nuclear power in its future energy mix. Consequently, in 2014 and 2015, 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 2011 by the Ministry of Energy. The company was selected via its subsidiary, Innowind (80% owned by EDF EN) to carry out three windfarm projects, the construction of which began at the end of 2013, and the commissioning announced during 2015 (see section 1.4.1.4.3 "EDF Énergies Nouvelles"). Innowind was, moreover, selected for an additional 33MW of wind power, during the fourth round of the tenders by the Ministry of Energy in June 2015.

EDF is also present in South Africa through the KES (Kukhanya Energy Services) company, created in 2002 (see section 1.4.5.3.9 "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. In this regard, a technical partnership agreement was signed in November 2015 between the Agence Française de Développement, Eskom and EDF, for the sharing of technical expertise in the area of networks.

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 is specialised in electricity production and, ultimately, in electricity transmission and distribution.

Morocco

EDF has been active in Morocco since the 1970s, and has formed preferred partnerships with Morocco's national electricity and water office (ONEE), electricity distribution authorities, and industrials. To help support its development, the Group created EDF Maroc in 1977 and EDF EN Maroc in 2012.

EDF and ONEE continued their cooperation, pursuant to the general agreement signed in January 2012, in the areas of renewable, thermal and hydraulic generation, as well as in networks and training.

After having been selected by ONEE through a tender, the consortium led by EDF EN in partnership with the Japanese group, Mitsui & Co., is developing the 150MW Taza wind farm (see section 1.4.1.4.3 "EDF Énergies Nouvelles").

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.

1.4.5.3.9 Access to Energy Mission

Since 2001, the Group has been pursuing a programme to provide access to energy in developing countries.

In South Africa, the KES (Kukhanya Energy Services) company, created in 2002, is 50% owned by EDF, 15% by the local operator, Calulo, and 35% by Total. It initially developed its business through photovoltaic kits in Kwazulu-Natal, then extended its activities into the Eastern Cape region. At the end of 2015, KES supplied solar electrical power to nearly 200,000 persons, representing an increase of around 25% between 2014 and 2015.

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, using essentially photovoltaic systems. EDF holds 45% of BPC Lesedi, a local subsidiary owned jointly with BPC. The interest in pursuing this programme has been in question, and a procedure for disengagement, pursuant to a shareholder pact, is underway.

In Senegal, EDF has a 70% shareholding in ERA, alongside its local partner, Matforce. ERA is the operator of the rural electrification concession of Kaffrine-Tambacounda-Kédougou, which commenced the operational phase of its business in 2014 following the obtaining, at the end of December 2013, of the first tranche of the French Development Agency grant, through ASER¹. It currently supplies power to approximately 25,000 persons.

1.4.6 ENERGY SERVICES AND OTHER ACTIVITIES



(1) Including the whole EDF Énergies Nouvelles entity.

1.4.6.1 Energy services

The EDF group is a major player in energy services in France. Its competences allow offering comprehensive solutions, covering various fields: advice, solution design, construction, operation, and maintenance of the facilities.

EDF is also active in sectors as varied as public lighting, heating networks, decentralised low-carbon generation, remote control of consumption, and electric mobility.

The Group's strategic plan places an important emphasis on the development of energy services, in order in particular to meet the needs of local communities and businesses. This ambition rests upon a context which advocates energy efficiency, decentralised generation with low-carbon emissions, and research into competitiveness and quality of life, regardless of what may be the business sector concerned.

Consequently, the Group's actions are built around five challenges:

- energy efficiency for public buildings and tertiary and industrial companies;
- providing support to regions during their project, and in particular to "sustainable cities" or "smart cities";
- local power generation and the associated heating and cooling networks;
- intelligent public lighting;
- electric mobility.

1.4.6.1.1 Dalkia

The EDF group has held a 99.94% equity interest since July 2014 in Dalkia, a leading player in the European energy services market with a full range of services and an excellent sales network in France, serving to reduce energy consumption and to improve the performance of the facilities.

Dalkia's operations

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 brings expertise to its customers, in order to develop, realise, and manage innovative energy solutions, which are more ecological and more economical, for sustainable growth of cities and businesses.

From decentralised generation to demand-side management, while optimising distribution, Dalkia is present at each stage of the energy chain, in order to improve system performance. Thanks to its nearly 80 years of experience in managing heating and cooling networks, optimising industrial utilities, improving the energy performance of a building, or using alternative and renewable energies, Dalkia offers its customers tailor-made solutions to reduce their energy consumption and to improve the environmental and economic performance of their facilities.

In this way, Dalkia has allowed to avoid 2.46 million tonnes of CO_2 and realised 3.91TWh of energy savings in 2015.

1. ASER: Senegalese Agency for Rural Electrification (Agence sénégalaise de l'électrification rurale).


Heating and cooling networks

The development of the networks was an important growth engine in the last few years for Dalkia which established a reproducible model for value creation, resting upon numerous optimisation levers:

- improvement of the efficiency of teams and organisations, optimisation
 of the performances of operations upon the takeover of networks;
- reconfiguration of generating plants and networks: anticipation of future network needs, taking into account organic growth potential and progression of energy efficiency, integration of the challenges of regulatory compliance, reduction of unnecessary redundancies;
- modification of the energy mix for greater efficiency and less CO₂, with the optimisation of cogeneration and the development of renewable energies (biomass, geothermal, etc.);
- additional services in order to better enhance assets (for example, support service for the electricity grid).

Thus, Dalkia is one of the leaders in France in the management of urban heating and air-conditioning networks, operating 358 heating or cooling networks, both urban and local. Deploying this model across its geographic targets will constitute a significant part of its future growth.

Industrial utilities

Dalkia is active in the industrial utilities business for 2,100 French industrial sites. The challenge is to improve environmental performance (particularly by controlling CO_2 emissions and the valuation of energy recovery), competitiveness and security of supply.

Dalkia's strategy is to allow its industrial clients to concentrate on their core processes, by assuming responsibility for and optimising the production of their utilities, their energy usage, and their greenhouse gas emissions. Dalkia differentiates itself by a large and coherent range of services, which includes the optimisation of industrial utilities (steam, electricity, compressed air); adjustment of usage to requirements, and identification of sources of unavoidable energy and recoverable co-products, optimisation of industrial building usage, and reduction of greenhouse gas emissions.

Building energy services

Building energy services consist of management of the energy facilities in buildings: optimisation of local thermal energy generation, energy supply, operation and maintenance of technical facilities. They also seek to improve the operation of existing systems in order to maximise their effectiveness and to reduce their CO_2 emissions. 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.

In this respect, Dalkia manages 88,000 energy facilities in France.

Key achievements for Dalkia in 2015

In October 2015, DK Energy Polska, a subsidiary of Dalkia in Poland, completed the buyback of 100% of the shares of the Zaklady Energetyki Cieplnej Katowice SA (ZEC) company, a company which is primarily specialised in the generation and distribution of heat in the region of Katowice (Upper Silesia), and of its subsidiary, EC Szopienice. The business's development project, which rests primarily on gas mine recycling, and development of heating networks, will allow to reduce carbon from the energy mix of the region, while enhancing the value of local resources and by utilising more effective processes.

Toulouse Métropole chose Dalkia for the construction of a new heating and cooling network for the equivalent of 15,000 houses, and thus created a new eco-virtuous public service from renewable and recovered local energies. The public service delegation contract was signed for a 26-year term, and concerns the design, construction and operation of the new heating and cooling network, "Plaine Campus".

Air France entrusted Dalkia with the overall management of its Orly and Roissy industrial sites. Dalkia thus has become its preferred partner for multitechnical and multiservice services for 105 airport buildings and maintenance hangars. Over the contract's five years, Dalkia has committed to reducing energy consumption by 15%.

In March 2015, Dalkia finalised the 100% acquisition of Cesbron, a specialist in industrial and commercial cooling and in climate engineering. This acquisition made it possible for Dalkia to position itself in the cooling sector, and to enlarge its services range.

In biogas, Verdesis was acquired from EDF Énergies Nouvelles on 11 February 2015 by Dalkia, due to their close business proximity. Verdesis has a 27.2MW capacity, in operation in Europe.

Optimal Solutions

Optimal Solutions (the former EDF OS), a wholly owned subsidiary of the Dalkia group since 17 February 2015, has positioned itself as a specialist in the design and realisation of energy-efficient solutions in France, strongly complementing Dalkia's regions:

- in buildings or cities, through the renovation of buildings and eco-districts. It handles on its own the financial and legal setups, the design and construction of facilities, while integrating performance commitments throughout;
- in the design and works for the industrial and the tertiary sectors. The subsidiary has broad technical expertise, enabling it to adapt solutions to the needs of the customers, while seeking the optimum energy performance. These solutions integrate the following aspects: electricity, utilities, energy optimisation of processes, and some generation of renewable energy.

1.4.6.1.2 **EDF Fenice**

EDF Fenice, an international group based in Italy, was set up by the Fiat group before being taken over (100%) 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 or 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. EDF Fenice supplements its services with energy efficiency and environmental optimisation services for industrial sites and facilities.

At 31 December 2015, EDF Fenice had a total electricity production capacity of 280MW and a heat generation capacity of 2,789MWh. EDF Fenice has 52 thermal energy (steam, superheated water, hot water), electricity and compressed air production sites.

Italy

Contracts with the Fiat group still account for over half of EDF Fenice's business. A major goal in 2015 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 efficient partnership initiatives, increasing the likelihood that the contract will automatically be renewed for a further five years in 2017.

In 2014, EDF Fenice built its Energy Management System according to ISO Standard 50001-2011, which encourages best practices in energy management (reduction of greenhouse gas emissions and other environmental impacts, energy savings). In the end of December 2015, 13 of the 22 sites of the Fiat contract were certified (including both sites located in Spain), with the objective of having them all certified in future.

Spain

EDF Fenice has operated in Spain since 2001 through its wholly owned subsidiary EDF Fenice Instalaciones Iberica.

Strongly impacted by the energy reform of 2014, EDF Fenice Ibérica demonstrated in 2015 its ability to surmount the crisis, thanks to the consolidation of its commercial model in the services of energy efficiency and the reinforcement of its position in the industry's market.

The implementation of the European Union Directive on Energy Efficiency in Spain, setting concrete obligations for the large industrial businesses, allowed EDF Fenice Ibérica to accelerate the development of the Global Energy Partner model through reinforced commercial activity, targeted operational marketing, and a strategy of commercial partnerships.

And so, in 2015, EDF Fenice Ibérica signed new contracts with significant industrial groups from the Spanish agri-food sector, and established partnership agreements with specialised companies, making it possible to reinforce its commercial offering, both in the area of energy management and in commodities management consulting.

Poland

EDF Fenice has a wholly owned Polish subsidiary, EDF Fenice Poland. This company operates principally in the field of outsourced management of industrial utilities (cogeneration, heating, cooling, compressed air, electricity grid, industrial gases). It also handles various energy and associated environmental services (potable water, waste treatment, and liquid effluents). EDF Fenice also has the administrative concessions which are necessary to supply customers connected to its distribution networks (electrical, gas, heating). Finally, EDF Fenice Poland developed a business connected to energy efficiency, with the objective of reducing its customers' consumption and environmental impacts.

Russia

EDF Fenice has a wholly owned subsidiary in Russia, Fenice Rus, which markets energy efficiency and environmental services to industrial companies. Since its creation, Fenice Rus has signed eight performance contracts with Avtovaz, a Russia's leading car maker, which hare now fully operational. The facilities built for the TMH (TransMashHolding) company are also operational using the same business model. 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.

In July 2015, and more recently, in early 2016, Fenice Rus also commissioned the sewage treatment units which had been constructed, and which will be operated for 10 years by Fenice Rus, on two of Danone's industrial sites in Russia. These projects have also become benchmarks and are the basis for the international cooperation between Fenice and Danone.

An Energy Management System project has also been put into place in one of the Schneider Electric plants in Russia. This contract, with a three-year term, makes it possible to both identify energy-efficiency projects "online" to be created on the site, and to provide a benchmark for this type of project, on such a scale.

EDF Fenice is continuing to support international groups that operate in Russia, such as Danone, Alstom and Renault Nissan.

1.4.6.1.3 **Tiru**

Tiru is 51% owned by the EDF group. It specialises in:

- energy recovery: incineration of household waste to generate energy (electricity and 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, constructs and operates energy-from-waste and biomass facilitites in France, Great Britain, and Canada, and has 1,096 employees. Its client portfolio is made up of municipalities, predominantly departmental and municipal consortia, waste management operators, as well as some private-sector clients (in particular, greenhouse producers and industrials).

Tiru recovers 3 million tonnes of waste per year, through its 32 sites. Its energy recovery units sold close to 2.63TWh of electricity and steam, 50% of which was renewable energy. Thanks to Tiru, this supplied heating to 316,000 inhabitants and electricity to 514,000 inhabitants in 2015. In 2015, Tiru saved the equivalent of 1.7 million barrels of oil, or 727,000 tonnes of avoided CO_2 emissions.

Tiru is a pioneer in the waste market and thus contributes to the challenges of energy transition. It industrialises new processes that are central to the development of energy systems, such as the anaerobic digestion of household waste and production of biogas, the production of solid recovered fuel, or supply of hot water to agricultural greenhouses from the heat produced in waste-to-energy plants.

In 2015, Tiru and the Henin-Beaumont Mixed Consortium for the Elimination and Recovery of Waste (Symevad) launched a new and innovative process with the new plant, which produces solid recovered fuels and biogas from household garbage.

1.4.6.1.4 **Citelum**

A wholly owned subsidiary of the EDF group since 2014, Citelum is one of the leading players in public lighting, not only in France, but throughout the rest of Europe and indeed worldwide.

With roughly 450 employees in France, Citelum employs close to 3,000 persons, active primarily in Europe (including France, Italy, Spain, and Denmark) and in the Americas (including the United States, Mexico, Brazil, and Chile).

Citelum accompanies cities and industries towards a more intelligent, more economic, and safer world of light. Citelum develops its expertise in street lighting in the areas of road signals, lighting installation and connected urban services: in particular, video-protection, recharging of electric vehicles and Wi-Fi.

Citelum's development in France and abroad is built around five key product lines, defined in energy services 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.

Of note, in 2015, its expertise was selected in the call for tenders launched by the city of Rome, the subject of which was the renovation and maintenance of the stock of tricolour traffic lights, as well as the management of information billboards with changing messages and of access-control systems.

1.4.6.1.5 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 is a company which is wholly owned by EDF, and has historically developed a range of services which enables business customers and regional municipalities to monitor the energy performance of their property assets. The company is a major player in the area of digitalisation of energy management through innovative auditing offers (100% digital audits), multi-fluid and multi-site monitoring, and personalised energy management.

Edelia (Edev Téléservices)

Edelia is a company which is wholly owned by EDF, and it historically handles, on behalf of EDF, the deployment and operation of demonstrators within the framework of intelligent distributed load-shedding electrical systems, for residential customers, particularly in Lyon (Smart Electric Lyon), in Nice, and in Brittany (with the experimental "Une Bretagne d'avance"). Edelia is also designing and developing a service hub aiming to deal with several millions of customers (display screens of consumption, warnings, advice, etc.).

The positioning of Edelia today is that of a captive subsidiary contributing a capacity of innovation to the EDF group on the "smarthome and data" topics (exchanges of data between connected objects in the home, in order to enhance services).

Electric mobility

The transportation sector today is very dependent upon fossil energies, which emit CO_2 . Low-carbon electricity constitutes a lever for developing electric mobility which is more respectful of the environment. This is why EDF, the champion of low-carbon growth, is investing in this field, particularly through its subsidiary Sodetrel.

The Group's commercial offering includes:

 consulting services for local authorities and businesses on the positioning and scale of electric vehicle charging infrastructure;

- installation of recharging infrastructure for all customer segments: residential, local authorities and businesses, car parks and supermarkets;
- remote management and supervision of charging stations;
- the Group has also participated in experimental ride-sharing in Grenoble, Nice and Monaco.

Sodetrel

Sodetrel, a company which is wholly owned by EDF, offers a range of electric mobility schemes for local authorities, energy consortia, and businesses. In this regard, it proposes a wide range of offers to its customers, from the provision and installation of charging infrastructure to commercial operation of associated services, also including tools for the supervision of charging stations and key solutions in hand for technical operation and maintenance. Sodetrel, in collaboration with its eco-mobility partners, also offers electric vehicle fleet management solutions.

In 2015, Sodetrel, in the framework of a consortium ¹, deployed a network of 200 rapid-charging stations that are interoperable on highways and compatible with all models of electric vehicles in the market.

Citelum

Active in the street furniture sector, Citelum supports the development of mobility by providing technical installation, operation and maintenance services (see section 1.4.6.1.4 "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.

Its activity is organised around three agencies (Lorette, Audruicq and Nantes), to which the operational branches are attached (Bordeaux, Lyon and Avignon).

In 2015, HTMS piloted and completed the retrofitting of six power transformers on behalf of the steelmaker Trimet, on the site of Saint-Jean-de-Maurienne. For this project, a temporary joint business grouping was created with the Transformateur Service Vénissieux company as the HTMS authorised representative. The amount of this operation was \leq 4,700 thousand over 18 months. It involved a temporary alliance between businesses, which made it possible to organise in order to carry out a contract, for which they would not have been able to tender, had they been acting individually. They are referred to as co-contractors.

Heating: CHAM

Wholly owned by EDF, CHAM carrries out its activity of maintenance of residential energy systems in individual homes, private multifamily dwellings, and to a lesser degree, social housing. The business and its own subsidiaries are in a period of dynamic external growth, which aims to extend the territorial grid.

^{1.} This consortium brings together EDF, automobile manufacturers Renault, Nissan, BMW, and Volkswagen, and ParisTech. The Corri-Door project is being financed in half by the European Commission.

Financial services: Domofinance

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 2015, Domofinance granted more than 51,000 loans.

EDF consolidates using equity method 45% of Domofinance, the remaining 55% being held by BNP Paribas Personal Finance (a subsidiary of the BNP Paribas group).

1.4.6.2 Gas activities

In Europe, the EDF group requires over 20 billion cubic metres of gas, equivalent of half France's national consumption. As such, EDF has developed a gas strategy to ensure the security of gas supply for its 4.3 million customers (including more than 1.2 million in France), its cogeneration plants (owned by its subsidiary Dalkia in France), and its gas power plants.

The Group is thus present throughout the natural gas chain in France, but also in Europe, principally through its subsidiaries, EDF Energy, Edison and EDF Luminus. It also relies upon EDF Trading for its operations related to involvement in the wholesale markets, as well as with Dalkia.

1.4.6.2.1 Natural gas end-market

In 2015, the natural gas sales of the EDF group to its end customers in France totalled around 28.6TWh, equivalent to a market share of 6%. At 31 December 2015, some 1.2 million customers (ranging from residential customers to major accounts) had chosen EDF as their natural gas supplier.

In Italy, the United Kingdom, and in Belgium, the downstream customer portfolios consisted respectively of:

- in Italy: 521,000 customer accounts, 6.03Gm³ of gas (around 63.9TWh) and a market share of 13.6%;
- in the UK¹: around 2 million customers (27.7TWh), with a market share of around 5%;
- in Belgium: 589,000 customer accounts (13TWh), with a market share of around 18%.

1.4.6.2.2 Gas assets and projects

1.4.6.2.2.1 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 (see section 1.4.5.2.3.2 "Hydrocarbon business").

1.4.6.2.2.2 Infrastructures

Gas pipelines

Apart from its various rights to transport capacity in the European network, the EDF group participates, through its Edison subsidiary, in infrastructure projects for gas importation (see section 1.4.5.2.3.2 "Hydrocarbon business").

Liquified natural gas (LNG) regasification terminals

In 2012, EDF, through its subsidiary, Dunkirk LNG (65% owned by EDF, 25% by Fluxys, and 10% by Total), commenced construction of a methane terminal with a capacity of 13 billion cubic metres per year, on the Grand Port Maritime de Dunkerque area, with commissioning planned in 2016. The terminal is equipped with three LNG storage tanks with a capacity of 190,000 cubic metres each, providing greater flexibility to the network to supply the gas-fired power plants, enabling them to cope with peak demand. 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. With respect to environmental considerations, EDF opted for system for heating of liquefied natural gas without production of CO₂, using a portion of the warm water discharged from the Gravelines nuclear power plant. EDF will have 8 billion cubic metres of regasification capacity.

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 1.4.5.2 "Italy").

The Group also holds regasification capacities in the terminal of Zeebrugge (Belgium).

Storage

In Germany, the EDF group has storage for natural gas in salt cavities situated 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.

With respect to storage activities of the Group in Italy and in the United Kingdom, see respectively, sections 1.4.5.2.3.4 "Regulated activities" and 1.4.5.1.2.3 "Thermal production and gas storage".

The Group also holds storage rights in the Netherlands, Belgium and France.

1.4.6.2.2.3 Exploration and Production (E&P)

The Group is developing its upstream activities in hydrocarbons exploration and production, through Edison (see section 1.4.5.2 "Italy"). Proven reserves total 42 billion cubic metres of gas equivalent, with 2.7 billion cubic metres produced in 2015.

1.4.6.3 **Optimisation and trading: EDF Trading**

EDF Trading is the interface between the Group and the energy wholesale markets providing optimisation and risk management services as well as access to new markets and regions. It also provides market services to third parties. The company is active in the wholesale markets for electricity, natural gas, LNG & LPG, coal and freight and environmental products. It also handles dedicated retail operations for end users in North America. EDF Trading is one of the largest wholesale energy market traders in Europe, it is one of the largest marketers of gas and electricity in North America, one of the main independent providers of energy management services for power generation companies and retailers in the US, and a top 10 retail supplier to large commercial and industrial users in North America through its subsidiary EDF Energy Services.

EDF Trading has offices in Europe, Asia and North America, and its registered office is in London. The company has 988 employees and is governed by the UK's financial market regulator, the Financial Conduct Authority.

^{1.} Excluding Northern Ireland.

European Electricity

EDF Trading is a leading participant in the European electricity wholesale market, providing a full range of risk management services to EDF group asset operators in Europe and to third parties. It has an extensive geographic footprint and scale of activity which makes it able to adapt quickly to changes in the market and to develop new business where appropriate. In 2015, EDF Trading developed its intraday activities and increased transaction flows with EDF group entities. It also expanded its geographic footprint to include Romania and became a market maker for Spanish Power Futures.

European Gas

EDF Trading is a leading player in the European gas wholesale market. It manages EDF group entities' gas assets including production, transmission rights, long-term supply contracts and re-gasification and storage capacities. 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 2015, EDF Trading continued to manage the Group's gas portfolio and signed agreements with EDF's larger commercial and industrial customers. On the flow side, EDF Trading has been developing wholesale market products for a growing number of third party customers.

North American power and gas

EDF Trading is a leader in the North American wholesale electricity markets with an extensive geographic footprint. It is also one of the top gas marketers. EDF Trading contracts or manages about 4.2Gm³ (15bcf) of natural gas storage and around 400Mm³ (1.5bcf per day) of gas pipeline transportation. It has a portfolio of assets including long term electricity and gas contracts, virtual hydro plants, US tolling agreements, gas storage facilities and gas transportation contracts. In 2015, EDF Trading extended its footprint to the Mexican border and is currently looking at opportunities into Mexico. It partnered with EDF Renewable Energy on a natural gas contract in Pennsylvania and executed its first power supply deal in the Vermont Public Power Supply Authority. EDF Trading is also one of the leading traders of FTR's (Financial Transmission Rights) in North America.

Environmental products

EDF Trading is active across the carbon, green energy and weather derivatives markets in Europe, North America and China. The company is also involved in trading a broad suite of environmental commodities and is one of the largest traders of renewable energy certificates in the US. In 2015, EDF Trading executed the first transaction regarding the contract nearly launched by Nasdaq on German wind energy.

Liquefied Natural Gas (LNG) and Liquefied Petroleum Gas (LPG)

EDF Trading offers a complete range of LNG services including supply and delivery and nominations into the appropriate network. In 2015, EDF Trading signed a long term LNG optimization and supply agreement with the Korean utility KOGAS and is looking to expand this arrangement with other Asian

buyers. It also signed an Egyptian gas tender and worked alongside EDF on its marketing initiatives ahead of the commissioning of EDF's Dunkirk LNG terminal. EDF Trading is still developing its LPG trading activities and expects its first physical delivery early in 2016.

Coal and freight trading

EDF Trading operates a fully integrated coal and freight trading business with numerous supply sources across the globe. In 2015, EDF Trading closed a long term supply contract with Drummond and created a new joint venture in Singapore with the two largest Japanese utilities, Chubu and Tepco to optimize their coal procurement process, effectively doubling its current coal volumes into Japan.

EDF Energy Services

EDF Energy Services is EDF Trading's dedicated business for large retail commercial & industrial (C&I) consumers operating in the North American electricity, gas and environmental products markets. It is also the premier asset management provider for power generators in the US with around 25,000MW of generation output under management with over 60 power stations that it dispatches and operates on behalf of its customers. Many of these large customers are European or present in Europe, which allows EDF Trading to service them on the different markets they operate on. In 2015, EDF Energy Services extended its C&I footprint into the New Jersey, Delaware and Maryland retail electricity markets and is now no. 8 on the DNV GL (merger of Det Norske Veritas and Germanischer Lloyd) list of top C&I retail energy providers. It added more than 3,000MW to its EMA (Energy Management Agreement) portfolio in 2015 including power plants in Louisiana, Mississippi and Alabama. EDF Energy Services also worked closely with EDF's C&I business in Europe developing services for major global clients.

1.4.6.4 Électricité de Strasbourg (ÉS)

The ÉS group is a regional multi-energy company focused on three business lines: electricity distribution, sales and marketing of gas and electricity, and lastly, energy services and renewable energies. This balance makes it possible for the ÉS group to better provide support to its customers in energy transition.

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.

1.4.6.4.1 **Distribution**

ÉS Réseaux (ESR) carries out, within the Électricité de Strasbourg SA company, activities of electricity distribution network management. ESR operates, maintains, develops and renews an electricity network more than 14,000km 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 more than 500,000 points of delivery for low-, medium- and highvoltage power, as well as connections with the ERDF network and two other downstream network managers. ESR also provides services to businesses and Local Distribution Companies (Entreprises Locales de Distribution, or LDCs) of Alsace.

In order to comply with recent developments in the Energy Code, Électricité de Strasbourg engaged in a process to create subsidiaries for its distribution activities.

1.4.6.4.2 Sales and marketing

ÉS Énergies Strasbourg is the sales and marketing subsidiary of the ÉS group.

ÉS Énergies Strasbourg provides energy to nearly 500,000 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, ÉS Énergies Strasbourg offers related services such as electricity, gas and plumbing corrective maintenance. Also, ÉS Énergies Strasbourg has continued, for its residential customers, the implementation of support services in renovation and construction.

With a view to the elimination on 1 January 2016 of regulated tariffs for sales of natural gas for business customers consuming over 30MWh per year, but also electricity for customers whose subscribed power is greater than 36kVA, ÉS Énergies offered market proposals to its clients and strengthened its positioning as a leading provider of electricity and gas in the Bas-Rhin department.

1.4.6.4.3 Energy services et renewable energies

Écotral

Écotral is the main force of energy services of the ÉS group. Its activities cover design, engineering, construction, operation and maintenance, mainly in the field of renovation of low consumption buildings, electrical and thermal areas, heat networks and renewable energies.

Following the acquisition of Dalkia by the EDF group in 2014, the latter sought to reinforce its development in energy services in the Bas-Rhin department, by bringing together the strengths and competencies of the ÉS group, a local energy company rooted throughout the region, and of the Dalkia group.

And so, on 1 January 2016, Écotral became ÉS Services Energétiques, a subsidiary owned in equal parts by ÉS and Dalkia, and thereby integrated the activities of Dalkia in the Bas-Rhin department.

Deep geothermal energy

The ÉS group is one of the leading players in deep geothermal energy in France. It holds an equity interest of 40% in the ECOGI (Exploitation of Heating for Industry from Geothermal Sources) project. This company, the result of a partnership with the Roquette Frères company and the Caisse des Dépôts, with the support of ADEME (the French Agency for Environment and Energy Management), of the Alsace Region, and of SAF-Environnement, is leading the construction project of a superheated water production plant (24MW thermal) from a geothermal resource situated more than 2,500 metres deep. Besides the projects in the course of being studied, the ÉS group has also become involved with its partner EnBW in the transformation of the deep geothermal research site of Soultz-sous-Forêts into an industrial facility, with commissioning expected in the spring of 2016, the same as for ECOGI.

Biomass

In the area of biomass, the ÉS group has become involved, through its majority ownership in the ÉS Biomasse company, in the financing, construction and operation of a biomass cogeneration plant. Starting from the end of 2016, the plant will produce 70GWh of electricity per year, and 80GWh of heat, which will allow supplying one of the three principal heat networks of the city of Strasbourg.

1.4.6.5 **Other equity interests**

1.4.6.5.1 EDF Trading Logistics

With a fuel oil supply volume of approximately 1.1 million tonnes and 1.4 million tonnes of coal delivered in 2015, EDF Trading Logistics represents 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 controls the coal terminals at the ports of Le Havre and of Saint-Nazaire.

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.

1.4.6.5.2 Other equity interests

The non-exclusive property investment fund, created in the end of 2014 at the initiative of EDF Invest and Amundi, pursued its development in 2015, with in particular a new property investment in Germany.

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, within their specific field of activities (generation, fuel, engineering) to the Group's missions, and more specifically, to those of the generation and engineering: 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 intermediatelevel radioactive waste.

1.5 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 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.

1.5.1 EDF AS A PUBLIC UNDERTAKING

As of 31 December 2015, the French State held 84.94% of EDF's share capital and 85.04% 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.

1.5.2 **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 1.5.3.2 "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 electricity supply mission

The purpose of the balanced development of electricity supply mission, which is defined in Article L. 121-3 of the French Energy Code, is to achieve the objectives defined in the multi-year energy plan (PPE), which Law no. 2015-992 of 17 August 2015 on the Energy Transition for Green Growth substituted for the multi-year generation investment plan (PPI). Defined by decree, the PPE sets out priority courses of action for the public authorities for the management of all forms of energy in continental metropolitan France. It must be compatible with the greenhouse gas emission reduction targets set in the carbon budget and the low carbon strategy, which are defined by Decree no. 2015-1491 of 18 November 2015, pursuant to the aforementioned Law of 17 August 2015.

The PPE contains sections on (i) the security of supply, (ii) improving energy efficiency and reducing primary energy consumption, in particular fossil fuel, (iii) developing the utilisation of renewable energies and energy recovery, (iv) the balanced development of energy networks, storage, conversion and the energy demand monitoring, (v) the preservation of consumer purchasing power and the competitiveness of energy prices, in particular for undertakings that are exposed to international competition and (vi) the evaluation of the needs for professional skills in the field of energy and how training courses can be adapted to these needs.

It defines the quantitative objectives for the plan and the maximum indicative budget for the public funds that the State and its public institutions will mobilise in order to attain them. This budget is defined in terms of commitments and accomplishments. It may be broken down by objective and by industry sector.

The first PPE must cover an initial period of three years (2016-2018), then a second period of five years (2019-2023). Subsequent PPEs will be drawn up for two successive five-year periods.

The initial guidelines and actions for the period 2016-2023 that are contained in the PPE were presented and submitted for consultation on 19 November 2015, during the second meeting of the committee tasked with monitoring the PPE. The PPE is expected to be approved by decree and presented to Parliament in 2016.

The balanced development of electricity supply mission also involves guaranteeing the supply of areas that are not interconnected to continental metropolitan France (Corsica, and the overseas departments and territories) and some islands of Brittany.

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, which is defined in Article L. 121-4 of the French Energy Code, 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; and
- a 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, which is defined in Article L. 121-5 of the French Energy Code, 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 assigned to all electricity suppliers. The Law of 17 August 2015 on the Energy Transition for Green Growth provides for the gradual replacement of the TPN by the "energy voucher". This voucher is a special mean of payment that allows households that are experiencing financial difficulties to cover part of their energy consumption expenses (electricity, gas, fuel oil, etc.) or their expenditure on improving the energy efficiency of their homes. The voucher system will first undergo an experimental phase before becoming standard practice by 1 January 2018 at the latest, in accordance with conditions that are to be defined by a decree.

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 at the date of this reference document, 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 (from 1 November to 31 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 the TPN or the "energy voucher".

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 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 continue to benefit from 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 customers' and local authorities' 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 and 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.

1.5.3 ELECTRICITY MARKET LEGISLATION

1.5.3.1 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 principles of the opening up of 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 (on this subject, see also section 1.5.6.2.5 "Regulations applicable to renewable energy generation").

1.5.3.2 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. Moreover, Decree no. 2015-1823 of 30 December 2015 organised the regulatory section of the French Energy Code. Consequently, around one hundred decrees on energy law have been repealed.

The Law of 17 August 2015 on the Energy Transition for Green Growth amended numerous provisions of the French Energy Code, and in particular the objectives of the energy policy, which are now focused on the emergence of a competitive economy that creates an abundance of jobs through the mobilisation of all the industrial sectors (in particular the green growth sectors), security of supply and the reduction of reliance on imports, competitive and attractive energy prices, the preservation of human and environmental health, social and territorial cohesion, the fight against fuel poverty, and the contribution of an implementation of a European Energy Union.

Generation facilities

Anyone can operate an electricity generation facility provided that, above a certain power threshold determined by decree, an operating licence issued pursuant to Article L. 311-5 of the French Energy Code is obtained. 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 1.4.3.3 "Regulated Access to Electricity from the Existing Nuclear Fleet (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 final consumers whose power demand is less than or equal to 36kVA benefit, at their request, from regulated sales tariffs; this is also true for all customers in areas that are not interconnected to continental metropolitan France;
- household and non-household final consumers whose power demand is greater than 36kVA, who had not exercised their eligibility on 7 December 2010 were able to benefit from regulated sales tariffs until 31 December 2015. Since 1 January 2016, these consumers have no longer been able to benefit from regulated tariffs. Article 25 of Law no. 2014-344 of 17 March 2014 on consumption provided for a six-month transitional period, during which customers who had not signed a new contract with the supplier of their choice before 31 December 2015 could, in order to guarantee the continuity of their electricity supply, continue to benefit from a contract with EDF² during a maximum transitional period of six months, at the end of which they would 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. Order no. 2016-129 of 10 February 2016 provides for a system to ensure the continuity of gas and electricity supplies for customers who have still not accepted a market-based offer on 30 June 2016, starting on 1 July 2016. The CRE will launch the call for tenders for this contract, which will cover the post-transitional offer period, in March 2016.

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.

^{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.

² Or their Local Distribution Companies.

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 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 1.4.4.4 "Tariffs for Using the Public Electricity Transmission and Distribution Networks (TURPE)" above.

Supporting mechanisms for certain subsidiaries of generation

EDF is subject to purchase obligations that result in contracts being entered into with the operators of facilities. The purchase obligation framework, which was created by Law no. 2000-108 of 10 February 2000 on the modernisation and development of the public electricity service, was amended by Law no. 2015-992 of 17 August 2015 on the Energy Transition for Green Growth, which clarify some aspects of the regime and create a new form of subsidy in the guise of additional remuneration. The supporting mechanism for certain subsidiaries of generation under the aforementioned Law of 17 August 2015 now includes three separate sets of rules.

Firstly, the purchase obligation regime provided for by Articles L. 314-1 *et seq.* of the French Energy Code. These articles provide that EDF (as well as the LDCs that are responsible for supply in their service area) must sign purchase contracts, at the request of producers, for the electricity generated by technology sectors, the development of which the public authorities wish to support, either because they utilise sources of renewable energies, or because they have a specific form of energy efficiency (e.g. cogeneration).

Article R. 314-6 of the French Energy Code provides that producer who benefits from the purchase obligation must sell all of his production to EDF under agreements entered into on the basis of indicative models approved by the Minister for Energy. Purchasing terms and conditions, specifically the electricity purchase prices, are set by order of the Minister for Energy and Economy.

Secondly, the additional remuneration regime, which was introduced by Law no. 2015-992 of 17 August 2015 on the Energy Transition for Green Growth, is governed by Articles L. 314-18 *et seq.* of the French Energy Code. The additional remuneration takes the form of a premium that is paid to producers as a complement to their income from selling the electricity they produce on the market, as well as the assignment of their capacity guarantees. In this respect, EDF will be obliged to enter into an additional remuneration contract with eligible producers who request one and with certain producers who currently benefit from a purchase obligation and who wish to benefit from an additional remuneration agreement for the remainder of the term of their initial purchase contract.

The additional remuneration, for which the implementing legislation will be published over the course of 2016, is designed to partially substitute the purchase obligation system for certain facilities.

Finally, the tendering procedure which, pursuant to Articles L. 311-10 *et seq.* of the French Energy Code, may be initiated by the Minister for Energy when production capacities do not meet the targets of the multi-year energy plan. EDF is required, excluded areas of the LDCs, to enter into an electricity purchase contract or a contract that provides for additional remuneration (this is a memorandum of understanding in the event that it is EDF itself in the capacity of "producer" that is chosen) with the selected bidder(s).

The additional costs for EDF and for the LDCs resulting from contracts signed pursuant to the obligation to purchase energy and the complement of income are compensated by the State and funded in particular by a contribution received from final consumers, the Contribution to Public Electricity Service costs or "CSPE".

Mechanism for compensating the additional costs of public service

The Contribution to Public Electricity Service costs (CSPE)

Article L. 121-6 of the French Energy Code lays down the principle that the State must compensate in full the costs that are attributable to the public service generation and supply missions that are assigned to EDF and the LDCs.

For electricity generation, the expenses defined by Article L. 121-7 of the French Energy Code include:

- 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, as well as additional remuneration agreements that are entered into pursuant to Articles L. 314-18 *et seq.* of the French Energy Code;
- in areas that are not interconnected to continental metropolitan France:
 - 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 costs of studies paid by a producer or supplier with a view to implementing electricity supply projects that are identified in the decree on the multi-year energy plan.

For the supply of electricity, the costs defined in Article L. 121-8 of the French Energy Code include:

- the loss of income and the additional costs incurred by suppliers due to the implementation of the special "basic necessity" rate (TPN);
- the 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 mechanism for compensating public service costs, which is governed by Articles L. 121-9 *et seq.* of the French Energy Code, was reformed by Law no. 2015-1786 of 29 December 2015 (the Amended Budget Act for 2015), which aims to secure the financing of the costs of the public electricity service.

The compensation of public electricity service costs will now be financed by revenue from the domestic tax on the final consumption of electricity (the TICFE), now known as the Contribution to Public Electricity Service costs (CSPE). The CSPE will be collected directly from final consumers of electricity in the form of an additional levy on the sale price of electricity or directly from electricity producers that produce electricity for their own needs.

The amount of the CSPE is set at ≤ 22.50 /MWh as from 1 January 2016 (*i.e.* the rate that would have been set for the CSPE if it had not been reformed). As an exception, for electro-intensive and hyper-electro-intensive undertakings and distribution companies, reduced tariffs of between ≤ 0.5 /MWh and ≤ 7.5 /MWh have been defined.

The financing of public electricity (and gas) service costs is now provided exclusively by the State budget, as follows:

- The costs linked to energy transition, which correspond to subsidy mechanisms for renewable energies, as well as the reimbursement of the compensation deficit supported by EDF, are recognised in a special purpose account (CAS) for "energy transition" that was created by the Amended Budget Act for 2015. Revenue for this CAS is for the most part allocated to the CSPE, as well as a fraction of the domestic tax on energy products (TICPE), the domestic tax on the consumption of natural gas (TICGN) and the domestic tax on coals, lignite and coke (TICC).
- The other public service costs (fuel poverty, tariff equalisation in areas not interconnected to metropolitan France, cogeneration, and the budget for the energy conciliator, etc.) are entered directly in the general budget.

Decree no. 2016-158 of 18 February 2016 specifies the rules for determining the costs that can be attributed to public service energy missions, the procedure for determining the amount of the costs to be compensated for each operator, and the transactions for paying the compensations to the operators who bear the expenses.

Each year, the CRE records the amount of the costs that can be attributed, in respect of the previous year, to public service energy missions that are the responsibility of the operators, assesses, for the following year, the provisional amount of the same costs and updates the forecast of costs for the pending year. Within this framework, it identifies the costs that are allocated to the CAS "energy transition" special purpose account.

The CRE addresses to the Minister for Energy, each year before 15 July, its estimation of costs.

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 recorded for 2013 (€5.3 billion). Since 2007, the amount of the CSPE has not been enough to compensate the increase in these costs (except for 2015). 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 public authorities, which provides for the repayment of the debt formed by the CSPE deficit at 31 December 2012 (around \leq 4.3 billion, adjusted to \leq 5.0 billion at 31 December 2013 to take into account on the one hand the deficits related to public service charges at 31 December 2012, as confirmed by the CRE decision of 9 October 2013 and on the other the brokerage

costs incurred by the Group of €0.6 billion). Under this agreement, this debt corresponding to the CSPC's deficit is to be paid off by 31 December 2018, according to a progressive repayment schedule, and is to be remunerated at a rate of 1.72% in accordance with the Decree of 7 October 2014. In the context of the reform of the CSPE, EDF and the public authorities have agreed to add the existing debt to the net accrued compensation recognised by the CRE in respect of the years 2013-2015 (*i.e.* an additional amount of €644 million). The initial repayment scheme, which was revised in agreement with the State, is now included in a Ministerial order that is expected to be published in the first half of 2016.

Compensation for additional distribution costs

The purpose 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 Act (New Organisation of the Electricity Market – *Nouvelle Organisation du Marché de l'Électricité*), obligate each electricity supplier to contribute to the security of electricity supply in continental metropolitan France, in light of its customers' power and energy consumption patterns. Each supplier must therefore provide annually, under penalty of an administrative sanction, an amount of guarantees of capacity according to its customers' consumption at peak periods. Suppliers will obtain these capacity guarantees from generation or load operators, which must first have their capacities certified by the public transport network manager.

The aims of this mechanism are:

- to make it possible to maintain or develop generation or load shedding capacities that ensure the level of supply security set by the public authorities;
- to improve the remuneration of these capacities;
- to share the expense of this security of supply among all suppliers.

The "capacity mechanism rules" proposed by RTE were approved by a ministerial order of 22 January 2015 after consulting the CRE.

The Law of 17 August 2015 on the Energy Transition for Green Growth adapted the capacity mechanism to small stakeholders by allowing the LDCs to transfer their capacity obligations not only to another LDC, but also "to any other supplier" and by allowing electricity suppliers to transfer their capacity obligations to a final consumer or to a public network manager (Article L. 335-5 of the French Energy Code).

Moreover, Article L. 335-3 of the French Energy Code introduced the possibility for all capacity operators to transfer to a third party their liability for discrepancies between effective capacity and certified capacity on the one hand, and the payment of the penalties in respect of said discrepancies on the other.

On 13 November 2015, the European Commission opened an in-depth investigation on the planned French capacity mechanism, in light of European rules on State aids.

Electricity load shedding

The Law of 17 August 2015 on the Energy Transition for Green Growth amended the legal rules on load shedding and, in particular, Articles L. 271-1 *et seq.* of the French Energy Code on this subject.

These provisions amend the previous legal rules and stipulate, in particular:

- that load shedding is defined "as the action to reduce temporarily the effective withdrawal level of electricity from the public electricity supply and distribution networks by one or more consumption sites, compared to a forward-looking consumption plan or an estimated consumption, when an ad hoc request is sent to one or more final consumers by a load manager or an electricity supplier";
- that there is the possibility for consumers to monetize each of their demand responses, either via their supplier as part of a demand response offer that is inseparable from the supply, or via the intermediary of load managers;
- that the Government will organise calls for tenders if the load management capacities do not meet the targets of the multi-year energy plan (this mechanism replaces that of the load shedding premium);
- finally, for load shedding that leads to significant energy savings, the law
 provides that the administrative authority may require the payment to
 the supplier to be shared between the load manager and RTE.

The terms of application of these mechanisms will be detailed by decrees and entail the amendment of two sets of rules that were adopted pursuant to the previous regulations: the rules for trading load shedding reserves on the energy markets, known as the "Nebef 2.0" Rules, which were approved by the CRE decision of 17 December 2014 on the one hand, and the rules on incorporating load shedding reserves into the adjustment mechanism that are contained in the rules on planning, the adjustment mechanism and the recovery of cost adjustments, in the version approved by the CRE decision of 3 December 2015 on the other.

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 contributing to the correct functioning of the electricity and natural gas markets for the benefit of final consumers. 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 an amount of costs that are attributable to the public service missions assigned to power producers, and a net amount of 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 ARENH price. Moreover, since 7 December 2015, it is its responsibility to propose changes in the regulated sales and transfer tariffs for electricity, on which it previously could only issue an opinion.

The CRE now has decision-making power to set the Tariffs for Using 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).

The Law on the Energy Transition for Green Growth of 17 August 2015 also gives the CRE the possibility of having the information it obtains through its remits audited, at the expense of the audited undertakings.

1.5.4 **GAS MARKET LEGISLATION**

1.5.4.1 European 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.

Pursuant to this legislation, two network codes for capacity allocation mechanisms (CAM) and balancing rules officially entered into force on 1 November and 1 October 2015 respectively. The first requires the capacities at interconnection points between transmission networks to be commercialised by bundling the output capacity of the first network with the input capacity of the second network, and by selling these interconnection capacities via auction. The purpose of the second is to harmonise the balancing rules on transmission networks.

1.5.4.2 French legislation: the French 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 French 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 that is applicable to the supply of natural gas for part of their consumption. This special tariff will progressively be replaced by the "energy voucher" system (see section 3.2.3.6.1 "Contributing to energy access and the fight against energy poverty").

Customers whose consumption exceeds 30,000kWh per year can only benefit from regulated gas sales tariffs for a site if no new market offering offer 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 have no longer been eligible for these tariffs since 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, since 31 December 2015.

If they did not sign 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 benefit from a contract with their supplier for a transitional period of six months, at the end of which they are no longer supposed to be supplied. Pursuant to these provisions, non-household consumers who consume more than 200,000kWh of natural gas per year and who have not signed a contract with a supplier of their choice, on 1 January 2015 were automatically switched to the transitional offer system. When the aforementioned period of six months expired, these consumers were supposed to have accepted a market-based offer from the supplier of their choice, failing which their supply of natural gas was supposed to have been cut.

In a decision of 28 May 2015, the CRE found that around 10,000 nonhousehold consumers, including numerous local authorities and joint owners' associations, apparently had not signed a gas purchase contract in response to a market-based offer by 30 June 2015, thereby exposing themselves to a risk of their supplies being cut. It therefore decided to maintain supplies to the sites concerned by the manager of the distribution network for a final period of three months, *i.e.* until September 2015, at a price increased by 20% compared to the regulated tariff, in order to encourage these customers to accept a market-based offer, before gradually cutting them off.

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 Engie (previously GDF Suez) and the LDCs tasked with supplying gas.

Underground storage and third-party access to natural gas storage facilities

Article L. 421-4 of 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 an interruptible gas supply, during the period between 1 November and 31 March.

Articles R. 421-1 to R. 421-2 of the French Energy Code specify the legal framework that applies to underground storage facilities for natural gas.

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).

1.5.5 **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 the public electricity distribution service through concession agreements and general 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 formed by associations of several municipalities cooperating together, however contracting authorities at *département* level are becoming more common.

The unbundling of supply and network operations required under Community Directives has led to the identification of two separate public service missions: firstly, the mission to supply electricity at regulated tariffs assigned to EDF and the LDCs in their exclusive service areas and, secondly, 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 contracting authority, the distribution network manager (for the provisions relating to management of the public distribution network) and by EDF (or the LDC that has 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.

In accordance with the Order no. 2016-65 of 29 January 2016 on concession contracts and to the Decree no. 2016-86 of 1 February 2016, transposing into national law the European Directive no. 2014/23/UE of 26 February 2014, award of distribution and supply of electricity concession contracts to regulated tariffs is not subject to compliance with the obligation of competition.

Rights of the contracting authorities

The rights of the contracting authorities are detailed in section 1.4.4.2.2 ("Distribution activities").

1.5.6 **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.

1.5.6.1 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.

Public involvement in environmental matters

The general framework for the public's involvement in the preparation of regulatory and individual decisions by the public authorities that have an impact on the environment is laid down in Articles L. 120-1 *et seq.* of the French Environment Code. These provisions apply in the absence of specific provisions that are laid down by specialised legislation.

This legal framework is, however, expected to change with the reform of public involvement provided for by Law no. 2015-990 of 6 August 2015 on growth, business and equal opportunities (known as the "Macron Act"), following the workshop on "participatory democracy" initiated by the Government early in 2015 (see section 1.5.8.2 "Future regulations at national level (France)").

Environmental Liability (the "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, for each major river basin, and sets targets for maintaining and restoring the status of surface waters, in particular to 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 for each river basin in the master plans for water development and management (SDAGEs). All EDF's activities that could 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 hydropower 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, as well as the contents of the procedure for designing regional green coherence schemes (SRCE) that implement it have been incorporated into the French Environment Code, in Articles L. 371-1 to L. 371-6 and R. 371-16 to R. 371-35, and completed by Decree no. 2012-1492 of 27 December 2012 and Decree no. 2014-45 of 20 January 2014.

A bill on the restoration of biodiversity, nature and landscapes, which is currently being debated in Parliament, aims to improve the protection of biodiversity (see section 1.5.8.2 "Future regulations at national level (France)").

Comprehensive environmental authorisation and project certificate

Three experimental procedures concerning the environment, which are limited in time and confined to certain regions, were implemented pursuant to the Law of 2 January 2014, which empowered the Government to simplify and increase legal certainty for corporations.

Firstly, the experimental use of the project certificate (which was introduced by Order no. 2014-356 of 20 March 2014, then completed by the Macron Act of 6 August 2015). The project certificate 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.

Secondly, experimental use of a comprehensive authorisation system that is applicable to projects that require authorisation for facilities that are classified for the protection of the environment (which was introduced by Order no. 2014-355 of 20 March 2014, and completed by the Macron Act and the Law of 17 August 2015), and to projects that require authorisation under the Water Act (which was introduced by Order no. 2014-619 of 12 June 2014, completed by the Law of 17 August 2015). The comprehensive authorisation system allows for a coordinated appraisal of authorisation applications and the issuance in a single document, for a given project, of all the decisions required of the State (see section 1.5.6.2.1 "Regulations applicable to facilities classified for the protection of the environment (ICPE)"). The Macron Act empowers the Government to make these authorisations permanent via an order.

These procedures are liable to apply to EDF's projects.

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

societal commitments to sustainable development ("RSE reporting"). The Law of 17 August 2015 on the Energy Transition for Green Growth completes the list of the environmental information contained in the aforementioned Article L. 225-102-1 by requiring undertakings to make public, as from the financial year ended 21 December 2016, information on the consequences of climate change for their business activity and the usage of the goods and services they produce.

These provisions concern EDF and some of its subsidiaries.

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 3.1 "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 Decree no. 2013-301 of 10 April 2013, EDF must clean up and decontaminate polluted equipment at rates between 50 and 500ppm, 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 5dm³. The rules for conforming to these obligations were stipulated in detail by two orders of 7 January and 14 January 2014.

Greenhouse gases

Allowance trading scheme

Some of the EDF Group's activities fall within the scope of application of Directive no. 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 quotas, 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.

In order to support the price of GHG allowances on the European market, in Decision (EU) 2015/1814 of 6 October 2015, the European Parliament and the Council decided to create a market "stability reserve" that makes it possible to remove surplus allowances from the market. This mechanism will enter into force on 1 January 2019. This decision is an initial step towards an in-depth reform of the ETS that was announced as part of the "2030 Energy and Climate Package" (see section 1.5.8.1 "Future regulations at European level").

GHG Reporting

Pursuant to Articles L. 229-25 and R. 229-46 et seq. of the French Environment Code (which were respectively amended by Order no. 2015-1737 and Decree no. 2015-1738 of 24 December 2015), 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. Article R. 229-46, as amended by the aforementioned Decree of 24 December 2015, specifies that the "groups defined in Article L. 2331-1 of the French Labour Code may draw up a consolidated report on greenhouse gas emissions for all their companies that have the same level 2 nomenclature code for French activities" and that employ more than 500 persons.

The report is disclosed to public and must be updated every four years. The first EDF report was published in the Indicators section of the EDF annual report in March 2012.

Failure to draw up or file the report may lead to an administrative fine, the amount of which cannot exceed €1,500.

Energy efficiency

Energy Efficiency Directive

On 25 October 2012, the European Union adopted a Directive on energy efficiency (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 enhances the provisions of European legislation on energy efficiency services (no. 2006/32/EC) and cogeneration (no. 2004/8/EC).

The Directive of 25 October 2012 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.

Articles L. 233-1 *et seq.* of the French Energy Code (derived from Law no. 2013-619 of 16 July 2013, which transposed Article 8-4 of the Directive into French law), require large undertakings to perform an energy audit on their business activities in France by 5 December 2015 at the latest, then every four years. The thresholds above which undertakings are concerned, the scope of the audit and the conditions to be met by the energy auditors are laid down in Articles R. 233-1 and R. 233-2 and D. 233-3 to D. 233-9 of the French Energy Code, completed by the Order of 24 November 2014 on the terms of application of the energy audit. Undertakings that use a certified energy management system that is ISO 50001 compliant may, under certain conditions, be exempted from this obligation. In accordance with the regulations, on 4 December 2015, EDF sent the summary of its audit report to the lle de France Prefect.

Energy savings certificates

At national level, the energy savings certificates (CEE) 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 a 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 (now Articles R. 221-1 *et seq.* of the French Energy Code) and several implementing orders that were published in December 2014 determine the conditions and terms for the issuance of CEE for this new period.

The Law of 17 August 2015 on the Energy Transition for Green Growth amended the CEE system for the third period, by adding an additional system to the obligation that was already provided for, concerning the energy savings made for the benefit of households that are in a precarious situation in terms of energy. Decree no. 2015-1825 of 30 December 2015 (now Articles R. 221-1 *et seq.* of the French Energy Code) and several ministerial orders of the same date have clarified the rules on meeting the energy savings objectives that are specifically for the benefit of households that are in a precarious situation in terms of energy. The level of this specific obligation for energy suppliers is set at 150TWhc for 2016-2017.

Moreover, the Law of 17 August 2015 on the Energy Transition for Green Growth provides for a fourth period between 1 January 2018 and 31 December 2020. An order 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 made 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 that transmit electricity.



Law no. 2015-136 of 9 February 2015 on sobriety, transparency, information and consultation regarding electromagnetic wave exposure introduced an obligation to provide information for persons who install equipment that emits electromagnetic fields on residential premises. In due course, this obligation may concern 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 that are generated in situ. In this new regulatory environment, EDF is concerned as a manufacturer and user of monochloramine and sodium hypochlorite. Applications for authorisation will be prepared and filed within the framework of this Biocides Regulation.

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 set 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).

1.5.6.2 **Regulations applicable to EDF group** facilities and activities

1.5.6.2.1 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 Order of 31 May (that was amended by an Order of 12 February 2015) and the Order of 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. Decree no. 2015-1250 of 7 October 2015 increased the threshold above which guarantees are required from ξ 75,000 to ξ 100,000 (Article R. 516-1 of the French Environment Code). It also provides for additional financial guarantees to be lodged with the Caisse des dépôts et consignations, as well as the amendment of the rules governing how guarantees are triggered, in particular by allowing them to be implemented as soon as court-ordered liquidation proceedings are initiated.

Seveso facilities

Since 1 June 2015, "Seveso" ICPEs have been governed by the provisions of the Seveso 3 Directive (2012/18 of 4 July 2012), which replaced the Seveso 2 Directive (96/82/EC). The entry into force of the Seveso 3 Directive resulted 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 facilities. 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, entered into force on 1 June 2015.

Decree no. 2015-1250 of 7 October 2015 amended the rules governing how the financial guarantees that are applicable to Seveso ICPEs are lodged, in particular by allowing operators of multiple facilities to pool these guarantees. A forthcoming order will specify the rules for lodging these guarantees, as well as the methodology for calculating pooled guarantees.

Facilities that are subject to the IED Directive

Directive 2010/75/EU of 24 November 2010 on industrial emissions (known as the "IED" Directive) revised and recast several existing Directives into a single piece of legislation, including the IPPC, LCP, Waste Incineration and VOC Directives, among others.

Chapter III of this Directive affects EDF as it regulates the combustion plants that are found in fossil fuel-fired plants, in particular. The applicable requirement levels depend on the nominal thermal power of the combustion plants concerned and on the fuel used. This Directive, which was partially transposed into French law by Order no. 2012-7 of 5 January 2012 (and incorporated into the French Environment Code in Articles L. 515-28 to L. 515-31), has the effect of broadening the application of the IPPC Directive to include new activities, enhancing the scope 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, which is now Article R. 512-4 of the French Environment Code, 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 no. 2013-374 of 2 May 2013 completed this transposition by introducing 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.

1.5.6.2.2 Specific regulations applicable to basic nuclear facilities

In France, EDF is, in particular, subject to Law no. 2006-686 of 13 June 2006 on transparency and safety in the nuclear field (the "TSN Law"), which was integrated into the French Environment Code via 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 (the "BNF Order"). This legislation establishes the legal rules that are applicable to Basic Nuclear Facilities (BNF). The Law was amended by Order no. 2016-128 of 10 February 2016 that contains various provisions on nuclear matters and which, in particular, transposed into French law Council Directive no. 2014/87/Euratom of 8 July 2014 amending Directive no. 2009/71/Euratom establishing a Community framework for the nuclear safety of nuclear installations and Directive no. 2011/70 of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste. It will also concern the NSA's powers of sanction.

The TSN 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 construction of a BNF is authorised, following a public enquiry, by a decree, after consulting the NSA and on the basis of a report by the Ministers for Nuclear Safety. The decree that authorises the construction must state the identity of the operator, the nature of the facilities, its maximum capacity and its perimeter. 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). The decree that authorises the construction of the BNF sets a time limit to commission the facility and 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 authorisation to commission the BNF (i.e. load the fuel into the reactor core) is issued by the NSA after consulting the public. In this respect, the operator provides the updated safety rule set and an internal emergency plan (IEP) that specifies the organisational measures, intervention methods and requisite resources that are implemented by the operator in the event of an emergency. An additional safety inspection assesses the compliance of the facility with the applicable regulations and updates 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 the general regulations on basic nuclear facilities derived from the French Environment Code. Priority must be given to the protection of the interests mentioned by the law (public safety, health and sanitation, nature and the environment) via the prevention of accidents and the limitation of their consequences in respect of nuclear safety, as specified by the BNF Order. In this respect, nuclear safety is defined as a set of technical provisions and organisational measures concerning the design, the construction, the operation, the shutdown and the decommissioning of BNF, as well as the transportation of radioactive substances, which are adopted with a view to preventing accidents or limiting the effects thereof.

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, nine have been published and approved.

The provisions of the French Environment Code concerning BNF also set 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.

Moreover, increasingly strict administrative and criminal law penalties have been established to punish BNF operators who do not comply with their legal and regulatory obligations, such as a three-year prison sentence and a \leq 150,000 fine if a BNF is operated without authorisation, or a one-year prison sentence and a \leq 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 no. 2014/87/Euratom of 8 July 2014 amending Directive no. 2009/71/Euratom establishing a community framework for the nuclear safety of nuclear installations (see section 1.5.8.1 "Future regulations at European level").

The legal framework described above for safety and inspection was completed by certain provisions of the Law of 17 August 2015 on the Energy Transition for Green Growth and Order no. 2016-128 of 10 February 2016 that contains various provisions on nuclear matters.

In particular, the role of the local information commissions (CLIs) was reinforced: they can review all matters that fall within the scope of their remits of their own motion, they must be consulted if the specific intervention plan is amended and can inspect BNF at the request of the chair of the CLI in the case of an event rated 1 or higher on the International Nuclear and Radiological Event Scale, etc. Moreover, the NSA's power of sanction was enhanced with, in particular, the creation within the NSA of a Sanctions Committee composed of Council of State and Supreme Court judges.

Decommissioning of nuclear facilities

The decommissioning of a BNF is authorised by a Prime Minister's decree that is issued after a public enquiry and after an opinion by the NSA. This 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 approval decision by the NSA, makes it possible to end the BNF status of the facility. The Law of 17 August 2015 on the Energy Transition for Green Growth, in particular its provision that is now Article L. 593-25 of the French Environment Code, gave legislative value to the decommissioning strategy implemented since the early 2000s by EDF in stating that decommissioning must take place within a timeframe that is *"as short as possible"* after final shutdown, under conditions that are economically acceptable and in compliance with the principles set forth in Article L. 1333-2 of the French Public Health Code and Section II of Article L. 110-1 of the French Environment Code.



A draft decree on the decommissioning of basic nuclear facilities will amend the Decree of 2 November 2007, known as the "Procedures Decree", with a view to implementing the provisions derived from the Law on the Energy Transition for Green Growth, in particular the content of the shutdown declaration and decommissioning application files.

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 Law no. 91-1381 of 30 December 1991 on research into the management of radioactive waste.

The method used to manage radioactive waste in France depends on the level of radioactivity and radioactivity lifespan of the waste (see section 1.4.1.1.4 "The nuclear fuel cycle and related issues"). The Law of 28 June 2006, which is now 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 BNF, as well as managing spent fuels and radioactive waste, is 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. This report 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 no. 2011/70/Euratom established a 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 exposing persons to ionising radiation are regulated by two separate sets of rules, 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 primarily based on all nuclear activities being subject 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 1mSv 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 no. 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 State services concerned have organised working groups in which employers and employees 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) and 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 was limited to approximately €91.5 million per nuclear accident at a facility and to approximately €22.9 million per nuclear accident during transport. These amounts were respectively increased to €700 million and €70 million on 18 February 2016 when Article 130 of the Law of 17 August 2015 on the Energy Transition for Green Growth mentioned below entered into force.

Over and above the maximum amount for which the operator is liable, the State 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 limit 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. The Minister for the Economy monitors French operators' compliance with this obligation. EDF complies with the current coverage requirements (see section 2.2.7 "Insurance").

Protocols to amend the Paris and Brussels Conventions were signed on 12 February 2004 but have not yet entered into force. 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 will thus be at least €700 million per nuclear incident in a facility and €70 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). Over and 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 cost of measures to rehabilitate damaged environments, and certain other harms resulting from damage to the environment. These new provisions will, however, 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.

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, its facilities and its 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 areas, a vital area, an internal area, etc.). Following an amendment by an Order of 15 September 2015, inow makes it possible to set up safety devices in dangerous areas if the assessment of the contents of the safety study provided for in Article R. 1333-4 of the French Defence Code reveal that the means implemented to meet the safety objectives appear to be insufficient.

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.

Law no. 2015-588 of 2 June 2015 on the improvement of the protection of civilian facilities that house nuclear materials created a specific criminal misdemeanour of trespassing in these facilities. For the implementation of these rules, Decree no. 2015-1255 of 8 October 2015 created Restricted Access Nuclear Areas (ZNAR) that must be delineated within each facility. Trespassing in a ZNAR constitutes a criminal misdemeanour that carries 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).

1.5.6.2.3 Regulations applicable to fossil fuel-fired energy generation

The EDF Group's thermal energy generation business is subject in France to the regulations that are applicable to ICPEs (see section 1.5.6.2.1 "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 on national emission ceilings for certain atmospheric pollutants (the 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 (the LCP Directive), which, since 1 January 2016, has been repealed and replaced by Directive no. 2010/75/EU of 24 November 2010 on industrial emissions (the IED Directive). These directives have been 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, which, since 1 January 2016, has been repealed and replaced by the Order of 26 August 2013 on combustion facilities with a power rating of 20MW or more, which are subject to authorisation under section 2910 and section 2931.

Exemptions from obligations concerning emissions into the air were possible until 31 December 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 3 Directive and to the obligation to lodge financial guarantees (see section 1.5.6.2.1 "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.

Directive no. 2015/2193/EU of 25 November 2015 on the limitation of emissions of certain pollutants into the air from medium combustion plants must be transposed into French law by 19 December 2017. It lays down rules designed to limit the air pollution caused by sulphur dioxide (SO_2), nitrogen oxides (NO_x) and dust from medium combustion plants, and to reduce the airborne emissions and their potential risks for human and environmental health. The facilities concerned are combustion plants with a rated thermal input of 1MW or more and less than 50MW, regardless of the type of fuel they use.

1.5.6.2.4 Regulations applicable to hydropower facilities

In France, hydropower facilities are subject to the provisions contained in Articles L. 511-1 *et seq.* of the French Energy Code. They require concession agreements 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 1.4.1.4.1.4 "Issues relating to hydropower generation" 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, downstream of hydropower facilities and, in general, maintaining balanced management of water resources (see section 1.5.6.1 "Basic regulations applicable to the environment, health, hygiene and safety").

Competitive tendering for hydropower concession contracts

Until 1 April 2016, the competitive tendering procedure for hydropower concession contracts will still be governed by Decree no. 94-894 of 13 October 1994, which has now been incorporated into Book V of the regulatory section of the French Energy Code (cf. Decree no. 2015-1823 of 30 December 2015 on the organisation of the regulatory section of the French Energy Code). This decree, as amended by Decree no. 2008-1009 of 26 September 2008, places concessions within the legal framework



for public service delegation contracts defined by Law no. 93-122 of 29 January 1993, known as the "Sapin Act", it being specified that the former preferential right of the outgoing operator was eliminated by the Water Act (Law no. 2006-1772 of 30 December 2006) as it was incompatible with European law.

For all procedures initiated as from 1 April 2016, the award of hydropower concession contracts is now governed by Order no. 2016-65 of 29 January 2016 and by its implementing Decree no. 2016-86 of 1 February 2016 on concession contracts. This legislation has repealed the aforementioned provisions of the "Sapin Act", in order to modernise them and align them with European law (Directive no. 2014/23/EU of 26 February 2014 on the award of concession contracts).

The Law of 17 August 2015 on the Energy Transition for Green Growth has completed the legal framework for hydropower concession contracts by giving the State the possibility:

- of combining concession contracts that form a "series of facilities that are hydraulically linked", by setting a new deadline for all the concession contracts concerned (Articles L. 521-16-1 and L. 521-16-2 of the French Energy Code);
- 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 (Articles L. 521-18 *et seq.* of the French Energy Code);
- of extending certain concession contracts in return for investments by operators where these investments are necessary in order to reach national energy policy targets (Article L. 521-16-3 of the French Energy Code).

A draft decree on hydropower concession contracts, the purpose of which is to implement the provisions of the aforementioned Law of 17 August 2015 and to modernise the regulatory framework for hydropower concession contracts (in particular by clarifying certain aspects of the procedure for awarding hydropower concession contracts by approving a new model for general terms and conditions), was submitted to the CSE for an opinion on 20 October 2015. As soon as this decree is enacted, probably in the first semester of 2016, it will incorporate, by way of amendment, Book V of the regulatory section of the French Energy Code, which now contains the provisions of the aforementioned Decree of 13 October 1994.

Moreover, other pieces of draft legislation on hydropower concession contracts are expected to be adopted in the near future, in particular a draft order that will be enacted pursuant to powers granted to the Government by Article 119 of the Law of 17 August 2015, which was submitted to the CSE on 12 October 2015, which, in particular, amends the rules on the administrative and criminal penalties that are applicable to hydropower concession contracts.

Annual concession fee

In accordance with Article L. 523-2 of the French Energy Code, when a hydropower concession contract is renewed or extended under the conditions provided for by Articles L. 521-16-2 or L. 521-16-3 of the French Energy Code, an annual concession fee that is proportional to the revenues generated by the concession contract is 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. A limit is set by the contracting authority on a case-by-case basis for each new or renewed concession contract. Article 69 of Law no. 2015-1785 of 29 December 2015 (the Budget Act for 2016) expressly confirmed that this type of concession fee excludes the application of the concession fees provided for by Article L. 523-1 of said Code, which apply to concession contracts that were renewed before 2006.

Safety and security of facilities

Articles R. 214-112 *et seq.* of the French Environment Code contain provisions that are applicable to the safety and security of hydropower facilities that are authorised, declared and operated under concession contracts. Dams are divided into three classes (A, B and C) according to their characteristics, in particular their height and the volume of the floodwaters. According to

this classification and the legal rules applicable to the facility, the regulations require the operator or concession contract holder to fulfil a certain number of obligations in order to guarantee the safety and security thereof (in particular by carrying out and updating hazard studies – see section 1.4.1.4.1.2. "Hydropower safety"). The aforementioned draft decree, on hydropower energy concession contracts, contains provisions that are designed to unify the regulations, regardless of the legal rules that are applicable to the facility.

1.5.6.2.5 Regulations applicable to renewable energy generation

The "Climate Package" (known as the "2020 Energy-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 (GHG) emissions, a 20% improvement in energy efficiency and a 20% portion of renewable energy (REN) in energy consumption. The "2020 Energy-Climate Package", which was adopted on 24 October 2014, set new targets for 2030: a 40% reduction in GHG emissions compared to 1990, 27% of renewable energies in the energy mix and a 27% improvement in energy savings.

One of the five instruments that make up the "2030 Energy-Climate Package" is Directive no. 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources, known as the "REN" Directive. It allocates the effort to reach the target of 20% of renewable energies 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 their GDP, and requires Member States to adopt national renewable energy action plans.

According to Article 4 of the aforementioned REN Directive, France adopted its National Action Plan in favour of renewable energies (2009-2020). This plan, in accordance with the REN Directive, sets a national target of a 23% share of energy from renewable sources in the gross final consumption of energy by 2020. The Law of 17 August 2015 on the Energy Transition for Green Growth also provides for a target of 32% of renewable energies in energy consumption by 2030. Moreover, the same law provides that the national plan will be replaced by the part of the PPE that concerns the development of renewable energies and energy recovery.

In order to achieve the objectives of the REN Directive, 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 Articles D. 321-10 to D. 321-21 and D. 342-22 to D. 342-25 of the French Energy Code specify the content, 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 guarantees of origin of the 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 Articles R. 314-24 to R. 314-41 of the French Energy Code. 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 exceptional provisions designed to encourage the development of sea-based energies, which were enhanced by the Law of 17 August 2015 on the Energy Transition for Green Growth.

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. Moreover, Decree no. 2016-9 of 8 January 2016 simplified the legal procedures that are applicable to sea-based renewable energy projects that win competitive tendering procedures.

Furthermore, the Law of 17 August 2015 on the Energy Transition for Green Growth provides an exceptional appeal timeframe for the benefit of *"facilities that produce energy from renewable sources"* of four months in which to contest an authorisation, as from, respectively, either the publication of the authorisation, or its notification.

1.5.6.2.6 Regulations applicable 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 1.5.6.2.1 "Regulations applicable to facilities classified for the protection of the environment (ICPEs)") under section 2980 "Terrestrial facilities for the generation of electricity using mechanical wind energy with one or more wind-power generators". In connection with the application for a building permit, an impact study must be performed for wind farms that are subject to authorisation and submitted with the building permit file.

The Law of 17 August 2015 on the Energy Transition for Green Growth amended the rules on the distance required between wind farms and housing: the minimum distance of 500 metres is maintained, but may be increased in light of the impact study, which is part of the authorisation application. It also inserted provisions into Article L. 146-4.1 of the French Urban Planning Code that are designed to facilitate the location of land-based wind farms in municipalities concerned by the "Coastline" Law. A decree is also expected to clarify the rules 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.

1.5.6.2.7 Regulations applicable to public markets

The Directive no. 2014/24/EU on procurement and Directive no. 2014/25/EU on procurement by entities operating in water, energy, transport and postal services sectors, in which EDF is submitted as a marketer, have been transposed in national law by:

- Order no. 2015-899 of 23 July 2015 on public markets which proceed to an union of the different competitive procedures present so far in the Code des Marchés Publics and Order no. 2005-649 of 6 June 2005;
- Decree no. 2016-260 of 25 March 2016 related to the Order of 23 July 2015.

These texts entered into force on 1 April 2016.

1.5.7 **REGULATIONS ON THE WHOLESALE** ENERGY MARKETS

Inspired by the rules contained in Directive no. 2003/6/EC on market abuse applicable to financial markets (see section 4.1 "Corporate Governance 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.

1.5.8 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.

1.5.8.1 **Future regulations at European level**

European Energy Union

On 25 February 2015, the European Commission published its strategy to build a European Energy Union. This package "European Energy Union" calls for several legislation amendments and is based on three communication points concerning:

- the strategic framework for a resilient Energy Union that has a forwardlooking climate change policy;
- the programme for the fight against global climate change after 2020 as part of the Paris Protocol;
- the achievement of the target of 10% of interconnection in the electricity sector.

There are five dimensions to the Energy Union: supply security, the internal energy market, energy efficiency, reduction in carbon emissions, and research and innovation in the field of energy. Each of these dimensions is accompanied by actions that will be developed and implemented during the coming years.



In a press release dated 10 November 2015, the European Parliament Committee on Industry, Research and Energy presented its demands concerning the construction of the European Energy Union.

On 18 November 2015, the European Union published a report on the state of the Energy Union. This report describes the progress made over the last nine months, states the key areas of action for 2016 and draws the initial conclusions concerning the policies that must be implemented at regional, national and European level. The report is accompanied by twenty-eight information sheets that assess, for each Member State, the progress of the Energy Union at national level. It also presents the roadmap for the Energy Union.

Environment

The 2030 Energy and Climate Change Package

On 24 October 2014, the 28 Member States of the European Union reached an agreement on their 2030 climate change and their energy objectives and policies (known as the "2030 Energy and Climate Change Package"). Within this timeframe, the agreement includes an objective of reducing European Union greenhouse gas emissions by at least 40% (compared to 1990), increasing the portion of the European Union's energy consumption to 27% of renewable energies and improving energy efficiency by 27%. The European Commissioner for Climate Action and Energy has announced that the 2030 Energy and Climate Change Package would be translated into legislative proposals. Accordingly, on 15 July 2015, the European Commission presented a draft directive designed to amend the Directive of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community (the "ETS Directive"), for the period 2021-2030. This reform is expected to be submitted to the Parliament and the Council in the coming months.

Rules on the safety and control of nuclear facilities

In July 2014, the Council of Ministers of the European Union adopted Council Directive no. 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.

1.5.8.2 Future regulations at national level (France)

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, was adopted by the French Parliament during its first reading on 24 March 2015. This law is expected to improve protection for biodiversity and set up a French Biodiversity Agency. It also contains the provisions of the bill on compensation for environmental harm that the government announced in September 2013. The law is currently being finalised by the upper and lower houses; after being adopted by the Senate on 26 January 2016, it was adopted during its second reading by the French Parliament on 17 March 2016.

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). The "Macron" Act of 6 August 2015 provides for the implementation of certain proposals that were made during this work, via orders, which must contain measures designed to (i) accelerate the completion of construction and development work to facilitate energy transition, (ii) reform environmental evaluation and transpose the provisions of Directive no. 2014/52/EU of 16 April 2014 on impact studies and (iii) accelerate the resolution of environmental disputes.

In parallel to the General Assemblies, on 6 January 2015, the Minister for Ecology launched the "Participative Democracy" workshop on environmental matters that is designed to generate concrete proposals for the reform of public participation. The proposals that are developed by this workshop were included in the "Macron" Act, which empowers the Government to reform the legal framework for public participation via orders. The measures to be published are expected to enhance, in particular, this participation at the public consultation stage, ahead of the filing of authorisation applications.

The orders provided for by the Macron Act are expected to be published before 7 August 2016.

All of these reforms are liable to impact the authorisation procedures that are applicable to the EDF group's 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 the duty of vigilance of parent companies and prime contractor companies

This bill includes the obligation for large companies to set up a vigilance plan and ensure its "effective" implementation, in order to identify and prevent the materialisation of risks of infringements of human rights and fundamental freedoms, serious bodily injury or harm to the environment or health risks that result from their activities and those of the companies they control, as well as the activities of their subcontractors and suppliers. A system for verification/sanctioning by the courts of compliance with this obligation is included in the bill. Parliament adopted the bill at its first reading on 30 March 2015. The Senate rejected it on 18 November 2015 but it has been adopted in its second reading by the French Parliament on 23 March 2016.

1.6 **Research & development, patents and licenses**

The main missions of the EDF Group's Research and Development Division (R&D) are firstly, to support the Group's business lines and subsidiaries on a day-to-day basis, by providing them with its top-level expertise and high-performance practices, and secondly, to contribute to building the Group's future by anticipating the developments and major challenges with which it is confronted.

In particular, these challenges include the following:

- 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 nations, and the resulting shift in areas of consumption;
- the significant development of information technology applied to energy sector, offering new opportunities for the electricity business;
- customers, individual and collective consumers, who are also becoming producers, and who want to use energy more effectively and live in more energy self-sufficient buildings, neighbourhoods and towns.

In this context, R&D's role is crucial when it comes to finding solutions to all of these challenges. Its avenues of research are structured on the basis of three broad priorities:

- consolidating and developing competitive low-carbon production mixes: one of the key issues in transition is to ensure the effective coexistence of conventional means of production, in particular by further improving the safety, performance and operating lifespan of existing nuclear power plants, alongside the development of new renewable energy;
- developing and experimenting with new energy services for clients, enabling demand-side management that is both flexible and low-carbon, thanks to improvements in knowledge of demand, the development by clients of energy efficiency, the promotion of new effective uses of electricity, often in combination with renewable energies (heat pumps, electric mobility, etc.), the development of technical and economic modelling to engineer buildings, industry and sustainable cities, and the development of uses and consumption being integrated into the electricity system itself through the use of smart grids and appropriate pricing;
- preparing the electricity systems of the tomorrow by optimising the lifespan of network infrastructures and accompanying adaptation of the electricity system by improving network asset management; implementing optimisation models and economic scenarios for new infrastructure projects relating to energy transport; inserting intermittent energies and developing smart grids.

In addition to its overall activity, R&D has also identified four research programmes that fall into the "disruptive – future-ready" category. These are:

- local energy services and systems, with industrial fine-tuning of technical resources for urban planning and definition of optimum procedures to incorporate local energy systems within an overall national system;
- the use of digital technology in customer relations to offer innovative services and, within our own industry, to improve monitoring of our installations and maintenance forecasting;
- energy storage, photovoltaic energy and electric mobility;
- Small Modular Reactors: small reactors that could be used, in particular, to address the market for areas that are isolated or suffer from weak transport links.

1.6.1 **R&D ORGANISATION AND KEY FIGURES**

EDF's R&D is integrated and multidisciplinary in order to facilitate synergies and method transfers between the different business lines within the Group.

In 2015, the Group's overall research and development budget amounted to €658.9 million, €555.2 million of which was earmarked for the EDF R&D budget. This is one of the largest R&D budgets of any major electricity company. Approximately two-thirds of this budget is devoted to programmes put together on a yearly basis under contractual agreements with EDF's operational divisions and subsidiaries. The remaining third goes to medium and long-term anticipation initiatives that fall within Group R&D priority areas.

In 2015, around 21% of this budget was devoted to protecting the environment. In particular, expenditures covered research into energy efficiency, uses of electricity as a substitute for fossil energy, renewable energies and their insertion into the grid, sustainable cities, the local impacts of climate change and other environmental issues such as biodiversity, water quality, and the reduction of disturbances. EDF's R&D has a total staff of over 2,100, representing 29 nationalities; 80% have manager status, 33% are women, and 150 are Ph.D. students. 200 research lecturers teach in universities and major engineering schools. Each year, EDF's R&D hires some 100 people, and channels others towards other entities of the Group. The R&D Division has 15 departments. Its expertise covers the entire field of activity of the Group: renewable energies; networks; nuclear generation, fossil-fired, and hydro power generation; energy management; trade; Information Systems; the environment. It is both specific to a particular discipline, businesses, projects, as well as coming together for work on major systems. EDF's R&D is responsible for an internal training organisation, the Technology Transfer Institute (Institut de transfert de technologie, ITech), whose purpose is to disseminate EDF R&D practice, know-how and innovation to the rest of the EDF Group. Comprising some 100 courses, the training catalogue is updated every year; the offer is now incorporated in the Skills Academies (see section 3.3.1.3 "Skills development: preparing the future").

R&D is currently organised on a multi-site basis. Three of these sites are located in France, in the Paris region; seven are located abroad: in Germany, the UK, Poland, China, the US, Singapore and Italy. The Chatou and Les Renardières centres, near Fontainebleau both have a workforce of some 500 people. 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 a new project to relocate EDF's main R&D centre, currently located at Clamart, to the Paris-Saclay campus. The new centre is destined to provide workspace for up to 1,500 people, including Group researchers, Ph.D. students and interns. It is an expression of fresh ambitions on the part of EDF for its R&D, placing scientific and industrial innovation and research at the heart of its priorities. A new EDF training centre will also be located nearby. Together on one site, the new research centre and training centre will form the EDF Lab Paris-Saclay complex. This strategic decision positions EDF as a leading player on the Paris-Saclay campus, thereby enabling it to benefit from more dynamic collaboration with the higher education establishments and public and private-sector research centres located nearby.

In this regard, a new agreement came into force on 1 July 2014, following signing by EDF's R&D Division and all the trade union organisations representing R&D. This agreement, reached as a result of sustained social dialoque between the stakeholders defines the measures taken to support EDF Clamart employees as they move into the new centre in mid-2016.



In addition, a number of partnership agreements have been concluded with other institutions present on the future Paris-Saclay University campus:

- SEIDO, a joint laboratory between EDF and Telecom Paris Tech dedicated to the Internet of things and cybersecurity for electricity systems. Its mission is to prepare and facilitate the deployment of energy demand management and energy efficiency services, making use of interoperable, communicating energy-related objects (heating, air conditioning, white and brown goods, electric vehicles, etc.), thereby helping to provide cohesion of the entire system, as well as its safety (security, confidentiality, etc.);
- the shared Rise Grid laboratory, devoted to the modelling and simulation of smart grids, in association with the Supélec engineering school;
- the SEISM institute for earthquake modelling from fault to structures, bringing together EDF, the French Atomic Energy Commission (Commissariat à l'Energie Atomique), École centrale de Paris, ENS Cachan and the national scientific research council CNRS;
- PGMO, the Gaspard Monge Programme for optimisation and operational research, housed by the Jacques Hadamard Mathematics Foundation, and established with the patronage of EDF's R&D Division;
- IMSIA, the Institute of Mechanical Sciences and Industrial Applications, which since June 2015 has brought together ENSTA, CNRS, and CEA Saclay alongside EDF;
- the Energy Finance and Markets laboratory, shared with Dauphine University, ENSAE and École Polytechnique.

The R&D sites also accommodate two research units operated jointly with CNRS: IMSIA (formerly LaMSID, the Laboratory for the Mechanics of Sustainable Industrial Structures) and IRDEP, the Institute for Photovoltaic Energy Research and Development, as well as an international R&D centre, the Materials Aging Institute (MAI).

To conduct its research, EDF is continuing to invest in powerful and reliable digital simulation resources. It develops cutting-edge computing code and resources that are among the best in industry. Its current capacity is 1,400 teraflops.

In addition, the Group benefits from unique experimental resources; these include specific analytical loops (chemicals/corrosion, failure, aero-acoustics, etc.); loops focused on components or processes; resources for on-site test interventions; or resources dedicated to the characterisation of materials and their ageing. Two recent flagship installations are noted below:

- Concept Grid: a scaled-down electricity grid whose purpose is to try and test the insertion of the innovative hardware and "intelligent" systems that together make up a smart grid before installing them on the network. Concept Grid is designed to prepare future developments of the grid by studying the integration of new components and equipment from the world of information and communication technology to facilitate demand-side management. It is also intended to facilitate the integration of decentralised production, by studying the behaviour of production. Concept Grid provides the missing link between a conventional research laboratory, in which innovations are tested in conditions that are not entirely representative of reality, and the actual grid, where quality of service considerations restrict experimentation;
- Vercors: construction of a reactor building to 1:3 scale in order to study the ageing of double containment buildings.

R&D is also increasing its capacity for industrialisation and value creation based on internal innovation, and with a view to benefiting further from external innovation. The aim is to be able to integrate innovations in the Group's industrial processes. This policy is structured around two approaches:

 improving value creation from internal innovation and accelerating time to business through initiatives conducted in collaboration with the business lines. For instance, a dedicated team helps to protect and leverage EDF R&D intellectual property and expertise potential, and also to accelerate the transfer and industrialisation of innovations; developing an opening on external innovations, and, as needed demonstrate external innovations.

EDF is the leading investor in Electranova Capital, a venture capital fund for startups specialising in cleantech, launched in May 2012 together with Allianz and Bpifrance, and managed by Idinvest Partners. With an investment capacity of some €90 million, the purpose of the Electranova Capital fund is to promote the emergence of innovative products using new technologies in order to meet the challenge of low-carbon energy models.

Ten investment have been concluded with new companies, four of which are French. All of them are related in some way to one or more of EDF's business lines:

- Actility: major French smart grid company;
- Enlighted: expert in energy optimisation, Enlighted provides lighting control solutions for retail, industrial, and service buildings;
- Forsee Power Solution: a French firm specialized in battery design;
- Seatower: a Norwegian firm that has developed innovative gravity foundations for offshore wind farms;
- SunFire: a German company specialized in fuel cells and electrolysis for stationary storage;
- Leosphère: A French SME established in 2004, and now the world leader in the use of Lidar, a technology using lasers and their reflection in the atmosphere;
- Techniwood: a French company that designs, manufactures and markets the latest industrial generation of a high-performance wood-insulation composite construction system known as Panobloc[®];
- Sunrun: an American firm which is one of the leading vendors of solar panels to consumers in the US, on the basis of solar as a service;
- Organica Water: a Hungarian-based company that is developing and marketing a disruptive, energy-efficient technology for the organic treatment of municipal and industrial wastewater;
- First Fuel: a US firm providing a "digital" solution for carrying out mass energy audit campaigns for retail premises remotely.

EDF also has a stake in the Amorçage Technologique Investissement fund (ATI), managed by CEA Investissement, dedicated to new French companies working in technological innovation for energy, the environment, micro-technologies and nanotechnologies.

Lastly, EDF has taken out five stakes in venture capital funds in France, North America and China in order to provide access to a global pool of startups and innovations:

- Robolution Capital, a fund focusing on robotics, launched in March 2014;
- Chrysalix, a Canadian fund dedicated to cleantech venture capital, in December 2011;
- Tsing capital, the first Chinese fund dedicated to cleantech venture capital, in December 2011;
- DBL Investors in the USA, a fund set up in 2008;
- Mc Rock, a Canadian fund dedicated to industrial tools of internet, in 2015.

1.6.2 **R&D PRIORITIES**

EDF's R&D works for all the Group's business lines. For each of them, it offers technological solutions or innovative business and economic models designed to improve their performance, and prepare the Group's future in the longer term by means of medium and long-term anticipation initiatives. It is one of the factors in EDF becoming a global industrial group providing low-carbon electricity systems.

As the energy sector undergoes profound change, the goal of EDF R&D may be defined in terms of three strategic avenues: consolidating and developing competitive low-carbon production mixes, developing and testing new energy services for clients and preparing the electricity systems of tomorrow.

R&D also conducts research in information technology to support these three strategic avenues. This research is in turn structured around five major areas: complex systems; the management and processing of large volumes of data, the internet of things, cyber security; and the simulation of physical problems.

Research in this field has a twofold purpose:

- improving business line performance through advanced simulation technologies;
- facilitating the emergence of new opportunities for business lines through innovative uses of new information and communications technologies.

1.6.2.1 Consolidating and developing competitive carbon-free generation mixes

In the field of nuclear, hydro and thermal power generation, EDF's R&D develops tools and methods to improve the safety of the means of production, optimise the latter's operational lifespan, and increase their performance in terms of output and environmental impact. There are three key priority goals: ensuring the Group maintains its advantage in nuclear power over the long term; developing renewable energies; and examining the industrial feasibility of carbon capture and storage.

To secure the Group's advantage in nuclear power generation in the long term, R&D is also working to protect EDF's assets through actions in line with its policy to improve the safety of installations, particularly with regard to enhanced performance and extended operating lifespan. For instance, in 2014, R&D conducted research to better understand and model ageing phenomena in materials, in particular the steel used in reactor pressure vessels and the concrete used in containment buildings. This research is vital for managing the operating lifespan of installations, in particular for non-replaceable components.

Other actions in the field of nuclear power deal with issues relating to the fuel cycle. They include the design of new power plants, in particular fourth-generation plants and Small Modular Reactors (SMR).

Lastly, R&D actions contribute to greater familiarity and better control of the impact of installations on the environment, and at the same time, take environmental risks to industrial installations more fully into account. So, for instance, R&D is studying how the availability of water as a resource in the future may develop in view of climate and territorial changes. R&D research also contributes to understanding the possible risks and consequences on the power generation fleet (availability of a cold source, scope for modulation, location optimisation).

To support these programmes, R&D is developing digital solution tools and experimental test resources, as well as tools capable of taking up the fresh challenges raised by growing amounts of digital data, IT security, and new information and communication technologies.

The events at Fukushima in 2011 have resulted in more research into safety, the environment (external threats) and lifespan, as well as into new topics such as the rehabilitation of inhabited areas evacuated after a nuclear accident. Together with other European players in nuclear power, in March 2012, EDF's R&D set up NUGENIA, an international non-profit association whose purpose is to develop a single cooperative framework for R&D in Europe for second and third-generation nuclear systems, as part of the European Sustainable Nuclear Energy Technology Platform

(SNETP). The association brings together 80 members from 20 countries, including industrial players, research entities, safety authorities and others. EDF chairs this association, which will facilitate the emergence of synergies and joint projects between members or with national R&D programmes, in the following fields: safety and risk analysis; serious accidents; reactor cores and performance; component integrity and ageing; fuel, waste and decommissioning; "Innovative Generation III Design"; as well as cross-functional challenges regarding the harmonisation of practices (in particular in the field of safety), in addition to controls and non-destructive evaluation. For the 2014-2015 request for projects, in 2014 NUGENIA submitted some fifteen projects, most of them in the field of safety and the operating lifespan of the existing fleet. In addition, the NUGENIA+ project has launched its own request for projects using funding allocated by the European Commission.

In 2012, EDF was also behind the launch of the Connexion project, devoted to the digital nuclear Instrumentation & Control systems of the future, as part of the French state's "Investments for the Future" projects¹. This project brings together industrial and academic partners working in the French nuclear industry in an ambitious research programme designed to prepare the future methods for the design, qualification and renovation of digital I&C systems for power plants. The initiative also addresses the need to harmonise industrial solutions within the industry. The systems engineering methods developed during the course of this project are feeding into other projects to design new nuclear power plant models, and contribute to the digital transition policy being implemented by the group.

The second priority is support for the development of renewable energies. These are playing a growing role in the energy landscape both within Europe and worldwide, and EDF is already a major player here, and is seeking to expand its role in the field still further.

For renewable energies, the goal of R&D is to identify technological breakthroughs offering significant competitive advantage, and to help the most promising technologies to emerge industrially, working in partnership with the academic and industrial worlds. EDF is investigating a wide range of renewable energies: hydro, photovoltaic, onshore and offshore wind farms, thermodynamic solar power, biomass, marine energies, geothermal energy, etc.

R&D is also working to develop tools and methods to enhance operational performance and optimise the cost of the EDF group's electricity production system projects based on renewable energies, with a number of aims in mind:

- reducing investment risks: for instance, EDF's R&D is providing expertise for the EDF group's offshore windfarm projects, in particular as regards the design of windfarm turbine systems and foundations, turbine certification, and methods to evaluate production potential. The qualification in 2015 of a floating Lidar system to measure wind at projected offshore windfarm sites has confirmed the improved performance delivered by this innovative solution. R&D is also preparing the future by studying floating offshore windfarm technologies, as well as supporting EDF EN in the development of the *Provence Grand Large* project;
- improving operational performance: for instance, R&D has developed a solution to measure machinery performance based on the monitoring of the operational parameters of turbines. This diagnostic tool allows underperforming turbines to be identified and a preliminary diagnosis to be carried out;
- controlling the technical and economic impact on the electricity system; and managing the electricity system balance as renewable energies are incorporated. Research relates to the definition of procedures for renewable energies to be inserted into electricity grids. This involves analysing the various solutions allowing intermittent renewable energies to be integrated, and evaluating the costs and limitations of their integration into large systems: storage, super grids, smart grids, energy management, etc.

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^{1. &}quot;Investments for the Future" (Investissements d'avenir) is a loan initiated by the French government to fund research and innovation initiatives relevant to the economic development of France.



The third priority is carbon capture and storage, and more generally the limitation of CO_2 emissions from fossil-fired power plants (see section 1.4.1.3 "Thermal generation in mainland France"). The cost, the impact on infrastructure performance and the lead times required to implement such solutions constitute a major issue. Research by R&D is designed to provide clarity as to the technical and economic maturity of the various capture technologies in order for the group to have an informed view of the best strategy for cutting the Group's thermal power plants' CO_2 emissions.

For the existing power plants, the capture of CO_2 by processing exhaust gases now appears to be the most appropriate solution.

With the support of French research agency ADEME and its partners, EDF built and operated a CO₂ capture research demonstrator for a period of one year at EDF's coal-fired power plant at Le Havre. Tested on the CO₂ present in smoke from coal combustion, the technology involves the use of an advanced "amine scrubbing post-combustion capture" process. Capturing nearly 2,000 tonnes of CO₂, the research demonstrator allowed the promising performance of this technology in an industrial environment to be verified with regard to its consumption of energy and solvents. Supplementary studies are being carried out to extrapolate the results to industrial scale.

Elsewhere, R&D is also examining new avenues to prepare the emergence of a second generation of CO₂ capture and storage technologies, with a lower energy penalty, and to evaluate breakthrough technologies that may increase installation performance considerably, with a corresponding decrease in CO₂ emissions.

1.6.2.2 Developing and experimenting with new energy services for clients

The development of energy efficiency and distributed renewable energies, regulatory and technological (digitalisation) changes, as well as the opening up to market competition, have all led to profound changes in the relationship between energy firms and their clients. They allow clients to become actively involved in their consumption and production of energy, both individually and across entire territories.

In this context, the EDG group's marketers face multiple challenges:

- changes to rate-price trajectories;
- demand-side management: under schemes such as "Green Deal" in the UK and Energy Savings Certificates in France, suppliers must assume an increasing number of obligations;
- the development of smart technologies: the arrival of smart meters and the emergence of connected objects will, for the general public, mean access to new services enabled by these new smart technologies (monitoring, customised offers, etc.);
- changes in customer relations, destined to become increasingly digital, with more demanding client expectations accompanied by changing behaviours. However, the modernisation of this relationship should not overshadow the parallel rise in energy poverty impacting customers in need of an adequate service from their energy company;
- the growing power of local stakeholders as a result of France's Energy Transition and "NOTRe" Boundaries Reform Acts: local authorities, already actively engaged in urban planning and public energy distribution, will be increasingly able to take control of their own energy destiny. The notion of sustainable territories, which combines aspects of development (eco-districts) and mobility (electric vehicles), will structure local policies. New potential areas of service are emerging at the intersection of the development of smart technologies and the increasing influence of local communities.

In order to meet these challenges, EDF R&D is restructuring its action around a number of topical priority programmes:

- developing load curve methods and models to provide close familiarity with demand, as well as new rate structures and prices to encourage dynamic demand-side management to meet new requirements in terms of the flexibility of the electricity network;
- innovating to develop new uses for electricity (heat pumps for buildings and industry, electric mobility) in order to stimulate future electricity demand and effective energy solutions in the long term for all client segments, in a way that is compatible with new regulatory frameworks;
- developing methods and resources to allow client relations to be modernised, enhancing commercial performance and cutting costs thanks to new information technologies and related data processing; experimenting with smart grids downstream from meters, and preparing the services and equipment to be used with Linky meters in buildings;
- designing and modelling local energy systems; developing the tools and technologies to deliver an innovative service offering for sustainable towns, cities and territories in France and internationally.

As a result, research has been conducted into new uses for electricity, such as electric mobility, heat pumps and more economic buildings. R&D has developed a prototype of an industrial high-temperature heat pump that allows waste heat from client processes to be recovered. The deployment of this technology as part of a service offering to clients is underway. Innovations that will ultimately allow the cost of heat pumps for buildings to come down have also been developed. Lastly, innovations relating to smart energy management for energy used for heating have been developed, in particular for residential heat pumps and to modernise storage tanks, making them more compatible with innovative control modes such as offpeak periods for solar.

These works are specifically carried out on the ground via smart grid demonstrators, such as Nice grid and Smart Electric Lyon, in which R&D examines new models aggregating various types of flexible demand (load management, deferred consumption, self-consumption, renewable energies, and energy planning and management at local levels). R&D has also launched an experimental project dealing with industrial load management based on the remote coordination of processes.

Regarding customer relationships, in order for residential clients to be aware of their electricity use between two bills, EDF has designed and developed a prototype range of features compatible with smart meters, including an application for smartphones and PCs that allows consumers to estimate their bill, taking into account their own particular characteristics, seasonal variations in their electricity consumption, and their past consumption history. EDF's R&D is also working on research initiatives to fight energy poverty, for example by designing relevant client relations offers and tools.

In sustainable territories, in order to meet the needs of cities that are seeking to optimise infrastructures and their management (transport, waste treatment, buildings, energy production, and networks) and aspiring to become sustainable, "smart cities", R&D is developing urban engineering resources for EDF marketers in France, such as the study performed for the Nice metropolitan area. R&D is also investing in a partnership with the city of Singapore to develop a decision support tool for urban planning. 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 homes for the city, to develop an innovative IT solution for urban modelling. In collaboration with the Singaporean authorities, this solution covers: the energy efficiency of buildings and their air conditioning systems, as well as the collection of household waste. It also includes the possibility of addressing issues such as the incorporation of photovoltaics into buildings, green roofs, and local water recycling. This modelling is coupled

with innovative 3D visualisation tools at the level of individual buildings or a neighbourhood, of the impacts of planning decisions, for instance on greenhouse gas emissions. The platform developed for this solution was delivered on schedule in mid-2015. New fields of development are being studied in collaboration with Singapore. The experience has already allowed a project to be developed in Lyon for the new Gerland neighbourhood.

Electric mobility is another important aspect of sustainable cities: electric transport opens up the prospect of a fundamental transformation of modes of travel. Battery storage is the key technology for electric transport. R&D research in this respect consists, firstly, in characterising battery safety and performance in the laboratory, and secondly, in innovating in the terms of breakthrough technologies with the potential to deliver significant improvements in battery life or cost. R&D is also studying non-mobile applications of these battery technologies (combining them with renewable energies, system services, etc.).

More generally, the goals of R&D activities in the field of electric vehicles (EV) and rechargeable hybrid vehicles (PHEV) are as follows:

- support the development of this new use (monitoring initial experimentation, standardisation, innovations with the potential to remove market barriers, such as wireless charging);
- manage integration into the electricity system (smart charging, dimensioning and location of recharging stations);
- develop mobility service tools (fleet supervision platform, charging station operation software, tools for mobility consulting for local authorities);

in particular, through partnerships with leading transport players (Renault, PSA, RATP, and SNCF).

1.6.2.3 Preparing the electricity networks of tomorrow

Energy transition towards a low-carbon economy in Europe implies meeting new challenges:

- encouraging the insertion of production from energy sources that are renewable, but also intermittent;
- integrating new uses of electricity by optimising the means of production and grid requirements;
- and also developing active demand-side management for local-level decentralised energy systems integrated with larger-scale energy management systems;
- optimising energy flows in Europe, and developing grid infrastructures;
- and more generally, in line with the public interest and the competitiveness of electricity, optimising the economic equilibrium of the electricity system (generation investments, investments in networks, costs/benefits of energy and environmental efficiency solutions) without significant rise in bills or complexity for clients, while also maintaining the quality and reliability of the electricity system.

The trend towards more intelligent electricity systems, also known as smart grids, is one of the pivotal points of the transition to a low-carbon energy economy in Europe. The major challenges are technical, economic and regulatory and, apart from the integrating renewable energy and new uses, they are tied to the management of information for different network users and the need to control costs.

R&D has set itself a number of priorities to meet these challenges.

The first one concerns the management of the balance between energy supply and demand of all kinds:

- to anticipate the coming changes in the energy landscape, R&D is developing forecasting models for the global landscape in the medium to long term (the global macroeconomic environment; growth in energy demand; energy and climate policies; the competitive and regulatory environment; emerging technologies and potential breakthroughs, etc.);
- to anticipate the consequences of the development of new means of production or uses, it is developing electricity system models enabling an anticipation of flexibility requirements and the margins needed to ensure equilibrium between supply and demand. To evaluate the costs and benefits of the various options in an objective manner, it is implementing and proposing harmonised methods of analysis to the various stakeholders;
- lastly, for the operational management of supply/demand equilibrium in relation with EDF's own scope of equilibrium, R&D is developing decision support tools to optimise and manage EDF's portfolio risks on European electricity and gas markets.

The second priority is to improve the performance of electricity grids. Research conducted by R&D in this field has the following aims:

- improve the management of grid 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 the electricity system models of tomorrow or smart grids, notably through the following goals:

- supporting the development of the Linky project (see section 1.4.4.2.4 "Future challenges: renewal, development, smart meters" and section 5.1.3.4.2.1 "ERDF: rollout of Linky smart meters") and anticipating new smart metering architectures and related services;
- preparing and contributing to smart grid experiments;
- inserting intermittent, decentralised energy production in networks; developing new system services and preparing for future local energy balances;
- trialling and industrialising new solutions based on storage systems to deliver value to electricity systems and networks.

R&D is also involved in the development of new functionality relating to the coordination and operation of the grid, as well as new solutions in the environment of new smart meters, such as ERDF's Linky project. For example, R&D has developed and trialled a new distribution network coordination feature associated with decentralised production. Based on an estimate of the condition of the network, this innovative coordination method makes it possible to maintain high-tension grid voltage within a contractual range even when there are fluctuations in output from decentralised production resources.

R&D is also testing electricity use management systems based on the Linky infrastructure. In particular, these experimentations have shown the feasibility of load disruption, such as electric heating, to reduce peak consumption periods.

It develops solutions to improve forecasts of losses on the network and develop local energy balance forecasts (source substations).

It contributes its expertise to every aspect of the Linky project, in particular the drafting specifications and qualifying equipment.



Lastly, R&D is also working on electricity systems and super grids, the directcurrent networks that could emerge with the insertion of renewable energies that alter the technical and economic fundamentals of electricity networks.

In order to prepare the solutions to these new challenges, a number of smart electricity demonstrators are currently under development in France and Europe, based on a collaborative approach. R&D is heavily involved in this respect with NiceGrid, Smart Electric Lyon, Venteea, Pégase, etc., with the aim of shedding light specific issues relating to the transition of the electricity system, learning technical and economic but also social and environmental lessons, as well as considering business models and regulation. EDF's R&D is also testing multiple innovative solutions prior to deployment in the field using Concept Grid, its new test platform dedicated to the intelligent electricity systems of tomorrow. These projects also offer opportunities to reflect and innovate, together with the electricity sector as a whole and the 'new information and communications technologies' sector, in order to best adapt the equipment to the flexibility requirements of the electricity systems of the future. A large number of experiments are exploring all the potential of smart meters, the first link in the smart electricity network chain.

1.6.3 INTERNATIONAL AND PARTNERSHIPS

To conduct its research and development programmes, EDF's R&D develops a large number of partnerships worldwide, the purpose of which is to maintain its expertise at the highest global level in the disciplines central to EDF's concerns, and to supplement its internal reservoir of skills.

The partnership policy of R&D takes various forms both nationally and internationally.

In France, over the past few years R&D has set up 14 joint laboratories with academic partners and technical or industrial centres and participates with them in collaborative research projects funded by national agencies like the National Research Agency, the ADEME or the Single Interministerial Fund, via competitiveness clusters. Each joint laboratory offers an opportunity to establish a combined team around a common scientific and technical problem, in order to create value, expertise and knowledge for all partners, and constitutes a major asset when taking part in cooperative projects. R&D also supports four specially targeted teaching and research chairs.

In the field of nuclear R&D, the tripartite agreement between CEA, EDF and AREVA that expired at the end of 2012 was extended for a further year and followed by a new nuclear R&D agreement in early 2014. This new "Institute" agreement is designed to increase R&D programme coordination between partners and to have programmes defined with reference to detailed goals, particularly industrial goals. In practical terms, this entails the following:

- the establishment of a Tripartite Programme Team (équipe programme tripartite, EPT), in charge of the supervision and coordination of programmes. This team consists of four members per partner, for a total of 12 members;
- the organisation of these programmes into projects monitored by the EPT;
- the implementation of these programmes in the existing joint laboratories.

At the same time, the tripartiteagreement on R&D between CEA, IRSN and EDF that expired in 2012 and was extended in 2013 was also the subject of negotiations in 2014; this has led to the signature of a four-party agreement including AREVA, allowing enhanced coordination with the "Institute" policy.

R&D is also present within the Energy Transition Institutes (*Instituts de la transition énergétique*, ITE) set up as part of "Investments for the Future" initiative:

The Institut photovoltaïque Île-de-France (IPVF): this institut, of which EDF is a founding members, targets technological breakthroughs to make photovoltaic energy competitive in the market. Ultimately, the Institute will bring together some 150 researchers from the different partners at a state-of-the-art facility in Saclay;

- France Énergies Marines, devoted to marine energies and offshore wind farms;
- Paris-Saclay Efficacité Énergétique (PS2E), working on the energy efficiency of industrial procedures and energy controls in industrial parks;
- SuperGrid, focusing on major transport networks to connect remote renewable energy production sites;
- Vedecom, devoted to electric mobility;
- Efficacity, working on energy efficiency and sustainable cities; and
- INEF 4, working in the field of building rehabilitation and sustainable construction.

"EDF" was also behind the launch in 2012 of the Connexion project, focusing on future digital nuclear Instrumentation & Control systems as part of the "Investments for the Future" initiative (see section 1.6.2.1 "Consolidating and developing competitive carbon-free generation mixes"). In Europe, R&D participates in some thirty EU projects and has established links 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. EDF is also a founding member of several European associations recognised at the EU level, such as Nugenia for nuclear power and EASE for storage.

Since the early 2000s, EDF has had a research centre in Germany - EIFER - in collaboration with the Karlsruhe Institute of Technology (KIT). This centre is chiefly devoted to decentralised production (fuel cells, hydrogen), sustainable cities and territories, geothermal energy, and biofuels. In recent years, partnership agreements have been signed with Fraunhofer institutes, the University of Stuttgart, and TU Berlin.

Since 2010, research activity has been strengthened internationally around several centres: in Poland, in the UK, in China, in Singapore, in the USA and in Italy.

The british centre consolidates the Group's positions in the British research ecosystem, particularly through Strathclyde University in the field of renewables, as well as with Manchester University, Imperial College, the National Nuclear Laboratory (NNL) and the University of Bristol in the field of nuclear energy. In 2012, this research centre became an independent legal entity, EDF Energy R&D UK Centre Ltd. This subsidiary is part of EDF Energy. This new status increases EDF's visibility and the research capabilities in the UK, in line with the Group's development strategy.

EDF Polska's research team is dedicated to advanced fossil fuel issues, biomass co-combustion, and more recently, heating networks. The R&D Polska Centre has developed collaborative work with Polish universities, including AGH at Krakow and Wroclaw University.

The centre based in Beijing is a particular asset when it comes to taking part in large-scale Chinese demonstrators for smart grids, sustainable cities, and a number of renewable energy technologies. This centre is also a resource in facilitating the implementation of the research partnership for nuclear power in China (see section 1.4.5.3.6 1 "Activities in China"). The creation of the centre has been accompanied by significant development of academic and industrial partnerships in China. For instance, EDF has signed a joint research programme in China relating to thermodynamic solar power. The cooperation underway with the Chinese Academy of Science's Institute of Electrical Engineering mainly concerns research and innovation work carried out on a testing platform dedicated to solar thermal power technologies located in Badaling. One of the challenges for EDF is to further improve its modelling capacities using measurements performed during experiments conducted on this platform.

The main goal of the Edison R&D team in Italy is to coordinate all gas research programmes for the EDF group. In 2015, Edison and the University of Turin set up a joint laboratory devoted to this topic.

In the US, the R & D and innovation sector is one of the most important and dynamic in the world. EDF has since several years an R & D Innovation team, located in Silicon Valley, which supports EDF's development in the United States and contributes to innovation in the group. The business areas of EDF Innovation Lab include the analysis of digital technology and regulatory trends, the evaluation of new business models for the group in the US linked to distributed energy resources and micro grids, smart cities, integration of renewable energies, and management of data for emerging energy services. EDF Innovation Lab also contributes to the partnerships developed a long time ago by EDF with excellence organizations such as EPRI, MIT and UC Berkeley, among others.

In Singapore, EDF labs Singapore was set up in early 2014 to support the service contract for the city's Housing Development Board. This centre is devoted mainly to research into sustainable cities.

1.6.4 **INTELLECTUAL PROPERTY POLICY**

Intellectual property plays a major role in the protection of the EDF group's technologies and know-how against the competition, as well as the capitalisation of these assets through licensing.

EDF wants to strengthen its industrial property portfolio in order to make the most of its capacity for innovation and its technological expertise. The portfolio is made up of patents, registered software and formalised know-how.

Patents

As of the end of 2015, EDF's portfolio included 541 patented innovations, protected by 1,902 property titles in France and abroad.

Strengthening the patent portfolio is a priority. The aim of this is to facilitate R&D cooperation, protect the development of EDF's activities, contribute to EDF's external image, boost the motivation of researchers, and provide maximum leverage for inventions.

In 2015, EDF filed 64 patent applications ¹ (60 in 2014).

Trademarks

"EDF" is a registered trademark in more than 90 countries. The Group's name is a vital component of its image and its heritage: as a result, the EDF brand, Internet domain names and logos are under constant surveillance, in order to protect them against any fraudulent use that could jeopardise to the image of the Group. Moreover, following the work to enhance the "EDF" brand, the Company has implemented brand licensing agreements with those of its subsidiaries that use the "EDF" brand.

The Group has also registered a large number of other brands, in particular those relating to the business of its various subsidiaries.

As of the end of 2015, the EDF group's brand portfolio included some 435 names, protected by over 1,300 property titles.

1.7 **Property, plant and equipment**

1.7.1 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 68% of which is owned outright by the Group and 32% 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 operationmaintenance 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 €951 million for the period from 2016-2030.

1.7.2 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 \in 18 million for 2015 (\in 17.6 million for 2014).

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.

1.7.3 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 2015, the residual non-securitised balance for personal residence mortgages was \in 3.3 million on EDF's balance sheet (\in 3.9 million as of 31 December 2014).

^{1.} Note: ERDF has also filed one patent application.



EDF R&D, Les Renardières ©EDF - William Beaucardet

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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 2.3 ("Dependency factors"). Key litigation, proceedings and

arbitrations in which the Group is involved are described in section 2.4 ("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.

The procedures implemented by the Group in order to control the risks to which it is exposed are described in section 2.2 ("Steering of activities and organisation of control in the Group").

2.1 Risks to which the Group is exposed

2.1.1 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 1.4.2.1. "Presentation of the market in France"). EDF is prepared to meet the competition in a context of heightened competitive intensity (new regulations, emergence of new players, mergers between existing players, changes in market prices, etc.). The end of regulated rates as of 31 December 2015 for sites signing up for power greater than 36 kVA led to EDF losing market share (see section 1.4.2.1.3 "Regulated energy sales tariff contracts"). This loss of market share, at constant consumption and price levels, will have an adverse impact on the Group's sales in France. Lastly, to achieve its objectives, EDF could be forced to adapt its marketing expenditures or its margins (especially in the event of price competition); this situation could 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 faced by the group, 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 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.

When selling its output, the Group is exposed, either directly or indirectly to European energy wholesale prices.

The current situation of low prices in the European energy markets, if prolonged, exposes the Group both in terms of its turnover and the value of its assets.

Indeed, the Group sells a significant share of its energy output on the European markets or through regulated or contracted prices, indexed to a greater or lesser degree depending on market prices. This share increased

in 2014 and especially in 2015 with energy market prices lower than the price of the ARENH (regulated access to electricity generated by existing nuclear capacity (accès régulé à l'électricité nucléaire historique)). The end of regulated rates for sites signing up for power greater than 36kVA will further increase this share as of 2016. Current price levels generate great uncertainty with regard to turnover, the expected margin and results. These price levels, if prolonged, may also have an impact on the profitability of the Group's generation units, mainly in Europe.

Various factors affect these price levels: commodities prices on world markets, the balance between supply and demand, as well as pricing and tax policies or subsidies granted to certain means of production. As a result, the Group is unable to guarantee that it will be in a position to avoid adverse impacts on its business, its assets and its financial results, depending of the change in energy market prices.

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 1.5 "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. The legal framework is therefore subject to change in the future, and such changes could be unfavourable to the Group and in particular generate additional costs, be inconsistent with the Group's growth model, change the competitive context in which the Group operates, or affect 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.

Act no. 2015-992 of 17 August 2015 on Energy Transition for Green Growth results in additional constraints with regard to the power generation tools (share of nuclear power in French energy production reduced to 50%, cap of the total authorised capacity of nuclear generation to 63.2GW) 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 implement would be incompatible with the objectives of the strategic plan or the PPE).

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 is 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 1.5.6.1 "General regulations that are applicable to the environment,

subject of very low-frequency (50 hertz) 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

The French government supports and bolsters RTE's transparency efforts

on this topic: in application of the Grenelle 2 Act no. 2010-788 of 12 July

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 transformers, 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 2.2.6.4 "Management of risks associated with industrial accidents or the environment and health impacts of the Group's activities"), 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 sections 2.2.6 "Management of industrial and environmental risks" and 2.2.7 "Insurance").

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 1.5.3.1, "European legislation" and section 2.4.1 "Legal proceedings concerning EDF"), which could have a material adverse impact on the Group's model, activities and financial results.

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

The transmission and distribution activities carried out respectively by Réseau de Transport d'Electricité (RTE) and Electricité Réseau Distribution France (ERDF) are conducted within a framework ensuring their independence with regard to the production and marketing activities, so as to allow all users non-discriminatory access (see section 1.4.4 "Regulated activities in France").

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 1.5 "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.

RISKS ASSOCIATED WITH THE GROUP'S 2.1.2 **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 2.1.3 ("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 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 (WHO) 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 have about such structures.

health, hygiene and safety").

Lastly, facilities or assets operated by the Group or its employees 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 various 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 1.4.4.4 "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 were reiterated in France in the NOME Act no. 2010-1488 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 1.4.2.1.3 "Regulated energy 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.

The NOME Law also established a regulated access to historic nuclear power (accès régulé à l'énergie nucléaire historique or "ARENH") for the benefit of electricity suppliers in competition with EDF (see section 1.4.3.3 "Regulated access to historic nuclear power (Accès Régulé à l'Énergie Nucléaire Historique, or "ARENH")"). The ARENH price, which is regulated, is a reference of used prices for the regulated tariffs fixation. Pending new procedures for the setting of the ARENH reference price, its price is maintained at €42/MWh. A draft decree laying out these procedures was submitted to the European Commission in early July 2014.

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 1.5.2 "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 a risk of local imbalances and 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 will fully compensate additional costs incurred to perform such obligations. 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 section 2.4 "Legal proceedings and arbitrations"). 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 1.4.4.2.2 "Distribution activities"), which grant it the exclusive right to engage in expansion actions and operate the public electricity distribution network. These public electricity distribution concession agreements are tripartite agreements between the licensing authority, the operator of the distribution network and the supplier at the regulated rate. Under the law, only ERDF and local distribution companies (LDC) in their service areas (and EDF for areas not connected to the continental metropolitan network) may be appointed to operate the public energy distribution networks and only EDF and LDCs in their service areas may

be appointed to provide the supply at the regulated rates. Therefore, at this time, when a concession agreement is renewed, ERDF and EDF do not compete with other operators. However, the Group cannot guarantee that such provisions will not be amended by law in the future (see section 1.5.5 "Public electricity distribution concessions"). Furthermore, the Group may not obtain the renewal of these contracts under the same financial terms and conditions (see section 1.4.4.2.2 "Distribution activities").

ERDF's deployment of "communicating" meters (Linky) begun in December 2015 and a first phase of three million meters should be rolled out by the end of 2016. The second phase will continue until up until 2021 (see section 1.4.4.2.4 "Future challenges (renewal, development, communicating meters)"). It is possible however that these time frames and associated costs may need to be revised owing to technical or administrative problems concerning the provision or installation of the devices.

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 1.4.4.1 "Transmission – Réseau de Transport d'Électricité (RTE)" and section 1.5.3.2 "French legislation: the French 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 to be renewed pursuant to competitive tendering procedure now defined by Order no. 2016-65 of 29 January 2016 and Decree no. 2016-86 of 1 January 2016 relating to concession agreements (see section 1.5.6.2.4 "Regulations applicable to hydropower facilities"). The Water Act no. 2006-1772 of 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 specified the conditions for the competitive tendering of expired concessions and Act no. 2015-992 of 17 August 2015 on energy transition for green growth placed various tools at the disposal of the public authorities (possible grouping of concessions by valley, creating hydropower joint venture companies, extensions in return for investments). A draft decree on hydropower concessions implementing the provisions of the aforementioned Act of 17 August 2015 and modernising the regulatory framework for hydroelectric concessions (in particular by clarifying certain points of the procedure for granting concessions and approving new standard specifications) is in the process of being drafted and should be adopted by the end of the first quarter of 2016.

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. For concessions whose terms have been shortened by the French government in order to group them by valley, an overall economic balance will be sought between the various concession holders at the valley level. When hydropower concessions are renewed or grouped together or their terms extended, they 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 no. 2010-788 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 in light of the European Commission's growing requirements (see section 1.4.1.4.1.4 "The challenges of hydropower generation").

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 operation 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.

RISKS TO WHICH THE GROUP IS EXPOSED

RISK FACTORS AND CONTROL FRAMEWORK

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 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 1.5.6.1 "General regulations that are 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 injuries caused by entities that were not part of the EDF group at the time they were committed, if the Group at the time they were committed, if the Group at the time they were committed, if the Group the

Furthermore, these regulations may be significantly reinforced by national or European authorities (see section 1.5.8 "Principal planned regulations that are likely to have an impact on EDF Group's business"), which would have an adverse impact 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 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 may 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 sellers.

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" entities in the scheme through the National Certificates Register (known as "EMMY").

EDF met the objective set for the second period (2011-2013), which has been extended until 31 December 2014. However, EDF must face increased competition, a decrease in the principal mineral deposits associated with more stringent regulatory requirements, and the economic crisis, which has reduced households' investment capacity and hurt the construction sector.

The third period began on 1 January 2015 and will end on 31 December 2017, pursuant to Decree no. 2014-1668 of 29 December 2014. The obligation was doubled (700TWh cumac) and could increase EDF's sales costs.

Lastly Act no. 2015-992 of 17 August 2015 on the Energy Transition for Green Growth creates as of 1 January 2016 a specific obligation benefitting fuel poor households, in addition to the general obligation the level and conditions of which were set out by the decree relating to energy savings certificates of 30 December 2015, which involves additional energy savings certificate costs for EDF in its capacity as obligor which it will be difficult to pass on in the ongoing agreements.

In particular, EDF cannot guarantee that increased sales costs will be completely reflected in the rates, thereby worsening the results (see section 1.5.6.1 "General regulations that are 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. In February 2015 the new line between France and Spain east of the Pyrenees was inaugurated. Although there are currently other projects to develop interconnections, in particular the line 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 exposed to 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 2.2.2.2 "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 2.2.7.5.3 "Storm coverage"). Neither RTE's aerial distribution networks nor the Island 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 costlier 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 nuclear power plant 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 1.4.1.1.3 "Environment, nuclear safety and radiation protection").

Despite having set up a crisis management structure that enables it to react promptly to such events (see section 2.2.2.2 "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 5.1.2 "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. An 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 5.1.2 "Economic environment"). The current situation of overall excess capacity of European energy power plants is further weakened by the arrival of new heavily subsidised means of production in an economic context of stable or even declining consumption.

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 $\mbox{\rm CO}_2$ emission allowances.

In conducting its production and marketing 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 CO_2 emissions allowances markets. These fluctuations are particularly significant in the current context of wholesale energy prices in Europe (see section 5.1.2 "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 2.2.2.3 "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 fossil fuel-fired power plants, for all European producers. Capacity markets are currently being set up in several European countries, but with different approaches. This may limit the risk that certain power generation assets necessary to secure the supply will 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 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 in the financial markets.

As a result of its activities, the EDF group is exposed to risks in 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 2.2.2.4.3 "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 2.2.2.4.4 "Currency risk");
- equity risk: the Group is exposed to equity risk on securities held primarily as dedicated assets constituted to cover the cost of longterm 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 2.2.2.4.5 "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 fixedrate 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 2.2.2.4.6 "Interest rate risk").

The manner in which these risks are organised and the management principles applied thereto are described in section 2.2.2.4 ("Management and control of risks associated with financial markets"), and the measures taken to control these risks are explained in section 5.1.6.1 ("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 affect 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 in particular to the adoption of EMIR (European Market Infrastructure Regulation, Regulation No. 648/2012 adopted on 4 July 2012 by the European 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 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 2.2.2.3 "Management and control of risks associated with energy markets")) and financial risk management activities (which are part of the internal policies described in section 2.2.2.4 "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 ESMA (European Securities and Markets Authorities) 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 1.5.8.1 "Future regulations at European 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. 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 2.2.2.5 ("Management and control of counterparty default 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 that 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 1.4.1.1.3 ("Environment, nuclear safety and radiation protection").

Regarding asbestos, the Group has taken measures to treat materials, as well as information and protection measures, as described in section 3.3.2 ("The health and safety of our employees and our service providers' employee: an absolutely priority"). For a description of on-going legal proceedings, see section 2.4 ("Legal proceedings and arbitration").

2.1.3 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 operation ¹. Nuclear-generated electricity accounts for 76.3% of total electricity generated in France ². 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 significant liability risks and potentially significant additional operating costs.

^{1.} Source: Nuclear Power Reactors in the World, International Atomic Energy Agency, table 24, 2015 edition (figures as at 31 December 2014).

^{2.} Source: 2015 Electricity Report – RTE.

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.

Indeed, a nuclear operator is responsible for the nuclear safety of its facilities.

The nuclear civil liability scheme that applies to nuclear facility operators of States Parties to the Paris Convention, and the insurance applicable thereto, are described in section 1.5.6.2.2 ("Specific regulations applicable to basic nuclear facilities") and section 2.2.7.6 ("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 nuclear damage, the Group would be automatically liable up to a monetary maximum set by the law applicable in the country, 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, not yet in force (see section 1.5.6.2.2 "Specific regulations applicable to basic nuclear facilities"), provide for these maximum amounts to be increased and a substantial expansion of the damage covered. The new amounts are applicable as of 18 February 2016 under Act no. 2015-992 of 17 August 2015 on the Energy Transition for Green Growth and, in spite of the Group's preparation over the last few years, these new amounts will have a significant impact on the cost of insurance. The entry into force of the other changes laid out in these protocols will once again increase the cost of insurance and the Group cannot guarantee that insurance covering this liability will always be available or that it will always be able to maintain such insurance.

Property damage to EDF's nuclear facilities is covered by insurance programmes (see section 2.2.7.6.3 "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 measures 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, 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 1.5.6.2.2 "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 as stated in Article L.596-4 of the French Environment Code. 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 1.4.1.1.2 "Operation of the nuclear fleet and technical performance"). Cases of non-compliance with regulations are also likely to be used by third parties against EDF and brought before the courts.

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 2.3 "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 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 2.3 "Dependency factors" and section 1.4.1.1.4 "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 1.4.1.1.4 "Nuclear fuel cycle and related issues").

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

The group of nuclear facilities that the Group currently operates in France is highly standardised (see section 1.4.1.1.1 "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 1.4.1.1.2 "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 "Great Fairing" is intended to renovate existing plants, increase the safety level of reactors and, if the conditions are met, extend their operating life. This programme, which was approved in principal by the Board of Directors, involves additional investments for 2015 and the upcoming years and bringing forward certain expenditures that were already planned before the Fukushima accident (see section 1.4.1.1.2 "Operation and technical performance of the nuclear fleet" and section 1.4.1.1.5 "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 was the case in 2014 and 2015 in the United Kingdom, where a fault detected on a "RAG" type reactor (advanced gas-cooled reactor) led to further tests being conducted on three other similar reactors and where, as a precaution, pending the results of the on-going expertise, the four reactors were authorised to restart only at reduced power (see section 1.4.5.1.2.1 "Nuclear generation").

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 1.4.1.1.5 "Preparing for the future of the nuclear fleet in France"). Accordingly, at the end of 2015, approximately 80% of the 900MW segment units have undergone their third ten-year inspection and, for 9 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 and the ASN indicated that, following the permanent "Guidelines" group meeting of April 2015, it would issue an initial opinion on the broad guidelines of the 900MW reactors and, in 2018-2019, a final opinion on the "generic" phase of this re-evaluation (see section 1.4.1.1.5 "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, the financial impact of which, 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 41 and 47 years for advanced gascooled reactor (RAG) power plants and is 40 years for the pressurised water reactor (PWR). Since EDF Energy acquired them, the operating life of the RAG power plants has been extended by 8 years on average and the objective is to increase the operating life of the PWR power plants by 20 years (see section 1.4.5.1.2.1 "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 time 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 Sates, 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.

The Act no. 2015-992 of 17 August 2015 on the Energy Transition for Green Growth calls for the nuclear component in electricity generation to be reduced by 50% before 2025. It also caps at current levels (63.2GW) the total authorised capacity of nuclear electricity generation. In practical terms, this provision forces EDF, in order to obtain permission for the commissioning of any new nuclear generating capacity (such as 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. 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 1.4.1.2 "New Nuclear Projects") 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 September 2015, EDF submitted a new timetable and updated construction costs for the project in amount of €10.5 billion. It is expected that fuel will be loaded and the reactor activated in the 4th quarter of 2018. The new organisation set up and the progress of the project are set out in section 1.4.1.2.2 ("Progress of the EPR Flamanville project"). The completion of this timetable remains nonetheless dependent on specific authorisations still to be issued by the French Nuclear Safety Agency (equipment qualification, loading authorisations, commissioning authorisations, etc.). The Group may not obtain the necessary authorisations or they 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 yet occur during equipment qualification, testing and 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 on nuclear pressure equipment) 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. On 21 October 2015, EDF and China General Nuclear Power Corporation (CGN) signed a strategic investment agreement for the construction and operation of these reactors. The final investment decision is nonetheless subject to a certain number of conditions specified in section 1.4.1.2.3.1 ("Hinkley Point C EPR"). 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 have, along with other Austrian or German companies, filed a non-suspensive appeal in July 2015 against the European Commission's decision approving under the rules on State subsidies the contract for difference negotiated with the British government, which presents a risk for EDF and its partners. In the event of an unfavourable ruling from the Court of the European Union, the economic conditions of the operation could be significantly affected.

The EPR programme is a key 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 1.4.1.1.4 ("Nuclear fuel cycle and related issues"). In France, as an operator of nuclear power plants and radioactive 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 both on the technical and financial levels in accordance with guidelines laid down by the public authorities and under their supervision. EDF is also responsible for all nuclear waste generated during plant operations and decommissioning.

The Group's liability may be alleged, in particular as a nuclear power operator or producer of radioactive waste 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 1.5.6.2.2 "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 no. 91-1381 of 30 December 1991 on research on radioactive waste management and no. 2006-739 of 28 June 2006 on sustainable management of radioactive materials and waste (see section 1.4.1.1.4 "Nuclear fuel cycle and related issues" – "High-Level Long-Lived Waste (HAVL)"). 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, especially as the nuclear order of 10 February 2016 adopted pursuant to Act No. 2015-992 on the Energy Transition for Green Growth empowers the administrative authority to reclassify radioactive material as radioactive waste and radioactive waste as radioactive material. Furthermore, the Group cannot guarantee the timeframe in which the public authorities will authorise such storage, or predict certain 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 1.4.1.1.4 "Nuclear fuel cycle and related issues" - "Storing conditioned ultimate waste").

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 1.4.5.1.2.1 "Nuclear generation"). 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 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 Council's intention to establish a shared Community framework for the responsible and safe management of spent fuel and radioactive waste (see section 1.5.6.2.2 "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 costs estimates are revised.

In France, EDF has booked provisions for spent nuclear fuel management operations (transport, processing, conditioning for recycling) (see note 29.1.1 in the appendix to the consolidated financial statements for the financial year ended 31 December 2015) based on the price and volume conditions of the master agreement signed with AREVA in December 2008 and broken down in the successive implementation agreements. The implementation agreement for the period from 2016-2023 was signed in February 2016 (see section 1.4.1.1.4 "The nuclear fuel cycle and related issues"). The amount of provisions currently booked to cover the period not covered by the current agreement should be reassessed if the terms under which this agreement is renewed 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 radioactive waste producers (see note 29.1.2 in the appendix to the consolidated financial statements for the financial year ended 31 December 2015 and section 1.4.1.1.4 "Nuclear fuel cycle and related issues"). Following new calculations of the costs of deep storage under the supervision of the DGEC in conjunction with EDF, the Minister of Ecology, Sustainable Development and Energy, in an order of 15 January 2016, set the new reference cost at €25 billion under the economic conditions of 31 December 2011. This change in cost was reflected in the Group's late-2015 financial statements (see note 29.1.2 in the appendix to the consolidated financial statements for the financial year ended 31 December 2015). The current estimate is based on the assumptions of the preliminary design and will be regularly revised based on the progress of the project, as stated in the Ministerial order.

The amount of the provisions currently booked is nonetheless subject to change in the upcoming years. 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 in the appendix to the consolidated financial statements for the financial year ended 31 December 2015).

Decommissioning existing nuclear facilities may present currently unforeseen difficulties or be much costlier 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 1.4.1.1.6 "Decommissioning of nuclear power plants"). The Act no. 2006-739 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 submitted a progress report in July 2015 in connection with the National Radioactive Materials and Waste Management Plan (PNGMDR). This report assesses several storage concepts and allows for the possibility of storage of graphite waste on the Soulaines site (see section 1.4.1.1.4 "Nuclear Fuel Cycle and Related Issues"). Construction by EDF 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 2.4 "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 in the appendix to the consolidated financial statements for the financial year ended 31 December 2015).

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 1.4.5.1.2.1 "Nuclear Generation").

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.

The amount of dedicated assets allocated by the Group to cover the costs of its long-term nuclear business commitments (radioactive waste and decommissioning) might need to be revised upwards and require additional expenditures.

In France, as of 31 December 2015, the market value of EDF's portfolio of dedicated assets was \leq 23.5 billion, compared to \leq 23 billion on 31 December 2014 (see sections 1.4.1.1.7 "Assets available to cover long-term nuclear-related commitments (outside the operating cycle)", 1.5.6.2.2 "Specific regulations applicable to basic nuclear facilities" and note 47.3 in the appendix to the consolidated financial statements for the financial year ended 31 December 2015).

In the event of a significant change in the provisions determining the reference base of the dedicated assets, it might prove necessary to make additional disbursements to adjust the value of these assets, 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 1.4.1.1.7 "Assets available to cover

long-term nuclear-related 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 5.1.6.1.6 "Management of financial risk on EDF SA's dedicated asset portfolio" for a sensitivity analysis), which could require EDF to disburse additional amounts to restore the value of these assets and such events could adversely affect 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 1.4.5.1.2.1 "Nuclear generation").

2.1.4 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, marketing 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 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 1.4.1.4.3 "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 1.4.6.2 "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 1.4.5.3.2 "Central and Eastern Europe").

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 1.4.6.1 "Energy Services"). The integration of Dalkia into the Group since 25 July 2014 reinforces this expertise and development sector (see section 1.4.6.1.1 "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 5.1.3.4 "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 the 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 or confusions regarding the respective roles 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 ENGIE. 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 ENGIE (almost all of them by the joint department of ERDF and GRDF, the two distribution subsidiaries of the EDF and ENGIE 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 ENGIE 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 1.4.4.2.3 "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 leave the labour force 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 3.3.1 "Professional excellence: Employment and Skills 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 the 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 in the appendix to the consolidated financial statements for the financial year ended 31 December 2015). 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 2015, 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 2015, the average duration of employee benefits commitments was 17.8 years in France and 19.4 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, could 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. Since 2012, actions have been implemented to optimise purchases relevant to both operating expenses and investments. Thus, 2015 was marked by lower operating expenses. In the medium term, the Group has set an objective of once again generating positive cash flow ¹ in 2018 and has implemented actions to achieve this objective. However, the Group cannot guarantee that the programmes which it implements to improve performance 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 2015 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 2015 (see note 1.1 in the appendix to the consolidated financial statements for the financial year ended 31 December 2015).

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.

2.1.5 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 and of any dividends paid to an EDF shareholder could be adversely affected by a fall in the value of the euro.

^{1.} After dividends, excluding Linky and the new net development of assets disposals.

2.2 **Steering of activities and organisation of control in the group**

The objective of this section is not to comprehensively present all the control procedures existing within the Group companies, but to focus on control procedures related to activities or risks deemed significant, and on the main long-term procedures in place in 2015, highlighting changes and key initiatives developed during 2015. These internal control and risk management procedures comply reflect the general principles set out in the AMF risk management and internal control reference framework¹ (published on 22 January 2007 and updated 22 July 2010).

2.2.1 GENERAL FRAMEWORK FOR STEERING AND CONTROL IN THE GROUP

2.2.1.1 Executive Management Steering bodies

The organisation of EDF's Executive Management reflects two major principles: improve integrated group operation while maintaining the independence of the management of regulated subsidiaries and strengthen the role of operational staff in making decisions.

Executive Committee

The Chairman/CEO relies on an Executive Committee in which all the business lines within the Group are represented. Its composition is set out in section 4.3.1 ("Composition of the Executive Committee").

This Committee is a decision-making body which reflects and consults on Group operational and strategic matters. It reviews all substantive issues and significant events for the Group, monitors operational objectives and results and contributes to the management and anticipation of major challenges for the EDF Group. It reviews and authorises significant projects, in particular Group investment or divestment projects which exceed certain thresholds. In principle, the Executive Committee meets weekly.

Meetings of the Executive Committee acting as a "risk committee" are devoted to reviewing and steering risks and reviewing audit activities.

The Chairman/CEO and the Executive Committee launched in early 2015 the "CAP 2030" strategic plan to set EDF's course for 2030. Various missions corresponding to the discussions and actions to be undertaken in priority in order to ensure the success of this project were set up. The Executive Committee regularly reviews these missions.

The Group Executive Committee Commitments Committee

To strengthen the appraisal and monitoring of projects, an Executive Committee Commitments Committee² thoroughly examines the most significant projects in terms of the extent of the commitments or the risks incurred before decisions are made.

Risk Committee

The Risk Committee ³ was created at the beginning of 2015. It represents an area for making decisions in order to better manage the risks to which the Group is exposed: it reviews the Group's risk map, identifies in the risk map risks that are a priority for the Group and shares the strategy for dealing with them. It is also a place for exchanging information and passing on alerts regarding emerging risks. Each Executive Committee member sponsors one or more priority risks and, as such, is responsible for defining the strategy for handling the risk and the corresponding action plans, including those defined as a result of audits. It also examines the audit programme of the Group. The committee met twice in 2015 and, in particular, approved the list of priority risks for the Group.

The General Inspector for Nuclear Safety and Radiation Protection

A General Inspector for Nuclear Safety and Radiation Protection is appointed by the Chairman and CEO of EDF, to which he or she reports and whose mission is to carry out inspections in their areas of expertise and to make an annual review of the overall safety of the Group's nuclear fleet. The General Inspector for Nuclear Safety and Radiation Protection proposes areas for improvement to Executive Management.

EDF Group Hydropower Safety Inspector

An EDF Group Hydropower Safety Inspector is appointed by the Chairman and CEO of EDF to which he or she reports and whose mission is to carry out inspections in their areas of expertise and to make an annual review of the overall safety of the Group's hydropower fleet. The EDF Group Hydropower Safety Inspector proposes areas for improvement to Executive Management.

2.2.1.2 **Description and management** of the internal control system

A decision relating to the implementation of internal control within the EDF Group was signed by the Chairman and CEO on 3 September 2010. This decision reflects in particular the provisions of the Order of 8 December 2008 on the legal control of accounts and specifies internal control guidelines for the EDF Group. It aims to provide reasonable assurance with regard to control of EDF's risks, based, following a continuous improvement approach, on the following key principles:

- a delegation of responsibility to each of the Group managers, who are responsible at each level for:
 - controlling the main risks,
 - ascertaining this control is carried out for the activities they have delegated,
 - cover and allocate the control systems in proportion to the risks identified,
 - carry out self-assessments of the systems implemented and formally and regularly submit the results to their own manager;
- an internal audit system described in section 2.2.1.3.2 ("The Group Audit unit").

^{1.} When drafting this section, EDF ensured its consistency with the AMF reference framework, which itself is based on the changes observed in the main international standards, especially COSO II and ISO 31000.

^{2.} The composition of the Executive Committee's Commitments Committee is the same as that of the Executive Committee.

^{3.} The composition of the Risk Committee is the same as that of the Executive Committee. It met for the first time on 13 April 2015.

These key principles apply to all Group entities, but the procedures for their implementation may be different based on the entities concerned (size, governance conditions, and level of control).

Thus, for the area controlled (excluding regulated subsidiaries), these principles are implemented by Executive Managements with regard to the subsidiaries they control and with regard to EDF's main Operating Divisions, which, in their turn, control several operational units or subsidiaries.

Each Director concerned has appointed an "internal control manager." The network formed by these managers (around 80 individuals) is managed by the Group's Risk Management Department.

An internal control manual ¹ has been drawn up and offered to each entity² to serve as a reference in the implementation of its own internal control system. This guide sets out the various cross-functional risk areas throughout the Group and identifies the key control requirements. It is updated annually on the basis of feedback or new control requirements including those related to compliance with Executive Management policies and decisions. At the end of 2015, each of the 66 entities concerned produced an annual internal control report comprising primarily a self-assessment ³ of risk management and activities under their purview and a description of the progress actions. This has been the Group's approach for the ninth consecutive year ⁴. Each year, the Chairman and CEO and the Audit Committee, and thereafter the Board of Directors, receives a report summarising all these documents and their possible interpretation in terms of the state of internal control within the Group.

The Audit Department conducts comprehensive audits of these entities including a review of the soundness of their internal control at the rate of three to five years depending on their importance.

For other Group subsidiaries (regulated subsidiaries and subsidiaries in which the Group has significant shareholdings), risk management is carried out by EDF representatives within the governance bodies. Thus, they ensure that risk mapping is implemented for each subsidiary, the internal control and audit systems are set out in detail, and information is regularly provided concerning the risk map and audit activities (programme and main results); they also ensure the effectiveness and relevance of each of these systems through periodic audits ⁵.

The Group's Audit Department and Risk Department provide support:

- to EDF representatives in major subsidiaries to assist them in implementing and steering the approach within the governance bodies;
- to the Directors of the associated Departments, tasked with providing the same support to EDF representatives within the other subsidiaries falling under their area of responsibility and to report on said matters in their annual self-assessment report.

In 2015, in connection with the "CAP 2030" project launched by the Executive Committee, a project to modify the internal control was initiated. Its main objectives were validated by the Chairman and CEO in September 2015. The purpose of this project is to propose actions to improve internal control by strengthening the responsibility of managers, simplifying self-assessment tools and clarifying the various requirement standards set out in the internal control manual. This project has been gradually implemented since 2015 with the aim of producing all its results by late 2016-early 2017.

2.2.1.3 Participation in the internal control of the Group Risk Department, the Group Audit unit, the Financial Department and Legal Department

2.2.1.3.1 Group Risk Department

For many years, EDF has set up policies to manage its operational risks (industrial risks, environmental and health risks, etc.), financial risks and organisational risks.

In addition to these sector-based policies and in the context of a changing environment, EDF decided, as of 2003, to set up an overall risk management and control process reinforcing the existing procedures, in particular by creating the Risk Department Group which is tasked, inter alia, with:

- having each Group entity carry out a risk map, either directly within the scope of EDF and the controlled subsidiaries or via the governance bodies for the regulated or co-controlled subsidiaries; draw up and update the consolidated risk map for the Group's major risks (see section 2.2.2.1 "Risk Mapping Process");
- alert the Chairman and CEO and the Executive Committee on emerging risks and risks that have not been sufficiently observed;
- reinforce the deployment of the risk control policy, either directly within the scope of EDF and the controlled subsidiaries or via the governance bodies for the regulated or co-controlled subsidiaries (see section 2.2.2.1 "Risk Mapping Process") ensuring in particular the completeness and coherence of the various sector-based risk control policies;
- ensure the internal control policy is deployed and manage the internal control function (see section 2.2.1.2 "Description and management of the internal control system");
- ensure the energy market risks policy is deployed throughout the scope of EDF and the controlled subsidiaries and, more generally, ensure the control of these energy markets risks, either directly within the scope of EDF and the controlled subsidiaries or via the governance bodies for the regulated or co-controlled subsidiaries (see section 2.2.2.3 "Management and control of risks related to the energy markets");
- define and deploy the control of financial risks (rate, exchange, liquidity, equity, credit risks) and counterparty default risk within the scope of EDF and the controlled subsidiaries, ensure that these financial risks are controlled via the governance bodies for the regulated or co-controlled subsidiaries (see section 2.2.2.4 "Management and control of risks related to the financial markets");
- verify the comprehensiveness and relevance of the risk analyses carried out for long-term investment and commitment projects which are submitted to the Executive Committee-level bodies for decision;
- ensure the crisis management policy is deployed within the scope of EDF and the controlled subsidiaries and define the procedures for exchanging information and coordinating in times of crisis with all the subsidiaries and ensure that the crisis system is operational at the Group level (see section 2.2.2.2 "Management Crisis").

^{1.} When preparing the internal control manual, EDF ensured its consistency with the AMF reference framework, which itself is based on the changes observed in the main international standards, especially COSO II and ISO 31000. The first internal control manual was prepared and distributed on 22 January 2007. Since then it has been updated each year. In 2015, the internal control manual was restructured to facilitate understanding of the requirements and the control of their implementation.

^{2.} Dalkia and Citelum have been fully integrated into EDF's internal control and risk management system since 2015.

^{3.} Self-assessments reflect all the areas identified in the internal control manual and in particular all action fields in the AMF framework.

^{4.} New self-assessment models are being tested for fiscal year 2015.

^{5.} For regulated subsidiaries, these responsibilities are exercised within the limits set by the regulations in force.

2.2.1.3.2 Group audit unit

The Group Audit unit consists of all the Group, EDF and subsidiary audit resources that conduct internal audit activities. Pursuant to a decision of the Chairman and CEO this function is supervised by the Group Audit Director. The Group audit unit includes the Audit Department and audit teams specific to each of the main French and foreign subsidiaries. Relations between the Audit Department and the various audit teams and their respective powers take into account whether the teams belong to EDF or controlled or regulated subsidiaries. The Audit Department carries out functional supervision of the function (co-appointment and peer assessment of audit directors of the subsidiaries by the Audit Department – excluding RTE and ERDF –, exchanging best practices, training, sharing tools and methods, etc.). In 2015, the Group audit unit consisted of 116 people¹.

One of the avenues of the "CAP 2030" strategic plan covers audits. In line with the internal control improvement actions which management is asked to carry out, the objective approved by the Executive Committee in September 2015² consists of refocusing the Group audit on its role as third line of defence. In this spirit, some business audit teams which had more of a role of second level of internal control will be reallocated to strengthen the internal control of the structures concerned ³.

Performance standards for EDF and the controlled subsidiaries

The Audit Department applies international standards defined by the Institute of Internal Auditors, promotes these standards and monitors compliance with the standards within the controlled scope.

The missions, powers and responsibilities of the auditors as well as the rights and duties of the audited parties are set out in a charter which was updated on 3 September 2010. This charter, signed by the Chairman and CEO reiterates the independent nature of the audit function and specifies the missions and commitments of the internal audit function, the duties and rights of the auditors and audited parties. It is accompanied by a Code of Ethics applicable to all the Group audit unit as a whole. This Code is intended to promote a culture of ethics and serves to reiterate that the auditor must comply with and apply certain basic principles relevant to the profession and the conducting of internal audits.

The Audit Department reports to the General Secretary; the Director of the Audit Department enjoys direct access to the Chairman and CEO and reports on audit works to the Audit Committee to which it provides with information necessary to determine the adequacy of the audit staff with regard to the implementation of the supervision missions it has to carry out.

All auditors of the Audit Department and Audit Departments of EDF and its controlled subsidiaries (excluding regulated subsidiaries) are trained in the same methodology consistent with international standards. They are recruited from the various businesses of the EDF group as well as from external audit firms. Each auditor is assessed at the end of each mission. Experience as an auditor is part of a path that is both recognised and provides career-oriented qualifications. A memorandum of understanding was signed to this effect in March 2006 between the Audit Department and the Company Executives Development Department.

The key processes relevant to the proper functioning of the Audit Department for the entire chain of its activities (from the drafting of the audit programme up to monitoring of the implementation of recommendations) are set out and coordinated.

In 2014, the audit unit voluntarily submitted to assessment by the IFACI^{4,} which certified that its practices comply with international standards for the profession, as it did in 2008 and thereafter in 2011-2012.

Operating procedures for EDF and the controlled subsidiaries

The Audit Department and the Audit Departments of the subsidiaries monitor the internal control systems of the various Departments and controlled subsidiaries. In particular, the Audit Department conducts cross-departmental corporate-level audits and the audit departments of the subsidiaries conduct audits within their scope of responsibility. The Audit Department is the sole entity empowered to carry out audits of subsidiaries for corporate-level risks.

The audit programme is reviewed by the Chairman and CEO, the Risk Committee, and thereafter by the Board of Directors. It is drawn up to reflect:

- the need to audit the main Group entities (Departments and subsidiaries) at intervals suited to their importance in order to assess in particular their internal control is correctly implemented;
- the main accounting and financial processes and "Group Head" processes (human resources, information systems);
- major projects;
- risks of the Group's risk mapping which were not addressed by the aforementioned audits at intervals suited to the critical nature of the risk;
- monitoring of Executive Management decisions.

The programme of the audit teams of the subsidiaries is coordinated with the Audit Department programme.

All audits give rise to recommendations which, once validated by the audited parties and their management, become the subject of action plans drafted by the aforementioned management and audited parties and are sent to the Audit Department. In the next 12 to 18 months, the Audit Department will ensure the application of these corrective actions or any other action decided by management in order to put a halt to any irregularities detected by the audit. The audit is deemed to be concluded satisfactorily only when the irregularities have been eliminated. Conversely, any unsatisfactory conclusion or conclusion with reservations will result in an appropriate management alert.

These principles are applied in the same terms by the entire audit unit.

The Audit Department prepares a biannual summary report summarising the highlights of the audits for the entire scope of the Group audit unit, the main corporate audit findings and the corresponding recommendations, and the result of the corporate audits closed during the period. Furthermore, it identifies any recurring or generic problems observed in several audits over the period which merit special attention on the part of Management. It provides an audit-based vision of the level of control of the Group's risks. This report is presented to the Chairman and Chief Executive Officer, the Risk Committee and thereafter to the Audit Committee and the Board of Directors.

2.2.1.3.3 Finance Department

The Finance Department (FD) monitors market developments and developments in financial techniques and analyses the financial risks of projects. The control systems for the Management Control, Accounting and Tax business lines form part of the the Group Internal Control Policy (proposals for key requirements to be adopted by the operating entities) and cover the implementation of business line policies. For the area of management control, these policies concern in particular: the management cycle, expenditure commitments, monitoring of investments. For the area of accounting and tax issues, these policies concern in particular the reliability of the accounting and tax information.

Management Control is tasked with:

 steering the Group's management cycle forecasting processes (mediumterm budgets, forecasting and plans), draw up summaries of the

^{1.} Full-time equivalent within the scope of EDF SA, EDF Energy, EDF Trading, Edison, EDF Luminus, EDF Polska, EDF EN and Dalkia.

^{2.} After review by the Executive Committee meeting as the transformation committee and submission to the Audit Committee.

^{3.} Business audit teams for EDF SA (Production, Engineering, Commerce, Asia Pacific), audit EDF Polska, EDF Trading, EDF Luminus.

^{4.} L'Institut Français de l'Audit et du Contrôle Interne (The French Institute of Audit and Internal Control).

RISK FACTORS AND CONTROL FRAMEWORK STEERING OF ACTIVITIES AND ORGANISATION OF CONTROL IN THE GROUP

aforementioned forecasting processes and arbitrate at the Department and subsidiary level for the Group as a whole. Prior to decisions being made, Management Control is responsible for issuing alerts and suggesting proposals as part of the analysis of the financial consequences of the proposed transactions or performance levels;

- assisting operational management in the coordination of the performance: implementation of the budget (for which forecast updates are carried out twice a year, along with monthly reporting covering the results generated to date and an update of the last annual forecast) is monitored through regular performance reviews deployed throughout the Departments and controlled subsidiaries;
- carrying out the Group's financial control function by contributing in particular to the investment control processes and conducting economic and financial optimisation analyses;
- drive development of medium- and long-term financial paths.

The Finance Management Directors of the Departments of the business lines and Subsidiaries sit on the Management Committee of the entities to which they belong. They are appointed and evaluated jointly by operational management and management of the Management Control business line.

Accounting is tasked with:

- drawing up the financial statements for EDF and the consolidated financial statements for the Group;
- ensuring the quality of the accounting by drafting Group reference materials setting out the accounting standards and the chart of accounts to be applied;
- updating, on behalf of EDF, the internal control reference materials relating to the control of financial and accounting information.

For subsidiaries, accounting internal control policies are the responsibility of each corresponding legal structure.

Moreover, investment projects evaluated in the Group Executive Committee Commitments Committee are previously taken up and analysed from a normative standpoint to anticipate any impacts on the Group's balance sheet and income statements.

Taxation is tasked with:

- ensuring the consistency of the tax policies within the Group;
- ensuring that legal and reporting obligations are properly met, in particular by ensuring a watch on legal and regulatory obligations;
- ensuring accounting follow-up of the deferred tax position as well as the periodic justification of the financial statements;
- identifying and controlling the Group's tax risks.

2.2.1.3.4 Legal Department

The Legal Department, which reports to the General Secretary, is tasked with protecting the Group's interests and securing its activities, by providing support, advice and expertise. It is also tasked with anticipating and planning on a long-term basis how to protect the Group's interests and contributing to its performance, in particular by optimising contractual issues and legal solutions.

In order to strengthen the overall control of the Group's legal risks, the Chairman and CEO decided, pursuant to a decision dated 23 September 2014 to create a Group Legal Unit whose supervision has been entrusted to the Group Legal Director.

In addition to the Legal Department's contribution to the Group's internal control as referred to in sections 2.2.1.4 ("Delegations of authority and technical authorisations") and 2.2.4 ("Internal control procedures relating to compliance with laws and regulations"), quarterly Group legal reporting covering litigation and major or sensitive cases has been set up.

Furthermore, a contract library ensures the dissemination and control of sensitive EDF contracts. This contract library, forming part of the internal

control system, is a secure process identifying and digitising major contractual commitments for EDF and certain subsidiaries (excluding regulated and jointly-controlled subsidiaries). This system has been completed by a decision and an implementing memorandum regarding the control of major contracts stipulating that originals of major contracts meeting specific criteria are to be centralised in secure national facilities.

Lastly, the Legal Department has set up a knowledge management system to ensure the Legal Department's doctrine is consolidated, standardised and shared and establish a legal watch for legislative topics and case-law of major interest to the Group.

2.2.1.4 **Delegations of authority and technical authorisations**

The Chairman and CEO delegates some of his or her powers to certain members of the management team.

The organisation put in place for procurement is designed to ensure proper control of the purchasing processes. Procurement contracts are signed, depending on the thresholds, either by the Chairman, a Group Executive Director or any of their delegates following signature by the Procurement Department Director or any of their delegates. Signature by the Procurement Department Director or their delegates formally recognises that the instrument complies with the procurement process. Each Group Executive Director is expected to reinforce the internal control system for procurement instruments submitted for their signature and those procurement instruments directly handled by their Management.

The Chairman and CEO has delegated the nuclear operator liability to the Group Executive Director for the Nuclear and Fossil-fuel Fleet Department and the Group Executive Director for the New Nuclear Engineering and Projects Department, who then sub-delegated it to the Directors of the Divisions involved which have, in their turn, sub-delegated it to unit managers.

Authorisations are issued by each facility manager, who must ensure beforehand that the associated skills have been assessed. These requirements apply to all persons carrying out work, both for staff of EDF and service providers.

The Legal Department prepares and updates delegations of authority whenever required by changes in the organisation of EDF. Moreover, a handbook on delegations of authority drafted by the Legal Department was distributed in November 2008 and updated and distributed again in 2010. It is designed to serve as a tool to inform and educate EDF entities on the nature and consequences of delegations of authority along with their management rules.

2.2.1.5 Ethics and environmental quality approaches

2.2.1.5.1 Ethics and compliance approach

By a decision sent on 2 April 2013 to the members of the Executive Committee of the Group Management Committee, to the Chairmen of the Group companies and to the Country Directors, the Chairman and CEO deployed the Group Ethics Charter; this decision represents a second stage extending to the Group an initiative launched in this area in 2004 and initially reserved for the scope of EDF SA. The Chairman set as a common objective for all Group employees to familiarise themselves with the new ethics reference materials before the end of 2013.

Group leaders appointed in each company and major Department of EDF SA an ethics correspondent responsible in their company or major Department for promoting the Ethics Charter in their business context, preventing and dealing with ethic failures and playing a role in the Group's ethical approach.

The Group's Ethics and Professional Conduct Committee comprises, in addition to its chairman, five voting members who are leaders of the Group, with equitable geographical representation (France – outside France) and

parity between men and women. The committee also includes three nonvoting members representing the Group HRD, the Group Legal Department and the Group Risk Department.

The Committee, which acts as an advisory, consultation and support body, is called upon to issue opinions and make recommendations to management on all Group ethics issues and ethics-related implementation. It also responds to any internal or external consultation as well as any ethics alert at the Group level ("central" alerts). It is the recipient of reporting from EDF's ethics delegate summarising the central alerts along with reports from each company summarising local alerts and implementation of the ethics approach. Its chairman reports, on behalf of the Committee, to the Ethics Committee of EDF's Board of Directors.

The Ethics Charter guarantees the right of every Group employee confronted with a situation contrary to the Group's values and commitments to alert on a confidential basis and without risk their management or a dedicated contact person within the company or, if necessary and as a last resort, the Group Ethics and Professional Conduct Committee in particular by sending a secure email (alerte-ethique@edf.com or ethics-alert@edf.com).

In 2015, the EDF group ethics system was strengthened: the Executive Committee decided to structure the ethics and compliance unit to the EDF group as a whole. It approved the unit's scope, missions and organisational principles.

Created in December 2015, the first mission of the Group Ethics and Compliance Department will be to propose to EDF's chairman a "Group ethics and compliance" programme consolidating the management of EDF's compliance with the national and international laws and regulations to which the Group is subject as a result of its business and geographic locations.

In addition to procedures already set up by a number of Group companies exposed to domestic regulatory environments (EDF Energy, Edison, EDF Inc., EDF Energies Nouvelles) or specific regulatory environments (EDF Trading), the Group Ethics and Compliance Department will be tasked with providing the EDF Group with (i) a Group-wide ethics and compliance policy (reference materials, etc.), (ii) a standardised and consistent control and management framework at the Group level, and (iii) increased visibility of the Group's ability to control risks associated with compliance.

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 3.2.3.1 ("Ethics and compliance").

2.2.1.5.2 Environmental quality approach

For many years, the EDF Group has taken into account issues relating to sustainable development and made sustainable development a real dimension of its overall strategy. The Group's policy has led to joint ambitions being signed in 2009 by the leaders of the main Group companies. This policy provides a coherent framework for initiatives taken by these companies and revolves around three issues:

- the fight against climate change, controlling and limiting environmental impacts including, in particular, biodiversity protection;
- access to energy and developing ties of territorial proximity;
- contribution to the debate on sustainable development.

The implementation of this policy is coordinated by the EDF Group Sustainable Development Committee.

The CAP 2030 strategic plan aiming to make EDF "an efficient and responsible electrician, championing low carbon growth" established new prospects for the Group's Sustainable Development and environmental dynamics. Sustainable development objectives, backed by CAP 2030 and specifying the Group's course are being drafted for implementation in early 2016. The policies for each area will be adapted in accordance with these objectives.

The Sustainable development Committee serves as the environmental Management Board at the Group level and is in charge of coordinating the environmental management system in accordance with ISO 14001.

The EDF group maintains its ISO 14001 certification obtained for the first time on 9 April 2002. The scope of certification encompasses EDF (including all its operational entities and most of its functional entities), several French subsidiaries (including ERDF, Électricité de Strasbourg, EDF Énergies Nouvelles), and a number of international subsidiaries including EDF Energy, Edison, EDF Luminus. In May 2015, the independent body Afnor Certification issued a new expanded ISO 14001 certificate for the Group after the entry, in particular, of Dalkia. The certification now covers 98% of the Group's consolidated Turnover for 2015 (see section 3.5.1 "Economic indicators").

The processes implemented as part of this certification help to reinforce the control of the Group's environmental risks, in particular with regard to regulatory aspects and environmental issues at stake by assuring its stakeholders of a structured and tailored organisation.

2.2.1.6 **The organization and management** of information systems

Each of the Group entities (Departments or subsidiaries) is responsible for oversight within their perimeter and the Group Information Systems Department is responsible for oversight for shared infrastructure and services. Depending on the guidelines adopted in conjunction with each Department, oversight responsibilities are distributed between the relevant Department and the Shared Information and Telecommunications Services Department, which plays a cross-departmental role for EDF and certain subsidiaries.

The Finance Information System is used by several Group Departments and raises several important issues in terms of data integrity and application availability. The Group Executive Director for Finance has delegated oversight of the Finance Information System to the Finance Information Systems Department, which coordinates the daily operation of applications, manages changes, and implements all necessary steps to ensure the security of the Information System.

Governance of the Information System unit was enhanced pursuant to the Chairman's decision of 19 December 2011 to reinforce Group coordination of support functions. This governance is characterised by a scope being extended to all non-regulated Group subsidiaries and a more integrated coordination entrusted to the Group Information Systems Department to ensure Information System synergies and performance to serve business strategies, in particular with regard to the financial trajectory, security and availability of the Information Systems.

Strategic decisions and trade-offs are reviewed, depending on their nature and the related scope, by one of the EDF Committees mentioned in section 2.2.1.1 ("Executive Management Steering Bodies") or by the France Information Systems Directors Committee, or by the IS Group Committee (ISGC) which also comprises Group subsidiaries, excluding regulated subsidiaries. An IT Industrial Policy Committee makes decisions regarding IT industrial strategies for EDFS SA and makes recommendations for subsidiaries.

Moreover, the Group Information Systems Department, which reports to the Group Executive Director, Finance also ensures that the Information System strategy is coherent in the medium term; in this context, a vision of the Information System for 2020 and the associated strategic guidelines were drawn up with input from the businesses.

2.2.1.7 External controls

Like all listed companies, EDF is subject to review by the AMF (French Financial Markets Authority).

As a company majority owned by the French government, EDF is subject to control by the *Cour des comptes* (French Court of Auditors), State controllers, the Inspectorate of Finance, Economic Affairs Committees or ad hoc committees of inquiry of the French National Assembly and Senate and EDF Markets Committee.

According to law, the Statutory Auditors certify the annual financial statements (parent company and consolidated financial statements) and perform a limited review of the Group's half-yearly condensed consolidated financial statements. They issue a report on the annual report of the Chairman of the Board of Directors prepared pursuant to Article L. 225-37 of the French Commercial Code (*Code de commerce*).

In light of its activity, EDF is also subject to control by the Energy Regulatory Commission (*Commission de Régulation de l'Énergie*) and the Nuclear Safety Authority (*Autorité de Sûreté Nucléaire*).

The findings of these various external controls feed into the internal control and audit programmes, among others.

2.2.2 GENERAL FRAMEWORK FOR THE MANAGEMENT AND CONTROL OF GROUP RISKS

For many years, the EDF group has pursued a policy to manage its operational, financial and organisational risks.

The objectives of the risk management and control policy 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.

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. Management of the Group's risks is regularly reported during Risk Committee meetings (see section 2.2.1.1 "Executive Management Steering Bodies").

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 distinct from the risk management functions. This system ensures notably a standard approach with respect to the identification, assessment and control of risks.

2.2.2.1 Risk mapping process

Under those principles, EDF prepares a consolidated mapping of its major risks for the entities under its operational control or under joint control, based on maps prepared by each operational or functional entity using a shared methodology (typology, principles for identifying, assessing and bringing risks under control, etc.). Each identified risk gives rise to an action plan. Priority risks are placed under the responsibility of one or more sponsors within the Executive Committee.

The updating of the risk mapping is the subject of extensive discussions conducted regularly between the Group Risk Department (see section 2.2.1.3.1 "Group Risk Department") and each of the contributing operational and functional entities. These discussions aim to question the relevance of the identification of risks and the soundness of the control additions undertaken.

The consolidated mapping completed at the end of the year is approved by the Risk Committee and presented to EDF's Board of Directors after review by the Audit Committee. Since 2015, the Risk Committee has identified within the group risk mapping a smaller set of "priority risks" selected as a result of their operational or strategic importance. The connection between these risks and the CAP 2030 strategic plan has been given priority so that risk control action plans may be included in the corresponding works as much as possible.

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 Insurance policy and its implementation (see section 2.2.7 "Insurance"), the crisis management policy and the analysis of risks concerning matters examined by the Group's steering bodies (the Executive Committee, the Executive Committee's Commitments Committee, etc.). The risk management process contributes *inter alia* to securing the long-term investment and commitments process by ensuring the quality of the risk analyses for the matters presented to the Executive Committee's Commitment's Committee. Lastly, the major risks to which the Group is exposed are set out in section 2.1 ("Risks to which the Group is exposed") in line with the late-2015 Group consolidated risk map.

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 semiannually. 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 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.

2.2.2.2 Crisis management

The crisis management policy formalised by a decision of the Chairman and CEO in June 2005 sets out the crisis management and organisation principles for the scope of EDF and its controlled subsidiaries and specifies all the measures required for its implementation, so as to manage situations in which its assets, staff, business activities or reputation are threatened by a foreseen or unforeseen event. This policy consists in particular of:

- ensuring that crisis management structures and permanent systems for reporting alerts exist in all Group entities;
- verifying the existence and regular updating of relevant crisis management procedures in each EDF Department and in the controlled subsidiaries for the risks involved;
- defining, for the crisis periods, the procedures for coordinating with all the subsidiaries ¹ – possibly via the Departments to which they report;
- ensuring feedback from crises and crisis exercises is systematically applied in order to avoid or reduce the consequences of similar crises;
- verifying that professional development actions exist for all those involved in crisis situations.

The control system of the crisis management policy is integrated into the Group internal control system. Furthermore, the efficiency of this system and the global coherence is tested regularly through a crisis exercise programme. The crisis organisation is regularly readjusted to reflect any significant changes in the internal organisation or external environment and based on feedback following major crises.

2.2.2.3 Management and control of risks associated with energy markets

2.2.2.3.1 Management framework for risks associated with energy markets

Risk factors associated with energy markets and commodities are described in section 2.1 above ("Risks to which the Group is exposed").

In order to manage and control these risks, the EDF group has implemented an "Energy Markets Risks" policy covering all energy commodities. This policy was approved by a decision of the Chairman and CEO during the Executive Committee meeting of 30 April 2013. It is applicable to EDF SA and entities under the Group's operational control. Regarding subsidiaries jointly controlled and non-controlled companies², the policy in term of energy market risks and the associated control process are reviewed within the framework of governance bodies of these companies.

Section 5.1.6.2 ("Management and control of energy market risks") further describes the management framework, the organisation of the control and the operational management principles. Only the main elements thereof are described hereunder.

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 complying in particular with European regulations on trading companies (see section 1.5.7 "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.

The Executive Management approves the entities' exposure strategy every year, as well as the related risks limits which are presented to it by the DRG in line with the budget process.

The consolidated exposure to energy market risks of entities under EDF's operational control is submitted to the Group's Executive Committee on a quarterly basis. The control processes are regularly reassessed and audited. EDF's Audit Committee gives its opinion to the Board of Directors regarding the energy markets risks policy and on the evolutions proposed by the Risk Department Group.

2. Considering the regulated subsidiaries, these responsabilities are exercised under the fixed limitations of the current regulation.

^{1.} Coordination in times of crisis for RTE is organised under the auspices of the public authorities.



2.2.2.4 Management and control of risks associated with financial markets

2.2.2.4.1 Management framework for risks associated with financial markets

Risk factors associated with financial markets are described in section 2.1 above ("Risks to which the Group is exposed"). EDF has set up a system of financial management (see section 5.1.6.1 "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 SA 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, through outsourced employee benefit funds and, to a lesser extent, through its cash management by direct equity investments.

Principles set out in this management framework include in particular 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 management framework must be submitted to EDF's Audit Committee and Board of Directors for approval.

2.2.2.4.2 Organisation of the control

In particular, the Group Risk Department is responsible for the control of market risks (rates, exchange, equity, credit), liquidity risks and counterparty risks for EDF and the controlled subsidiaries. This control is exercised through:

- verification that the financial management framework and Group counterpart default risk policy principles have been properly applied, in particular through support and control missions (methodology, organisation, monitoring of exposure, regular calculation of risk indicators and monitoring Group risk thresholds compliance);
- control of market positions of the EDF trading room in charge of cash management. For these activities, a system of indicators and risk thresholds checked daily and on a weekly basis has been set up to monitor and control exposure to financial risks. This involves the Finance and Investment Department, the trading room of the Group Risk Department and the Group Risk Department, which are immediately called upon to take action in the event the thresholds are exceeded. The Markets Committee (body bringing together the various Finance and Investments Department entities concerned and the Group Risks Department) checks and reviews on a monthly basis, where necessary, requests for exemptions to the management framework and requests for new product investments;
- control of financial and counterparty risks associated with investments for the "Dedicated Assets" portfolio (within the Finance Department), managed by the Listed Assets Management Divisions (financial portfolio) and EDF Invest (unlisted portfolio real assets: infrastructure, real estate and private equity) of the Financing and Investments Department. The policy governing the creation, management and control of EDF SA's financial risks was updated and approved by EDF's Board of Directors on 11 February 2015. An annual risk mandate along with specific frameworks have been set up by the Group Risk Department to set out the risk management principles and admissible risk thresholds for both portfolios as well as at the overall level. The Operational Management Committee chaired by the Financing and Investments Director is the steering body for the financial portfolio (listed assets), whereas the Investment Committee

chaired by the Group Executive Director, Finance is the steering body for the unlisted portfolio. The Group Risk Department participates in these two committees for the purpose of preparing alongside managers the risk management strategy for both portfolios. Furthermore, the Dedicated Assets Monitoring Committee chaired by the Group Executive Director, Finance carries out overall monitoring for the portfolio;

• control of the completeness and relevance of the risk analyses performed for long-term investment and commitment projects, submit to the Executive Committee-level bodies for decision.

To ensure the independence of the financial risk control structure with regard to the management activities for these risks, said management activities report to the Group Risk Department.

In addition, regular internal audits ensure the effective implementation of the controls.

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.

2.2.2.4.3 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 5.1.6.1.1 ("Liquidity position and liquidity risk management").

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.

2.2.2.4.4 Currency, equity and interest rates risk

To limit its exposure to these risks, the Group has adopted management and control principles which are described in section 5.1.6.1 ("Management and control of financial risks").

2.2.2.5 Management and control of counterparty risk

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 Executive Committee on 24 September 2014, 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 5.1.6.1.7 "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 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 losses, RTE also regularly monitors its counterparties based on criteria it defines.

2.2.2.6 Specific controls

2.2.2.6.1 Commitments approval process

In accordance with the procedure of September 2011 governing the Group's "commitments process" and following tentative approval by the Executive Committee, the Group Executive Committee Commitments Committee will review all projects committing the Group (excluding regulated subsidiaries and jointly-controlled subsidiaries), in particular those covering:

- investment, divestment, and merger and acquisition projects exceeding €50 million ¹;
- expenditure covering supplies, works or services in an amount exceeding €200 million;
- long-term purchase or sales agreements for annual amounts exceeding 5TWh for electricity, 10TWh for gas and €150 million for coal, oil, emission credits and CO₂ allowances;
- the multiannual programme to supply back-end reactors and services of the nuclear fuel cycle;
- operations transferring obligations concerning the decommissioning or back-end of the nuclear fuel cycle.

Group Executive Committee Commitments Committee meetings are systematically preceded by meetings attended by corporate-level experts (Group Risk Department, Legal Department, Finance Department, Upstream-Downstream Trading Optimisation Department, Sustainable Development Department, Strategy Department, Procurement Department, etc.) and project developers in order to verify the comprehensiveness of the risk analyses of the projects that are presented. This work relies upon methodological standards for analysing the risks of developments projects incorporating the entirety of impacts.

Whenever necessary, the proposed commitments are then reviewed by the Board of Directors as described in section 4.2.2.4 ("Powers and missions of the Board of Directors").

The investment management guide stipulates that proposed commitments in an amount less than that for which the Group Executive Committee Commitments Committee must be consulted are to be reviewed by governance bodies specific to each entity. Moreover, in order to reinforce the industrial and financial control of projects and operational activities in France and abroad, "gold rules" applicable to all contracts awarded by the Group were approved by the Chairman and CEO in January 2013 and have been implemented. These "golden rules" constitute an information framework associated with a monitoring process enabling risks taken by the Group to be assessed in the context of its operations.

2.2.2.6.2 Control of the Information Systems (IS)

Organisation of the internal control of the information systems unit

The internal control system of the IS unit forms part of the Group Internal Control Policy (propositions for joint key requirements for the Group) and covers the implementation of the unit's policies and the control of major crossdepartmental risks. The policies concern in particular shared infrastructures and services, security of the information systems, governance of IS projects, management of IS risks and compliance with the French Data Protection Act.

As a reminder, the internal control information framework of EDF's IS is based on the external COBIT (Control Objectives for Information and related Technology) information framework.

Internal control and cover of the risks specific to IS issues has been coordinated since 2009 by the Group Information Systems Department at two levels in the unit's organisation: a network of IS risk and internal control correspondents and the Information Systems Directors Committee, which represents the departments. The Group Information Systems Department ensures close coordination between the networks of IS risk and internal control correspondents and IS security managers, strengthening coverage of risks and internal control for EDF. These networks are progressively being extended to subsidiaries.

The France Information Systems Departments Committee appoints the Security Committee to plan and steer cross-departmental security-related work. In particular, it performs the following roles:

- contribution to the preparation and updating of the EDF-SA security reference documents. Coordination of the management, awareness building, training, and support for the IT unit and business lines in the areas of Information System security;
- incorporating institutional and technical monitoring with regard to the security of the overall feedback (application, compliance, efficiency, incidents, reporting, reviews, audits);
- examining complex dossiers requesting an exemption from the security policy.

The EDF Group information systems security policy structures the guidance and organisation of the group's IS security. It is the subject of reporting in the IS Group Committee. Two dedicated committees monitor for EDF SA and in Group subsidiaries any changes to this policy and the level of security:

- monthly for EDF SA by a committee chaired by the EDF Group IS Security Manager, including the Information Systems Security Managers for the entities falling within the scope;
- quarterly for the major subsidiaries by a committee chaired by the EDF Group IS Security Manager, including the Information Systems Security Managers for the major subsidiaries.

Actions in the field of IS security

2015 was marked by:

 defining the strategic IS security objectives for 2020, transposing the IS 2020 vision mentioned in section 2.2.1.6 ("Organisation and management of information systems");

^{1.} Excluding financial investments and divestments related to the management of dedicated assets and pension assets, which have a specific governance.

2

- creation, by the business lines, of a risk map for high-security applications and implementation of a centralised procedure for this risk map;
- conducting a "cyber attack" crisis exercise with active participation of part of EDF's Top Management;
- implementation of two "Business Continuity Plan" exercises for the EDF data centres and implementation of the business continuity plans in most subsidiaries;
- regular holding of meetings of the Office Examining Proposed Outsourced Services tasked with conducting security analyses for outsourced services since its creation in 2012;
- the production launch of cyber surveillance tools to provide improved visibility of IS security incidents by means of alerts and reporting;
- signature by the Chairman of a framework agreement between the French Ministry of Defence and the EDF Group regarding the cyber centre of excellence.

2.2.2.6.3 Administration and management of subsidiaries

Under the new "Corporate Officers" policy signed by the Chairman and CEO on 15 January 2015, any EDF subsidiary or entity in which EDF holds an interest (excluding regulated subsidiaries) is monitored by a corresponding Director who is a member of the Executive Committee or by their Delegate. The Director or their Delegate proposes corporate officers representing EDF on the governance bodies of these companies; the appointments are lastly approved by EDF's Chairman and CEO.

This policy also requires that the approval of Executive Management be obtained before incorporating any subsidiary or acquiring any holdings in France and abroad.

The Administrators and Companies Delegation, created in 2002, ensures in particular:

- updating of the corresponding risk map for the companies pursuant to decisions made by the relevant Management;
- monitoring of the "target compositions," shared prior visions of skills, profiles necessary for satisfactory representation of EDF in the governance bodies of the subsidiaries and entities in which EDF holds an interest;
- compliance with the appointment process for corporate officers;
- professional development of corporate officers (initial training seminar for new corporate officers with support from the Group University, information via the intranet site of the community of administrators).

2.2.3 THE INTERNAL CONTROL PROCEDURES RELATING TO RELIABILITY OF FINANCIAL AND ACCOUNTING INFORMATION

2.2.3.1 The AMF reference framework

The internal control manual was entirely restructured in 2011 with regard to control of accounting and financial information in order to bring it into line with the AMF (French Financial Markets Authority) reference framework as revised in 2010.

2.2.3.2 Group accounting principles and standards

The accounting standards used by the EDF comply with the international standards published by the International Accounting Standards Board (IASB) approved by the European Union and applicable as at 31 December 2015. These international standards include the IAS (International Accounting Standards), IFRS (International Financial Reporting Standards) and the SIC and IFRIC interpretations. The accounting rules and methods are described in the Group accounting principles manual and summarised in the notes to the consolidated financial statements.

The Group's consolidation scope is specified in the notes to the consolidated financial statements (see note 51 of the notes to the consolidated financial statements for the fiscal year ended 31 December 2015). A network of correspondents from the operational Departments and subsidiaries facilitates dissemination of the instructions and harmonised accounting implementation throughout the various Group entities.

2.2.3.3 **Procedures for preparing and controlling** the consolidated financial statements

The consolidated financial statements are prepared by the Consolidation Department of the Accounting Consolidation Division on the basis of the data entered locally by each entity (entities of the parent company and subsidiaries) in accordance with the Group standards and closing instructions, according to a single plan of charts. The scope of consolidation is closed after noting all companies of significance that are controlled, jointly-controlled or under significant influence. The significant or non-significant nature of entities for which EDF holds an interest and which might fall under the Group's scope of consolidation is reviewed on a quarterly basis and submitted to the statutory auditors for assessment once a year.

The half-year consolidated financial statements are presented to the Audit Committee and the Board of Directors, for each half-yearly accounting period.

The annual consolidated financial statements are reviewed by the Audit Committee, then closed at 31 December of the fiscal year by the Board of Directors of EDF and lastly approved by the General Meeting of Shareholders.

Each annual and semi-annual results in the drawing up of instructions specifying the key deliverables expected from each stakeholder to the publication of the financial statements, the management report and the reference document for the annual closings. Meetings with EDF departments and the subsidiaries facilitate the preparation of these financial statements and make it possible to anticipate changes with regard to certain treatments thereby increasing the reliability of the accounting and financial information published. An analysis of the conditions of preparation (compliance with deadlines, quality of information, etc.) after the event allows for regular improvement of the consolidated financial statements preparation and analysis process.

Monthly reporting of information covering the balance sheet accounts and the income statement has been in place since 2011 and has helped anticipate the treatment of complex transactions and contribute to more reliable results.

Uniformity of the financial language of Accounting and Management Control contributes to the coherence of Group management and is one of the ways of ensuring continuity between:

- actual data from accounting and data created during forecasting phases;
- external financial reporting and internal control.

This common language facilitates dialogue and collaboration between these two functions at all levels of the organisation and helps promote exchange of information between actors and the quality of the information produced.

2.2.3.4 **Procedures for preparing and controlling** the financial statements

The financial statements are prepared annually and semi-annually by the Parent Company Financial Statements Department of the Accounting Consolidation Division.

The annual financial statements are closed on 31 December of the fiscal year by the Board of Directors of EDF and approved by the General Meeting of Shareholders.

The condensed half-year financial statements are closed on 30 June of the fiscal year by the Board of Directors. EDF's transactional accounting (excluding Nuclear Fuel Division, Isolated Energy Systems and Executive Managers Department for the accounting component of payroll) is entrusted to the shared "Accounting" service centre of the Shared Services Department. The processing of the transactional accounting is organised by process. "Governance pacts" set the respective responsibilities of the operational Departments, the shared "Accounting" services centre or, where applicable, the accounting operators in the operational businesses and the Accounting Consolidation Division.

Meetings are organised on a quarterly basis with the EDF SA departments to prepare the financial statements and anticipate changes with regard to certain treatments thereby increasing the reliability of the accounting and financial information published.

Each operational and functional Director makes a commitment each year with regard to the quality of the Internal Control system in the Accounting and Financial fields, the improvement goals for the coming period and the truthfulness and exhaustiveness of the accounting information for which they are responsible by preparing a commitment letter sent to the Accounting Consolidation Director.

The internal control system in the accounting field is integrated into the Group internal control system as a whole. An indicator reference framework is used within EDF making it possible to measure the areas of conformity of the accounting information for each process.

2.2.3.5 Disclosure and dissemination of information

In addition to the communication and reporting actions mentioned in section 2.2 ("Steering of activities and organisation of control in the Group"), special emphasis may be given to the following specific actions:

- following its IPO in 2005, EDF has established procedures aimed at regulating and improving the reliability of the process and the content of EDF's financial disclosures and preventing market offenses. Accordingly, a procedure was defined organising the respective roles within the company with regard to the preparation, approval and dissemination of financial disclosures. A financial information validation system was set up, aimed at ensuring the validation and consistency the different sources of EDF's financial disclosures, as well as examining and validating the content of all the financial information channels. This Committee includes representatives from the Finance Department, the Communications Department and the Legal Department. Furthermore, the EDF group has adopted since 2006 a Code of Market Ethics reiterating the principles and rules applicable to transactions involving securities of the EDF company or listed companies of the EDF group. Alongside the dissemination of this Code, awareness-raising actions on exchange rules have been carried out among Group employees, especially as regards precautions and obligations related to inside information and black-out periods during which leaders and certain employees holding inside information must refrain from making transactions involving the company's shares;
- the Code of Good Practice: compliance with the Codes of Good Practice for the regulated subsidiaries is controlled each year by these subsidiaries and checked by the Energy Regulation Commission, which publishes the results of its audits in its annual report.

2.2.4 INTERNAL CONTROL PROCEDURES RELATING TO COMPLIANCE WITH LAWS AND REGULATIONS

The Legal Department carries out a monitoring mission as regards legislative and regulatory developments: it issues alerts and carries out awareness training for the concerned Departments on changes which might impact the Group.

By a joint decision of 1 June 2007 supplemented by a decision of 12 May 2011, the Legal Department and the Audit Department adopted an action plan formalising the role of the Legal Department in the definition of control objects prescribed in the various EDF entities, so as to incorporate them in their own internal control plan. The purpose of these control objects is to ensure that these entities:

- provide the Legal Department with the regulatory fields specifically concerning them, so that it can carry out its watch mission as effectively as possible, taking care to include cross-departmental legal issues (competition, insider trading, etc.);
- systematically call upon the Legal Department as early as possible to assist with cases comprising major legal risks and issues;
- ensure that the delegations they grant within their entity reflects their actual organisation and are updated as necessary;
- ensure that draft "major contracts" are prepared with the assistance of lawyers, and, once signed, sent to the Legal Department for inclusion in the Group's contract library;
- ensure that the legal proceedings initiated by the entities are periodically reviewed by the Legal Department;
- identify their needs, in terms of legal awareness initiatives in their specific fields, including cross-departmental needs, and notify the Legal Department of these needs.

Since 2010, the Legal Department has put in place a Competition Law Compliance Programme with three objectives: (i) raise awareness of competition rules through training, information and practice; (ii) develop expertise in competition laws (for preventive, defensive, or offensive use); and (iii) monitor compliance of competition rules.

Furthermore, in a decision of 22 January 2014, the Chairman and CEO launched an anti-corruption compliance programme applicable to all EDF group businesses, departments and controlled subsidiaries. A corruption prevention system will appear in the compliance policy to be deployed in 2016 by the Group Ethics and Compliance Department.

A system for controlling consultants (in the sense of "business intermediaries and introducers") is also in place within EDF, falling under the responsibility of the general secretariat. It includes in particular an analysis of the reputation and respectability of the Group's counterparties.

2.2.4.1 Regulations related to the Group's facilities

The Group's facilities are subject to specific regulations (see section 1.5.6.2 "Regulations applicable to EDF group facilities and activities"), whether under the Environment Code in France or in application of other national or European provisions.

In areas related to operations, each entity is responsible for defining and implementing adequate control procedures (see section 2.2.6 "Management of industrial and environmental risks").

With regard to the security of its facilities, EDF implements on all the sites concerned those measures prescribed by authorities for their protection.

2.2.4.2 Other regulations

Controls are also carried out with regard to the implementation of social security and labour regulations.

Since January 2014, the Group health and safety policy has defined a shared coherent framework reflecting the policies of the various Group subsidiaries along with their action plan. This Group policy applies to all the companies controlled by the EDF Group in all countries in which EDF does business, and concerns both its employees and those of its subcontractors working in its facilities and premises. It provides for the establishment of an annual health and safety review within EDF's Executive Committee.

As part of this policy, EDF has undertaken to halve the occupational incident rate for its employees between 2013 and 2017.

2.2.5 INTERNAL CONTROL PROCEDURES RELATING TO APPLICATION OF THE INSTRUCTIONS AND GUIDELINES SET BY EXECUTIVE MANAGEMENT

In connection with the deployment of the internal control system within the Group, implementation of the major decisions and policies is monitored by ensuring that they are incorporated into the internal control manual, and audits may be carried out under the Group audit programme in order to verify that these decisions and policies have been properly implemented and that the objectives set within this framework have been met.

2.2.6 MANAGEMENT OF INDUSTRIAL AND ENVIRONMENTAL RISKS

2.2.6.1 Management of nuclear safety risk

The risk factors associated with nuclear safety are described in section 2.1.3 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 Group's nuclear safety policy approved on 20 January 2012 by the Chairman and Chief Executive Officer lays out the major nuclear safety principles. The Nuclear Safety Council chaired by the Chairman of the EDF group meets several times a year, discusses the Group's safety issues and reviews in February the annual "Nuclear safety, radiation protection and security" report.

Meetings to share experience are regularly organised between the operators of both countries. Furthermore, the General Inspector for Nuclear Safety and Radiation Protection, who reports directly to EDF's Chairman and CEO, ensures, on the Chairman's behalf, that the safety and radioprotection concerns are properly taken into account by the operators and issues a report every year thereon which is made public.

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 both in France and the United Kingdom, 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 ongoing, 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.

Applicable nuclear industry regulations are specific to each country in which the facilities are located and external controls are organised by local authorities (French Nuclear Safety Authority (ASN) in France, Office for Nuclear Regulation (ONR) in the United Kingdom).

The EDF Group also submits its safety approach to the independent external scrutiny of peers which enables it to benefit from feedback from international experience.

WANO (World Organisation of Nuclear Operators) schedules international peer reviews for operators throughout the world. When requested by operators, these reviews allow experienced professionals to concretely observe working practices on the ground. It is thus possible to make comparisons with international best practices in all areas of the operation of nuclear power plants. Following the review, the Unit Director agrees on an action plan developed with the WANO team. Two years after the review, a team of ten WANO experts will assess the effectiveness of the action plan implemented by the site. This follow-up enables the site to enhance its actions in any potential areas of weaknesses with the help of international experts who, when requested by the site, will also carry out technical support missions. These measures directly expose the operators within the Group to international practices by participating in missions in other countries.

The International Atomic Energy Agency also organises safety reviews called OSART (Operational Review Safety Team) which are made at the request of member States; their purpose is to make recommendations and disseminate best practices.

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 nuclear 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 operational quality and safety of the Group's French nuclear fleet are subject to multiple internal controls by the Nuclear Inspectorate, a service which reports directly to the Nuclear Generation Division, and the Audit Assessment Mission, which functionally reports to the Nuclear Engineering and New Projects Department Director, whose verification actions regularly assess the safety level of all the various entities responsible for operation and engineering. Moreover, the Audit unit conducts several audits in the nuclear field (engineering, fuel and operation) each year.

External controls are also carried out 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.

Site reviews were conducted in 2015 by WANO teams in Golfech, Penly and Cattenom, as well as follow-up reviews in Civaux, Fessenheim and Blayais. The first "Corporate" OSART review of EDF took place in 2014 and came to the conclusion that EDF was fully compliant with the standards set by the International Atomic Energy Agency. In 2015, a review of the Dampierre site was conducted by a OSART team.

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. In particular, it is worth noting the deployment throughout the Electricity Generation Nuclear Power Plants of the new post-Fukushima crisis management reference materials, incorporating the Nuclear Rapid Action Force, which is capable, as of 1 January 2016, of intervening on 6 units on the same site in less than 24 hours to deliver and set up additional human and material resources to ensure the cooling of the reactors and pools (see section 1.4.1.1.3 "Environment, nuclear safety, radiation protection").

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 1.4.1.1.5 "Preparing the future of nuclear plants 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. The ASN since then issued, in 2012 and in 2014, recommendations designed to reinforce the safety of the facilities. The corresponding works were implemented by EDF in its *Grand Carénage* programme.

Local information commissions (CLI) are exchange and information with local stakeholders, near nuclear facilities, whose roles have been reinforced par the law in 2015 (see section 1.5.6.2.2 "Special regulations applicable to basic nuclear facilities").

The framework applicable to European operators in terms of liability and related insurance is described in section 2.2.7.6 ("Specific insurance for nuclear facility operations").

In the United Kingdom

Safety is the foremost priority for EDF Energy. 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 therefore based on strict standards and 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.

In 2012, EDF was subject to a "Corporate" evaluation by WANO. In 2015, a follow-up review was conducted which ascertained the progress made and the efficiency of the processes implemented. An OSART review also took place on the site of Sizewall B in October 2015.

Pursuant to the Nuclear Installations Act, the Ionising Radiation Regulations of 1999, and the Radiation Emergency Preparedness and Public Information Regulation (REPPIR), 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 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. D^r 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. In four years, EDF Energy has completed the programme of works necessary to improve its facilities' resistance to extreme external hazards (see section 1.4.5.1.2.1 "Nuclear Generation").

2.2.6.2 Management of hydropower safety risk

Risk factors relating to hydropower safety are described in section 2.1.2 ("Risks associated with the Group's activities").

The Group operates hydroelectric facilities under concession agreements or administrative licenses. It is responsible for their safety, which, as the operator, is its major and ongoing concern.

There are three strategic activities in connection with the management of hydropower safety are reiterated in section 1.4.1.4.1.2 ("Hydropower safety"):

- controlling risks related to operations: changes in the level bodies of water or flow of waterways downstream of the structures;
- management of works during flood periods to ensure the security of the facilities and communities;
- prevention of the major risk of a hydropower structure rupturing through surveillance and maintenance of the structures.

In order to further improve the management of these risks, in 1995, EDF initiated quality assurance procedures for these three activities in metropolitan France and in the French overseas departments, which resulted in each of the hydropower operating groups obtaining ISO 9001 certification at the end of 2003. These certifications are the basis of a continuous progress programme 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. All actions taken in respect of safety as well as performance help improve the protection of individuals and property (see sections 1.4.1.4.1.2 "Hydropower safety" and 1.4.1.4.1.3 "Hydropower generation fleet performance").

The Inspector General for Hydraulic Safety of the EDF Group, directly in contact with the CEO and Chairman, ensures on behalf of the Chairman that the safety concerns are adequately taken into account by the operators and issued a reports thereon every year.

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 Article R. 741-18 of the French Code of Homeland Security (*Code de la sécurité intérieure*) (see also section 1.5.6.2.4 "Regulations applicable to hydropower facilities").

As such, EDF has taken out general civil liability insurance policies to cover these risks (see section 2.2.7.3 "Civil liability insurance (not including nuclear civil liability)").

2.2.6.3 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 2.1.2 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, the information campaign "Under aerial power lines, beware – keep your distance" (sous les lignes, prudence, restons à distance) is ongoing. 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.

2.2.6.4 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.

They are accordingly subject to specific regulations (see section 1.5.6.2 "Regulations applicable to EDF group facilities and activities").

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 2.1.2 ("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 (EMS) 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 3.2.2.1.1 "Environmental management system (EMS)"). 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 2.2.7.3 "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 May 2015, the Group obtained a new ISO 14001 certificate that now incorporates Dalkia (see section 3.2.2.1.1 "Environmental management system (EMS)").

2.2.7 **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.

2.2.7.1 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 risks ¹.

Its duties are to:

- continuously analyse cover for the EDF group's risks in conjunction with the Group Risk 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;

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

- 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 Department: EDF Assurances and the Group's captive insurance companies (see section 2.2.7.2. "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 new Group insurance policy was approved in October 2012 by the Group Executive Director in charge of the Group Finance Department. 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

Since 2004, the Audit Committee is presented with an annual update on the costs of covering EDF's risks through insurance or by transferring risks to the financial markets.

Since 2011, a Strategic Insurance Policy Committee (COSA) chaired by the Group Executive Director, Finance provides an opportunity for the business lines and Finance to reflect on changes to and procedures for implementing the insurance policy, in particular the main characteristics of insurable risks hedging programmes.

Information exchanges between the Group Risk Division (see section 2.2.2.1 "Risk mapping process") 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, in order to, firstly, harmonise risk cover and rationalise its management and, secondly, control the corresponding insurance costs. The French Energy Code has gradually caused RTE to transfer to the insurance market the covers provided under the EDF group's insurance programmes. RTE completely withdrew from the EDF Group insurance programmes as at 31 March 2015.

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

2.2.7.2 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 Insurance Company 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), fossil fuel-fired 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.

2.2.7.3 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, fossil fuel-fired 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.

2.2.7.4 Civil liability insurance for corporate officers and directors

EDF has concluded a 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.

2.2.7.5 **Damage insurance** (not including nuclear assets)

2.2.7.5.1 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 \in 25 million.

This programme provides cover for operating losses for most subsidiaries in the event of property damage, but not for EDF, which does not benefit from this cover. The actions and measures taken to prevent industrial and environmental risks and limit their impact are described in section 2.2.6 ("Management of industrial and environmental risks").

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

2.2.7.5.2 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.

2.2.7.5.3 **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 would pay parametric-based compensation tied to a wind-speed index. This cover was terminated early on 15 September 2015. Temporary cover up to 30 April 2016 of €150 million, based on the same index, was signed on 25 September 2015 with Swiss Re.

Moreover, a policy ending on 27 December 2015 was signed on 16 December 2011 with Swiss Re with a total capacity of coverage of \leq 40 million, with provision for one-time reinstatement. Temporary cover up to 30 April 2016 of \leq 40 million, based on the same index, was signed on 14 December 2015 with Swiss Re.

2.2.7.6 Specific insurance for nuclear facility operations

2.2.7.6.1 Civil liability of nuclear facility operators

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 1.5.6.2.2 "Special 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 (AGCS) and European Liability Insurance for the Nuclear Industry (ELINI), a mutual insurance association, in accordance with the liability limits set by regulations for accidents.

For onsite accidents, total cover is €91.5 million per nuclear accident until 17 February 2016. In accordance with the law, these policies do not include any excess. Océane Re, a Group captive reinsurance company, shares this risk through reinsurance agreements entered into with Allianz and ELINI.

EDF Energy operates nuclear plants in the United Kingdom. In the UK, the operator's nuclear civil liability scheme 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, a Group's captive insurance company. Océane Re contributes to the cover for this risk through the reinsurance policy it has issued to Wagram Insurance Company Ltd.

New provisions following regulatory changes

Protocols amending the Paris and Brussels Conventions were signed on 12 February 2004, but are still not in force.

In France, the Act on Energy Transition for Green Growth was enacted on 17 August 2015.

It amends the provisions of Articles L.597-28 and L.597-32 of the French Environment Code and in particular liability limits for nuclear operators are, as of 18 February 2016, respectively \in 700 million for nuclear facilities (\notin 70 million for reduced-risk facilities) and \notin 80 million for risks during transport.

As of 18 February 2016, operators are required to be in possession of the financial cover covering the new liability amounts.

It is in this context that EDF published a contract notice on 10 August 2015 entitled "EDF SA Nuclear Civil Liability Insurance Programme" designed to obtain and set up the insurance coverage in order to cover its nuclear civil liability and manage the associated claims, as soon as the provisions of the Act on Energy Transition come into effect. The Group approved the sharing of cover between the nuclear insurance market and the Group's captive insurance companies with the aim of bringing these policies into line with the Paris Convention as well as controlling the financial impact generated by the new legal requirements. It has set up a distribution along these lines with EDF's captive insurance companies, AXA (reinsured by ASSURATOME the French nuclear pool), and ELINI (nuclear mutual insurance association).

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 \notin 700 million and gradually increased over a five-year period to a ceiling of \notin 1.2 billion.

Before ratifying the 2004 protocol, the United Kingdom seeks clarification from the European Commission on the compatibility of its intervention with EU rules on state aid; other countries share this view.

For more information on the laws governing nuclear power plant operators' civil liability, see section 1.5.6.2.2 ("Special regulations applicable to basic nuclear facilities").

2.2.7.6.2 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 (unless stipulated otherwise) and such liability was limited to \notin 22.9 million until 17 February 2016. This amount is increased to \notin 80 million with an unchanged scope of damages as of 18 February 2016 (for more information see section 2.2.7.6.1 "Civil liability of nuclear facility operators" and section 1.5.6.2.2 "Special regulations applicable to basic nuclear installations"), and then will be extended to a wider scope of damages admissible for compensation when the amended Paris Convention comes into force.

2.2.7.6.3 Damage insurance for nuclear facilities

In addition to the cover obtained through EDF's membership in the OlL 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, AXA and Allianz (reinsured by Assuratome, the French nuclear pool) and EMANI (nuclear mutual insurance association) (see Section 2.2.7.2 "Use of captive insurance companies and mutual insurance funds" and section 2.2.7.7. "Premium") for a total capacity of €1,760 million, over and above an amount of €240 million. The Group programme covering power plants in France and the UK was renewed on 1 April 2015 for a period of three years up to 30 March 2018.

Furthermore, in connection with the activities of CENG (Constellation Energy Nuclear Group) in the United States, EDF Inc. is a member of NEIL (Nuclear Electric Insurance Limited, a nuclear mutual insurance association).

2.2.7.7 **Premiums**

The total amount of insurance premiums for Group programmes for all types of cover amounts to \leq 154.3 million in 2015 compared with \leq 146 million in 2014, excluding life and health insurance, including \leq 65.5 million supported by EDF and \leq 17.5 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.

2.3 Dependency factors

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

With regard to suppliers, EDF and ERDF use 26,121 suppliers in 2015 (compared with 26,349 in 2014 and 24,620 in 2013). The top five suppliers of EDF and ERDF account for 10.8% (15% in 2014 and 12.6% in 2013) of total EDF purchases (not including fuel purchases) and ERDF purchases, and the top ten suppliers account for 15.1% (20.8% in 2014 and 17.6% in 2013).

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 in respect of specific and secure means of transmission.

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 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. In July 2015, the two groups signed a Memorandum of Understanding on the future of the AREVA NP activities, which also contained a comprehensive strategic and industrial component, so as to strengthen their cooperation (see section 1.4.1.2.3.2 "Memorandum of Understanding with AREVA").

2.3.1 NUCLEAR FUEL CYCLE

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 1.4.1.1.4 "Nuclear fuel cycle and related issues" – "Front end"), EDF relies to a large but decreasing extent on the AREVA group, which accounted for approximately 44% of EDF's purchases in 2015 (50% in 2014):

- 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 1.4.1.1.4 "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 1.4.1.1.4 "Nuclear fuel cycle and related issues" – "The back-end cycle"), 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 and included in successive application contracts (see note 29.1.1 of the notes to the consolidated financial statement for the fiscal year ended 31 December 2015). The contract for 2016-2023 was signed in February 2016 (see section 1.4.1.1.4 "Nuclear fuel cycle and related issues" "Front end").
- Recycling, which covers the manufacture of MOX fuel, is carried out, for its part, in the MELOX plant.

2.3.2 POWER PLANT DEVELOPMENT AND MAINTENANCE

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. The production of the steam generators covered under the first contract is underway. With regard to the second contract, the first facilities for the second segment of the Paluel power plant was successfully completed during 2015. Moreover, a diversification programme 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 fossil fuel-fired generation facilities.

EDF does not consider itself to be dependent on the Alstom group, which is subject to competition with regard to most of its activities. EDF has nonetheless sought to maintain its interests in the nuclear field following the purchase by General Electric of Alstom's Energy division. The main challenge for EDF is twofold:

- ensure, at an acceptable cost to the end of each unit's lifespan, the industrial capacity necessary to maintain under operational conditions and extend the lifespan of the nuclear generation fleet operated by EDF in France and the United Kingdom including the Flamanville 3 and Hinckley Point C EPR reactors;
- ensure the availability for future EDF nuclear projects of turbine offers under excellent technical and economic conditions.

Preservation of these strategic interests relies on framework agreements and the creation of a joint GEAST subsidiary dedicated to nuclear power plant machine rooms activities.

2.4 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.

2.4.1 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 which covered 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 both 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 in order to check whether the State had acted as an informed market economy investor under the tests established by the European courts. On 22 July 2015, the European Commission issued a new decision ruling that the tax treatment of the provisions created between 1987 and 1996 for the renewal of the RAG facilities constituted incompatible State aid, considering that the tax exemption granted to EDF could not be treated as an investment for economic reasons. Following this decision, the State ordered EDF to repay the amount of the aid granted plus interest in accordance with the terms decided by the European Commission, corresponding to a total amount of ≤ 1.38 billion.

EDF has formally acknowledged this decision and repaid the sums demanded. However, the Group disputes the existence of unlawful State aid and on 22 December 2015, it initiated an action for annulment before the European Union General Court.

Competitive bidding for hydroelectric concessions in France

The Directorate-General for Competition of the European Commission (EC) has issued proceedings against the French State with respect to hydroelectric concessions in France, under Article 106, Chapter 1 of the Treaty on the Functioning of the European Union (TFEU) combined with Article 102 of the same treaty.

Within the framework of these proceedings, the EC sent the French State a letter of formal notice on 22 October 2015, stating that it considers that the French State has infringed the above-mentioned provisions by awarding the majority of the hydroelectric concessions in France to EDF and renewing them with EDF as these steps strengthen EDF's dominant position in the French market for the retail supply of electricity.

The State had a period of two months to reply to the formal notice, which marked a new adversarial exchange between the State and the EC, which does not affect the final decision that will be adopted by the European Commission. As the main interested third-party, EDF received a copy of this formal notice and on 4 January 2016, it sent the European Commission its comments in reply to the formal notice, strongly contesting the EC's analysis and the facts on which this analysis was based.

Asbestos

In the past, EDF has used products containing asbestos. Thus, certain employees, in particular those working in fossil-fired 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 end of December 2015, EDF and ERDF have been party to 634 inexcusable fault actions in France in relation to the alleged exposure of its employees to asbestos in their workplace. Establishing a liability in such an action could lead to the payment of additional compensation by the employer to the 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 CNIEG (Pension fund for Electricity and Gas Industry companies). A \in 30 million provision was created in EDF's financial statements in 2008 to cover the financial risk.

As at the end of December 2015, the cumulative amount of the final judgments against EDF, in relation to litigations relating to the *"faute inexcusable"* of the employer amounted to approximately €26.6 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 subsidiaries operating in the photovoltaic sector. EDF had lodged an appeal against this decision before the Court of Appeal in Paris.

On 21 May 2015, the Court of Appeal in Paris partially reversed the ADLC's decision and set aside the fine relating to the use of EDF's trademark and logo for the 2009-2010 period along with the increased fine for repeated breaches. Ultimately, the amount of the initial fine has been reduced by approximately 42%. Accordingly, it has been reduced from €13.5 million to €7.9 million.

On 16 June 2015, ADLC lodged an appeal with the Court of Cassation. EDF also lodged an appeal with the same court on 19 June 2015. The Court of Cassation's judgment should be handed down late 2016.

Litigation by photovoltaic operators for compensation

On 26 July 2013, the liquidator of Evasol, a company operating in the energysaving 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 7 April 2015, the Commercial Court in Lyon struck the case of the list, as Evasol's adviser had ceased his professional activity.

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 16 December 2014, the Court ordered a stay of proceedings pending the judgment to be issued by the Court of Appeal in Paris on EDF's appeal against the above-mentioned ADLC decision. The Court of Appeal handed down its judgment on 21 May 2015. To date, the case has not been re-entered on the case list.

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 damages of €15 million.

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 and retroactively suspended EDF's obligation to purchase photovoltaic electricity and reduced the purchase prices for producers that had not finalised their connection requests by 1 December 2010.

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.

On 21 June 2012, SUN'R filed a complaint against EDF and ERDF, along with an application for protective measures (*mesures conservatoires*), with France's ADLC. SUN'R accused 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.

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 alleged facts, 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 \in 1 million for EDF and \in 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.

On 30 April 2015, SUN'R issued proceedings against ERDF and EDF SA before the Commercial Court in Paris seeking compensation for the loss allegedly caused to it by the delays in the procedure for the connection of its solar energy plant projects to the electricity distribution network. It has asked the Court to stay the proceedings and claims, pending ADLC's decision on the merits of the case, a provisional amount of €10 million to be applied against its loss.

On 24 November 2015, Sun West, Azimut 56 and JB Solar issued proceedings against ERDF and EDF SA with the Commercial Court in Paris on the same grounds. They are currently claiming almost €4 million to compensate their alleged loss but have asked the Court to stay the proceedings pending ADLC's decision on the merits of the case.

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 some first instance courts dismissed 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.

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 has submitted its comments on the decision to the European Commission, following its publication in the Official Journal of the European Union on 3 October 2014.

Capacity mechanism investigation

On 13 November 2015, the European Commission opened an in-depth investigation into the implementation of the French capacity mechanism in order to decide whether it complies with EU State aid rules. As an interested third party, EDF has submitted its comments on this decision to the European Commission, following its publication in the Official Journal of the European Union on 5 February 2016.

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 Company's provisions 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 Électricité de Strasbourg subsidiaries by the Administrative Court in Montreuil, which were upheld in July 2015 by the Administrative Court of Appeal in Versailles. The tax authorities have lodged an appeal against this decision with the French Council of State. 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, constituting a financial risk in relation to the payment of corporate income tax of approximately \in 660 million at the end of 2015.

In addition, the Company received an adjustment notice from the tax 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 also contests this adjustment claim.

At the end of 2015, the tax authorities gave the Company notice of the above-mentioned recurring adjustments and also challenged the deductibility of certain long-term provisions, for the 2012 and 2013 financial years.

The Company considers it has a good chance of being successful in this litigation and no specific provision has been recorded in its accounts to cover these claims.

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-affiliated 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 six 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).

In a judgment handed down on 26 January 2016 by the criminal division of the Court of Cassation, the court dismissed the appeal lodged by the employee and Mr Yannick Jadot, civil party, against the judgment issued by the Court of Appeal in Versailles on 6 February 2013.

The Court of Cassation held that the challenges made against the grounds for the Court of Appeal's finding that no EDF representative was involved in the commission of the offence cannot be upheld by the Court of Cassation as they fall within the unfettered discretion of the lower courts.

This decision signals the end of this dispute and renders the judgment dismissing the civil parties' claims against EDF final and non-appealable.

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 based 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 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 judgment issued on 17 November 2008 on the ground that the prices it fixed constituted 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. The order dated 17 June 2014 was challenged before the Council of State, which upheld it in a judgment dated 9 March 2016, considering that the notification of this order to the European Commission was not required and setting aside the argument according to which the compensation granted to producers of wind-generated electricity for the capital locked-in would be excessively high.

In an opinion issued in the Praxair case on 22 July 2015, the Council of State considered that the income from the CSPE does not have a direct impact on the amount of the aid granted to producers using renewable energy. It therefore inferred that the CSPE cannot be treated as an integral part of the mechanism used to support the wind-power sector that was held to be unlawful in the Vent de Colère judgment issued on 28 May 2014 or any other mechanism used to support renewable energy. Having regard for the Council of State's notice, the Administrative Court of Appeal in Paris, in a ruling dated 23 February 2016, set aside the claim for restitution of the CSPE initiated by the Praxair company. In general, any such claims seeking restitution of the CSPE on the same grounds should be set aside.

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 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, which resumed 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"*. Some 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. As the second building permit was subsequently withdrawn by the Prefect on 11 September 2015, the Administrative Court of Appeal held that there was no need to rule on this matter on 7 January 2016.

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.

The arbitration proceedings resumed in 2015 and the hearings were held at the beginning of 2016.

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, followed by the submission of the State's statement of case on 3 April 2015. In a decision issued on 22 February 2016, the Council of State dismissed the applications and ordered the applicants to pay €3,000 to EDF.

SHEM

In order to ensure water supplies for the *Canal des Nestes*, concessionaires and operators of facilities located upstream (EDF and SHEM) are bound by regulatory obligations requiring them to release certain volumes of water each year ("agricultural releases"). Under an "agricultural releases agreement" dated 1 December 2003, EDF and SHEM agreed the technical and financial arrangements for the releases to be carried out by SHEM, for EDF and against payment.

From October 2010 onwards, as the allocation of the facilities between EDF and SHEM had been modified by the State in SHEM's favour following the renewal of hydroelectricity concessions, the State modified the allocation of the facilities currently affected by agricultural release obligations. As none of the facilities currently operated by EDF are affected by these obligations, EDF felt that the above-mentioned agreement dated 1 December 2003 had ceased to serve any purpose and therefore it rejected SHEM invoices for a total amount of €12 million.

In an application dated 29 March 2012, SHEM issued proceedings before the Administrative Court in Paris seeking a decision ordering EDF to perform the agreement dated 1 December 2003 and pay the unpaid invoices issued since the end of 2010. In a judgment issued on 31 October 2013, the said court ruled that it lacked jurisdiction to hear the dispute and that the dispute should be heard by the civil courts. This decision was upheld in a judgment issued by the Administrative Court of Appeal in Paris on 10 November 2015. The SHEM challenged this decision before the Council of State on 11 January 2016.

2.4.2 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. On 3 July 2015, the reporting judge (rapporteur public) upheld the sum of €129 million and dismissed SNCF's other claims. In a judgment handed down on 10 September 2015, the Council of State followed the reporting judge's findings and ordered the payment of €129 million corresponding to the price of the facilities sold.

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, which was upheld in July 2015 by the Administrative Court of Appeal in Versailles. The authorities lodged an appeal against this judgment with the Council of State.

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. ERDF received an adjustment proposal on the same grounds for the 2012 and 2013 financial years. This adjustment is also challenged by ERDF.

Photovoltaic producers litigation

In 2010, announcements of cuts in electricity purchase prices led to a considerable surge in the number of connection requests received by ERDF units, primarily in August 2010 (due to the fact that at that time, the date on which a full request was filed determined the applicable prices). Three months later, the moratorium decree issued on 9 December 2010 suspended the conclusion of new contracts for a period of three months and stated that if the financial and technical proposal for a request had not been approved before 2 December 2010, a new connection request would need to be submitted at the end of this three-month period.

At the end of this moratorium, new electricity purchase provisions were introduced. Within this framework, a system of invitations to tender was developed and, moreover, a new order set the new mandatory purchase price for photovoltaic electricity. This order, issued on 4 March 2011, led to a significant drop in photovoltaic electricity purchase prices.

The judgment handed down by the Council of State on 16 November 2011 dismissing the various appeals lodged against the moratorium decree issued in December 2010 led to a considerable surge in the number of proceedings issued against ERDF at the end of 2011, which continued in 2012, 2013 and 2014. These proceedings were mainly issued by producers forced to abandon their projects as the operating conditions are less attractive than before due to the new electricity purchase prices. These producers believe that this situation was caused by ERDF, on the ground that ERDF failed to issue technical and financial proposals relating to connection in a timely manner, which would have allowed them to enjoy the more attractive electricity purchase conditions. The judgments issued at first instance, and by the Court of Appeal, contain diverging reasons and findings, with some courts dismissing all of the claims filed by the claimants while others award them compensation, but on the whole the compensation awarded is lower than requested.

49 new cases were brought in 2015. Moreover, in two decisions issued on 9 June 2015, the Court of Cassation ruled, in particular, that ERDF was liable and confirmed that its liability was covered by its insurer.

In December 2015, the Court of Appeal in Versailles decided to submit a reference for a preliminary ruling to the Court of Justice of the European Union on the compliance of the 2006 and 2010 pricing orders with European State aid laws. Since this judgment, ERDF or its insurer, as the case may be, routinely ask for a stay of execution.

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 3*bis* 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 3*ter* 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 Énergie lodged an appeal against this decision before the Council of State.

Regarding this new action against the prices for the use of the distribution network, Direct Énergie requests the cancellation of the CRE's decision on the following grounds: (i) the terms of remuneration of the Regulatory Asset Base, which apply in addition to the remuneration of regulatory own funds/equity, are not justified, leading to an overvaluation of prices; (ii) the mechanism does not encourage customers to reduce their electricity use during peak periods; (iii) impropriety in the decision-making process (inadequate consultation with market players).

The CRE presented its arguments in a brief in November 2015, in which it defends the pricing level applied to the BAR and underlines the fact that the method applied complies with the applicable provisions.

A decision could be issued before the end of the first semester of 2016.

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.

Direct Énergie

On 31 December 2015, the company Direct Energy filed a suit against ERDF before the Commercial Court of Paris regarding the compensation for the management of customers who entered into a single contract with suppliers.

EDF International

Tax disputes

EDF International's tax audit relating to the 2008 to 2011 financial years led to correction proposals, received 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, in respect of which it considers it has a good chance of being successful in this litigation. In 2015, the France-USA amicable settlement procedure initiated by EDF International regarding the valuation of the CEG shares came to an end and resulted in a withdrawal of the tax adjustment notified to the Company.

Moreover, the authorities renewed their adjustment relating to the valuation of the convertible bond for the 2012 and 2013 financial years.

ICC Arbitration/SOROOF

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.

In October 2015, the parties signed a settlement agreement bringing the arbitration proceedings to an end.

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 a 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. In a judgment issued on 19 March 2015, the Court of Appeal in Aix-en-Provence set aside this judgment and dismissed all of the liquidator's claims filed, in particular, against the EDF ENR group. The Court found that there had not been any de facto management or mismanagement and held, in substance, that the 2008 financial crisis and the main shareholder's default, both unforeseeable events, combined with the lack of a credible partner to replace the majority shareholder for the continued implementation of the project, had caused the project to fail.

The liquidator has lodged an appeal with the Court of Cassation challenging the appeal decision issued on 19 March 2015.

LEGAL PROCEEDINGS AND ARBITRATION

RISK FACTORS AND CONTROL FRAMEWORK

SOCODEI

The low-activity waste processing and packaging centre (Centraco) 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. 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.

Pursuant to its decision adopted on 14 January 2014 setting new technical requirements to be met before resuming operations, ASN authorised the restarting of the smelters in a decision issued on 2 April 2015. Following a summons served on its representative to appear before the examining magistrate on 16 September 2015, SOCODEI was placed under investigation for homicide.

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.

At a preliminary hearing before the Court of Appeal in Rome on 15 June 2015, the case was listed for trial on 21 March 2016. At the latter, the judge set the deadlines for the filing of briefs for 20 May and 9 June.

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, 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.

Following the hearing of 15 January 2015, the Council of State definitively set aside the decision of the deputy special commissioner in a judgment handed down on 5 March 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. 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.

At the end of the proceedings before the Assize Court on 18 December 2015, Aussimont's former managers and Montedison were acquitted of the water poisoning charges. Accordingly, Edison has not been held civilly liable, in any manner whatsoever. The judgment containing the reasons for the decision is pending publication.

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 acquisition of control 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.

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 issued civil proceedings before the Court in Milan seeking damages from EDF, A2A and Edison on the basis of a similar fact-based line of reasoning as that used for the administrative proceedings. The proceedings were served on EDF on 27 March 2015.

In this case, the plaintiff claims that the negotiations between EDF and A2A that led to the takeover of Edison and Edipower were not conducted in line with Edison's sound management principle and harmed the interests of its minority shareholders. The plaintiff alleges that it was forced to sell its shares under the mandatory takeover bid launched following the acquisition of control of Edison as otherwise its holding in approximately 10% of Edison's share capital would have lost all liquidity. For the record, the bid price was €0.89 per common share. The plaintiff alleges a loss caused by a drop in value of approximately €294 million in the Edison securities recorded on its balance sheet as at 31 December 2011. However, it has not given an exact figure for the damages it claims and asks the court to appoint a court expert to assess the exact amount of its loss.

On 26 January 2016, a procedural hearing was held before the civil court in Milan. The court decided that replies must be filed by 29 March and 18 April.

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.

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 1" 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.

LEGAL PROCEEDINGS AND ARBITRATION

RISK FACTORS AND CONTROL FRAMEWORK

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. EDF International filed the following with the Permanent Court of Arbitration of The Hague (i) an application for compensation for the loss of the PPAs, assessing the loss it has sustained at approximately €290 million by factoring in the effects of the "heating" decree which now limits BE Zrt's total profits, along with (ii) an application for reimbursement of the stranded costs arising from the termination of the PPAs, assessed at approximately €300 million. The European Commission was involved in these proceedings as an *amicus curiae*.

The Court of Arbitration 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 Court of Arbitration 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.

On 20 January 2015, Hungary filed an application with the Federal Swiss Court challenging the award.

In a judgment issued on 6 October 2015, the Federal Swiss Court dismissed Hungary's entire challenge and ordered it to pay EDF International compensation of 200,000 Swiss francs (€179,500) as costs. Hungary has paid this sum. The award is a final award and no further appeals may be lodged.

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 Bade-Wurtemberg 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 Bade-Wurtemberg State at ≤ 834 million. In September 2012, Neckarpi confirmed the reduction of its main claim to this amount. Alternatively, Neckarpi requests the cancellation of the sale of the EDF group's shareholding in EnBW.

EDF filed a counterclaim for damages for the losses incurred as a result of the proceedings, which EDF considers to be unfounded and unjustified.

The arbitration proceedings are nearing their end. The Court of Arbitration brought the trial stage to an end in June 2015. The arbitration award should be issued before the first semester 2016.

^{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.

2.4.3 LITIGATION HAVING ARISEN AFTER THE CLOSING OF THE 2015 FINANCIAL YEAR

Quadlogic Controls Corporation

ERDF received on 24 February 2016 a subpoena before the Paris Tribunal de Grande Instance for the US company Quadlogic Controls Corporation ("QCC") on a potential counterfeit of a European patent hold by QCC. ERDF formally contests the innovation activity of QCC and the supposed counterfeit. The procedure is underway.

Bugey 5

Following the third safety review of the reactor number 5 of the Bugey site to continue its exploitation for a further ten years, the ASN adopted on 23 December 2014 a decision defining complementary requirements. In March 2016, the Republic, the Canton and the city of Genève introduced before the Council of State a motion requesting the cancelation of the aforementioned decision of the ASN and the implicit decision by which the Minister of Environment, Energy and Sea authorizes the pursuit of the exploitation for a further ten years of reactor number 5 of Bugey, according to the applicants.


First test on the tidal turbine in Douarnenez ©EDF - Philippe Dureuil

Environmental and societal information – Human Resources

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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.

3.1 Corporate responsibility commitments

3.1.1 MATERIALITY MATRIX: PRIORITISING ISSUES

In 2014, EDF carried out a Materiality Analysis ¹ 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, Brazil) and external stakeholders (members 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.

The Materiality Analysis was presented to the Group Executive Committee as part of the review of the new elements to be included in the Registration Document.

Key results



Legend: • Blue: environmental issues • Light blue: labour issues • Black: social issues • Grey: cross-interest issues

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.

ENVIRONMENTAL AND SOCIETAL INFORMATION – HUMAN RESOURCES CORPORATE RESPONSIBILITY COMMITMENTS

The most important issues are plant safety, a low-carbon energy mix (nuclear and renewable energies), the development of new renewable energies, the control of energy demand, and general health and safety. In total, 19 highpriority issues are identified in the dark green zone of the matrix. They are all examined in more detail (policy, objectives, reporting and management) as part of the corporate responsibility commitments and in this Registration Document (see the GRI – Global Reporting Initiative – correlation table available on the EDF website).

3.1.2 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, as laid down in its Code of Ethics, the Group has implemented a corporate responsibility approach (CR). This approach became a reality in 2013, through the EDF group's corporate responsibility commitments which were drawn up in collaboration with numerous internal and external stakeholders and approved by the Executive Committee. Various policies at Group level contribute to this approach. These commitments are currently under review, in line with the CAP 2030 plan. In their 2015 version, the aim of these commitments is 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 producer, responsible employer, responsible partner.

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 Uni	2015	2014
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 CO2 emissions (for electricity and heat generation) within the 150g/kWh limit ⁽¹⁾ g/kWh	95	102
Invest in renewable energies and increase their competitiveness		
Group's installed capacity for electricity generation using renewable energies		
Hydropower MW4	21,698	21,889
Wind power MW4	6,398	5,340
Solar power MW	592	536
Other renewable energies MW	432	500
Make a significant contribution to improving the energy efficiency of households		
Number of households supported by Group companies ⁽²⁾ in terms of energy efficiency		
EDF Numbe	366,091	394,300
EDF Energy Numbe	33,622	51,200
Électricité de Strasbourg Numbe	3,596	2,780

(1) Direct CO_2 emissions excluding life cycle analysis (LCA) of generation plants and fuel.

(2) Companies in the Group consolidation scope selling energy to B2C consumers.

Responsible employer

On the strength of its 159,112 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	2015	2014
Reduce workplace accidents among employees and sub-contractors			
Halve, over 5 years, the frequency rate of accidents involving Group employees that result in lost-time (target for 2017: 2.2) $^{(1)}$		3.2	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	%	87	85
Pool of future top executives to be 30% female in 2015 $^{\scriptscriptstyle(2)}$	%	26	24
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 in 2015 ⁽³⁾	Number	16	13
13 companies to obtain the United Nations' Global Compact at advanced level in 2017	Number	3	2

(1) The number of 3.2 integrates the results of all the Group, including subsidiaries acquired during the year. At constant scope, frequency rate pursues in 2015 the decrease engaged since 2012 (from 4.4 to 2.9) and is in line with the goal "between 2012 and 2017, EDF group aims to halve the frequency rate". Between 2012 and 2015, the decline is already a third.

(2) The 2 points growth between 2014 and 2015 was not enough to achieve the ambitious target of 30% by the end of 2015. The Group will continue to maintain the growth of its pool over the coming years.

(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	2015	2014
Promote transparency and dialogue on sensitive issues			
8 companies to set up a formal space for dialogue with stakeholders in 2015	Number	4	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	159,112	158,161
Indirect jobs ⁽²⁾ (in FTE)	Number	544,189	475,545
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	1,108,811	1,031,000
EDF Energy	Number	381,283	389,600
EDF Luminus	Number	31,850	31,240
EDF Démász	Number	2,463	2,600
Edison	Number	16,941	26,600
Électricité de Strasbourg		16,886	6,306
Preserve water resources in all activities			
Publication, from 2015, of the Group's "water footprint"	l/kWh	1.06 (4)	0.989 (4)

(1) Consolidated Group figures, calculated according to the IFRS rules applicable for each year.

(2) In 2015, 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, Dalkia and TIRU.

(3) Energy guidance advice, negotiated payment plans, grant of financial aid, etc.

(4) Whilst awaiting approved tools, EDF has published a partial footprint with an estimate of the consumption of evaporated water in litres per kWh of electricity generated by the Group's thermal, nuclear and gas power plants (see section 3.2.2.4.2 "Impact on water").



3.2 Environmental and societal information

3.2.1 MANAGING SUSTAINABLE DEVELOPMENT

3.2.1.1 Governance

Governance of sustainable development involves the following organisations, systems and management bodies:

- a Group Sustainable Development Department reporting to the Group Senior Executive Vice President, Innovation, Strategy and Planning who is also a member of the Executive Committee. The task of this department 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 monitor and report on those actions. Three high-priority issues involve the coordination of dialogue with stakeholders, support for sustainable development in projects and management of sustainable development within the Group;
- a Group Sustainable Development Committee that comprises the heads of sustainable development for Group subsidiaries and departments. While respecting the principles of governance 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 promoting the exchange of experiences and best practices among its entities. It met twice in 2015, specifically to discuss the option to implement integrated reporting, to debate the issues of adapting to climate change and to perform the environmental department review required for the Group's ISO 14001 certification;
- an environmental management system (EMS) that covers all entities (see section 3.2.2.1.1 "Environmental management system (EMS)"). In this context, the entities and companies have organised the management of their own sustainable development in accordance with their own operational activities. With regard to EDF's thermal generation, a sustainable development management committee comprised of the relevant business units is responsible for the coordination, brokerage and introduction of sustainable development within the business objectives. Similarly, subsidiaries such as Edison and Dalkia have put in place a sustainable development governance, at Executive Committee level, tailored to their own issues.

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".

3.2.1.2 Awareness and training in sustainable development for managers and employees

Staff training and awareness-raising on environmental issues are carried out in line with the Group's sustainable development policy as well as the ISO 14001 certification. They are performed using a variety of methods, from awareness raising measures to "catalogue" training. In the Group's departments and subsidiaries, the "environmental" component, and increasingly "sustainable development", are subject to processes and tools that allow for the identification of training requirements and for employee training to be tailored to the various business requirements. In France, to reinforce the inclusion of sustainable development in professional training plans, a chapter dedicated to sustainable development is now included in the "Guidance on Business Training" regulatory document.

Environmental training is incorporated within existing courses and developed in more detail during dedicated specific training sessions. Linked to the Group's EMS, this training aims to maintain and develop employees' ability to identify and control the impact of Group activities on the environment. Some are open to subcontractors, including waste management training and nuclear generation training for subcontractors which includes a specific environmental module.

In addition to these business-specific training sessions, a catalogue of "sustainable development training and awareness raising" offers crossdivisional training to staff of all EDF departments and subsidiaries. This includes training linked to the Group's EMS on themes such as human rights, responsible purchasing (for the most exposed employees – 279 purchasers in 2015), dialogue with stakeholders, waste prevention and management, contaminated soil, calculating the water footprint and biodiversity issues and regulations. Training session "how to develop and manage a project" raises awareness of how sustainable development should be considered by EDF entities' project managers; over one hundred project managers took part in this training in 2015. In addition, a training session on "Knowledge to those whose work is associated to local rooting. Over the past three years, more than 600 officers have undergone training from this dedicated catalogue.

As part of their action plans to limit waste production, a number of subsidiaries have improved their staff training on waste prevention and management (Fenice, Norte Fluminense and EDF Démász). Eco-driving training sessions are also being offered (1,510 hours in 2015 at ERDF) and form part of the business travel plans introduced to reduce CO, emissions.

Awareness raising measures take a number of forms within the Group. The intranet networks (sustainable development community, project management community), magazines, guides and themed information packs, customised for each company, all help to increase staff knowledge on environmental and sustainable development matters.

For the EDF group, the EMS and its ISO 14001 certification process have over the past decade contributed to the environmental element of sustainable development being integrated within the businesses. For the Group's companies, the certified EMS is an important asset and support in terms of regular and organised staff communication. EDF recently introduced an Environmental Management Board and environmentally themed groups including a training group which is in charge of coordinating cross-divisional awareness raising measures and training on sustainable development for EDF entities and subsidiaries.

EDF is working to raise employee awareness on energy control, with a view to encouraging best practices and an active contribution from staff in terms of keeping customers and the general public informed. In addition, as part of the inclusion of an employee profit-sharing criterion based on the reduction of greenhouse gas emissions in tertiary buildings, campaigns to raise awareness on energy control and eco-friendliness (videos, weekly quiz, etc.) have been organised by EDF's Commerce, Human Resources and Real Estate Departments.

As part of the CUBE 2020 (Contest for Better Use and Building Efficiency 2020), awareness training days have been offered to project managers. In its 5th edition this year and held as part of the European Week for Waste Reduction organised in France by ADEME, the "Waste" contest was extended to Group level. Its aim is now two-fold: to showcase work accomplished – using concrete examples of how waste can be reduced – and to promote best practices. This edition featured an information campaign on food waste which took place at the EDF generation divisions' head office.

EDF Trading has reinforced staff awareness on recycling tertiary waste through twice monthly information sessions, quarterly promotional meetings and "toolbox" meetings (training and e-learning). EDF Démász organised a waste collection operation as part of Earth Day. In Asia, information on eco-friendly actions is designed specifically for service providers.

In 2015 in France, the collection of "Biodiversity guides" grew with the addition of a new guide and a handbook on "Island electricity systems".

3.2.1.3 **R&D for sustainable development 1**

R&D activity contributes to the Group's attainment of mid- and long-term energy and climate goals required for the energy transition as well as to the development of new technologies in renewable energies and storage solutions, in particular:

- to address the intermittency of renewable energies;
- to incorporate digital and other new information technologies into our electricity systems and the world of interconnected objects;
- to enhance its range of energy services with new, digital solutions for all customers.

EDF also strives to protect natural resources and human health through the reduction of pollutant discharges to the air, water and soil, in line with the circular economy.

In France, more than 21% of EDF's R&D budget is dedicated to protecting the environment (see section 1.6.1 "R&D organisation and key figures").

The "Generation Environment" programme, which looks at the interactions between the generation fleet and the environment, marshalled more than €26 million in 2015 (€25 million in 2014), distributed as follows:



In 2015 the main areas of research in the field of sustainable development were as follows:

- adapting to climate change, the performance of a low-carbon generation fleet and energy efficiency (see section 3.2.3.6.1 "Contributing to energy access and the fight against energy poverty");
- the preservation of biodiversity (see section 3.2.2.6 "Preserving of biodiversity");

- renewable energies (see section 3.2.2.4.1 "Renewable energy in the EDF group");
- sustainable cities: the 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 3.2.2.3.3 "Helping customers consume less, more efficiently"); 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 non-dispatchable renewable energies, full-scale experiments on electricity storage systems for customers in Corsica and the overseas departments.

3.2.2 ENVIRONMENTAL INFORMATION

3.2.2.1 Control of environmental performance

3.2.2.1.1 Environmental management system (EMS)

The environmental management system (EMS) is organised, at Group level, in such a way as to coordinate all initiatives, objectives and indicators according to the environmental commitments of the Group's sustainable development policy, coordinated by a Group Sustainable Development Committee.

Since 2002, the EDF group has been ISO 14001 certified with a 2015 scope that represents 98% of its consolidated sales and those of its subsidiaries and equity interests. In May 2015, the Group's ISO 14001 certification was renewed by the independent certification body Afnor Certification and a new certificate was issued to include Dalkia. External auditors have highlighted the significant contribution of management and employees to the initiative, which has enabled the attainment of set environmental performance targets in addition to the appropriate and anticipatory preparation for the new 2015 version of the ISO 14001 standard, demonstrating the Group's commitment to continue to improve the system and its performance.

The Group's main environmental initiatives relate to continuing:

- to reduce direct CO₂ emissions by optimising nuclear generation, adapting thermal generation and developing renewable energies and indirect emissions associated with our organisations;
- to reduce the impacts of industrial and commercial activities on water, air, soil, waste, transport and the use of space, resources, materials and equipment;
- to implement regulations such as the "Environmental performance of the Group's coal-fired units" project by applying the requirements of the IED Directive 2016 and the Seveso 3 Directive at relevant sites;
- to increase energy efficiency both upstream (generation fleet and tertiary buildings) and downstream (customer usage); energy audits were carried out in 2015 on EDF's thermal power plants and the commitment was made to an ISO 50001 certification process for island power plants;
- to work on biodiversity and the optimisation of water use, which remains vital for EDF and its stakeholders.

^{1.} See section 1.6 ("Research and development, patents and licences").

3.2.2.1.2 Management and prevention of environmental risks

The EDF group implements a risk management policy for its operational, financial and organisational plans, which incorporates environmental risks (see section 2.2.6.4 "Management of risks linked to industrial accidents and the environmental and public-health impacts of the Group's activities").

Risk Identification

Environmental risks are fully integrated into the EMS and into the Group's internal control system. They are subject to action plans resulting from strategic directions in the Group's sustainable development policy.

The 2015 update confirms the risk analysis and does not highlight new environmental risks. In 2015, the Group had 14 Seveso high-threshold sites and 25 Seveso low-threshold sites ¹.

In 2015, as in previous years, the most significant factors in terms of economic and financial challenges related to environmental risks pertain to the following subjects: GHG emissions; the roll-out of energy efficiency initiatives and obtaining related certificates; impacts of EDF activities on the air, water, soil and on waste production; protection of biodiversity and services provided by ecosystems; the management of water resources.

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 includes decontamination operations, where necessary²;
- an employee training programme and a programme to raise awareness of all parties involved;
- inspections and audits of generation sites (see sections 3.2.2.2.1 "Nuclear safety" and 3.2.2.2.2 "Hydropower safety");
- a crisis management policy which requires the regular testing of crisis systems through an annual programme of crisis response drills (see section 2.2.2.2 "Crisis management").

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. This work has led to the withdrawal of approximately 50 products over 3 years from the Nuclear Generation business, new limits on the use of tetrahydrofuran at EDF Energy (in conjunction with studies on suitable substitutions), and the introduction of purchasing rules. Other studies are in progress as well, namely in relation to hydraulic control fluids and potassium chromate (at EDF Energy and EDF Luminus in particular). 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 2015, no high-stake environmental events took place³. There were a few incidents, without any major environmental or health impacts, which mainly concerned gas emissions or leaks or spillages of hydrocarbons or acid. 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 2015, two convictions were handed down against EDF in France for a total amount of approximately €10,500.

3.2.2.2 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 3.1.2 "Corporate responsibility commitments: Group performance indicators").

3.2.2.2.1 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 WANO⁴, and OSART⁵ audits conducted by experts from the International Atomic Energy Agency (IAEA)).

In France, the safety of nuclear facilities is controlled by the French Nuclear Safety Authority (ASN) (see section 1.4.1.1.3 "Environment, nuclear safety, radiation protection").

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.

^{1.} High-threshold and low-threshold: industrial establishments are "Seveso" classified according to their technological risk, in terms of the quantities and types of hazardous products they handle. There are therefore two different thresholds which classify establishments as "Seveso low-threshold" or "Seveso high-threshold". The requirements vary significantly between these two types; they are very restrictive for the high-threshold, particularly with regard to the safety management system, informing the public and the prevention plan, etc.

^{2.} These decontamination operations may concern situations involving contamination and denaturing that date back to before EDF became the operator.

^{3.} High-stake environmental event: an event causing serious environmental damage (areas, resources and natural environments, sites and landscapes, 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.

^{4.} World Association of Nuclear Operators.

^{5.} Operational Safety Review Team.

Results for 2015

In France, improvements to the control of planned outages continued in 2015. This improved control included better planning, preparation and stability of outage programmes. This control forms a direct contribution to the Group's safety results, as does the reduction in non-compliance with technical specifications and the nuclear operator's highway code. Unplanned outages remained at a satisfactory level, 2.48%, similar to previous years.

However, there was an increase in automatic reactor outages and fires ignited compared with 2014. Although the consequences of these incidents were limited, particularly in terms of safety, this situation did lead to the implementation of corrective action, the first results of which should be confirmed in 2016.

In the United Kingdom, safety performance improved in 2015, largely due to special support given to those sites that performed the weakest in 2014. Unplanned outages improved significantly, from 10.7% in 2014 to 2.3% in 2015. EDF Energy received a positive assessment during the WANO corporate review follow-up.

3.2.2.2.2 Hydropower safety

EDF operates 433 hydropower plants in France and manages the reservoirs of 239 large dams. The average age of the French hydropower fleet is 71 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 (see section 1.4.1.4.1.2 "Hydropower safety").

3.2.2.3 Impacts of Group activities on climate change

Globally speaking, anthropogenic emissions of greenhouse gases (GhG), and CO_2 emissions in particular, are the main causes of climate change.

Measures are already being taken, with one main objective in mind: to limit the temperature increase to below 2°C. The Paris Agreement, the contents of which were approved at the end of COP 21 in December 2015, confirms this objective and reinforces the role of non-government players, including companies, in adressing this challenge.

Currently, energy generation is responsible for 60% of global emissions, including transport and electricity, which account for a leading share. Whether they are developed or under development, it is a question of reducing our companies' reliance on carbon by consuming less energy, and ensuring that the energy we do consume produces less carbon. Low-carbon electricity is the best way of reducing the dependence of our economies on fuel and fossil fuels today.

Global demand for electricity is set to increase by 70% between now and 2040, but its generation is responsible for 40% of energy-related GhG emissions. This must change if we are to combat climate change: the EDF group is committed to this change, through the use of a low-carbon, competitive and diversified energy mix. In 2015 in mainland France, EDF generated over 98% of its electricity without any direct CO₂ emissions ¹. Since 1990, EDF has cut its carbon emissions more by than half. The Group's energy mix favours low-carbon energies, nuclear energy, hydropower (with the largest capacity in Europe) and new renewables such as wind and solar power.

3.2.2.3.1 Reduction in CO₂ emissions²

In 2015, the Group emitted 59.1 million tonnes of CO_2 worldwide, of which 8.5 million tonnes were emitted by EDF. The relatively low CO_2 emissions in mainland France reflect the fact that more than 98% of the electricity generation is without any direct CO_2 emissions ¹.

In mainland France, EDF set itself the goal of reducing its CO_2 emissions by 30% before 2020 compared to 1990 levels (23.6 Mt). This goal was achieved for 2015 with a drop in emissions of more than 15 million tonnes.

CO₂ emissions due to electricity and heat generation (in g/kWh)	2015	2014	2013 (restated)
EDF group	95	102	123 (1)
EDF	15	17	35

(1) The data published in 2013 (not restated) was 116.3g/kWh.

At European level and according to the most recent European Carbon Factor study available from PWC³, "we must emphasise the contribution of the EDF group to the maintaining of a relatively low average European carbon factor: without EDF, which has a specific content of $17g CO_2/kWh$, the European carbon factor of the panel studied would be 32% higher and would reach 413g CO₂/kWh".

These results are the product of an industrial policy committed to reducing its direct CO_2 emissions:

- worldwide: to keep the Group's direct CO₂ emissions as low as possible, and in all cases below 150g/kWh;
- in continental France: to halve its specific CO₂ emissions in 2016 compared to 1990 levels (63g CO₂/kWh);
- in Corsica and overseas departments (Island Energy Systems Division): to reduce CO₂ emissions between 2005 and 2020, with an interim target in 2015 of 480g CO₂/kWh;
- in the United Kingdom: reduce the carbon intensity of electricity generation to 250g CO₂/kWh by 2020, and to less than 100g CO₂/kWh by 2030.

^{1.} Excluding life cycle analysis (LCA) of generation plants and fuel.

^{2.} The CO₂ emissions mentioned in this chapter relate to direct emissions, excluding LCA emissions of generation plants and fuel.

^{3.} PWC, "Climate Change and Electricity", November 2015.

In order to reduce and maintain its greenhouse gas emissions to one of the lowest levels in Europe, the Group has several short- and long-term levers, including:

- optimising hydropower generation by modernising generation methods;
- developing other renewable energies (wind power, photovoltaics);
- operating the nuclear fleet, which emits very low levels of greenhouse gases;
- optimising carbon performance and modernising the thermal fleet;
- developing concrete solutions for consuming less energy, more efficiently, and reducing CO₂ emissions. In France for example, EDF aims to reduce the average electricity consumption of its data centres by 40% over the next 5 years, representing a drop in CO₂ emissions of 1,150 tonnes;
- continuing with the efforts made to reduce the carbon footprint of the networks;
- incorporating carbon-related criteria into the Group's industrial arbitrage between the various means of generation, for long-term investments.

Optimisation of carbon performance and modernisation of the thermal fleet

The environmental performance of the thermal power plants has been consistently improved to reduce the Group's environmental impact and 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.

In France since 2011, the Group has commissioned three CCGT thermal power plants and is planning the future construction of an additional CCGT in Corsica. In 2014 and 2015, some of the most polluting thermal units were shut down (see section 1.4.1.3.2 "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 CCGT and combustion turbines. Over this period of time, these measures will have resulted in the CO₂ emissions per kilowatt hour of EDF's thermal fleet in France being reduced by more than a third.

In the United Kingdom, the three new units in the new 1,300MW CCGT plant of West Burton B have been operating since 2013. With 1.5 million customers served every year for the past 25 years, this power plant is helping EDF Energy to meet its 2020 goal of reducing its specific CO_2 emissions. Furthermore, in Poland, EC Zielona Góra completed the modernisation of its power plant and replaced its coal fuel with gas in 2013. A similar programme is planned in 2017 for the Toruń power plant. In Belgium, the modernisation of the boilers at the Ham thermal power plant has meant that fuel oil could be replaced with gas since 2014, resulting in a reduction in CO_2 emissions of approximately 35% in 2015.

In Italy, the Edison thermal fleet is entirely made up of high-efficiency CCGT with low CO_2 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, increases in cogeneration and the use of biomass as fuel are expected over the coming years.

The Group is also active in this field of research. EDF is continuing the R&D project "Innovative Cycles" which aims to reduce the carbon intensity of the fleet through increasing the efficiency of the thermal power plants (assessment of the performance of high temperature materials, cogeneration, new advanced thermal cycles).

Furthermore, in the area of carbon dioxide capture and storage (CCS) technology, the EDF group is participating in post-combustion and oxycombustion capture projects with internal and external industrial partners as well as in studies concerning the transport and storage of CO_2 . Following an experiment carried out in Le Havre, a new research project was launched in 2015 in partnership with the R&D centre in China for the purposes of evaluating the interest in so-called second-generation CCS technologies for future applications.

3.2.2.3.2 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 (approx. 20 years), they are relatively unaffected, especially as they are lightweight facilities with easy-to-replace equipment.

In France, EDF continued to apply the climate change adaptation strategy which was previously adopted at Group level and which constitutes 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.

In 2014, EDF launched a comprehensive research project to develop the tools and methods used to anticipate and lessen the impacts of climate change. The programme includes the creation of a "Climate Service" to build a database of verified and ready-to-use climate forecasts which would be made available to businesses.

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. Nuclear power plants have been designed to withstand extreme weather. Renovation work (costing almost €400 million until 2019) is underway at French power plants with the aim of improving their efficiency during hot weather.

According to the Intergovernemental 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 addition, the new CCGT plants in France are located in non-heat-sensitive areas that are not prone to flooding.

In order to provide hydropower facilities with stronger protection against extreme weather risks, certain plants have been reinforced with the installation of spillways. One of these plants is the dam at Charmines, which re-opened on 18 July 2015 following renovation work. It is the 8th EDF dam to benefit from "Piano Key Weir" spillway technology ¹. This technology was developed by EDF's hydroelectric engineering and R&D divisions, in collaboration with Hydrocoop, the *École Polytechnique Fédérale de Lausanne* and the University of Liège. On 2 December 2015, EDF received the Large Group Award for the "Adapting to the effects of climate change" category of the Climate Solutions Trophy.

In its climate change adaptation plan, ERDF has formalised the measures intended to reduce network vulnerability (1.3 million km) and shorten the time it takes to reconnect 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 2015, ERDF took down 36,412 kilometres of high-voltage overhead lines, including 15,638 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. This task force has the ability to mobilise up to 2,000 people, 24 hours a day, 7 days a week, both in France and abroad. In 2015, the "air networks" FIRE team was mobilised during storms which affected the south west of the country on 31 August and 1 September. During the heat wave between 29 June and 10 July, the "underground networks" FIRE resources were mobilised, along with specialist vehicles, to repair faults that had occurred on networks in the IIe-de-France, Provence - Alpes - Côte d'Azur and the Lyon regions.

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. EDF Energy has invested almost £600 million in these nuclear power plants.

3.2.2.3.3 Helping customers consume less, more efficiently

The EDF group aims to help all of its residential, business and local authority customers to consume less, more efficiently and ultimately, to reduce their CO_2 footprint. In addition, customers can now generate their own energy and make significant energy savings. EDF offers support through a range of new offers and services, made possible by the digital revolution and the development of smart systems.

The Group's sustainable development policy includes promoting energy efficiency to customers, one of the primary levers in combating climate change. One of the main focus areas concerns improving the insulation in homes occupied by people experiencing financial difficulties (see section 3.2.3.6.1 "Contributing to energy access and the fight against energy poverty"). In order to meet their regulatory obligations, the Group's companies have developed their own energy efficiency solutions tailored to their markets. The integration of Dalkia in 2014 brought the expertise of a leader in energy services, and EDF Fenice continues to develop optimisation solutions for Italian, Spanish, Polish and Russian industrial customers.

EDF committed to helping its customers reduce their CO₂ emissions by a cumulative amount of 2 million tonnes between mid-2009 and 2013. The 2014 target of 600,000 tonnes of avoided CO_2^2 was maintained in 2015. By mid-2015, the result was 489,198 tonnes, equal to a cumulative total of 3.38 million tonnes between mid-2009 and mid-2015.

EDF offers a range of energy efficient services to support its customers and to help them generate energy savings. This initiative made it possible for EDF to obtain Energy Savings Certificates under the system that imposes customer energy saving obligations upon every energy supplier (see section 1.5.6.1 "Basic regulations applicable to the environment, health, hygiene and safety" – "Energy Efficiency"). As the leading producer in France of Energy Savings Certificates (25% of total volume), EDF fulfilled its obligations for the 2nd period which ran between 1 January 2011 and 31 December 2014. In order to meet its obligations for the 3rd period which began on 1 January 2015, EDF is involved in the development of new energy saving technologies, is financing national programmes (the professional training body FEBAT in particular) and is continuing to support its customers (businesses, local authorities and social-housing lessors, and residential customers) by providing advice and funding (subsidised loans, the "Habiter Mieux" (Better Living)

^{1.} The "Piano Key Weir" is a new type of nonlinear spillway whose piano-key shape offers a greater surface over which the water can flow, allowing for the discharge capacity of the spillway to be improved and for the storage capacity of existing dams to be increased.

^{2.} EDF calculation based on average greenhouse gas content by country, including life cycle analysis (LCA), determined according to the generation mix per country provided by the International Energy Agency 2012 and according to the LCA of generation methods provided by the Intergovernmental Panel on Climate Change 2012.

programme managed by the national housing agency, commercial incentives, etc.) in order to encourage them to take energy saving action. Examples of DSM and energy efficiency measures taken by EDF in 2015:

In France

Energy saving promotion and training	 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 (25,400 professionals trained in 2015). Grant of 42,000 subsidised loans for residential customers improving the energy efficiency of their home with EDF's partners. EDF supports VALLOUREC in its "GreenHouse" project. This support relates to the modernisation of the heating furnace of the pipe mill at Vallourec Saint-Saulve (leading to energy savings), and the introduction of an Energy Performance Plan which includes training sessions for workers.
Awareness raising/information	 Launch of e.quilibre, a digital solution for residential customers, included in their supply contract. e.quilibre is a digital dashboard developed by EDF to help customers analyse their electricity and/or gas consumption and, as such, to gain more control over their consumption. Available from the edf.fr website, this tool allows customers to: monitor, in € and in kWh, changes in their monthly and annual electricity and/or gas consumption; compare in kWh their consumption with that of similar households; gain control over their bills using consumption estimates for their various appliances and analysis of their usage during off-peak times (depending on their tariff); benefit from personalised advice and eco-friendly tips for making energy-saving changes.
Energy efficient offers and advice	 In 2015, 130,000 homes benefited from energy renovation work carried out by an EDF home solutions partner company.
Experiments	 The Smart Electric Lyon project involves more than 20,000 volunteers comprised of residential customers, retailers, businesses, social-housing lessors and local authorities in the city of Lyon. These customer-experimenters can take control of their energy consumption, by benefiting from: information on their consumption and personalised advice, available directly on their tablets and/or smartphones (e.g. consumption adapted according to energy prices); pricing estimates tailored to their requirements and consumption habits; "intelligent and connected" equipment which is automatically updated with information sent by the supplier, all of which is controlled with a smart meter. In order to carry out these experiments, 21 academic and industrial partners have come together in an EDF consortium. In Corsica, EDF is developing a project to recover the heat produced by diesel generators at the Lucciana thermal power plant currently under construction, and to inject this heat into a network that supplies other local infrastructures. Plans to recover the heat produced by the new EDF PEI thermal power plants are underway for Port-Est in La Réunion, Pointe Jarry in Guadeloupe and Fort-de-France in Martinique.
Promoting efficient use and controlling consumption	 EDF works together with manufacturers Philips, Osram, Panasonic, and Xanlite to offer energy saving options to consumers, including preferential rates on LED lamps. Each lamp is sold at an attractive purchase price thanks to a financial contribution from EDF and an additional commercial effort from the manufacturers and distributors to offer consumers high-quality LED bulbs at competitive prices. The Fondation Abbé Pierre and EDF renewed their partnership for 2015 on the "Toits d'abord" ("Roofs first") programme, as part of the Energy Savings Certificate initiative which since 2012 has enabled the thermal renovation of over 1,500 "very social" housing units.

International

Energy efficiency	 In the United Kingdom, a number of energy performance contracts have been signed with large companies: for example, one such agreement was entered into with Nissan Motor Manufacturing which has already resulted in annual energy savings of £6 million and identified potential further savings of £17 million to be implemented in 2016. 47,000 energy efficiency operations have been carried out at residential customers' homes for a total of £54 million. In Italy, the development of the "Energy Control" option, through which Edison offers residential customers an energy consumption management system coupled with a discussion forum and a place to submit feedback online. Edison has also developed a new "E-Manager" offer for the tertiary sector which provides an in-depth analysis of energy consumption and suggests energy saving measures that could be implemented (average cost saving of 10%). In Wuhan in China, EDF has redesigned the lighting for the manufacturing workshops at a PSA site. The new system incorporates LED lighting, dimmer switches and motion detectors.
Energy audits	 In Italy, Edison has carried out 16 energy audits on its generation plants, gas storage facilities and office buildings. In the United Kingdom, EDF Energy has performed energy audits on its Cottam, Heysham 1 and Sizewell plants.

Fostering energy transition in towns and communities

The EDF group is committed to the energy transition of towns and communities. These play a vital role in combating climate change. EDF develops tailor-made solutions to assist local authorities in their energy-related projects. EDF's support focuses on strategic energy planning and advice, energy generation from local resources, the energy and environmental performance of buildings and facilities, street lighting and mobility.

One such example is the work EDF has done for the largest social-housing lessor in Singapore. EDF has developed an urban planning platform which uses a 3D interface to enable local decision-makers to visualise the potential consequences of various energy scenarios under discussion for the city. This tool can also assist in reducing CO_2 emissions. The platform has 500 functions which cover the major urban issues in great detail (energy, transport, water, waste, etc.). Each simulation requires only three minutes to produce comprehensive results.

Thanks to this solution designed and produced by EDF Optimal Solutions, an EDF subsidiary, 300 homes in the Cap Azur eco-district (Roquebrune-Cap Martin) recover the heat from the wastewater of a treatment plant, which they use for heating and hot water. Before the treated water is discharged to the sea, heat exchangers capture its heat (between 12°C and 24°C) and send it via a completely sealed system to cooler waters. Heat pumps, installed in the buildings, either heat up or cool down the temperature of this water, which can be used for heating, hot water and air conditioning. As a result, 70% of the district's supply is now fed by renewable energies. This system has enabled tenants to make savings of 50% and to reduce their CO₂ emissions by 85% ¹.

Electric mobility

Transport accounts for the largest share of CO_2 emissions in France and the EDF group has developed expertise in terms of 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 infrastructures 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. The electric vehicle market had a very successful year in 2015 with 22,187 registrations, representing growth of 47.5% compared to 2014. Although the majority of sales are to the residential customer market, utility vehicles sales are also taking off.

As part of the Corri-door project, 200 rapid-charging stations for electric vehicles were installed in 2015. Located alongside main roads and junctions, this network of charging stations will facilitate inter-city travel in electric vehicles and contribute to the development of the market. Launched in 2014, this European project is led by EDF and its subsidiary Sodetrel, which has also been awarded the public contract for the Nord-Pas-de-Calais region for the supervision and operation of 1,250 electric vehicle charging stations. Having overseen the Sydev stations (Vendée region) since 2014 and as the supplier for SDEM (Morbihan region), Sodetrel is currently one of the leading operators of local authority charging stations in France.

The EDF group teams have developed and manufactured a range of solar electric mobility solutions. This system, known as Ombriwatt, is based on a photovoltaic generator that uses solar energy to power the electric vehicle charging stations. Ombriwatt is also a car park of approximately 30m² which protects vehicles from the sun and bad weather. Equipped with photovoltaic panels designed in France by Photowatt, a wholly owned subsidiary of EDF EN, this equipment produces low-carbon energy which can be used to charge the batteries of parked vehicles, or which can be re-injected into the site's electricity grid.

Smart grids

The adaptation of the electricity grid to the new needs of society is a major strategic challenge and one of the key elements of the energy transition. Electricity grids that increasingly incorporate new information and communications technologies are being developed in order to:

- facilitate the integration of intermittent renewable energy sources and the adoption of new, high-performing electricity uses (heat pumps, electric vehicles, plug-in hybrid vehicles, etc.);
- enable consumers to take ownership of their energy consumption, improving energy efficiency through interaction with the grid.

The widespread distribution of the Linky meter by ERDF began on 1 December 2015, with a target of 35 million meters to be replaced by 2021 (see section 1.4.4.2.4 "Future challenges (replacement, development, smart meters)").

In 2015, ERDF continued to manage and monitor demonstrators to experiment with the various aspects of the Smart Grids: integration of renewable energies in the public distribution network, electric mobility support, storage: Nice Meridia, SO MEL SO CONNECTED, Bordeaux Euratlantique, BienVEnu (electric mobility).

In the overseas departments, the Island Energy Services Division completed three important projects in 2015:

- the Click Conso project, which tested 1,000 smart meters in Martinique. The aim of this project was to confirm that the meters and the chain of communication were functioning correctly; employee engagement for this innovative project; high-quality collaboration with service providers; customers primarily concerned today with invoicing based on actual measurements and consumption diagnostics. The results of this project are today used as the basis for the meter renewal project and for cost/ benefit analyses;
- the Pegase project (1MW capacity battery in La Réunion). The research carried out has led to the development of innovative benchmark methods based on images transmitted from satellites, to the linking of several renewable energy farms to the same battery and has shown that it is possible to smooth out intermittent generation with a battery and smart system management;
- the Millener project which had 2 main aspects: research into load management using smart grids has enabled the identification of a potential energy storage system for heating in Corsica; the study of the linking of photovoltaic and battery sources for residential use has confirmed a potentially valuable deposit for the network in terms of frequency regulation.

3.2.2.4 Sustainable management of resources

3.2.2.4.1 Renewable energy in the EDF group

A major player in the energy transition, EDF is the leading producer of renewable energies in Europe (hydropower, wind power, solar power, biomass, etc.). Water is the main renewable energy with which EDF works and the Group is currently the leading supplier of hydropower in the European Union. The Group has a renewable installed capacity of 29.4GW of which 21.7GW is from hydropower. The percentage of renewable energies in the EDF group's electricity capacity mix stands at 21.9%, compared to 20.8% in 2014.

Investments and their financing

For the past five years, the Group has devoted the largest portion of its gross operating investments for development to the development of renewable

energies. In 2015, the percentage of renewable energies in the Group's gross operating investments for development totalled 36% (37% in 2014).

In November 2013, in order to finance future renewable energy projects, the EDF group launched its first Green Bond in euros (from which the funds raised are exclusively dedicated to financing renewable energy projects), the first large corporate to do so. The funds raised (≤ 1.4 billion) were allocated in full at the end of June 2015. They contributed to the financing of 13 projects developed by EDF Énergies Nouvelles in France, the United States and in Canada, for a total combined capacity of 1.8GW, and an annual output of approximately 7TWh (10 wind power projects, 2 solar power projects and 1 biomethane project).

On 8 October 2015, EDF launched its 2nd Green Bond for a total amount of \$1.25 billion, the largest US-dollar denominated Green Bond issued until then by an industrial company. This issue will enable EDF to continue to invest in renewable energies. As with the first Green Bond, the financed projects will be subject to ESG¹ criteria including in particular the management of environmental impacts. Furthermore, EDF is committed to publishing a report on the CO₂ emissions avoided by the projects that have benefited from Green Bond financing.

See also section 6.9 ("Information relating to the allocation of funds raised through the Green Bonds issued by EDF in November 2013 and October 2015").

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 2015, investments for operation and maintenance increased to approximately €345 million. Large scale maintenance work took place in 2015, such as the emptying of Lake Guerlédan, the penstock work at Passy and Aston, the renovation and maintenance of the Rhine pondage and the renovation of the Revin STEP. In addition, EDF is focusing on its innovation and development efforts with a particular emphasis on the safety and performance of generation facilities. The Paimpol-Bréhat project managed by EDF is the world's largest tidal power project developed at pre-industrial level, selected as part of the ADEME call for expression of interest with a view to installing 7 tidal turbines at Raz Blanchard in 2017. We can also mention the significant renovation programme for the Rance facility, the aim of which is to secure and modernise the facility so as to ensure its long-term safety and profitability; the full redesign of the Romanche-Gavet plant; the uprating of existing facilities such as the La Bathie site in Isère and the commissioning of the Rondeau plant at Grenoble (comprised of 4 VLH icthyo-compatible turbines). In 2015, these development investments amounted to nearly €95 million, approximately 60% of which was allocated to the Gavet site. Faced with the risk of a hydropower deficit, plans are also being implemented to guarantee the maintenance of hydropower generation capability in France (see section 3.2.2.4.2 "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. Furthermore, EDF is currently involved in the construction of the 400MW Sinop dam in Brazil and, together with the State of Cameroon, the development of a 420MW dam on the Sanaga river, 60km north of Yaoundé.

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 (EDF EN), an integrated operator, world leader in renewable energies and present in all segments and throughout the entire value chain. Its goal is to reach 25GW in net capacity by 2030, i.e. to quadruple its net capacity, which currently stands at 6GW. In Europe, like in the United States, support mechanisms for renewable energies (excluding hydropower) have declined. Technological progress has made it possible to continue to reduce the cost of these means of generation. Eventually this will offset the decline in public support on mature segments such as onshore wind power and solar power. In emerging countries, increased energy demand should support and encourage the development of renewable energies.

In 2015 and via EDF EN, the Group strengthened its wind and solar power asset base with large commissioning programmes (1,826MW) and construction programmes (862MW) in a number of countries. The threshold of one gigawatt of installed wind and solar power capacity was achieved in France, Texas and Canada. At 31 December 2015, EDF EN had a gross installed capacity of 9,063.3MW, a net installed capacity of 6,131.5MW and a gross capacity under construction of 1,408.8MW.

The French government has set the medium-term target of developing 6GW of offshore wind power. Within this context, the Group is involved in the emergence of a French offshore wind power industry. As such, EDF EN is the leader of the consortium selected by the authorities in 2012 to complete and operate 1.5GW of offshore wind power. Public inquiries have been carried out on each of the projects. The consortium's three projects represent the installation of more than 200 large wind turbines on the Brittany and Normandy coasts.

EDF EN made the strategic decision to develop specific activities to ensure the operation and maintenance of renewable assets managed by the company on its own behalf and on behalf of third parties. At the end of December 2015, EDF EN had reached almost 14GW of capacity under operation & maintenance management, compared to 11.8GW in 2014 and 9GW in 2013.

Biomass and geothermal energies

With Dalkia, the Group has become co-leader in energy services and a benchmark player in biomass energy in France. Dalkia's goal for 2020 is to achieve 20% of biomass in its energy mix.

Since the beginning of 2015, the Group has implemented a biomass sustainability policy that aims to foster growth in the use of solid biomass for the generation 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, respecting human rights and collaborating with stakeholders.

In addition, in June 2015, Dalkia launched its new sustainable development commitments which incorporate its existing governance commitments including protecting the environment, saving energy and recovering and developing renewable sources.

Dalkia received support from the recently doubled ADEME "Fonds Chaleur" (Heat Fund). Created as part of the Grenelle Environment Forum, this fund is aimed at communal housing, local authorities and businesses and aims to support the projects of district heating networks that use renewable energies (biomass, geothermal power, solar power, etc.). It contributes to the national target of 23% of energy consumed to be from renewable sources by 2020.

Dalkia develops geothermal energy, which is particularly well-suited to the specific characteristics of urban heating networks. Today, Dalkia is the French leader in communal geothermal energy as it operates 27 plants.

1. Environmental, social and governance criteria.

In 2015, Dalkia acquired Verdesis, a developer and third-party investor in biogas projects both in France and abroad. Verdesis works throughout the entire biogas chain: production by methanisation of agricultural biomass and industrial wastewater, biogas treatment before use, recovery using engines and/or microturbines, enrichment for use as biofuel or for network injection. As at the date hereof, this subsidiary has more than 40 biogas treatment units in operation.

Innovation and research

The EDF group has made innovation and research one of its distinctive features, developing initiatives approved by stakeholders and by investing heavily in research, through renewable energy R&D programmes. As part of CAP 2030, the EDF group intends to increase its R&D on energy storage, photovoltaic power, electric mobility and new networks.

Societal innovation

The EDF group has developed crowdfunding initiatives or projects to support for the development of projects in those valleys in which its hydro-electric facilities are located:

- crowdfunding projects: the first crowdfunding campaign launched in France by EDF Énergies Nouvelles was a huge success. This campaign reflected the company's desire to involve the residents of the Vosges and Bas-Rhin departments in the development of the wind farm at Bois de Belfays. This campaign ran from 15 June to 16 July 2015, on the Lendosphere website which is dedicated to sustainable development projects;
- "One River, One Territory" project: as part of its commitment to economic development and encouraging innovation in the hydropower valleys in which it has a presence, EDF launched the "One River, One Territory" project in 2012. It is the result of a co-construction initiative combining local socio-economic players, multi-disciplinary experts and EDF representatives. This project is based on the idea of creating agencies dedicated to local economic development. Using financial resources, they draw on the skills of local manufacturers and tradesmen and support innovative projects in the fields of water, energy and the environment. In 2015, EDF opened its 7th agency, in Jura. Existing agencies are located in Rodez, Tulle, Vallées des Pyrénées, Savoie, Durance-Méditerranée and Sud-Isère Drôme.

Technological innovation

The EDF group devotes more than ≤ 60 million each year to technological innovation. Research programmes are based on four objectives: to reduce costs and improve performance of mature technologies, to identify high-status breakthrough technologies, to help the most promising technologies (including exploring new renewable means of generation such as floating offshore wind turbines or tidal turbines) to transition to an industrial scale and to help integrate renewables into electricity grids.

In 2015, the main research subjects pertained to:

- storing electricity from renewable sources, enabling, in particular, their intermittency to be managed ("Pégase-Toucan" solar power programme integrating energy storage in La Réunion which was commissioned in 2015);
- evaluation of wind-energy yield in areas of complex terrain or light wind;
- developing a yield assessment methodology using innovative technology such as the floating lidar;
- improving the efficiency of solar cells, increasing the lifespan of panels, research into better performance with bi-facial modules;

- improving maintenance techniques for wind turbines with a view to increasing their lifespan;
- generating offshore wind power using two 6MW prototype turbines (joint project between Alstom and EDF EN); floating wind turbines – participation in the ADEME call for expression of interest.

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, a website (http:// www.capareseau.fr) offers interested parties access to the accommodation capacities of generation facilities, whether they belong to a regional renewable energy connection scheme or not, as well as volumes from facilities already connected or awaiting connection. 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 with 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 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 for a residential customer was installed at the end of 2014. 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 periods¹.

3.2.2.4.2 Impact on water

Water is an essential element for the majority of electricity generation methods (excluding solar photovoltaic and wind power), either through its mechanical driving of hydropower turbines, or through its use in thermal power plants. The water stored in dam reservoirs represents the largest form of storage of potential electricity.

The EDF group has included the "water" risk in 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. Its sharing demands appropriate and responsible management. In the context of the multiple use and growing scarcity of water resources, the Group is optimising the water used for electricity generation so as to secure power generation, ensure the control of this resource, comply with EDF commitments vis-à-vis the multiple use of water (e.g. irrigation and leisure) and to meet regulatory and contractual requirements.

EDF group commitments

At the World Water Forum in 2012, the EDF group made three commitments:

- to invest the necessary resources to develop methods and tools to assess the water footprint of its electricity generation activities;
- to control the water footprint of its electricity generation activities;
- to create local value.

^{1.} At the end of 2015, 4 grid batteries and 18 residential batteries had been installed on the Nice Grid.



Invest in the assessment of the water footprint

As part of its corporate responsibility commitments in 2013, the EDF group committed to preserving water in all its activities and to publishing its "water footprint" from 2015 on the basis of this work.

Because the existing calculation methodologies were inappropriate for industrial companies, since 2013 the Group has been pioneering the development of a tool for assessing the impact on water of all energy sectors, which can be used anywhere in the world. This programme – Water for Energy Framework (WEF) – runs as part of an agreement with the World Water Council, in association with the scientific community and international representative bodies from the energy sectors. In 2014, the first version of the assessment methodology was approved for testing at twelve sites: eight EDF group sites, two Engie sites and two Hydro-Québec sites. In accordance with the commitments made in Marseille, EDF presented the results of this programme at the 7th World Water Forum held in Daegu (South Korea) in April 2015. The programme will continue under the management of the

World Energy Council (WEC) in close collaboration with EDF, so that it may be shared more widely and become adaptable to all sectors. The results will be presented at the next World Water Forum to be held in Brazil in 2018.

Whilst awaiting finalised approved tools, the EDF Group has already published a partial water footprint with an estimate of the specific consumption of evaporated water, accompanied by a series of indicators confirming the proper management of water resources (see below "Controlling the water footprint").

Controlling the water footprint

The Group is committed to continuing to improve performance in terms of water withdrawal and consumption at existing power plants and to researching the most efficient way to use water across territories and major river basins.

DISTRIBUTION OF WATER USED FOR COOLING THE EDF GROUP'S THERMAL POWER STATIONS



The exposure of the Group's generation resources to water stress has been assessed and remains low, since its facilities are predominantly situated in Europe (accounting for over 98% of the Group's total water withdrawal, of which more than 78% is in France and more than 16% is in the United Kingdom), and its nuclear and thermal power stations tend to be in coastal locations. In France, EDF has committed to reducing its drinking water consumption across its entire real estate portfolio and green spaces by 5% in 2014 and 2015.



Worldwide, 63% of the water withdrawn for cooling purposes by the Group comes from marine or estuary environments, where resource availability is not an issue. This percentage rises to over 56% in France, almost 99% in the United Kingdom and close to 95% 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 generation.

VOLUMES OF WATER WITHDRAWN AND RETURNED BY THE GROUP

(in billions of m3)	2015	2014	2013 (restated)
Cooling water withdrawn	49.3	49.8	50.8
of which fresh water	18.3	18.1	17.7
of which brackish (or estuary) water	5.2	5.8	6.1
Cooling water returned	48.7	49.3	50.3
of which fresh water	17.8	17.6	17.4
of which brackish (or estuary) water	5.2	5.8	6.1
Evaporated water	0.595	0.553	0.540

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 CCGT plant), or equipped with air cooling (Blénod 5 and Bouchain CCGT plant, currently in trial phase), which reduce their dependence on water.

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 was 1.058l/ kWh in 2015, vs. 0.989 in 2014 and 0.924 in 2013.

Examples of water consumption reduction and withdrawal limitation measures

The EDF group works in a number of ways to optimise its water usage and to reduce pressure on the environment:

- research into the most efficient way to use water across territories and major river basins and reducing water consumption with cooling systems adapted to the geographical area and the water resources available on site:
 - thermal power plants with open circuit cooling (direct withdrawal from freshwater, brackish water or the sea, before being returned to the environment after cooling of the facilities): annual volumes of withdrawn water vary between 900 and 1,900 million m³ per unit, depending on the electrical power capacity of the plants. Almost all (99%) of this water is returned to the aquatic environment;
 - EDF's thermal power plants with closed circuit cooling require less water: they require less water to be withdrawn and consume water through evaporation in air cooling towers (for every 6I/KWh of water withdrawn, 2I/KWh of water is evaporated);
 - EDF's thermal power plants with dry air cooling;
- limiting withdrawals of freshwater by recycling the water as part of the process or by desalinating the sea water;
- the contribution of in-house R&D programmes.

The recycling of process and cooling water is developing throughout the Group: for example, the Krakow and Toruń thermal power plants (Poland) now recycle 100% of their industrial water. In Italy, the majority of EDF Fenice's cogeneration plants installed with customers also recycle process water. In Italy, treated wastewater from certain power plants is reused, resulting in a 1% saving in overall withdrawals.

In France, EDF's thermal power plants in Cordemais and Martigues recover rain water or recycle their wastewater so as to reduce their consumption of municipal water, resulting in a saving of 150,000m³ of the 300,000 previously consumed. The Martigues plant is also trialling a desalination unit pilot project.

In French overseas territories, where EDF is investing in new thermal power stations, R&D teams have designed dry air cooling systems for engine cooling, which reduce water withdrawal by 700,000m³ per year, per power station.

Furthermore, for their other water requirements, these new plants use desalinated sea water to replace their normal withdrawals from groundwater or drinking water networks. Similarly, Edison has fitted two CCGT plants with sea water desalination equipment (more than 1.6 million cubic metres desalinated in 2015) to replace their freshwater withdrawal.

In Belgium, EDF Luminus has installed new variable flow water pumps at the Angleur plant which supply the demineralisation unit with the exact quantity of water required. In its Ham plant, a new system has been installed to help reduce water usage and boiler corrosion. The use of ammonia instead of trisodium phosphate to maintain required pH levels in the closed circuit reduces consumption by 8,900m³ per year, as well as salt deposits and emissions.

Creating local value

The Group is committed to creating local value in all of its electricity generation projects, to preserving water resources and to assessing the sustainability of its hydro-electric projects by drawing on the Sustainability

protocol of the International Hydropower Association (IHA) which came into force in 2015, through:

- the continued application of the IHA protocol and the significant progress made on the internal "Creating Value" project whose aim is to develop a methodology for identifying and evaluating the benefits created by the facilities. This programme was the subject of a presentation at the World Water Forum in Daegu;
- the continuation in France of the "One River, One Territory" programme with the opening of the 7th agency;
- the presentation at the World Water Forum of the "Multipurpose hydroelectric reservoirs" programme for which EDF led the international working group. This programme aims to incorporate the growing needs of stakeholders in the sharing of dam water resources.

Water management

In France, EDF manages 7.5 billion cubic metres of water (75% of the country's artificial reserves). Of the 50 billion cubic metres of water withdrawn by the Group, over 78% are withdrawn in France for the cooling of thermal plants and 99% of these are returned to the environment. The Strategic Water Committee, chaired by the National Water Coordinator, has established a water policy and ensures that the implementation thereof is consistent with the strategic objectives of EDF by taking into account the business constraints and external expectations. This policy is applied in each of the major river basins by a delegated basin coordinator. It is based on four major challenges: 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.

The operational management of water is the responsibility of EDF's internal Water Management group, and in each basin is overseen by regional coordination bodies acting under the aegis of the basin coordination delegate. It aims to guarantee the generator access to the heat sink by taking account of external constraints, to optimise electricity generation by coordinating the various generation methods, and to comply with EDF commitments vis-à-vis the multiple use of water (irrigation, leisure, etc..) for some of its reservoirs and downstream from its facilities. This water management is made possible thanks to EDF's hydrometeorological monitoring which requires the involvement of more than 1,100 stations and 20 internal forecasters who prepare short-, medium- and long-term forecasts of reservoir temperature, water flow and fill rate, in accordance with the weather.

The year 2015 was the 3rd warmest year since 1948. It was marked by a dry and warm spring, low snow levels and by a number of heat waves in France in July which predominantly affected the basin of the Rhône. Although it was characterised by 20% lower hydraulicity, generation plants did not experience any water shortages. As a result of the heat wave and in order to meet its obligations in terms of the multiple use of water, EDF placed 7 reservoirs under special management from the end of spring so as to keep tourist coastlines in good condition. Production losses due to environmental constraints were higher than in 2014, reaching 28 days due to high temperatures on the Rhône, but did not exceed the guidelines for discharge temperatures. These losses were minimised by the optimisation of thermal unit outages in summer in favour of coastal plants but also as a result of the good overall management of water resources by the water level management group.

EDF was therefore able to meet all of its commitments to stakeholders in terms of low-water replenishment and agricultural support, as well as almost all of its commitments in terms of restored flow – some very rare cases were subject to a low restored flow – and complied with water level requirements for tourism (tourist coastlines), in agreement with the relevant stakeholders.

3.2.2.4.3 Impact on air

At its place of use, one of the benefits of electricity is that it does not pollute the atmosphere. For this reason, it is the energy of choice for urban life. Nevertheless, the impact of its generation on air quality varies in accordance with the type of facility. Significant investments have been made to the EDF group's thermal power plants, coal-fired in particular, to limit their emissions of atmospheric pollutants.

	2015		2014	l .	2013 (res	stated)
${\rm SO}_{\rm x}$ and ${\rm NO}_{\rm x}$ emissions due to electricity and heat generation (kt)	SO _x	NO _x	SO _x	NO _x	SO _x	NO _x
EDF group	70	92 (1)	83	118	114	170
EDF	13	20	21	32	46	65

(1) The Group's NO_x emissions take into account the updating of the emission factor (see section 3.4.2.2 "Further details on the environmental data" – "Further details on air emissions") by Meco, whose emissions in 2015 were 1.4kt compared to 5.2kt in 2014.

In France, the goal between 2002 and 2020 is to at least halve SO_x , NO_x and dust emissions by thermal facilities. The target has already been achieved for NO_x and dust and is on track for SO_x .

Optimisation of environmental performance and modernisation of the thermal fleet

Thermal power plants emit the following pollutants: sulphur oxides (SO_2) , nitrogen oxides (NO_x) , dust. Faced with an increase in environmental concerns and regulatory constraints, particularly in Europe with the IED Directive on industrial emissions entering into force on 1 January 2016, all Group companies must improve the performance of their power plants.

These improvements relate to dust extraction, desulphurisation and flue gas denitrification systems, by promoting the use of more efficient technologies and selecting less polluting fuels, even changing from coal to fuel oil and/ or gas, which is cleaner.

In the island systems, recent facilities or those under construction are equipped with denitrification systems.

In Italy, Edison's thermal fleet is entirely comprised of CCGT plants. In the United Kingdom, the Group has been operating 1,330MW of CCGT since 2013. In Poland, the thermal power plants are particularly affected by pollutant emissions in the air. Most of EDF Polska's boilers are now equipped with low NO_x emissions burners. In anticipation of the European Directive on industrial emissions, EDF Polska is fitting its cogeneration units in Krakow, Kogeneracja and Gdansk and Gdynia with desulphurisation systems, and has launched a denitrification programme for its facilities. In Poland, EC Zielona Góra completed the modernisation of its power plant in 2013 and substituted coal with gas; a similar programme is planned in 2017 for the Toruń power plant.

The Group is also active in this field of research. In France, the Demether project provides support for the renovation of coal units at Cordemais and Le Havre (the last remaining coal-fired plants of the Group in France), so as to optimise the pollution abatement performance of its facilities (SO_x, NO_x and dust). In Poland, the "Flexibility of coal-fired units" project will shortly be implemented. The aim of this project is to improve the energy and environmental performance of power plants in a market that has become more flexible thanks to advances in renewable and intermittent energies. The questions relate to the ability of pollution abatement systems to withstand a drop in the minimum technical threshold, wide variation in loads and more frequent outages and start-ups.

3.2.2.4.4 Soil use and protection

As part of its industrial and tertiary activities, the Group owns, or uses under concession, large land assets. The environmental policies of the various Group entities aim to optimise the use of this land and to protect the soil and groundwater against any impact. Land use is monitored in terms of biodiversity-related programmes (see section 3.2.2.6.2 "Sensitivity of production sites to biodiversity (G4 indicators: EN11 and EN14")).

This protection is based on an "in-depth defence" type approach. The following protection methods are in place at all sites:

- 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;
- and more generally, operational procedures and high levels of awareness among operators through customised training.

The Group's industrial activities can potentially lead, or have historically led, to localised soil pollution. In order to control these situations, an action plan is in place at all of the Group's sites, comprised of four stages:

- site surveys;
- 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.

These management plans include monitoring procedures and, where necessary, treatment or natural mitigation measures. Where required, they include financial provisions to cover future costs and are systematically discussed with the relevant authority so that they may be correctly defined and implemented. In 2015 for example, a management plan relating to hydrocarbon and metal contaminated soil on the site of the penstock rehabilitation project of the Sabart hydroelectric plant (Ariège region) resulted in an agreement between EDF and Rio Tinto, owner of the land to the right of a former Péchiney plant responsible for this pollution, and a management strategy pertaining to 2,700m³ of land potentially requiring evacuation; another management plan for the Golfech site relating to hydrocarbon contamination at a fire training area resulted in the decontamination and excavation of 190 tonnes of soil for disposal in a bio-centre before the affected area could be reused. 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.

With this in mind, EDF and ERDF are continuing their decontamination of equipment containing PCBs ¹ and PCTs ² (between 50 and 500 parts per million). These action plans continued in 2015 and are on target.

Furthermore, action plans are underway to limit exposure to phytosanitary products. The targets that were set have largely been exceeded, particularly by the Group's Property and Insurance Department in France (20% between 2014 and 2015). These action plans are based on alternative techniques (mechanical, thermal or other) as well as on rules relating to companies in charge of maintaining their spaces, with the long-term goal being to terminate the use of pesticides.

3.2.2.4.5 Raw materials consumption

The Group uses fuels to generate electricity and other energy services such as uranium, coal, gas, fuel oil and biomass. It has introduced a number of measures to reduce its consumption whilst ensuring customer supply is maintained:

- changes to its generation mix with the development of renewables such as solar power, wind power and marine energy, the decommissioning of low-efficiency coal-fired plants, the commissioning of highly efficient CCGT (61% for the Bouchain CCGT), and the use of biomass in place of coal;
- the optimisation of existing facilities: improved energy efficiency (particularly by IES, EDF Energy and in China) through maintenance measures, modifications, rules relating to fuel quality (coal) and increased monitoring of efficiency levels (loss limitation);
- the real-time selection of the best performing means of generation depending on the load curve and energy performance. At IES in particular: the thermal power plants are called according to how much their production costs are in line with their fuel oil consumption per KWh produced. These power plants are started in "merit order", an economic mechanism that minimises hydrocarbon consumption. This will be further reinforced with the initiative to seek ISO 50001 certification of these thermal sites in 2016;

the implementation of a natural uranium saving strategy: EDF control over each stage of the fuel cycle, the development of performing fuels and the appropriate management of fuel within the nuclear units all contribute to the optimisation of the need for natural uranium (see section 1.4.1.1.4 "The nuclear fuel cycle and related issues"). The Group's business model based on controlling the full life cycle of its facilities allows for efficient feedback and the implementation of eco-design initiatives developed in the engineering centres. The Group is also developing an industrial ecology initiative between its various entities. The heating of liquefied gas at the LNG terminal in Dunkirk (under construction) will be carried out using the cooling water energy from the nearby Gravelines plant. A canal several kilometres long was commissioned in 2015 and constitutes an important investment in terms of the circular economy.

From a global point of view, the consumption of the various fossil fuels changed in 2015 as follows: coal -17%, fuel oil +5%, gas +4%.

Downstream, since all energy management initiatives help to conserve resources, EDF develops and markets packages for its customers that combine energy-efficient equipment, the use of renewable energy in buildings, and incentives for energy-saving behaviour.

In terms of reducing consumption of raw materials, EDF intends to reduce its paper consumption by further developing its paperless billing. It's target for 2015 was 4.2 million customers (15% of residential customers). In addition, 100% of the paper used is FSC paper (recyclable and carbon neutral) and carries the EU Ecolabel. Every EDF site is implementing a separate collection for office paper.

3.2.2.5 Waste management

3.2.2.5.1 Radioactive waste

The generation of nuclear electricity produces waste, some of which is radioactive. The largest volumes of radioactive waste are produced during the permanent shutdown of nuclear power plants: rubble (concrete, soil, etc.), scrap and piping. But the most radioactive of all is essentially the waste produced by the processing of spent nuclear fuel. However, 96% of this waste is systematically treated and recycled.

All waste is recorded in the national inventory published by ANDRA every 3 years. This ensures the transparent management and total visibility of all radioactive waste.

Since 1985, the volume of EDF's operating waste has been reduced by a third thanks to advances made in power plant operation. Waste that cannot be avoided is sorted according to type. It is then hermetically sealed by EDF in special containers so as to prevent the spread of radioactivity and to increase protection. This allows it to be securely transported to ANDRA facilities where it will be permanently stored.

Some radioactive waste can be destroyed. Solid and liquid incinerable waste (gloves, coveralls, oils, solvents, etc.) is burned in the Centraco plant oven which is operated by SOCODEI (an EDF subsidiary). Other waste can be reduced in volume to facilitate its storage: this is the case with metallic waste (valves, pumps, tools, etc.) which is melted into ingots in the melting oven at the same plant.

^{1.} PCBs: polychlorinated biphenyls.

^{2.} PCTs: polychlorinated terphenyls.

Waste that can be neither recycled nor destroyed must be placed in a storage facility until such a time that its radioactivity returns to its natural radioactivity level. It is stored in ANDRA storage facilities. 90% of the volume of radioactive waste generated by EDF's nuclear fleet can be stored in the facilities in Morvilliers and Soulaines (Aube region). Two new storage facilities are planned for the 10% that cannot be stored. This is essentially waste produced by the processing of spent fuel and is the most radioactive of all waste. For this waste, which is very long-lived, the Act of 2006 approved the solution of a geological storage facility (Cigéo project). Research is underway for another storage facility which would be for graphite waste from first-generation nuclear plants (currently being decommissioned).

In accordance with the 2006 Act on the Management of Radioactive Waste, EDF is also contributing to research into the separation and transmutation of the most radioactive waste (transformation of very long-lived radionuclides into stable or short-lived elements).

The entire French radioactive waste management system is controlled by independent authorities: the French National Assessment Board (*Commission Nationale d'Evaluation*) controls the work of ANDRA and the ASN monitors all existing sectors and upcoming projects to ensure their safety and lack of risk to public health and the environment.

3.2.2.5.2 Radioactive effluents

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. 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).

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 in section 3.5.2 "Environmental indicators".

3.2.2.5.3 Industrial waste

So-called conventional waste is waste disposed of externally during the year, produced as a result of construction work (including decommissioning and heavy maintenance), operational phases (e.g. sludge) and tertiary work (e.g. office waste). Radioactive waste is excluded from this scope and accounted for separately in accordance with specific regulations, as is coal ash and gypsum, given the quantities produced and the opportunities for their recovery. The report exclusively covers the waste disposed of on-site and excludes waste that is stored on-site, waste awaiting removal, materials reused on-site (e.g. earth and rubble) and equipment that could be reused (sold or gifted). Construction and decommissioning waste is included in this report, if its management falls under the responsibility of the EDF group. On the other hand, waste managed by service providers is not accounted

for. Waste from decommissioning projects, which varies enormously one year to the next, represents more than half of the total tonnage removed.

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 complies with the waste management hierarchy and focuses on reduction at source, sorting, recovery (construction waste in particular – this accounts for the largest quantities of waste) and the upstream use of eco-friendly products.

Waste prevention measures

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. They have action plans that aim to limit waste production and are incorporated within the management system action plans in place (at EDF and Edison for example) with associated indicators. A number of levers for action are used: internal procedures, specific rules set out in the company specifications (EDF EN among others), innovative technical solutions (including high voltage cables for direct burial, limiting movement of excavated soil), numerous awareness raising initiatives for staff and service providers (communication, training, EDF prevention guide incorporating 30 best practices). Given its importance, there are specific actions that relate to construction waste, including a dedicated EDF working group and developing the concept of sustainable construction. In order to gather information on best practices in this field, a "Waste competition" was launched in 2011 and has since been extended to Group companies.

Waste management and recovery

In addition to the prevention measures, the Group's environmental policy aims to improve the recovery of waste that is produced. The main actions implemented consist of:

- increasing waste reuse, particularly during decommissioning phases (decommissioning of IES plants, spare parts recycled at EDF Polska, soil during construction work, etc.);
- the efficient sorting of waste so that it may be sent to energy or material recovery companies in line with specific objectives defined in the environmental policies of the entities and relayed in the management contracts of the dedicated recovery companies and units (e.g. EDF EN's PV Cycle and First Solar agreements to take panels back at the end of their useful life);
- developing secure donations through specific agreements (office equipment in particular);
- reducing the hazardousness of waste, namely through limiting the use of hazardous products (see section 3.2.2.1.2 "Management and prevention of environmental risks");
- implementing, as widely as possible, eco-designed facilities that take into account their environmental footprint and a life cycle approach.

EDF's sustainable development policy has reinforced the goal of recovering all recoverable waste, increasing this from 75% in 2011 to 90% in 2015. The recovery rate for all conventional waste produced as a result of generation and engineering (excluding coal fly ash and gypsum which are recovered in full) was 92% in 2015.

Results within the Group	2015	2014	2013 restated
Volume of conventional industrial waste recovered or transported for recovery (in tonnes)	365,744	392,815	293,752
Waste recovery rate (%) – EDF group	80.6	79.9	75.1
Waste recovery rate (%) – EDF	92	92.6	88.9
Waste recovery rate (%) – EDF Energy	94.5	98.5	90.6

Impact of decommissioning and maintenance activities

In 2015, as in previous years, construction, decommissioning and maintenance activities increased, particularly in France (including island systems) and in the United Kingdom, impacting the overall volume of waste generated and recovered.

In France, waste management schemes are now systematically implemented prior to any major construction, decommissioning or maintenance project. Feedback is provided annually from the EDF business units in the spirit of continuous improvement.

The recovery of combustion products: a circular economy initiative

The majority of countries worldwide are turning towards a circular economy that breaks away from the linear economic system (extraction, production, consumption, waste) in favour of the efficient use of natural resources so as to limit the environmental footprint of activities. 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. In France, Article L. 110-1-1 of the French Environmental Code, created by Law no. 2015-992 dated 17 August 2015 on the energy transition for green growth, calls for the economical and responsible use of natural resources and primary raw materials as well as, in order of priority, the prevention of waste production, namely through the reuse of products, and, in line with the waste management hierarchy, the reuse, recycling, or failing those, the recovery of waste. In this respect, Article L. 541-1 of the French Environmental Code, in its amendment to the aforementioned Law dated 17 August 2015, specifies that the national waste prevention and management policy is a vital lever in the transition to a circular economy. Furthermore, Decree no. 2015-1827 of 30 December 2015 changes the waste prevention and management regulation in such a way as to promote the transition to a circular economy.

The Group has been committed to this approach for a number of years, with ethical systems in place for the recycling and reuse of thermal plant products. Combustion fly ash and gypsum produced by desulphurisation are recovered in full by all thermal generation plants both in Europe (France, Poland, United Kingdom) and in China. Overall, several hundred thousand tonnes of ash are used in building roads and in the cement industry (with savings of approximately one tonne of CO_2 avoided per tonne of ash used ¹). In Poland, the Ekoserwis subsidiary focuses on this activity. It enabled the recovery of 300,000 tonnes of ash during the construction of the S7 expressway and is developing research plans to further improve the recovery of these products.

In France, in order to find other ways to recover these products and waste, the Group has made a commitment to the Institute of Circular Economy and is working in collaboration with industrial bodies and universities to develop new methods and tools.

3.2.2.6 Preserving of biodiversity

3.2.2.6.1 The EDF group's biodiversity policy (G4 indicator: DMA)

The EDF group's industrial activities take place in sometimes remarkable natural areas with which they interact. Its activities therefore benefit from the services of these 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 around its biodiversity policy (2009) which is based on three objectives, in line with the Global Reporting Initiative (G4) 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.

In France, EDF's goal for its hydropower facilities is to ensure ecological and/or sedimentary continuity where required (increase in reserved flows, upstream and downstream passes for migratory fish, coordinated management of sediment transport, etc.) in order to ensure that the bodies of water affected are ecologically balanced.

Biodiversity partnerships

The Group's Sustainable Development Department directs and oversees, by liaising directly with the business units and subsidiaries, a biodiversity partnership policy through which all parties contribute to the implementation of EDF's biodiversity roadmap. In France, it primarily works with longstanding 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), the French Nature Reserves (Réserves naturelles de France), the French Committee of the International Union for the Conservation of Nature (Comité français de l'Union internationale pour la conservation de la nature), the Federation of National Botanical Conservatories (Fédération des Conservatoires Botaniques Nationaux), the Federation of Natural Spaces Conservatories (Fédération des Conservatoires d'Espaces Naturels) and the National Federation for Fishing in France (Fédération nationale pour la pêche en France). The Group's companies operate according to the same principle. EDF Energy has drawn up a biodiversity standard which includes its biodiversity strategy and action plan. Seven EDF Energy sites have been audited according to the Wildlife Trusts' Biodiversity Benchmark. For more than 20 years, EDF Energy has worked in partnership with the Suffolk Wildlife Trust at Sizewell and the Natural England Wildlife Trust. EDF Polska has begun cooperating with OTOP (Polish society for the protection of birds).

^{1.} EDF calculation based on average greenhouse gas content by country, including life cycle analysis (LCA), determined according to the generation mix per country provided by the International Energy Agency (IEA) 2012 and according to the LCA of generation methods provided by the International Panel on Climate Change 2012.

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 actions ¹. In 2015, the Biodiversity and "Island Electrical Systems" guides and handbook were published and handed over to all EDF employees in Corsica and overseas territories. In every unit of the Island Energy Systems Division, staff members with key responsibilities (quality control, environment, communication, generation, networks maintenance, etc.) attended a training session on "EDF's Island Energy Systems and biodiversity" in 2015.

Research and development on biodiversity

An "Environment R&D" programme provides the framework for the Group's research into its interaction with the environment. With regard to biodiversity, the ecosystems and associated ecosystem services, the R&D activities are based on the following principles:

- assessing the ecological value of the company's land and the consideration thereof in industrial decision-making;
- understanding and reducing the impacts of generation on aquatic and terrestrial biodiversity;
- improving the practices of environmental mitigation and the consideration of interactions between ecosystem services and the company's activities;
- identifying solutions for restoring and re-establishing the sediment continuity of watercourses.

Main actions carried out in 2015:

- assessment of the efficiency of the pondage mitigation measures put in place on 13 French rivers;
- analysis of the downstream migration behaviour of eels on the Rhine;

- report on the "Scoop a fish" system testing which aims to reduce fish mortality rates in the water intake structures;
- identification, analysis and testing of benchmarks used to assess the ecological quality of EDF land;
- work on the viability modelling of populations so as to eventually be able to better estimate the impacts of the company and better develop measures to promote biodiversity;
- identification and analysis of ecosystem service assessment models based on mapping tools, so as to be able to quantitatively characterise the interactions between ecosystem services and the company's activities.

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. This project, which aims to help slow down biodiversity erosion and support local movements, has been approved by the Ministry of Ecology, Sustainable Development and Energy.

3.2.2.6.2 Sensitivity of generation sites to biodiversity (G4 indicators: EN11 and EN14)

The Group manages 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.

NUMBER OF EDF SITES LOCATED LESS THAN 5KM FROM A PROTECTED SITE (BY IUCN CATEGORY)

	France		
IUCN categories	Mainland	Overseas departments	UK
I	34	8	0
ll	18	16	0
III	190	3	1
IV	79	16	10
V	142	4	2
VI	0	0	0
Natura 2000	310	0	5
Biodiversity-rich areas	532	24	4

The EDF sites are located in areas that are home to the following numbers of threatened species (G4 indicator: EN14):

	IUCN categories of threatened species					
	Red List – World			Red List – France		
Country	CR	EN	VU	CR	EN	VU
Mainland France	5	10	37	19	67	219

CR: critically endangered; EN: endangered; VU: vulnerable species.

1. Already effective introduction of a generic guide and "Hydropower", "Nuclear", "Property" and "Thermal" guides.

MAIN ACTIONS CARRIED OUT IN 2015

EDF	EDF is committed to mapping the ecological value and potential of its sites, based specifically on a methodology developed and adapted by the French National Museum of Natural History (IQE ecological quality index). Preliminary analyses enabling this assessment cover at the end of 2015 approximately 22% of EDF SA's sites.
EDF Énergies Nouvelles	Introduction of an adapted management system for the vegetation at its solar power plants in France.
EDF Energy	 Completion of inventories on all land owned (1,480ha). Annual biodiversity monitoring programme.
EDF Polska	 1,200 hectares belonging to EDF Polska were inventoried by the Ligue de protection de la nature, covering all EDF Polska sites.

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3.2.2.6.3 Impact management and characterisation (G4 indicator: EN12)

In general, the potential impacts of the EDF group's generation activities mainly concern:

- water and aquatic biodiversity, largely as a result of thermal facilities (thermal and nuclear);
- 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.

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However, some thermal or hydropower plants may also include areas for the protection or restoration of biodiversity.

For all large-scale projects, specific studies on the biodiversity effects are systematically conducted and documented as part of the environmental impact assessment (EIA). Similar processes are also performed at facilities in operation.

MAIN ACTIONS CARRIED OUT IN 2015

EDF	 The Hydropower Generation Division's "Ecological continuity" programme: launch in 2015 of 50 fish and sediment diagnosis projects to clarify the continuity challenges of each site (4 fish farms completed in 2015). "Fish continuity" programme: under the classifications in list 2,129 farms must be equipped within 5 years (by 2017-2018) in order to guarantee fish and sediment continuity. Highlights for 2015 include: progression to the final phase of the fish ladder construction project in Strasbourg; opening of the restored branch of the Rhine (almost 8km in length) and the re-establishment of all natural wet and dry environments that encourage the return of numerous species. At least a 5% reduction in the use of phytosanitary products compared to 2014, in line with the government Ecophyto plan to reduce the consumption of phytosanitary products by 50% over the course of the decade.
Edison	 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.

3.2.2.6.4 Protection and restoration (G4 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:

- EDF and ERDF are committed to a number of national action plans to protect the Pyrenean desman, the black vulture, the bearded vulture, the apron and Bonelli's eagle and also take part in regional variations of these plans such as the European otter project in the Centre region;
- the Group's companies also participate in LIFE programme projects, such as those to protect the alosa and the desman (EDF), the LIFE Gypconnect project (ERDF) and the LIFE avifauna project (EDF Desmaz);
- certain Group sites contribute to the protection goals for Natura 2000 areas and have implemented Natura 2000 agreements; the Group is working on an internal policy to adopt recommendations to combat invasive alien species and to 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. In 2015, the first prototype tests began on various types of soil and plants.

MAIN ACTIONS CARRIED OUT IN 2015

EDF	 Opening of the restored branch of the Rhine, as part of the Kembs environmental project. This operation consisted of restoring a branch of the river almost 8km in length, and the re-establishment of all natural wet and dry environments that encourage the return of numerous species.
Dunkirk LNG terminal	• Confirmed nesting of little terns and plovers close to the site. Successful transfer of compensatory environmental measures to the General Council and definition of a management plan for these areas. Renewal of the agreement with nature NGOs for the on-site observation of these species.
Électricité de Strasbourg	 Construction of a hamster "road-drome" (for the Great Hamster of Alsace) as part of the relocation of a high-voltage power line for the construction of the ring road south of Strasbourg.
EDF Energy	Wildlife crossings and tree planting have been organised at the Hinkley Point C Cannington bypass so as to maintain habitat connectivity for bats and other species. More than 67 hectares of habitat have been developed for reptiles displaced from Sizewell C. Completion of the management plan to ensure the conservation and improvement of 100 hectares of gravel pits; the Dungeness B site formerly used for gravel extraction is now protected under the Ramsar Convention and the Habitats Directive (Special Areas of Conservation and Special Areas of Protection).
Norte Fluminense	 Reforestation and tree maintenance (indigenous species) on land adjacent to the industrial site, over a surface area of 11 hectares.

3.2.2.6.5 Offsetting measures (G4 indicator: EU13)

The Group applies the principles of mitigation hierarchy¹, for which the French variation is the "prevent, reduce and offset" approach.

In France, EDF continues to collaborate with the Combe Madame Biodiversity Initiative association and local stakeholders, to restore subalpine habitats in the Belledonne mountain range (Isère region). This experiment is part of the action initiated by the Ministry of Ecology, Sustainable Development and Energy (MEDDE) to test the relevance and feasibility of the offsetting proposals. In 2015, the launch of the experiment was officially acknowledged by a letter signed by the Ministry for Ecology and EDF also started working with IRSTEA and the French National Museum of Natural History to come up with a method for assessing whether ecological equivalence has been achieved. 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 bought 67 hectares of arable land as part of its offsetting of the impacts of Sizewell C. Work began in 2015 to create 6 hectares of wetlands.

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.

3.2.2.6.6 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. EDF organised 66 events

in 2015, at which it offered introductory wildlife talks and seminars with local NGOs. In Guadeloupe, EDF is involved in a study on green turtles in partnership with the *Kap Natirel* association. 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 Brazil, EDF Norte Fluminense is continuing its work with the *Mico Leão Dourado* association which works on creating forest corridors for the golden lion tamarin and collecting scientific data on this endangered species.

3.2.3 SOCIETAL INFORMATION

In line with compliance rules and as part of the values and commitments that guide its employees, the Group is working to establish high-quality dialogue with all of its stakeholders, at all levels (internationally, nationally and regionally). This dialogue takes many different forms (awareness raising, co-construction of projects, assistance, etc.) and leads to significant contributions from stakeholders (in combating energy poverty, economic and social contributions to the communities, and consumer health and safety in particular). EDF's societal measures comply with the principles of the UN Global Compact. It is integrated in the EDF group's sustainable development policy, its CSR commitment and the public service contract.

3.2.3.1 Ethics and compliance

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. This initiative reached completion in 2007 with an EDF SA Ethics Handbook, updated in 2013 by the Group, to include a new Group Code of Ethics. Fraud prevention has been stronger since the end of 2010, and the drafting of a corruption prevention policy began in 2015. A Group-wide project aimed at ensuring compliance with competition rules was approved in 2010. With regard to preventing the violation of human rights, the Group has been a member of the Global Compact since 2001.

^{1.} Principle in accordance with IFC PF6: Performance Standard 6 of the framework of the International Finance Corporation (IFC, part of the World Bank), dedicated to biodiversity conservation and sustainable management of living natural resources.

In December 2015, a Group Ethics and Compliance Department was created within the Secrétariat Général. Its aim is to increase visibility of the Group's ability to control compliance-related risks, through the creation of a Group ethics and compliance policy and a consistent management and control framework for the entire Group.

Ethical guidelines

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 EDF's Executive 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. Once it had been rolled-out in full, the Group companies focused on consolidation activities. Then, in 2015, Edison and EDF Luminus launched a dedicated kit-based e-learning system for managers. Démász introduced a new tool which it uses to communicate regular ethical messages. EDF Polska held workshops on the Group's three core values, while EDF Norte Fluminense set up its warning system to reconcile the requirements of the recent Brazilian legislation and the related EDF group principles.

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, including dedicated staff and a secure and confidential whistleblowing system, available 24/7¹. The governance is structured as follows:

- the Ethics Committee of the Board of Directors ensures that ethical considerations are taken into account in the work of the Board and in the management of the company;
- the Group Ethics and Compliance Commission which is tasked with providing advice, consulting services and support – issues opinions and provides recommendations to 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 whistleblowing reports at Group level (known as "central alerts"). It receives reports from the EDF Ethics Officer on central alerts and other reports from 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;
- an ethics representative: in each Group company, an ethics officer is appointed by the company executive. EDF SA has a network of Ethics Officers in Divisions and Units.

In terms of reports, the Group's warning system has led to the examination of 101 files of which 91 were ethical issues reported in 2015 (21% more than in 2014). The majority of issues reported by Group employees related to "Respect for persons", a situation which has remained stable for several years.

Ethical issues reported through the Group system	2015	2014	2013
Respect for persons	47	26	23
Of which harassment	16	12	3
Of which discrimination	16	9	12
Of which acknowledgement	15	5	8
Integrity	15	4	3
Of which corruption	0	0	0
Of which fraud	11	2	1
Of which conflict of interest	2	1	1
Of which favouritism	2	1	1
Performance	9	1	0
Environment	7	8	2
Solidarity	5	1	1
Other	8	35	1
TOTAL	91	75	30

1. edf.fr/groupe-edf/responsable-et-engage/ethique-et-responsabilite-d-entreprise/alerte-ethique.

The percentage of issues resolved through dialogue, information or line manager intervention in 2015 was 89%, with the remaining 11% requiring remedial measures or disciplinary action, which may include dismissal. 51% were reported by employees, with the remainder being divided between third parties (31%) and customers (16%). Suppliers represented only a

marginal percentage. Since 2014, in addition to the alerts monitored by the Commission, EDF has had a reporting system within its companies for serious breaches of the Code of Ethics, handled directly by the companies. In 2015, 60 cases were detected by the companies and are broken down as follows:

	Number of cases detected during the year				
Types of serious breaches to the Code of Ethics		EDF SA	France (excluding EDF SA)	Europe (excluding France)	International (excluding Europe)
1. Disrespect for persons	30	13	11	5	1
2. Fraud ⁽¹⁾	29	0	4	19	6
3. Violation of Human Rights	0	0	0	0	0
4. Breach of competition law	1	0	0	1	0
5. Serious damage to the environment	0	0	0	0	0
TOTAL	60	13	15	25	7

(1) Of which no incidents of corruption. There have been no fines or penalties relating to corruption.

Fraud prevention

In 2015, as part of the action plan to combat fraud, awareness-raising actions continued to strengthen the performance and effectiveness of antifraud measures. In addition, guidelines for handling fraud alerts were made available in the Managers community of the Group Intranet. Based on the Chairman's decision on fraud issues and the Group's Code of Ethics, this educational guide entitled "Comment traiter les alertes fraude" (also available in English) advises Group managers on how to handle alerts appropriately – and any failings that may indicate potential fraud – whilst protecting the rights of all parties involved and complying with Group rules and values. An information leaflet (in French and in English) for all EDF employees has also been available since June 2015.

Corruption prevention

In January 2014, an anti-corruption compliance programme was launched by the Group's Secretary General. In collaboration with the Group's Legal Department, the anti-corruption compliance policy will be updated in 2016 by the Ethics and Compliance Department and will include a set of guidelines, application notes and a Group e-learning programme.

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 instil 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 2015, over 5,431 employees had been trained through an e-learning programme developed in several languages, in France and other countries¹. 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.

Although EDF's competition compliance programme is not enforceable against third parties and is not therefore imposed upon them, it is clear that compliance with the programme's competition rules must be applied in all relations between EDF group employees and their customers, competitors, partners and service providers.

An assessment of existing disputes has been carried out and, in accordance with the criteria used to make provisions, no provisions were made for current disputes. The competition compliance programme is subject to an annual report and to the EDF group's internal control procedures.

3.2.3.2 Respect of human rights

The EDF group is committed to respecting human rights in all areas in which it operates, in its activities and throughout its entire value chain.

The United Nations Guiding Principles on Business and Human Rights, adopted in 2011, constitutes the reference text for the Group in all matters relating to human rights.

Furthermore, in its Code of Ethics, the EDF group also refers explicitly to the Universal Declaration of Human Rights, the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work and Fighting Discrimination, the OECD Guidelines for Multinational Enterprises, the Convention on the Elimination of All Forms of Discrimination against Women and the Convention on the Rights of the Child.

In 2009, in the EDF group's social responsibility agreement which is still in force, the Group commits, in all companies that it controls, "to comply and ensure compliance" with the fundamental conventions of the ILO and in particular conventions 87 and 98 relating to freedom of association and the principles of collective bargaining. In 2012, EDF entered into a collective

^{1.} Of which 2,405 in France and 2,936 internationally with the main contributors being EDF Energy, Edison, EDF Polska and Bert. Added to that was the launch in 2015 of business-specific modules, such as the end of the regulated tariffs and the long-term contracts for businesses.

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agreement in China¹. EDF China's union committee (7 members elected for 5 years) represents EDF China employees in accordance with Chinese Law and the principles and values of the EDF group. In 2013, the EDF group committed to *"not tolerate any human rights violation, fraud or corruption, in any of its companies or suppliers"* in its corporate social commitments presented to the General Meeting.

The EDF group is aiming for 13 of its companies to reach the Advanced level of the UN Global Compact (of which EDF has been a member since 2001) by 2017. At the end of 2015, 14 companies have already signed the Global Compact, including Dalkia, and 3 have reached the Advanced level: EDF, Edison and EDF Luminus. The Group has also committed to introducing ethical clauses into its purchase agreements.

In order to identify and assess the actual and potential negative impacts of its activities and those of its suppliers, EDF:

- considers the impacts on human rights in its investment screening criteria, particularly in countries deemed to be at risk, and in all projects;
- carries out audits on the sensitive supply chains (e.g. coal as part of the Bettercoal association, uranium) as well as more than 45 supplier audits on "at risk" purchasing segments².

The EDF group is also committed to raising awareness among all of its staff on human rights. Together with EDH (*Entreprises pour les Droits de l'Homme*), of which EDF is a founding member, it has developed a human rights e-learning programme which will be gradually rolled out from the end of 2015. EDH is also offering an in-depth, one-day training session for exposed managers and employees.

EDF has put in place an ethics reporting system to allow employees and other stakeholders (customers, suppliers, third parties) to register any requests or complaints. This system is the subject of a quantitative annual report (in 2015 no alerts related to "Human rights³"). EDF Energy employees and suppliers can also report any concerns they may have via the "SafeCall" system.

A number of Group entities and subsidiaries have reinforced this system in 2015, in a variety of ways:

- by maintaining SA 8000 certification Norte Fluminense;
- by beginning implementation of the new UK Modern Slavery Act EDF Energy;
- by joining a cooperative platform for supplier self-assessment Nuclear and Thermal Generation Department;
- by creating a human rights report based on GRI G4 Edison.

3.2.3.3 Tax transparency

EDF has introduced a Group tax policy to determine the principles applicable to its relationships with its customers, with public institutional and tax authorities and with its financial and commercial partners.

3.2.3.3.1 The Group tax policy

A wide scope

The policy covers all of the Group's taxes: direct and indirect taxes, contributions, tax levies, customs charges to be paid by the business or its customers (when EDF acts as collector on behalf of a third party).

It must be applied throughout the Group, by all entities regardless of their nature or geographical location. All Group staff must comply with this policy which aims to protect the Group's reputation and to reduce any tax risks to which it may be exposed through its activities.

Clear directions

To strengthen the tax performance of the Group in strict compliance with national and international tax laws and regulations. To control tax risks through the continued and systematic improvement of the identification and management of tax risks in all Group entities, predominantly by way of regular tax reviews and appropriate action plans. To organise the reports and action required to ensure the continuous forecasting and optimisation of the fiscal cash flow⁴, as well as the careful management of the Group's effective tax rate. To maintain a transparent and constructive relationship with tax and public authorities.

Ethical principles

EDF applies a transfer pricing policy, compliant with the OECD principles, to justify the income that arises therefrom and to calculate the tax sums due in all jurisdictions in which the Group has a presence. EDF has no legal entity (company, branch or sales office) in any country or territory on the list of non-cooperative countries and territories as defined by French and international legislation. A presence in any of these states must be justified by economic business reasons and never for purely tax reasons. Similarly, cash flow via these countries is prohibited where it is for tax reasons only.

Presence in Luxembourg and Ireland

Like all major French and international groups, EDF relies on captive and mutual insurance companies to supplement the cover provided by traditional insurance markets. The captive and mutual insurance companies enable EDF to reduce the cost of its insurance schemes and the total sum of premiums paid. EDF has two captive insurance companies which are based in Ireland and Luxembourg:

- Wagram Insurance Company Ltd. (wholly owned by EDF), insurance company founded in 2003 in Dublin which is involved in the majority of the Group's insurance schemes;
- Océane Re (99.98% EDF subsidiary), reinsurance company founded in 2003 in Luxembourg to reinsure EDF's nuclear civil liability risk.

3.2.3.3.2 Taxes paid by the Group

In 2015, the EDF group's tax expense was €3,641 million, a 1.3% increase (€48 million) compared to 2014 (+0.6% in organic terms). This increase notably includes an increase in taxes paid on the nuclear market in the United Kingdom. Income taxes paid by the Group stood at €1,508 million in 2015 (€2,614 million in 2014): the €1,105 million decrease in the company's tax liability is essentially due to the adjustments in France to the income tax balances of previous years and the reduction in tax advances paid in 2015. The effective tax rate (ETR) was 28.5% in 2015.

^{1.} The collective agreement was implemented in 2013 for employees of the holding company in China. Its main objectives were the continuous improvement of working and employment conditions for employees, and to promote social dialogue.

^{2. 45} audits carried out in 10 countries (including China, Bangladesh, Tunisia and Poland).

^{3.} See section 3.2.3.1 ("Ethics and compliance"), Group company reports for serious breaches only.

^{4.} Fiscal cash flow: tax paid.

BREAKDOWN BY COUNTRY OF TAXES PAID BY GROUP SUBSIDIARIES FULLY OR PARTIALLY INTEGRATED

In millions of euros Country	2015	2014	2013
France	1,041	2,045	1,446
Italy	47	214	122
United Kingdom	157	145	158
Egypt	30	95	103
Belgium	168	76	77
Norway	(38)	(40)	(58)
China	7	20	28
Hungary	17	14	12
Poland	12	10	19
Brazil	33	7	13
Portugal	4	7	10
United States	5	4	(3)
The Netherlands	5	4	3
Canada	16	3	2
Mexico	na	3	na
Other countries	5	7	6
TOTAL	1,508	2,614	1,936

BREAKDOWN OF TAXES PAID IN OTHER COUNTRIES

In millions of euros	2015	2014	2012
country	2015	2014	2015
Luxembourg	1	2	na
Vietnam	2	2	2
Singapore	2	1	1
Greece	na	1	1
Japan	na	1	(6)
Ireland	na	0	na
Switzerland	na	0	0
Germany	1	0	6
Spain	na	na	2
Austria	0	na	na
TOTAL	5	7	6

3.2.3.4 Listening and dialogue with stakeholders

The Group has made listening and dialogue with its stakeholders a major focus in the management of its activities and projects, at all levels and in all jurisdictions. This approach is based on using the knowledge gained from listening to foster constructive dialogue. This dialogue is used, in the quest for continuous improvement, to enrich projects and tools and to gain a deeper understanding of stakeholder expectations. This drive is reflected in the Group's sustainable development policy, along with recommendations prepared in conjunction with Group companies, to whom they are applicable. As such, having taken stakeholder expectations into account and with continuous improvement in mind, each Group entity and company applies the methods deemed most appropriate in each situation. As part of the EDF group's commitment to promoting transparency and open dialogue on sensitive issues with all stakeholders, its goal was to increase the number of companies that have set up a "formal space for dialogue" from 3 to 8 between 2013 and 2015. At the end of 2015, 4 "spaces" had been set up (EDF SA, EDF Energy, Edison and ERDF).

Listening and dialogue with stakeholders should span all projects and operational activities, should be led by the management staff and represented by the Executive Committee member in charge of sustainable development.

3.2.3.4.1 Listening

Listening can take on a number of forms; here we have split these into two main categories: a) the use of polls and surveys, and b) dialogue occurring through EDF's strategic partnerships. Both involve the mapping of stakeholders.

STAKEHOLDER MAPPING PROCESSES



Mapping of EDF stakeholders

Listening to the expectations of our stakeholders enables us to develop and refine our strategies and policies.

The main stakeholders at EDF central level associated with the Sustainable Development Department are presented opposite.

The mapping of EDF stakeholders enables business units to gain information through:

- local consultation on generation sites and new industrial projects;
- relations with customers, suppliers, sector partners, socioprofessional organisations, public authorities and national and international institutions;
- operational partnerships with NGOs and the academic world;
- participation of experts and specialists in independent boards or panels to provide Group managers with external opinions;
- public information and education, for young people in particular, on energy and sustainable development issues.

With the aim of preventing, reducing and offsetting the impacts of its activity on the environment, the quality of this dialogue with all stakeholders relies on the success of the Group's sustainable development policy and its performance.

EDF entities and their stakeholders work together to identify and define their areas of influence. The expectations of stakeholders are analysed with a view to potentially becoming compliance obligations.

The use of satisfaction polls and surveys

Listening to stakeholder expectations has become an essential part of the operational activity of Group entities and companies. This has always been a major focus at EDF Energy, as well as in entities where marketing is an inherent part of business (the Commerce Division and Dalkia in particular); within the Group, however, these polls are now being used in other domains including nuclear, hydropower and thermal power:

- local residents survey on nuclear generation¹, thermal generation² and hydropower generation³: Carried out since 2009 by the survey company IPSOS, this research tool measures local residents' opinions on nearby plants and on energy. 19 nuclear generation sites, 7 thermal sites, 15 hydropower sites and 2 nuclear sites under decommissioning (Creys-Malville and Brennilis) were the subject of this survey in 2015;
- service provider survey on nuclear generation⁴ and thermal generation⁵: Service providers' view of EDF as an "instructing party" is measured regularly via surveys, in order to take into consideration the progress to be made in terms of the conditions for the provision of services;
- Sustainable Development Survey ⁶ (SDS): this monitors French and European opinion on topics relating to the environment, energy and sustainable development, and is carried out by EDF's R&D department in five European countries. In 2015, this confirmed that environmental degradation is not the chief concern of Europeans, with the exception of Germany, and to a lesser extent, France;
- Internal Environmental Survey (BIPE⁷): a survey carried out on a sample of EDF and ERDF officers. The questionnaire, which was rewritten this year, covers the following themes: environmental issues, various sources of energy and their impact on the environment and environmental challenges specific to EDF, from an institutional or professional point of view.

In the United Kingdom, EDF Energy organises regular meetings (three to four times per year) with local stakeholders which cover matters related to its business activities and their impacts. EDF Energy was recently involved in an external survey conducted by PWC to identify and design products and services that are best adapted to the customers of each sector. All survey methods, both quantitative and qualitative, are used. This may be in the form of face-to-face interviews, telephone interviews or via social networks.

A 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. Against the backdrop of the global debate on the energy transition towards less carbon-intensive economies, EDF continued its strategic partnerships with the think tanks of the Institute for Sustainable Development and International Relations (IDDRI) and the Nicolas-Hulot Foundation for Nature and Mankind (FNH). 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. Long-term partnerships with the National Museum of Natural History (Muséum national d'histoire naturelle - MNHN), the International Union for the Conservation

of Nature (Union internationale pour la conservation de la nature – UICN), the Bird Protection League (Ligue pour la protection des oiseaux – LPO), the Coastal Protection Agency (Conservatoire du littoral), the French Nature Reserves (*Réserves Naturelles de France* – RNF) and the National Federation for Fishing in France (*Fédération nationale pour la pêche en France*) promote technical exchanges and dialogue between the national NGOs and the company's various businesses.

3.2.3.4.2 Dialogue bodies

Between voluntary initiatives and involvement with regulatory bodies, the bodies dedicated to dialogue initiated by EDF or to which it contributes are both numerous and varied. Among these ⁸:

- the Public Debate Commission (Commission du débat public), primarily involved in three EDF Énergies Nouvelles offshore wind power projects;
- local information commissions (Commissions locales d'information CLI), which keep local residents up-to-date on the activities of nuclear facilities, as required by regulations. In the latest review, they mainly concerned the protection of populations and investments to increase nuclear safety in the wake of the Fukushima accident;
- local and regional water authorities, such as the River Basin Committees and the Local Water Commissions;
- monitoring committees (Flamanville EPR, the Poutès dam, Dunkirk LNG terminal, etc.);
- independent panels⁹, several panels of external experts provide Group managers and companies with their view on the major topics of interest to EDF; agenda items are proposed by both parties and the recommendations made are reviewed two years after the work has been completed:
 - the Sustainable Development Panel (SD Panel) is a channel for dialogue, made up of international and independent specialists in fields that relate to the Group's activities. This panel met in 2015 to discuss water and its relationship with energy and climate change, and to discuss the matters of multiple use and value creation in hydropower facilities. In a context of increased pressure on this resource, the SD Panel encouraged EDF to continue its long-standing work on this issue, confirmed as a major challenge for companies in the energy sector. The Sustainable Development Council in France – whose members are also external specialists and representatives on 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 action regarding sustainable development. In 2015, the International Panel and the French Council met to discuss the strategic direction of the EDF group (CAP 2030); very early in the launch of this initiative, Council recommendations to better distinguish major trends, uncertainties and potential failings were incorporated, so as to operate in response using alternative scenarios,
 - the Stakeholder Advisory Panel advises EDF Energy's CEO and Executive Committee on corporate strategy and sustainable development. In 2015, the Panel, which is comprised of five independent members, notably discussed the Hinkley Point project, and in the build-up to COP 21, EDF Energy's position on climate change.

3. IPSOS Public Affairs, Local residents opinion survey on generation sites, hydropower plants, 7th edition, 2015.

- 5. Source: Service provider survey, STSR Committee of 4 June 2015.
- 6. Source: 2014 results of the Sustainable Development Survey.
- 7. Source: 2014 results of the Internal Environmental Survey.
- 8. Independent of the mediation system set up by EDF for its customers.
- 9. The most formal of the "formal spaces for dialogue".

^{1.} Source: IPSOS Public Affairs, Local residents opinion survey on generation sites, nuclear power plants, 7^{th} edition, 2015.

^{2.} IPSOS Public Affairs, Local residents opinion survey on generation sites, thermal power plants, 7th edition, 2015.

^{4.} CRG Ecole polytechnique, DPN service provider survey, 2014 report.

In 2015, ERDF introduced a Stakeholder Council based on the Sustainable Development Council model. It is comprised of ten independent experts qualified in fields of interest to the business (economics, innovation, land, digital age, etc.). The first meeting was held in December 2015 to discuss the roll-out of the Linky meters.

There are other panels in existence that are devoted to topics associated with sustainable development, such as the EDF Scientific Council and the EDF Medical Council.

Continuous local consultation: some examples from 2015

In addition to the regular exchanges that the Group has with its institutional stakeholders, Group entities and companies have taken up the practice of consultation, resulting in some of these companies formalising their commitments in the form of a charter (including EDF EN and DPIT for example). Generally speaking, this consultation at various territorial levels is carried out either for the purposes of a specific project, or as and when required as part of the operation of core activities.

For example, Dalkia is involved in the work of the regional councils in the IIe-de-France and Nord-Pas-de-Calais regions and the work of professional federations at national level (FEDENE, AMORCE, SER, FBE, IGD, MEDEF, etc.) and European level (EFIEES, EuroHeat&Power, etc.). With regard to hydropower generation, co-construction measures are used by the "One River, One Territory" agencies, in the eastern Jura mountains for instance, with the socio-professional players of the Ain and Jura departments, with a view to sharing the economic assessment of the region and collectively identifying the areas on which the future agency should focus its work. In the Aspe Valley in the Pyrenees (*vallée d'Aspe*), a voluntary consultation has led to the identification of 4 key themes (environment and water usage, economic development, territorial and tourist development and the area's involvement in the life of the concession) with a view to drafting a territorial pact with the local players in the valley.

3.2.3.4.3 Continually improving dialogue with stakeholders

Continuous improvement enables the better integration of stakeholder expectations within projects and activity performance; but it also allows for listening and dialogue methods to be improved, particularly in terms of the use of the Internet and social networks.

Increased use of the Internet and social networks

EDF Energy and Edison already have experience in the use of Internet tools for listening and dialogue. For instance, every British nuclear power plant holds regular meetings with local communities and promptly publishes the major points of these meetings online, along with the daily performance results for the plant; also published online is a monthly newsletter which is sent to local stakeholders and authorities.

In 2015, the EDF Commerce division was the first in France to organise an online chat session with consumer associations. It also obtained Afnor certification for its listening processes.

In 2015, the Wesley wind farm in South Africa, assigned in April to the EDF EN subsidiary InnoWind, has been the subject of a specific consultation process from the very first stages of construction of the farm, so as to raise awareness among local communities (including visits to a similar existing farm). Ongoing assistance provided by employees that speak the local

language (Xhosa) is also offered to local communities. The manager of the wind farm construction project will oversee the communication between InnoWind and the local communities, in particular the effective distribution of information on the progress of the project, and will remain the point of contact for any guestions or complaints.

Integrating stakeholder expectations

The listening and dialogue processes aim to promote an understanding of stakeholder expectations with a view to the improved, and more frequent, consideration of these expectations, as well as their integration within the final versions of projects. Just as with other projects (the Nam Theun and Guerlédan dams in particular), Group entities and companies are continuing this initiative. One example is Island Energy Systems which has entered into formal partnerships with Fishing federations (Corsica, Réunion) and Water agencies (Corsica, Guyana). Other examples include MECO which uses this scheme as a main focus for its EMS, and Socodei, in the management of its projects at facilities classified for environmental protection (ICPE).

EDF Luminus also systematically incorporates the requests of local residents. In 2015, for example, this was manifested in a specific project that aims to reduce noise disturbance from wind turbines¹. A new technical feature (Trailing Edge Serrations) was installed on the turbines at Florette de Leuze, as well as at the new wind farms in Olen-Geel, Dendermonde and Bilzen.

3.2.3.5 **Raising the awareness of the general** public to sustainable development

Committed to contributing to education on energy-related matters, the Group companies have continued and strengthened their mission to raise awareness among the general public, their customers and young people, but also among professionals and local authorities, on sustainable development and energy control issues. Specific action was taken in light of the COP 21 held in Paris in December 2015.

Numerous sites were opened to the general public, to economic players, national bodies and ministries.

Every year in France, somewhere in the region of a hundred thermal and hydropower plants welcome 430,000 visitors who are invited to take part, prior to their visit to the plant, in a learning conference on how it works and the measures put in place to reduce the site's impact on the environment. 45 of these plants have "discovery spaces" open to the general public, which offer educational activities on issues related to energy, protecting the environment and controlling energy. EDF's generation plants take part in national events such as the Fête de la nature, the Fête de la science and the European Sustainable Development Week. There were 20,000 visitors to the 5th edition of the "EDF Electricity Industry Days", 800 of whom went on "low-carbon" tours which combined a visit to a nuclear power plant with another to a wind farm or a visit to a hydropower site with another to a solar power plant. In 2015, 20 discovery spaces (building and content) were made available to persons with reduced mobility or with visual or auditory disabilities. At the R&D research site in Chatou, approximately one hundred manufacturers, SMEs, start-ups, national bodies and ministries were present on 6 July for the "Research and innovation for the climate and the environment" day. A side event to the international Unesco conference "Our Common Future under Climate Change", this event was also part of COP 21.

For elected representatives, EDF shareholders, journalists and students, SOCODEI organised guided tours of the nuclear waste treatment and packaging facility. In Dunkirk, the exhibition space at the LNG terminal

^{1.} More broadly, there are various sources of noise caused by EDF group activities, whether as part of its traditional activities: nuclear, thermal or hydropower plants (air cooling systems, transformers, turbo-generator groups, ventilation, pumps, etc.), VHV and HV lines, transmitters or as part of its newer activities such as wind farms. For the benefit of both workers and local populations, the EDF approach consists of the planning, assessment and reduction of noise at source as much as possible.

welcomed more than 4,600 visitors. At EDF Energy, each nuclear site has a public welcome centre (more than 45,000 visitors in 2015) which hosts exhibitions on sustainable development. In Poland, 4,500 visitors attended open day events organised by EDF Polska.

In France, in the Empalot district currently under renovation in Toulouse, a community workshop was set up by EDF for a number of local stakeholders. The aim of the project is to combat energy poverty by involving residents in the energy efficient renovation of their homes. Residents were advised on how to reduce energy and water consumption, learned about hazard prevention and were offered practical training sessions on painting and DIY, as well as a tool rental service. Those people most in difficulty can benefit from home-based support provided by a technical adviser.

Électricité de Strasbourg has created a digital renovation platform for homes in Alsace, which includes an energy performance simulator that offers homeowners and builders a comprehensive tool to assist in their high-quality renovation.

The Group companies have also developed several initiatives for young people. In 2015, 20,500 schools and NGOs took part in an environmental education programme launched by EDF Energy in 2008 ("The Pod"). In 2015 in Italy, 5,500 students and 2,500 parents took part in the Eco Generation 2.0 programme which Edison launched with the aim of developing and encouraging a sustainable development culture and growing a structured network of schools and local authorities involved in sustainable development.

In France, within the scope of its partnership with the Ministry of Education signed in 2002 and within its public service missions, EDF organises conferences in line with school programmes that are led by suppliers that specialise in education on topics of electricity, energy and sustainable development aimed at schoolchildren (from primary to the final year of secondary). As a supplement to these conferences, EDF also has educational resources available on its website (edf.fr). In light of COP 21, specific initiatives have been designed on the theme of climate change. One such initiative is the game "Cleanopolis", launched by EDF in France in November 2015 and available free of charge on the App Store and Google Play. The aim is to raise awareness of climate change among young people, through play.

3.2.3.6 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.

3.2.3.6.1 Contributing to energy access and the fight against energy poverty

Contributing to the fight against energy poverty

The Group's chosen approach is to assist its customers by effectively implementing public mechanisms, by providing support to them through

adapted recommendations, tailored aid, and by developing longer-term preventative actions in order to reduce consumption in the most vulnerable households.

The Energy Transition for Green Growth Act (TEPCV) was enacted in August 2015. Several mechanisms involve the fight against energy poverty: The putting into place of the "Energy Cheque" to be substituted, beginning in 2018, for the social energy tariffs (a planned two-year experiment), the putting into place of a remote display of consumption in real time and in euros, for clients experiencing difficulty, and the putting into place of an energy savings certificate obligation, which is in addition to the classic energy savings certificate mechanism.

In this context, the EDF group continues its involvement in the fight against energy poverty, reinforcing its contribution to existing programmes, and implementing new solutions, specific to the countries concerned. This involvement is evidenced by the integration of this challenge into its Corporate Responsibility Commitments and through voluntary initiatives, in the three aspects of its solidarity policy: payment assistance, household support and prevention.

In France, EDF leads a Voluntary Solidarity Policy with the most disadvantaged customers, first of all by acting to support the existing public mechanisms. And so, EDF implements the electricity social tariffs (Basic Necessity Tariff, TPN) and natural gas tariffs (Special Solidarity Tariff – TSS) with no charge for activating electric service. These social tariffs are set off by the Contribution to the Public Electricity Service (CSPE) for the TPN and the Contribution to the Special Solidarity Tariff for Gas (CTSSG) for the TSS.

The number of customers benefiting from Basic Necessity Tariff (TPN) was 3.2 million at the end of 2015: all suppliers considered together. In mainland France, this number was 2.5 million for EDF. In Corsica and in the overseas departments, the number of customers benefiting from the Basic Necessity Tariff (TPN) was 241,360 (compared to 199,142 in 2014). EDF is also, in mainland France, the primary contributor to the Housing Solidarity Fund (FSL) with regional authorities, with a contribution of €22 million in 2015. In Corsica and in the overseas departments, the amounts allocated to the FSL remained stable; 2,711 families were able to benefit from payment assistance in the amount of €537,800. Approximately 350 EDF solidarity counsellors work with the local solidarity players to support persons in precarious situations, particularly with regard to payment assistance for invoices. In 2015, they processed 498,000 applications. EDF offers personalised solutions and directs customers towards Social Services as soon as that becomes necessary.

EDF has reinforced the means of warnings and follow-up with vulnerable customers (customers receiving TPN, or assisted by Housing Solidarity Funds) when winter arrives (mailings, SMS campaigns, automatic phone-call campaigns), so that such customers can maintain their energy supply. During the winter season, an extensive outgoing, personalised telephone-contact campaign was carried out in mainland France with customers benefiting from winter protection and still in a situation of arrears, in order to make them aware of overly large debts upon coming out of the winter season.

EDF is pursuing its partnership policy with social-mediation structures. The initiative carried out with these structures, through more than 180 reception points promoting regional presence, closer to the customers, particularly concerns information and explanation of the energy bill, and raising awareness of behaviours which would make energy savings possible. During occasional initiatives, EDF also makes available kits containing items for energy savings (low-consumption lamps, water-saving devices, automatic shut-off devices).

The Multi-Service Mediation Information Points (PIMMS) programme, which celebrated its 20th year in November 2015, contributes to maintaining a close link with all customers with respect to accessibility to the service, understanding of invoices, and payment assistance initiatives. These partnerships are taking place closer to the action of the elected officials and regions which need them. EDF, a founding member, handles the chairmanship of *Union Nationale des PIMMS* (National PIMMS Alliance).

Concerning prevention, EDF develops long-term campaigns to improve energy efficiency in the homes of people in energy poverty. The Company pursues its commitment in the programme for housing renovation ("Better Living"), piloted by ANAH (National Agency for Home Improvement). 49,700 homes were the subject of a renovation commitment in 2015, with an objective of 45,000 homes, with the financial participation of EDF being €29 million.

Among the voluntary contributions of the business, the "Toits d'abord" ("Roofs First") programme, in partnership with the *Fondation Abbé-Pierre*, participated in the thermal renovation of over 1,500 homes considered to be "very social". The partnership was renewed for 2015 in the amount of €1.53 million. The "Médiaterre" programme, in partnership with *Unis-Cité*, helps residents from over 60 working-class districts to modify their behaviour with regard to energy consumption, thanks to recommendations provided by young volunteers performing outreach work.

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, which meets two objectives: to know and to analyse the context of energy poverty, and to anticipate its developments; and to develop innovations which directly help customers in energy poverty. In 2015, on an experimental basis, a portfolio of a dozen or so technical-social innovations intended for customers experiencing energy poverty was put into place, involving payment for consumption and renovation. The first result obtained was the development and opening of the "Solidarity Workshop" ("L'Atelier Solidaire"), based upon a social business economic model, in the Empalot district in Toulouse.

In other Group companies

All of the Group companies having a portfolio of individual customers carry out initiatives contributing to the fight against energy poverty.

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. Its support plans comprise financial aid through a Solidarity Fund, the putting into place of 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.

Concerning its voluntary programmes, in 2014, EDF Energy re-examined its support measures for vulnerable persons and reinforced its collaborative programmes, in particular with nonprofits. The Personalised Support Service (PSS) contributes effective information in a grouped fashion concerning all of EDF Energy's recommendations and services for vulnerable customers. In January 2015, the do-it-yourself PSS (Personalised Support Service) digital tool was launched, to help clients to rapidly access all support services. 1,883 customers handled their issues through this tool in 2015, and EDF Energy is geared toward advancing its results in 2016.

In Hungary, EDF Démász continued its volunteer partnership with the Order of Malta (Maltese charity service) which, in 2015, provided 2,463 vulnerable customers identified by the charity and having opted for a prepayment meter, and financial aid of 50% of their electricity bills.

Access to energy

In matters of access to electricity, in 2015, EDF pursued its commitment through its decentralised service companies in Senegal, South Africa and in Botswana. EDF is also involved in promotion of access to electricity, a true vector of development, with the "EDF Help" programme of the Fondation EDF (humanitarian programmes, support of development, emergency situations – see section 1.4.5.3.9, "Access to Energy Missions").

The Island Energy Systems Division strengthens local collaboration, in particular with local distributors and the FACE public fund (Fonds

3.2.3.6.2 Contributing to local economic and social development

The EDF group's initiative makes it possible to contribute to local economic development and to the social cohesion of regions.

Contribution to economic development

The industrial and commercial activities of the EDF group generate local jobs, directly or indirectly, local procurement, and payment of taxes, which support local development. The Group has a reliable and auditable method based on the "World Input-Output Database" model, to calculate the number of indirect jobs. In 2015, the number was 544,189 full-time equivalent jobs (scope of the Group companies concerned: EDF SA, ERDF, EDF Energy, Edison, EDF Énergies Nouvelles, EDF Luminus, EDF Polska, Electricité de Strasbourg, Tiru and Dalkia). In 2015, the Group's activities represented 159,112 direct jobs.

EDF is the primary investor in France, and one of the most leading investors in Europe, with a contribution of close to \notin 9 billion in net investments to the French economy in 2015¹. EDF is also the largest customer of France's small and medium-sized enterprises, placing orders worth \notin 3.4 billion in 2015 with 38,500 SMEs.

In a context of economic crisis, and in response to the expectations of the regions for developing local energy projects, EDF operates on several axes:

- preserving firms' competitiveness by offering them the cheapest possible energy and helping them to reduce their energy bills through lower, more efficient consumption;
- reinforcing the share of purchases connected to its investments in regional enterprises;
- investing in new channels which can generate jobs and local economic development, such as offshore wind power with EDF Énergies Nouvelles (7,000 direct and indirect jobs envisioned in the framework of the development of 1.5GW of offshore wind capacity), nuclear power, and energy services with Dalkia;
- setting up innovative partnerships with businesses or local authorities to define local projects that will gradually integrate more local energy generation and local management of energy demand.

By way of example, several large-scale projects attest to this major contribution: *Grand Carénage*, Flamanville, Meuse, and Haute-Marne.

"Grand Carénage" is a project which translates the desire to extend the operating life of nuclear power plants beyond 40 years, under the best conditions of nuclear safety (while integrating, in particular, post-Fukushima modifications), of environmental safety and protection, and which requires the performance of volumes of significant maintenance work over the 2014-2025 period. To respond to this challenge, involving all of the nuclear-power sector over a short-term horizon, an "Industrial Project" programme was put into place, in order to become capable of integrating, with our industrial partners, the significant volume of work to be done on a fleet of 58 operating reactors. In particular, this involves implementing an industrial strategy for each maintenance segment, making it possible to ensure the industrial capacities of the suppliers of studies, manufacture, setting up, and reclassification. New buildings and new car parks will also be constructed, in order to accommodate all of the service providers under the best conditions.

d'amortissement des charges d'électrification), in order to propose breakthrough models and sustainable solutions to make the public electricity service accessible to all, and in particular in isolated locations of Guyana and the Réunion island.

^{1.} Excluding Linky and new investments, and excluding EDF EN/Dalkia.

In 2015, the Paluel power plant formalised the first deadline in the form of a ten-year inspection of the 1300MW series. After a regional diagnostic, local sourcing of the expertise needed by EDF and its partners was launched in the framework of a partnership with Pôle Emploi (the French Employment Centre). Forums were organised between EDF contractors and local businesses, particularly in the areas of mechanics, plumbing fixtures, electricity, and boiler-making.

The power plant also developed, with the community of the Côte d'Albâtre municipalities, an approach for the convergence between economic projects of the local governments and the needs of the plant (for example, adequacy of the forecast need for housing for service providers of the plant, with the creation of reception facilities, in the framework of the region's development of green tourism, new schemes for highway development).

With respect to the EPR under construction in Flamanville, EDF is contributing to economic and social development via:

- a support plan: a portion concerning the infrastructure development of the territory as a function of the needs of the EPR project, with 58 collaborative operations recorded in 2009 by ministerial letter. The notable achievements in 2015 concerned: the construction of gymnasiums in Pieux and Flamanville, development of the port of Dielette, renovation and construction of several school catering buildings (including Tréauville and Grosville) 47 out of the 58 operations scheduled have been finalised, and the 11 others are being entered into in the amount of €125 million, with an EDF contribution of €35 million to €40 million by completion (€27 million in 2015);
- a portion concerning Human Resources Training: an action plan aimed at promoting local recruitment of resources for EDF and for its service providers or subcontractors. The notable achievements in 2015 concerned: 70,000 training hours financed by the region and by Pôle Emploi, a slight increase in comparison with previous years. 953 trained job-seekers, 838 of whom were hired at the end of the training initiative (or a success rate of 88%);
- welcoming into the region of a new population (4,000 persons) which is contributing to the daily local and economic life of the region and to indirect employment.

The geological storage centre for radioactive waste, if it is authorised, will be located on the border of the Meuse and Haute-Marne departments. Beyond its tax obligations, since 2006, EDF has been leading a programme of economic support in this region, in cooperation with the local players.

EDF has established important activities there, such as its industrial archives or the logistical platform for the replacement parts of the nuclear fleet.

The next item which will be established will be that of a maintenance base for the nuclear power plants, in Saint-Dizier, between now and the end of 2017. EDF supports local businesses, in order to make it possible for them to better respond to its calls for tender and those of its suppliers. Thus, since 2006, there have been ≤ 124 million in orders which were contracted with businesses of the Meuse and Haute-Marne departments. In total, 1,470 jobs were maintained or created through EDF's initiative in this region. Training efforts concerning trades in the nuclear power sector, exceptional assistance in housing renovation, public lighting, and development of renewable energies in rural areas round out this mechanism, which seeks to prepare the Meuse and Haute-Marne departments for the arrival of the industrial project.

Contributing to social and local cohesion

Since its founding, and within its public service mission, EDF has always endeavoured to reduce regional inequities in France. 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. 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, employment/ integration/training, economic development, closeness and accessibility, and support to local initiatives – solidarity patronage.

With respect to contribution to the occupational integration of disabled persons, EDF has, since 1990, through nine successive company agreements, supported disabled persons in their desire to succeed at a work life which is compatible with their situation (hiring, rotation, purchases from ESAT¹). (a French support and work assistance establishment for the disabled...).

Moreover, in the framework of its approach for responsible purchasing, and closer to the regions, EDF has developed nearby responsible purchasing initiatives, such as eco-grazing, for example, at the Civaux nuclear power plant and the Cordemais power plant.

Fondation EDF

EDF, by way of its corporate foundation, supports projects of general interest, in France and internationally. It makes solidarity its priority. In 2015, it revised its strategy, giving priority to three areas of action: social inclusion, autonomy, and humanitarian intervention. The objective is to help each person find his place in a fairer, more humane society, by supporting innovative initiatives which bring together the Group's employees (foundation.edf.com).

3.2.3.6.3 Responsible purchasing

The EDF group's outsourcing challenges are described in section 3.3.4.1 "Responsible sub-contracting: a reality".

Responsible purchasing

In the framework of its responsible-purchasing approach, EDF makes available to its suppliers a service which enables them to reduce the payment timeframe, by 20 to 30 days, by making available a dedicated internet platform. At the end of 2015, over 3,000 suppliers had signed up for this service.

A Sustainable Development Charter, put into place by the Purchasing Department and updated in 2014, applies to all of the Group's suppliers, and provides, on the basis of audits, the possibility of terminating a contract if the supplier is not in compliance.

The Purchasing Department formalised a sustainable-development maintenance guide, and training courses adapted to purchasers, in order to help them address sustainable-development themes when meeting with suppliers.

In June 2015, Dalkia launched its new sustainable-development commitments, including in particular, the commitment "to develop a responsible-purchasing approach with our partners". Work is underway to update the sustainable-development clause in the general purchasing terms, and formulation of a sustainable-development charter with suppliers, for integration into their master contracts. A dedicated hotline makes it possible for the partners to have a clear and instant view of the status of their payments.

In compliance with formal tendering procedures, EDF's Customer Department 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 Centre²" (*Centre de relations clients externalisés*). Also, in June 2015, EDF saw its Corporate Responsibility label as an ordering party (*Label de reponsabilité sociale*) renewed, in the area of customer relations.

^{1.} ESAT (Établissement et service d'aide par le travail), a French support and work assistance establishment for the disabled.

^{2.} 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.

In July 2015, EDF obtained the "Responsible Supplier Relations" label from the awarding committee of Médiation Inter-entreprises ("Inter-business mediation"), which is notably under the supervision of the Ministry of Economy, Industry, and Digital Technology. Obtaining the label, which is awarded for a three-year period, followed an audit of the Vigeo group. The areas analysed during this demanding review were: respect of suppliers' interests, including payment time frames, impact of purchases on competitivity, and integration of environmental and societal criteria into the contracting process.

ERDF drew up its "Suppliers' Corporate Responsibility Charter", a contractual document forming part of the contracts, and put into place mediation with its suppliers.

Assessment of suppliers

In practice, respect of environmental and societal criteria by suppliers is materially assessed through the systematic implementation of self-evaluation questionnaires, and, on the basis of criticality, the carrying out of audits of sustainable development and corporate responsibility of the Tier 1 suppliers, 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 environmentfriendly 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 2015, the EDF group's Purchasing Department conducted 186 "Sustainable Development/CSR" assessments (compared with 129 in 2014 and 60 in 2013), including 45 audits, for an announced target of 100 assessments.

In the Group's companies, modalities for dialogue with suppliers are implemented and similar assessments (audits, self-evaluations) are carried out.

In France, EDF joined ACESIA (Afnor, a certification/standardisation body), and utilises this digital platform aimed at promoting a "customer-supplier" relationship that is responsible and durable. This tool makes it possible for purchasers and suppliers to share an approach of continuous progress in corporate responsibility.

Coal and uranium supply chain

EDF is a founding member (2011) of Bettercoal^{1,} an initiative which currently brings together thirteen energy companies and four European coal ports and terminals. Contacts are taking place to receive new members. 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. At the end of 2015, the operational approach intiated in 2014 had accumulated more than 30 self-evaluations, recorded in Bettercoal's document system, and several new site audits are in the course of negotiation.

With respect to uranium purchases, EDF is vigilant as to compliance with the specific clauses pertaining to "sustainable development" incorporated into the sourced contracts, and is proceeding with audits of mining sites.

3.2.3.6.4 Measures taken to promote consumer health and safety

EDF has long employed all mechanisms for information and raising awareness in matters of health and safety, in the areas of production, the network, and the customer relationship.

With respect to production sites, information is provided on the operations and on the health risks and impacts of the facilities. Since 2014, "Nuclear power and health" meetings have been held on nuclear power plants, on the theme of ionising radiation. In 2015, eight conferences were organised in Penly, Tricastin, Fessenheim, Gravelines, Saint-Laurent, Paluel, Saint-Alban, and Cattenom, addressed to over 1,000 health professionals, invited from within a radius of 50km around the power plants.

For several years, ERDF has been disseminating prudent recommendations to persons carrying on an occupational or leisure-time activity in the vicinity of electrical lines. A specific website has been put into place (http://www. sousleslignes-prudence). In an analogous concern, information campaigns in matters of pruning have been carried out in Guadeloupe, Martinique, and La Réunion. EDF Démàsz has raised the awareness of its business clients with respect to risks when working near the networks.

With regard to companies which market energy, information pertaining to electrical safety and/or gas safety is made available to the customers. The companies also have supplementary service offerings, such as an electrical safety diagnostic service, dedicated to residential customers, and which aims, especially in France, to control the safety of their private installation.

In 2015, EDF's Customer Department systematically sent to all customers subscribing to a natural gas offer with EDF, an information notice on gas safety; thus there were 400,000 customers who were made aware of such information.

Electricité de Strasbourg provides information on the risks inherent in the use of electricity, gas and electrical equipment, in coordination with the Promotelec association, for the diagnostic of electrical installations in homes (http://particuliers.es-energies.fr/). EDF Energy has trained its customer counsellors in order to be able to detect possible safety problems during talks with its customers. In Poland, as in all of the Group's companies, information pertaining to electricity and gas safety can be found online.

Addressed to the younger public, EDF has developed a series of "little safety memos" intended to remind them of the various safety instructions inside and outside of the house (http://kit-branche-toi-securite.edf.com/). In Corsica, thirty sessions for raising awareness concerning electricity risk were organised in schools, in partnership with the local volunteer sector.

Works are currently being carried out in the area of health/safety for EDF, with a view to refining the contours and reinforcing its place within its sustainable-development policy.

^{1.} Bettercoal is an international initiative made up of the following industrial operators: EDF, DONG Energy, Enel/Endesa, E.ON, GDF Suez/Electrabel, RWE, Vattenfall/Nuon and Fortum.

3.3 Human resources

In a changing environment, the human dimension is a key factor in the Group's performance, more than ever at the heart of EDF's strategic project.

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, in order to ensure long-term performance.

Everywhere that the Group operates, the health and safety of its own employees and its sub-contractors 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. A "Human Ambition" was defined this year as part of CAP 2030. It is based on five fundamental values, implemented through practical measures:

- developing a digital culture and new ways of working;
- making people accountable and simplifying working procedures;
- developing and adapting skills;
- transforming the recognition model;
- setting flagship health and safety standards.

3.3.1 PROFESSIONAL EXCELLENCE: EMPLOYMENT AND SKILL DEVELOPMENT

3.3.1.1 Stable Group workforces in 2015

The EDF group's consolidated workforces totalled nearly 159,000 staff on 31 December 2015 including 45% for EDF and 25% for ERDF.

Group workforces in France

In 2015, the workforces of the Group's two main companies in France (EDF and ERDF) remained stable, with a retiring employee replacement rate of more than 100%. The table, below, shows the breakdown of Group workforces in France over the last three fiscal years:

	2015	2014	2013
EDF – deregulated sector:	71,580	72,181	71,088
Generation and Engineering	41,789	41,545	40,268
Trading	10,860	11,543	11,731
Corporate	11,450	11,473	11,475
Island Energy Systems	2,985	3,005	3,086
CDI (open ended contract) and CDD (temporary contract) not employed under EGI status	4,496	4,615	4,528
ERDF – regulated sector	39,030	38,859	38,666
Other subsidiaries in France:	22,796	21,067	19,738
Électricité de Strasbourg, Tiru, EDF EN, SOCODEI, CHAM, EDF PEI and EDF Optimal Solutions	6 7 6 9		
(in 2013 and 2014)	6,760	6,860	6,682
Dalkia, Citelum	16,036	14,207	n.a.
TOTAL FRANCE	133,406	132,107	129,492

n.a. = not applicable.
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:

	2015	2014	2013
EDF Energy (United Kingdom)	13,920	14,716	15,162
EDF Trading (United Kingdom)	988	1,011	1,028
Edison (Italy)	3,066	3,101	3,240
Other foreign subsidiaries:	7,732	7,226	9,545
Eastern Europe	3,938	4,257	4,699
Western Europe and Mediterranean-Africa	3,467	2,804	3,350
Asia Pacific	224	76	74
Americas	103	89	1,422
INTERNATIONAL TOTAL	25,706	26,054	28,975

The graph, below, shows the age pyramid in the Group in 2015 (in France and outside France):



3.3.1.2 Levels of recruitment in 2015

In 2015, the EDF group's recruitments were intended to ensure:

- renewal of skills in order to counteract forecasted mass retirements;
- recruitment of technical staff for ongoing projects.

The level of recruitment at EDF remains high, in spite of the reversal of the trend due to a range of factors.

The technical field alone accounted in 2015 for 58% of workforces and 70% of recruitments at EDF. The end of forecasts of mass retirements had a moderating effect on the workforce growth trend and on hirings.

The commercial field, due to the fall in Trading Division workforces in a competitive regulatory and fast-changing technological context, accounted for 14% of workforces and 5% of hirings.

The "support" field accounted for 28% of workforces and 25% of hirings.

The graph, below, shows the recruitments as well as retirements observed since 2010 at Group companies whose head-office is located in France (excluding Dalkia and Citelum).



The EDF group's attractiveness maintained at a high level in 2015

EDF's attractiveness as an employer remains a key issue.

The results of surveys of engineering school students show that EDF holding up well despite a certain loss of interest in the industry, standing in sixth place in the Universum "Engineers" ranking (behind Airbus, Google, Thales, Dassault Aviation and Safran), fifth place for Trendence (ahead of Dassault) and second place in the "Engineering students and young engineering graduates" survey organised by QuatreVents. Otherwise, for alumni, EDF topped the rankings, being named "company most attractive to managers" in the June 2015 Figaro Économie ranking and "preferred employer of engineering alumni" in the Universum ranking.

In summer 2015, the content of the EDF careers site was updated, integrating the "one edf" project, which consists of providing a unique digital platform and bringing together all EDF's sites in France. It now offers internet users and applicants a simplified site, featuring a large amount of image and video content, and guarantees them better browsing whatever device they use (responsive design).

At the same time, our close relationship with student and young graduate applicants has been strengthened. For example, take the six chats organised over the year (video chat and live chat), or even the mobilisation of the "EDF Graduates" network (former students of EDF target schools) for an "ambassadors 2.0" project, to talk directly to applicants.

The "EDF recruits" section continues to attract every year more than 3 million visitors; in 2015, 400,000 applications were submitted online. The digital ecosystem around the site has also been strengthened. At the end of 2015, the EDF recruitment LinkedIn account had nearly 100,000 subscribers. The Twitter account has more than 2,500 followers. The internet user engagement rate has doubled.

In 2015, in conjunction with the new invitation to bid and the overhaul of the recruitment process, the objective was to increasingly classify applications and enhance the pre-selection process.

In 2016, the focus for recruitment shall be on internal mobility with betterclassified internal short lists in order to manage the decline of certain business lines, the changes in our recruitment structure, fewer engineers and still a high number of technicians as well as the need to control our costs made us re-examine our recruitment events.

EDF participated on 6 June 2015, for the first time, in the *Monde des Grandes Écoles et Universités* challenge, an event organised with seven other major firms (ADP, Atos, Disney, Generali, Lagardère, Nestlé and Renault), which combines business line, sport and disability fairs. This day provided the opportunity, for the Group's main French and European subsidiaries, to meet more than 2,000 students and young graduates and organise nearly 200 one-on-one interviews.

At the same time, EDF wanted to enhance its close relationship with target technicians (undergraduates), by developing with its regional employment departments, following identification of local target educational institutions, a full programme of regional events organised over the whole territory (business line videos, quizzes, Group business line open days, etc.). This project ("Technicien, c'est bien!") to promote technical careers shall be rolled out in 2016.

Finally, the work to optimise relations with higher education and research enabled the prioritisation of schemes targeting major engineering schools and universities, organised with assistance from the network of approximately 1,400 "EDF Graduates Network" ambassadors.

In 2016, plans for year-round online interaction with students will effectively support our direct encounters with them at fairs or on campus, by publishing online, directly on the schools' sites, placement and work-study offers.

Furthermore, the Partnerships Committee decided to create a "HE&R Committee" (Higher Education & Research), chaired by the HR Group Division. This features all EDF SA and ERDF's main business lines (R&D – Generation & Engineering – Strategy, etc.), and closely supervises partnerships with higher education (chairs, educational grants and support, apprenticeship taxes, research contracts). Finally, it offers a clear and shared vision of the different issues and levels of financing.

Organised and enhanced welcome and integration, appreciated by new employees

The integration and development of loyalty of newly-hired employees is an important theme for the EDF group, which welcomed from 2010 to 2014 nearly 6,000 newly-hired employees and nearly 8,866 in 2015. This high number of new staff required the setting up of integration schemes for these newly-hired employees, who were mainly young people. Accordingly, an integration scheme continues to be implemented for newly-hired employees at Group level.

The setting up of common tools is backed up, for management staff with three to four years of seniority, with a Group integration event focusing on strategic aims 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.

3.3.1.3 Skill development: preparing for the future

In a complex and fast-changing context, the development of EDF group employees' skills is a key contributor to the human ambition of the CAP 2013 strategy. After EDF, the "Horizons Compétences" scheme, a methodological approach to occupational and skill forecasting is being implemented at the EDF Group's other companies and subsidiaries in France (ERDF, Dalkia, Tiru) and abroad (training at China division in 2015, preparation of EDF Energy training ongoing) particularly via specific HR manager training courses.

For EDF, training is an investment which must both promote performance and transformation of business lines, as well as guaranteeing the skills necessary to manage its industrial facilities and public service missions.

In practical terms, investment in 2015 consisted of new methods of knowledge transfer using new custom tools:

- 87% of Group employees attended at least one training course in the year, lasting an average of 66 hours;
- digital training has been enhanced, in order to reach learners (employees and sub-contractors) more easily and safely via increasingly modern and shared distance learning courses: use of virtual and augmented reality, simulators, MOOC, serious games, e-learning modules, etc.;
- new methods of transferring occupational, or even inter-generational, knowledge have been developed, particularly by introducing learning communities or practices;
- the unanimous signing, in 2015, of an amendment to the agreement on continuous vocational training in the Electricity & Gas Industries (EGI) branch, introducing new professional training schemes such as the individual training account (CPE in French, *Compte Personnel de Formation*).

These training courses rely on a campus network, which is growing and modernising:

- firstly, digital campuses, with the progressive deployment of platforms enabling "digital" distance learning (3 out of 4 Group employees now have access to them);
- secondly, physical campuses, with a network of more than thirty training sites, which grew in 2015 to provide a wider range of tertiary and technical training courses for the Group's different business lines, with extended geographical coverage, both in France and Europe. A brand new Group campus was inaugurated in June 2015, in Cannington, in the United Kingdom, enabling the training of employees and students (in partnership with local universities) as well as the organisation of internal events. The Dalkia campus, in Lomme, provides cutting-edge energy service training infrastructure. Another Group campus is also being built at the heart of the Paris-Saclay scientific campus. This site, scheduled for inauguration in 2016, shall be the largest industrial research and training centre in Europe, with 70 classrooms and technical workshops, particularly including on-site training and nuclear power plant simulators.

The range of training courses available on these different campuses is optimised and adapted to the Group's skill needs by fourteen "Skill Academies" (technical and multi-disciplinary) and a "Group Management University" (GMU).

In order to benefit in the long-term from an agile and multimodal training programme, a Group "Training & Skill Development" policy was signed by the Chairman & Chief Executive Officer in November 2015.

Three key principles guide this policy, applicable at all EDF group companies, both in France and abroad:

- forecasting and managing changes to business lines and adapting the necessary skills in order to prepare for the future;
- making training a vector for performance;
- preparing and managing the progress of employees in their current and future duties, and promoting their mobility and employability.

These principles are implemented via highly-practical objectives, such as the aim of increasing digital training to 20% of the Group's total global training in 2020, or otherwise evaluating 30% of the training programmes regarding their on-the-job impact or their contribution to improving operational performance.

The GMU, created in 2010, is intended to train 26,200 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 2015, the GMU extended access to the Group University's e-learning platform to eligible managers in France, Hungary, Italy, Belgium, Poland, China and the United Kingdom. In 2015, this platform helped to provide 13,000 hours of training and accordingly set up the deployment of CAP 2030 via the organisation of set-up courses to explain its aims. In addition to e-learning, the GMU proposes 45 courses and trained 1,500 managers in 2015. The GMU also proposes programmes aimed at Group talents and managers. In 2015, at least 250 managers and 400 talents attended these training courses.

Promotional training courses promote the "social elevator" at all levels

At EDF the "social elevator" is a reality: more than 35% of the EDF Group's 35,000 current managers in France (EDF, ERDF) in fact became managers over the course of their careers.

To promote this dynamic, promotional training courses are organised every year in order to help employees boost their career and switch category. 276 EDF and ERDF employees began promotional training courses in 2015.

Among the most innovative schemes, EDF notably developed the original "Cap Exécution Cadre" course, enabling employees in operating positions to become managers in four years. More than twenty employees attended this new course in 2015.

Work-study programmes: the EDF group remains one of the companies most committed to this approach

With 5,585 work-study trainees present at the end of 2015, i.e. 5.3% of EDF and ERDF workforces, the Group has maintained its commitment in favour of work-study training, both to meet its skills renewal needs (12% of hirings in supervisory and operating categories and 33% for the management category are of work-study trainees), but also to promote the qualification and occupational integration of young or unemployed people (see section 3.3.4.2 "A significant contribution to local development via occupational integration"):

- 97% of work-study trainees at EDF obtain their diploma;
- one year after the end of their contract, 88% have a job or continue their studies;
- more than half of work-study trainees were recruited by the Group or are studying for a higher-level diploma as part of a work-study programme at the Group.

Several schemes are proposed for work-study trainees that the Group does not hire at the end of their work-study contract:

- job-seeking workshops organised nationwide in conjunction with Pôle Emploi (French national employment agency);
- sign-up to the "Engagement Jeune" platform featuring fifty or so major groups and a large number of SMEs and MMCs (Middle-Market Companies), enabling EDF's work-study trainees to submit their curriculum vitae along with a short recommendation from their tutor;
- assistance with setting up businesses for work-study trainees with a project;
- testing of services provided by specialist recruitment firms to help workstudy trainees find work.

3.3.1.4 Appropriate career management

Management of talent and executives

The EDF Group has developed a flagship talent-spotting system. This 2011 Group "Talents" 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 geographical area are organised in order to ensure the development of executives' careers and their appointment to appropriate positions.

Employee career path management

The new Group "Training & Skill Development" policy, signed in November 2015, includes several objectives regarding assisting employees with their careers, as well as their mobility and employability.

This policy particularly systematizes, at every Group company, an annual review of every employee's career plan. It also aims to ensure that every employee, wherever they work, can be assisted, upon request, with developing their career plan. Finally, monitoring of employees who have not attended any training courses for three years or more shall be extended Group-wide.

These practices are already well-established within the Group. The annual interviews held with 75% of Group employees in 2015 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, such as:
- the EDF intranet "My career path" community;
- the release of a "Your career path" practical guide;
- the new "Cart'Emploi" tool enabling the viewing of the breakdown of jobs by occupational category and by geographical area;
- interviews proposed at different career stages;
- customised career plan assistance provided by "career path" advisors.

For these advisors, a new professional training course shared between Group companies in France was launched in November 2015, accordingly facilitating the development of a common "mobility" culture between the companies.

In addition to the schemes implemented to simplify career paths within the Group, EDF also assists its employees who have career plans elsewhere, either to develop, over several years, a career at a non-Group company, or to set up or take over a business. Every year, EDF helps between 50 and 80 employees and recently work-study trainees to become entrepreneurs, each of them creating on average nearly three jobs.

Age management

2015 is the final year of the 2013-2015 generational contract, involving 88 EDF group companies in France. In spite of a slight decline in recruitment of employees aged over 50, the results ¹ should be in line with objectives which include:

- recruiting 10,000 young people aged 28 or under on open-ended contracts over 3 years (8,110 recruitments at the end of 2014);
- recruiting 300 employees aged over 50 on open-ended contracts (210 recruitments at the end of 2014);
- keeping 13,000 employees aged 55 or more in work (14,080 kept in work at the end of 2014).

Several practical and operational measures were taken in 2015 (introduction of an end-of-career interview scheme, "France Group" seminar on age

management and the generational contract, testing of intergenerational cooperation workshops, participation in the European day of solidarity between generations, etc.). All these measures meet needs that were pinpointed with the company's business lines and help to change the portrayal of cultures as well as human resources and managerial practices, based on the fundamentals of diversity and quality of life at work.

The upcoming renegotiation for the 2016-2018 period should strengthen the link between the generational contract, occupational and skill forecasting, and training.

3.3.2 THE HEALTH AND SAFETY OF OUR EMPLOYEES AND OUR SERVICE PROVIDERS' EMPLOYEES: AN ABSOLUTELY PRIORITY

3.3.2.1 Guaranteeing the best health & safety conditions at work for all

Since January 2014, the Group's health and safety policy has defined a common, consistent framework with which the policies and action plans of the Group's different subsidiaries must comply. This Group policy applies to all the 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. It provides for the setting up of an annual Group health & safety review.

During the first annual Group review, the CAP 2030 programme's major strategic health & safety objectives, which form the basis for the threeyear action plan to be adapted and implemented at each of the Group's companies, were defined:

- making health and safety one of the Group's major commitments and an essential component of its culture;
- placing managers at the heart of the deployment of health & safety policy;
- making all employees accountable on a daily basis;
- protecting and promoting the health of all: employees, service providers, clients and local people.

Eradicating deadly accidents, cutting the number of accidents and reducing absenteeism at work

Occupational accidents

Via the Group's 2014 policy, EDF committed to halving the frequency rate of occupational accidents involving its employees between 2013 and 2017 (Corporate Responsibility Commitment).

The Group has recorded a progressive improvement in the frequency rate (number of accidents at work having resulted in more than one day of absence from work, recorded over the current year and per million hours worked. Days of absence from work are linked to the year when they are taken even if the accident occurred the previous year).

^{1.} The 2015 data is not available on the date of this reference document.

(Group Data)	2015	2014	2013
Group employee frequency rate (1)	3.2	3.1	3.1

(1) The 2015 frequency rate takes account of the integration of 7 new companies at EDF Luminus and Dalkia. With equivalent scope to 2014 the 2015 frequency rate is 2.9, in line with the objectives set.

Each Group entity now monitors its service providers' accident rates, as had already been the case for several years at certain Group entities.

In 2015, the Group reaffirmed its commitment to continue reducing its frequency rate over the coming years for employees and service providers (Corporate Responsibility Commitment).

Deaths at work

After an improvement, 2015 saw a stagnation of the number of deaths at work (accidents and dizzy turns) with an increase in deaths at work at service providers.

(Group Data)	2015	2014	2013
Total number of employee and service provider deaths	16	15	13
including number of employee deaths:	3 (1)	4	4
including number of service provider deaths:	13 ⁽²⁾	11	9

(1) With 3 deaths linked to "core business" accidents.

(2) With 7 deaths linked to "core business" accidents.

"Core business" accidents are accidents linked to major risks: electricity, high falls, roads and handling of heavy loads.

In 2015, the first Group-level communication campaign on health and safety was deployed at all entities. It focuses on 10 key rules, adopted and based on analysis of the deadly accidents at ERDF and EDF over the last 30 years, which everyone must follow as they go about their work in order to avoid serious accidents and protect both themselves and those around them.

In order to continue developing a safety culture, other measures were taken or continued in 2015 (release of a manager training tool, viewing of video feedback following serious accidents – United Kingdom, Poland – viewing of a "safety" message at the start of meetings, etc.).

Absenteeism at work

Among the areas for improvement pinpointed, preventing stress and musculoskeletal disorders (MSD), the two main causes of absenteeism, were addressed via Group-wide schemes in 2014 and 2015.

In 2015, a guide on the prevention of MSD was prepared and distributed at each Group entity and adds to the range of guides already produced and distributed, on the following themes: prevention of addictive practices, health and extended working life, or the keeping in or return to work of psychologically-vulnerable people.

Health at work, a major theme

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 involved on all the social dialogue bodies in the field of 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).

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. Voluntary financial assistance and a pension supplement both financed by EDF were established. EDF also provided social assistance to sick workers and their families with information and support during the compensation process. See section 2.4 ("Legal and arbitration proceedings"), above, 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 individual dose of all the workers, employees of EDF and external companies, working on reactors was halved in less than ten years; in the United Kingdom, there was the same reduction, mainly thanks to optimised governance of maintenance and repair work. In France as in the United Kingdom, in 2015 and since 2003, no workers, employees or service providers exceeded the regulatory threshold (individual dose over 12 sliding months).

In France, in 2015, the average collective dose was 0.71 person-sieverts by reactor (0.72 and 0.79 person-sieverts by reactor in 2014 and 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 2015, the average collective dose was 0.048 person-sieverts for the EPR reactor (it was 0.365 in 2014 and 0.386 in 2013) and 0.067 personsieverts per reactor for "AGR" reactors (it was 0.074 in 2014 and 0.034 in 2013). The current level is comparable to the average figures recorded by pressurized-water reactor operators with an equal maintenance volume. EDF is proactively implementing an ALARA (As Low as Reasonably Achievable) policy to limit the collective dose to take account of 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 and to continue efforts to manage and reduce dosages in the most exposed business lines.

3.3.2.2 Making health at work a subject of social dialogue

Within the Group, there is social dialogue on health at work at three levels:

- at European level (presentation of the actions taken during the year to the European Works Council Health & Safety workgroup);
- at Group France level (with the presentation of the year's key issues and figures to the France Group Committee);
- at EDF level, with a national health at work group issuing recommendations on four themes: prevention of asbestos risk, impact of business line developments on medical teams, development of a health at work action plan and communication on health at work.

In 2015, the Group's new strategic objectives, set as part of the CAP 2030 programme, were presented to the EDF group's different bodies (EDF CWC, European Works Council and France Group Committee).

3.3.2.3 Providing the conditions for well-being: organisation and quality of working life

Quality of working life

Quality of working life 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.

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 absenteeism, a second on work-life balance and its impact on performance, and a third on use of collaborative tools. At EDF level, a seminar on the review of the "Preventing psychosocial risks and improving quality of life at work" agreement featuring managers and trade union representatives was held in March 2015. This review particularly focused on the stakeholder learning processes in order to examine these themes. There are currently 83 multidisciplinary groups assisting and supporting management. An e-learning provides management with training on quality of life at work, and internal and external service providers authorised by HR Group Division can be employed upon request from units when necessary.

Psychosocial risks

At EDF SA, work has been done with social partners, resulting in the introduction of schemes to prevent or deal with situations of ill-being at work. These include training and awareness of managers, setting up of surveys on the issue, the development of 80 multidisciplinary groups, which deal with individual and collective situations.

ERDF has set up more than thirty multidisciplinary groups that work to take action in terms of primary prevention. With the same objective, ERDF develops specific tools to analyse the impact of changes before they are implemented.

Efforts are also made internationally: EDF Energy added a new component based on well-being to its "better energy" programme that takes account of the mental aspects of health and Edison, with its "Edison per te" programme has offered its employees comprehensive medicals on a voluntary basis since 2008.

Organisation and working hours

In order to meet the needs relating to each company's business and particularly to ensure continuous operation, personnel may be required to provide a continuous service 365 days-a-year or be on call outside of regular working hours.

These arrangements are adapted over time according to the changing circumstances at each company, legislation and new authorised work organisation practices, particularly communications technology developments.

For example, for companies based in France, since 1 January 1999, the duration of the working week has been 35 hours, with services available for a minimum of 5 days.

To face up to the industrial and commercial challenges and changes to the environment at EDF, actions plans by business line have been implemented since 2014, following an assessment phase, in order to adapt organisation and correct certain practices pinpointed by the assessment carried out as part of the "Working performance and organisation" project. Launched in April 2013, this project 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.

Collective negotiations aiming to take account of legislative changes that have been made (fixed number of working days) began on 5 February 2015, discussions are ongoing to adapt the current arrangements at EDF by particularly introducing at EDF SA level a fixed number of working days for managers as well as innovations in working methods, such as telework.

3.3.3 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.

Since 2014, the Group's main foreign companies' compensation and social welfare systems have been reviewed based on this policy. Following each review carried out by the Group Human Resources Division, an action plan was jointly drawn up with the subsidiary and its implementation is monitored during subsequent reviews.

At the same time, a network of Compensation and Fringe Benefits managers was set up to back up the scheme, particularly in order to present the policy and share good practices.

3.3.3.1 A fair and competitive total compensation policy

Total compensation policy is guided by four principles that are reviewed by the Group Human Resources Division:

- competitiveness with the external market;
- consistency and internal equity;
- financial sustainability;
- communication.

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. There is 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.

In the "communication" section, each employee is provided with information on the compensation rules and arrangements with the utmost transparency in accordance with the principles detailed above. 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.

Variable compensation plans to boost performance

Within the Group, most employees have individual or collective performancerelated variable compensation. The terms and conditions of this variable compensation differ from one Group company to another, based on historical agreements and the applicable regulations.

At EDF Démász (Hungary), all staff are eligible for individual performancebased 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* and *Premio di Produttivita*).

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 variable performancerelated 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 2015 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 CO_2 emissions in tertiary buildings.

In 2015, the EDF SA agreement saw the payment of \in 150 million to EDF employees for the 2014 fiscal year, i.e. \in 2,107 on average per beneficiary.

In 2015, EDF paid for 2014 profit-sharing the sum of €84.6 million, i.e. €2,160 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.

The EDF Group Corporate Savings Plan totalled \in 4.36 billion at the end of 2015.

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 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 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.

The Collective Retirement Savings Plan totalled approximately €582,063 million for EDF and ERDF at the end of 2015. 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.

In 2015, Dalkia and EDF EN signed up for the EDF group Corporate Savings Plan and Collective Retirement Savings Plan. Approximately 7,500 saver employees at these companies (shareholders) transferred their credits, totalling \in 40 million to the Group's employee savings plans.

Time Savings Account

Time Savings Account agreements have been signed within the Group's principal French subsidiaries, specifically EDF and ERDF.

On 31 December 2015, the total number of hours saved in the Time Savings Account by employees of EDF and ERDF was valued at €723 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

On 31 December 2015, current and former employees of the EDF group held a total of 31,512,465 EDF shares, i.e. 1.64% of share capital. This number includes, firstly, 27,122,068 shares (i.e. 1.41% of capital) based on the definition of employee shareholding in accordance with article L. 225-102 of the French Commercial Code (shares held by current 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 4,390,397 shares, i.e. 0.23% 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.

3.3.3.2 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,
 - non-discrimination (access to health cover must not be dependent on the employee's state of health),
 - regulatory compliance;
- a principle of balance between competitiveness and sustainability:
 - 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 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.

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 via the law of 8 April 1946 organising the monopoly on electrical generation and distribution electricity 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.

Other Group employees' social welfare

The Group's other employees in France are covered by several 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.

The same applies to Group companies based outside France, for which the regulatory context specific to each country should also be taken into account.

Social activities

Unlike the common practice in French law, the management of social and cultural activities is delegated to specific organisations in the EGI sector.

The central social activity fund (CCAS), mutual and social welfare funds (CAS) and the CAS Coordination Committee are legal entities and are fully independent from EDF. The CCAS is administered exclusively by employee representatives and is supervised by the public authorities.

3.3.4 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.

3.3.4.1 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 subcontracting at EDF, and the EDF group CSR agreement signed in 2005 and extended in 2009.

Group CSR agreement commitments

The EDF Group's CSR agreement (see section 3.3.4.5 " High-quality social dialogue") 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 impacting sub-contractors 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 subcontractors 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

At EDF, the major areas in which work is sub-contracted include industrial and commercial activities, as well as Information Systems.

In the industrial field

In 2015, the social specifications (including transparent rules common to all stakeholders in the nuclear industry, including sub-contractors) developed by the French National Nuclear Industry Strategy Committee (CSFN – *Comité stratégique de la filière nucléaire*), were systematically integrated into calls for tenders. EDF's industrial project is presented to suppliers, in order to enable them to anticipate the company's needs. The nuclear service provider safety training course was also revised and is being progressively deployed in order to better take account of actual operational situations. Initial feedback already shows that service providers are satisfied.

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 turnover conditions. These points now form an integral part of the criteria to analyse companies' technical bids.

In the commercial field

Sub-contracting is used to meet increasing but fluctuating customer demand. The use of outsourcing for marketing 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. EDF saw its customer relations centres awarded "Socially-Responsible Operator" status for the second time as well as "Responsible instructing party" status for the third time in July 2015.

In the field of distribution

By adhering in June 2012 to the United Nations Global Compact, ERDF confirmed its commitment to promote in its activities the principles of Corporate Social Responsibility (CSR): protecting the environment, respecting human rights and working standards and combating corruption.

To share its commitment with its suppliers of works, services and supplies, ERDF published and distributed in 2015 an "ERDF Supplier CSR Charter", which is intended to be applied to all contractual relations between ERDF and its different suppliers.

A supplier must formally adhere to this Charter, either when they are selected, or as part of a call for tenders.

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 conditions for the provision of services (see section 3.2.3.6.2 "Contributing to local economic and social development").

3.3.4.2 A significant contribution to local development via occupational integration

The Group's commitment in favour of occupational integration

The Group maintains an ambitious work-study scheme, whose role as a "social elevator" is continuously underlined (see 3.3.1.3 " Skill development: preparing for the future ").

Work-study programmes are considered as a key tool to develop the occupational integration of young or long-term unemployed people, and to enable them to acquire or finish a qualification.

The Group has exceeded every year since 2010 the objective that it set itself to welcome every year more than 100 vocational work-study trainees, with a promise of a job or continued studies.

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.

Partnerships are formed with local and regional employment and training organisations (mission locale, 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.

Via its apprenticeship tax allocation policy or via contributions, the EDF group provides financial support for organisations that work for occupational integration (*écoles de la deuxième chance, Compagnons du Devoir, Association Jeunesse et Entreprise, C Génial, Nos Quartiers ont des Talents,* etc.).

Contribution to occupational integration

Introduction of social clauses in contracts

EDF includes, in some of its contracts for which it organises calls for bids, the application of integration clauses, which provide in practical terms for reserving a certain number of working hours to hiring people who are having difficulty in finding work.

Implemented particularly for major projects such as the Flamanville 3 EPR, the Gas Combined Cycle Turbine plant in Bouchain or the hydroelectric facility in Romanche-Gavet, the company works in partnership with local employment organisations (Pôle Emploi, *Maisons de l'emploi et de la formation*, Chambers of Commerce and Industry, etc.). The principal beneficiaries are young people under 26 with a low level of training, long-term jobseekers, young people who have never worked, beneficiaries of minimum social benefits or persons to which the 2005 law on disability applies.

Purchasing from integration enterprises and from companies that employ only disabled people and provide them with special facilities and support

Purchasing from companies that employ only disabled people and provide them with special facilities and support

The Group Purchasing Division continued in 2015 its work to increase or guarantee the level of purchases from companies that employ only disabled people and provide them with special facilities and support in accordance with the provisions of the EDF SA 2013-2015 agreement for *"equal opportunities and occupational integration of disabled persons"*.

Purchasing from integration organisations

EDF continues purchasing from organisations supporting integration via economic activity, particularly integration enterprises. In 2014, the volume of purchases was ≤ 1.4 million ¹.

3.3.4.3 **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 its 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.

In 2005, the company decided to devote several articles of its global agreement on Corporate Social Responsibility to combating all forms of discrimination, respecting diversity and promoting equal opportunities. With the Group Code of Ethics, this agreement constitutes the main frame of reference for the Group's companies. The challenges of all the strategic objectives in terms of diversity are managed by HR Group Division.

The eleven Corporate Responsibility commitments published in 2013 include "maintaining the professional excellence and performance of its teams via diversity training and promotion". This commitment includes an objective of increasing the number of women in the future management talent category. At the end of 2015, the proportion of women in the future management talent category was 26%. These objectives reflect the Group's wider ambition to achieve a proportion of women on its executive bodies equivalent to that of its supervisors (28% in France, 27% Group-wide). For EDF SA, the diversity of executive committees reached, at the end of 2015, 26% and the company set itself the target of reaching 28% by 2018.

At Group level, the level and formalisation of more specific local commitments vary depending on the applicable legal framework.

In France, the principle is also that of functioning as a network and of subsidiarity, which enables each of the Group's companies to have an impact in further fields. Dalkia, for instance, was awarded "Diverse Company" status, whereas EDF was awarded "Equal Access to Employment Company" status from its creation in 2006.

EDF's "Diversity" commitments led to the creation of several awareness and professional training programmes for managers, HR staff, employee representatives and employees. More than 8,500 employees attended courses, over the last seven years, as part of these programmes.

In terms of diversity, the measures taken by French companies are most often based on collective agreements on equal access to employment for women and men, disability and age management. Tools such as serious games have been developed and released on themes of diversity management, equal access to employment and intergenerational issues.

1. The 2015 data is not available on the date of this document.

To prevent any risk of discrimination, EDF regularly carries out studies and regular tests of its HR processes. EDF accordingly gave its backing, in 2012, to the intercompany "stereotypes and origin" study conducted by the Institut du Mécénat de Solidarité before extending this work, in 2013, via an "internal equal opportunities survey" in conjunction with MEDEF. The company has also conducted, since 2008, five tests on its main HR processes such as recruitment, work-study programmes or access to placements.

3.3.4.3.1 Support for employee network initiatives

Promoting diversity also involves supporting schemes organised by employee networks. These networks (ethnic minorities, women, working parents, disability, LGBT (Lesbian, Gay, Bisexual or Transgender)) are now active at many Group companies and concern several thousand employees.

Internal networks	Company	Launch date	Number of members on 31.12.2015
Women	EDF SA	2004 Interp'Elles, which became Énergies de Femmes in 2015	2,200
	EDF Energy	2009	1,023
	EDF Polska	2014	100
LGBT	EDF SA	2011 Energay	120
Lesbian	EDF Energy	2010	233
Ethnic minorities	EDF Energy	2010 (Black Asian Multicultural-Ethny)	283
Disability	EDF SA	1987 (Mission Handicap)	2,180
	EDF Energy	2010 (Disability and Carers Network)	615
Parents	EDF Energy	2014	124

These networks develop schemes to allow discussion, increase awareness and sometimes provide mentoring. For example, in 2015, the company had a little more than 250 "Elles Bougent" godmothers who work, on their territories, to increase awareness among young women of the attractiveness of the Group's technical business lines.

In France, the women's networks "Énergies de Femmes" and "Energay" (the LGBT association for EDF and the Electricity & Gas Industries) have received financial and logistical support from EDF since 2012. EDF also formalised its partnership with the "L'Autre Cercle" association, which fights against discrimination based on sexual orientation and homophobia at work. This partnership with the association "L'Autre Cercle" was formalised by the signing, on 21 December 2015, of an LGBT commitment charter.

The work carried out jointly with these associations enabled the company to publish in June 2015 a "guidelines" document on respect for sexual

For example, EDF commits:

orientations at work, aimed at managers and HR. It adds and adopts a similar approach to a "guidelines" document on religion published by EDF in 2010.

3.3.4.3.2 Gender equality

Equal access to employment for men and women is a powerful tool for organisations to change and modernise. It is a key component of the Group's diversity policy.

Several Group companies began the process to gain European recognition regarding equal access to employment (EDF, EDF Energy and EDF Polska in 2014, FENICE in 2015) and were accordingly awarded the Gender Equality European & International Standard (GEEIS). EDF and WIN France created a "Fem'Energia" prize which since 2006 recognises and supports women involved in the nuclear industry.

Main ambitions	Related objectives
To increase awareness among its staff of the bias created by stereotypes and to combat any form of discrimination, sexism at work and more generally violence against women.	Setting up and deployment of a training module adapted to a collective working format, with the aim of training 100% of work teams by 2020.
To put in place schemes that guarantee equal pay, that neutralise the impact of maternity or adoption on career development, and that also attempt to better understand, analyse and deal with persistent wage differentials.	Preserving equal pay for "equal work, equal skills and equal value", achieved since 2009. Systematic examination of the pay situation of women returning from maternity leave. External auditing & analysis of wage differentials at the company (INED/INSEE researchers).
To guarantee equal access to occupational and promotional training.	Annual training reviews by gender. Monitoring by gender of employees who have not attended a training course for 3 years. Reimbursement of childcare costs incurred due to absence to attend promotional training and for any course and from the first day of training for single parents.
To mobilise all the career path tools and stakeholders to end gender-based perceptions of business lines in order to favour the recruitment of women in technical business lines and, more generally, to enable greater variety and diversity at work.	Support for the "Énergies de Femmes" and "Elles Bougent" networks. Increased proportion of women recruited. Promotion of fast-tracking between business lines enabling reconversion from tertiary to technical.
To promote, finally, employee engagement via better work-life balance, adapted working conditions and a quality of life encouraging women to hold key positions and responsibilities at the company.	Parenthood charter signed, adapted and implemented. Parenthood guide for employees produced. Aim of achieving diverse Management teams.

3.3.4.3.3 Measures taken in favour of the occupational integration of disabled people

Group Vision

The Group Corporate Social Responsibility agreement addresses the issue of disability in two of its articles. Within the framework of the legislative contexts specific to them, the Group's companies put in place disability awareness campaigns for employees (including awareness campaigns aimed at employees coming into contact with customers). They develop local partnerships with associations working in the field of disability and are committed to making premises and workstations accessible.

EDF and ERDF implement their respective disability agreements, both unanimously signed in 2013 with the representative trade union organisations, and that impact approximately 3,600 employees recognised as disabled workers at the end of 2015.

The EDF agreement insists on the conditions required to promote equal opportunities at every stage of careers, ERDF's on the accessibility of the company's different business lines, the training courses that it proposes and a dynamic career path. In November 2015, EDF began negotiating a new disability agreement.

A few key figures:

- Since 2013, the year of signing of the agreement for the period 2013-2015 for EDF SA and for the period 2013-2016 for ERDF:
 - EDF signed 136 work-study contracts and recruited 311 disabled persons;
 - ERDF signed 142 work-study contracts and recruited 259 disabled persons.
- New tools were proposed to stakeholders in line with the objectives of the agreement: brochures to explain the process of purchasing from companies that employ only disabled people and provide them with special facilities, films, etc. Several of these films won prizes at the different editions of the Regards Croisés "Disability at Work" Festival.
- In accordance with its 2013-2015 disability agreement, the Électricité de Strasbourg group achieved a proportion of 8.7% of disabled workers in 2015. The Électricité de Strasbourg group signed on 18 December 2015 the 3rd agreement in favour of the employment of disabled persons covering the period 2016-2018.

3.3.4.4 **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 (extended in 2009) on Corporate Social Responsibility. The involvement of management and the special focus placed on Dialogue with employees and their representatives are key.

3.3.4.5 High-quality social dialogue

One of EDF's priorities is to continue to observe high-quality social dialogue, 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), a France Group Committee and 104 employee representative councils and 207 Health, Safety & Working Conditions Committees. The

chairs of these bodies meet regularly for discussions and to share good practices.

Central Works Council

EDF's CWC held 18 meetings in 2015, at which fifty or so items were presented. The most fundamental projects were discussed in depth, such as the changes to EDF's organisation and the merger of EDF and AREVA. The CWC's committees are very active, particularly the Economic Committee, the Central Employment & Training Committee and the Health & Safety Committee.

In 2015, social dialogue at corporate level was marked by discussion and negotiation on the draft amendment to the agreement of 25 January 1999 on organisation and working time. Furthermore, the 2015 amendment to the 2014-2016 EDF profit-sharing agreement was signed on 12 June 2015 by three representative union organisations.

France Group Committee

The France Group Committee, a forum for discussion at France-level featuring 28 elected representatives of the Group's main subsidiaries (EDF, ERDF, Dalkia, Tiru, EDF EN, etc.) met four times in 2015, including one initial meeting for the re-election of its members for a new 2015-2018 term of office.

Other than the statutory themes on which it is regularly informed, the France Group Committee discusses issues involving 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.

An amendment to the agreement on the functioning of the EWC was signed in June 2015 enabling increased representation of foreign companies in social dialogue at corporate level.

At the two ordinary meetings held in 2015, the following themes were examined, amongst others: the Group's international development strategy as well as the Group-wide adaptation and implementation of CAP 2030. Furthermore, an extraordinary meeting of the EWC was organised in order to inform the Council members of the terms of the disposal of BE Zrt in Hungary. At this meeting, amongst other items, the conditions for social assistance provided in connection with the disposal were presented.

CSR agreement and governance

The Dialogue Committee on the Group's Social Responsibility (DCSR) was created in accordance with the CSR framework agreement signed in 2005 then extended in 2009 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.

This agreement governs social dialogue on CSR. It has 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. Every year, at the social responsibility dialogue committee, the Group's Chairman and the Senior Executive Vice President, Human Resources, meet the trade union representatives of the companies that have signed up to the CSR agreement to discuss the Group's strategy and social news, and review the CSR measures taken by the Group in year N-1.

3.3.4.6 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. The companies drew up action plans to increase or introduce improvement measures based on the results observed within their scope. This process has been repeated every year since.

The survey was organised for the fourth time in September and October 2015. A significant internal communication campaign was organised to encourage employees to give their opinion (videos, posters and communication kit). Employee participation (77% and nearly 109,000 respondents), clearly up on the first year (63.8%), demonstrates Group employees' interest in this survey and the results of the fourth survey show clear progress in how human resources policies are viewed: +5 points over three years in the implementation of the annual assessment process, +4 points on knowledge of career paths, +4 points on promoting diversity, +7 points on attention paid to sub-contractors' working conditions. Employee engagement remains satisfactory at 71% at Group-level. The study shows confidence in local management is a real strong point (74%). Globally, 72% of employees say they are satisfied with the content of their work. Finally, more employees consider that the attention we pay to innovation in their company is satisfactory (+7 points in three years).

3.4 **Reporting mechanism and methodological elements**

3.4.1 **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.

The Group is 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.

The Group also made in 2013 a commitment that 13 of its companies would adhere to and will attain the United Nations Global Compact advanced level between now and the end of 2017. This is earned through detailed reporting on four items: human rights, working conditions, environment and the fight against corruption. Fourteen Group companies were members of the Global Compact at 31 December 2015, and three were already at the Advanced level: EDF, Edison, and EDF Luminus.

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.

3.4.2 METHODOLOGICAL ELEMENTS ON THE SOCIAL AND ENVIRONMENTAL DATA

3.4.2.1 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 (generation, distribution and transmission) significant in terms of environmental impacts;
- entities acquired for more than one year;
- entities still present in the consolidation scope at 31 December 2015.

In addition, within these subsidiaries, building activities (of new assets) are excluded. In this respect, for hydrocarbons generation activities, prospecting and exploration activities are also excluded. 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 more than six months ago.

For 2015, the differences between the scopes of reporting of social and environmental indicators are the following:

- subsidiaries taken into account in the reporting of environmental indicators and not in the reporting of social indicators: EDF Belgium (Belgium), Figlec (China);
- subsidiaries taken into account in the reporting of social indicators and not in the reporting of environmental indicators: CHAM and Citelum (France), EDF Paliwa (Poland), China Holdin, since 1 January 2015.

Given the 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 2015 scope are the following:

- Figlec (China) for which the concession was transferred back on 3 September 2015;
- BE ZRt, sold on 10 December 2015;
- GCCT Centrale Energia, sold on 28 May 2015 by EDF Trading (which represented the sole production asset of EDF Trading).

Their installed capacities are thus not included in the annual report at the end of December 2015, but their output and environmental impacts are taken into account in correlation with the duration for which they were held during the year;

- Dalkia is consolidated for all of its operational activities and its subsidiaries in France, excluding "PFI" contracts (handling contracts with profitsharing). PFI contracts are contracts for which Dalkia is not responsible for the energy supply, but is committed as an operator in the facilities' performance;
- EDF Optimal Solution is included in Dalkia.

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Entities included in the	consolidation scope as of 31/12/2015	Scope of environmental indicators	Scope of social indicators
France	Électricité de France	Х	Х
	ERDF	х	Х
	EDF PEI	х	Х
Other activities	Électricité de Strasbourg	Х	Х
	Tiru	Х	Х
	SOCODEI	Х	Х
	EDF Énergies Nouvelles	Х	Х
	Dalkia	Х	Х
	Citelum		Х
	EDF Trading ⁽¹⁾	Х	Х
	СНАМ		Х
United Kingdom	EDF Energy	Х	Х
Italy	Edison	Х	Х
	Fenice	Х	Х
Other International	EDF Luminus (Belgium)	Х	Х
	EDF Belgium (Belgium)	Х	
	EDF Polska (Poland)	Х	Х
	Kogeneracja (Poland)	Х	Х
	Zielona Gorá (Poland)	Х	Х
	EDF Paliwa (Poland)		Х
	EDF Démász (Hungary)	Х	Х
	BE ZRt (Hungary)	Х	
	EDF Norte Fluminense (Brazil)	Х	Х
	Figlec (China)	х	
	Meco (Vietnam)	Х	Х
	China Holding		Х

(1) Companies for which the non-financial results are adapted to the date of the asset disposal.

3.4.2.2 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 2015. 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

 CO_2 , SO_2 , N_2O , NO_x and CH_4 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 CO_2 and CH_4 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 (change in the GWP – Global Warming Potential – from 22.8tCO₂eq/t to 26tCO₂eq/t).

The MECO company does not collect all of its atmospheric emissions, the impact of which are not significant at the Group scale. For NO_x emissions, MECO updated the emission factor of its generation facilities, going from 150g/GJ to 40.5g/GJ.

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 are not exhaustive with regard to the conventional industrial waste of Tiru, Dalkia and EDF Énergies Nouvelles and from certain operational sites of EDF Fenice. Construction and decommissioning waste is included in this report, if its management falls under the responsibility of the EDF group. On the other hand, waste managed by service providers is not accounted for. Regarding ERDF, waste reporting is done on a rollingyear basis, from 1 November N-1 to 31 October N. ERDF's concrete pillars are now included in the reporting.

Details on radioactive waste

Concerning EDF

Indicators pertaining to "Very Low-Level radioactive Waste (VLLW) from activity and from decommissioning take into account:

- the actual volume of the VLLW directly evacuated from the Industrial Gathering, Storing, and Stockpiling Centre (*Centre industriel de regroupement, d'entreposage et de stockage –* CIRES) from the production sites, which corresponds:
 - to the volume of waste produced in the year for operating sites,
 - to the volume of waste shipped in the year for sites being decommissioned;
- of the actual volume of VLLW waste packages sent to CIRES from Centraco (after upgrading) connected to processing by merging of the EDF metallic waste (not VLLW waste created by incineration). This volume is determined for operating sites and for sites being decommissioned, on a pro rata basis to the delivered tonnages.

Indicators pertaining to "Short-Lived Low- and Intermediate-Level Waste (short-lived LLW and ILW) from activity and from decommissioning " take the following into account:

- the actual volume of the short-lived LLW and ILW waste directly evacuated into the Aube Storage Centre (CSA) from the production sites, which corresponds:
 - to the volume of waste produced in the year for operating sites,
 - to the volume of waste sent in the year for sites being decommissioned.

It integrates the reduction of the volume contributed, if applicable, by treatment before storage (the case of super-compacted waste);

of the actual volume of LLW and ILW waste packages sent to the CSA from Centraco (after upgrading) connected to treatment by incineration and by merging with EDF waste. This volume is determined for operating sites and for sites being decommissioned on a pro rata basis to the tonnages of metallic waste and solid waste which can be incinerated, delivered by the operating sites and by the sites being decommissioned.

The volume of waste created by reprocessing of waste produced and packaged during prior periods has not been included, because it is not significant.

The indicator "Short-Lived Low- and Intermediate-Level solid Waste from operating reactors" does not include the waste from 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.

Given 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 dessicants 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 Carbon14, for the period from January N to December N.

Further details on the quantity of electricity and heat generated from renewable energies

For Dalkia, the quantity of electricity and heat generated from renewable energies has been calculated on a pro rata basis to the quantities of renewable energies entering into their systems.

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 (in particular, those connected to protection against radiation), including therein discounting expenses.

3.4.2.3 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 Engie. An employee working 50% for EDF is counted for 0.5 in the published workforce.

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.

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.

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.

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. Certain subsidiaries do not communicate this type of data.

3.4.3 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

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 2015, its grade was 4.5 out of 5, moving up continuously in relation to previous years (4.3 in 2014 and 3.7 in 2013), and above all, the EDF group became a leader in its sector of activity, by obtaining the best performance among all of the businesses assessed.

At the end of 2015, the EDF group maintained its inclusion in the ethical market index referred to in its Corporate Responsibility Commitments (FTSE4Good), and made significant improvement in its grading.

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 2015, EDF was part of the Euronext Vigeo Europe 120, Eurozone 120 and France 20 indexes. In 2014, the last grading, EDF obtained a grade of 58 out of 100, an increase (from 55 at the end of 2012). It is ranked tenth *ex aequo* of the 43 Electric & Gas Utilities companies.

Dow Jones Sustainability Indexes (DJSI)

EDF obtained a very good score of 79 out of 100 in 2015, stable in relation to 2014 (79 out of 100), and up by 13 points in comparison to 2013 (66 out of 100), or 27 points more than the average for the Electric Utilities sector (52 in 2015). In its 2016 annual report (Sustainability Yearbook), RobecoSam again distinguishes the EDF group by the classification as a Yearbook Member, which means that the Group's performance ranks in the top 15% of the most performing businesses in its sector of activity.

Carbon Disclosure Project (CDP)

EDF belongs to the Carbon Disclosure Leadership Index (CDLI) France.

For the 2015 year, EDF obtained for the first time the maximum grade of 100 out of 100, in the score for transparency (an increase of 2 points compared to 2014 and 5 points compared to 2013) and is also improving in performance, obtaining the grade of A- in the score for performance (B in 2014 and in 2013, the grading range being A to F).

Sustainalytics

In 2015, EDF obtained a score of 78 out of 100, up 2 points compared to 2014 and up 7 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+, the same as in 2014 (C+ in 2014 and C in 2013, on a scale from D- to A+).

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). Up to now, the 2015 grade is still not available.

EcoVadis

In 2015, EDF obtained a score of 72 out of 100 and the Advanced Level.

AFNOR Acesia Solutions Achats (Purchasing Solutions)

In 2015, EDF obtained a grade of 91 out of 100, an improvement of 6 points compared to the preceding assessment (85 out of 100).

Distinctions

- CAC40 Enjeux les Échos ranking: in this classification carried out for the first time in 2014 on the CAC40 companies which were the most committed to CSR, EDF obtained a score of 788 out of 1,000 points in 2015, and was ranked 4th, a very strong improvement in comparison to 2014 (14th place in 2014).
- 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. The next study will take place in 2016.
- 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.

3.5 Environmental and social indicators

3.5.1 ECONOMIC INDICATORS

					Scope ⁽¹⁾		Ref
U	nit 201	5 2014	2013	2015	2014	2013	GRI ⁽²⁾
Economic indicators							
Amount of indemnities paid or to be paid following a legal decision in environmental matters ⁽³⁾ thousan	€ nds 10.	5 25	7.8	1	1	1	
Management							
Expenditure for environmental protection	3,55	3 3,043	2,924	1	1	1	
of which provisions	EM 2,56	1,996	1,901	1	1	I	LIN 30
Environmental management (% of the Group's consolidated sales covered by an ISO 14001 certification)	% 98	4) 98 (4)	95 ⁽⁴⁾	2	2	2	

(1) Scope 1: EDF.

Scope 2: EDF group.

(2) GRI: Global Reporting Initiative, version 3.

(3) Excluding court fees.

(4) Including companies not integrated in the Group certificate.

3.5.2 ENVIRONMENTAL INDICATORS

						Scope ⁽¹⁾		
				2013				
The barrier of the first second second	Unit	2015	2014	restated ⁽²⁾	2015	2014	2013	Ket. GRI
Fuels & raw materials – fuel consumption		1 1 2 0	1 272	N1/A	1	1	4	EN14
Nuclear fuel loaded in reactors	t	1,120	1,272	N/A	1	1	1	ENT
Coal	kt	15,065	18,151	23,644	2	2	2	ENT
Heavy fuel oil	kt	867	833	870	2	2	2	EN1
Domestic fuel oil	kt	368	345	372	2	2	2	EN1
Natural gas	GWh PCI	100,013	95,340	103,131	2	2	2	EN1
Industrial gas	GWh PCI	4	474	8,018	2	2	2	EN1
Water ⁽³⁾ – raw materials consumed originating from sources outside the company								
Cooling water withdrawn	10 ⁹ m ³	49.3	49.8	50.8	2	2	2	EN8
of which fresh water	10º m³	18.3	18.1	17.7	2	2	2	EN8
of which brackish (or estuary) water	10º m³	5.2	5.8	6.1	2	2	2	
Cooling water returned	10 ⁹ m ³	48.7	49.3	50.3	2	2	2	EN21
of which fresh water	10º m³	17.8	17.6	17.4	2	2	2	EN21
of which brackish (or estuary) water	10º m³	5.2	5.8	6.1	2	2	2	
Air – gas emissions								
Total CO ₂ emissions due to electricity and heat generation (including facilities not subject to guotas)*	Mt	59.1	64.3	79.3	2	2	2	EN16
SO ₂ emissions	kt	70.0	82.5	113.6	2	2	2	EN20
NO ₂ emissions	kt	92.2	117.6	169.9	2	2	2	EN20
Dust	t	4,385	5,205	7,761	2	2	2	EN20
Particulates (PM) – EDF	t	713	1,189	N/A	1	1	1	EN21
Particulates (PM ₁₀) – Group	t	2.660	3,374	N/A	2	2	N/A	EN21
Mercury – EDF	t	0.04	0.07	N/A	1	1	1	EN21
Mercury – Group	t	0.18	0.27	N/A	2	2	N/A	EN21
CH, emissions	kt CO ₂ eq.	37.3	32.3	34.4	2	2	2	EN16
N.O emissions	kt CO, eq	238.9	274 3	313.1	2	2	2	EN16
SE _c emissions – EDE	kt CO ₂ eq	58.6	64.2	N/A	- 1	- 1	1	EN16
$SE_{\rm emissions} = EDE + ERDE$	kt CO, eq	69.2	72 5	N/A	1a	1a	1a	EN16
SE, emissions – Group	kt CO, eq	80.3	82.1	94.1	2	2	2	EN16
Conventional waste	Kt CO ₂ Cq.	00.5	02.1	51.1	2	L	2	ENTO
Hazardous waste	t	64 411	82 504	63 978	2	2	2	FN22
Non-hazardous waste	t	389 471	409 245	326 975	2	2	2	FN22
Conventional industrial waste recycled	· ·	0007171	10072.10	0207070	-	-	_	
or transported for recycling	t	365,744	392,815	293,752	2	2	2	EN22
Ash produced	kt	2,657	3,062	3,859	2	2	2	EN22
Energy								
Renewable energy: quantity of electricity and heat generated using renewable energy sources (excluding hydropower)	GWh	19,163	18,811	17,692	2	2	2	EN6
Direct energy consumption, by primary source								
Internal consumption, pumping electricity	TWh	7.0	8.0	N/A	1	1	1	EN3
Internal consumption, electricity	TWh	22.0	22.1	N/A	1	1	1	EN3

not available: N/A.

(1) Scope 1: EDF.

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Scope 1a: EDF + ERDF.

Scope 2: EDF group.

(2) 2014 restated proforma Group data (see section 3.4.2.1 "Reporting scope").

NUCLEAR INDICATORS – EDF

	Unit	2015	2014	2013	Ref. GRI
Radioactive emissions to water (1)					
Carbon-14	GBq/react.	12.9	12.8	12.5	EN21
Tritium	TBq/react.	18.1	17.5	18.6	EN21
Radioactive emissions to air ⁽¹⁾					
Carbon-14	TBq/react.	0.17	0.17	0.17	EN20
Tritium	TBq/react.	0.50	0.50	0.49	EN20
Fuel					
Transported spent nuclear fuel	t	1,216	1,124	1,099	EN24
Decommissioning nuclear waste					
Very Low-Level radioactive Waste (VLLW) ⁽²⁾	m ³	1,847	2,580 <i>(2,580)</i> *	1,214 <i>(1,214)</i> *	EN24
Low- and Intermediate-Level radioactive Waste (LLW and ILW) $^{\scriptscriptstyle (2)}$	m ³	914	659 <i>(576)</i> *	513 <i>(407)</i> *	EN24
Nuclear waste from operations					
Very Low-Level solid radioactive Waste (2)	m³/TWh	6.0	7.6 (7.4)*	8.7 (8.3) *	EN24
Short-Lived Low- and Intermediate-Level solid radioactive Waste $\ensuremath{^{(2)}}$	m³/TWh	16.4	15.4 <i>(15.8)</i> *	19.0 <i>(17.7)</i> *	EN24
Long-Lived High and Intermediate-Level solid radioactive Waste	m³/TWh	0.88	0.88	0.86	EN24

(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, for the period from January N to December N.

(2) The methodology concerning nuclear waste from decommissioning and from activity has been updated (see section 3.4.2.2 "Further details on the environmental data").

* The values determined according to the new methodology are presented between parentheses.

NUCLEAR INDICATORS – EDF ENERGY

	Unit	2015	2014	2013	Ref. GRI
Radioactive emissions to water					
Tritium – AGR reactor (Advanced Gas-cooled Reactor)	TBq/react.	120	129	150	EN21
Tritium – PWR reactor (Pressurised Water Reactor)	TBq/react.	19	67	41	EN21
Radioactive emissions to air					
Carbon-14 – AGR reactor	TBq/react.	0.69	0.64	0.67	EN20
Carbon-14 – PWR reactor	TBq/react.	0.24	0.26	0.20	EN20
Tritium – AGR reactor	TBq/react.	0.71	0.66	0.59	EN20
Tritium – PWR reactor	TBq/react.	0.68	0.92	0.80	EN20
Fuel					
Uranium sent off site	t	172	193	177	EN24
Nuclear waste					
Transported Low-Level radioactive Waste	m ³	485	452	655	EN24
Generated Intermediate-Level radioactive Waste	m³	178	178	178	EN24



3.5.3 SOCIAL INDICATORS

EDF group	Unit	2015	2014	2013	Ref. GRI
Workforce as of 31/12 & distribution					
EDF + ERDF	Number	110,610	111,040	109,754	LA1
Total EDF group*	Number	159,112	158,161	158,467	LA1
Employee breakdown by age					
Under 25 years*	%	8	9	8	
From 25 to 35 years*	%	28	27	25	
From 36 to 45 years*	%	25	25	25	
From 46 to 55 years*	%	28	30	32	
56 years and older*	%	11	10	10	
Employees by geographic area (per head office location)					
France	Number	133,406	132,107	129,492	
including Dalkia International in 2013					
including CITELUM and Dalkia for 2015 and 2014	Number	16,036	14,207	13,056	
United Kingdom	Number	14,908	15,727	16,190	
Italy	Number	4,950	4,955	5,175	
Rest of Europe	Number	5,521	5,207	6,114	
Rest of the world	Number	327	165	1,496	
Managers	Number	45,935	44,539	42,327	LA 1
Women at managerial level (1)	%	30.0	28.65	25.7	LA13
Non-management employees	Number	113,177	113,622	116,140	LA13
Gender equality					
Male workforce*	Number	117,295	116,582	116,928	LA13
Female workforce*	Number	41,817	41,579	41,539	LA13
Male managers	Number	33,383	32,626	31,468	LA13
Female managers	Number	12,552	11,913	10,859	LA13
Hires/departures					
Hires	Number	8,866	10,385	10,945	LA2
Other arrivals ⁽²⁾	Number	8,466	6,628	8,027	LA2
Retirement departures/inactive employees	Number	4,722	4,665	4,321	LA2
Resignations ⁽³⁾	Number	2,104	1,727	1,768	LA2
Redundancies, dismissals, people made inactive	Number	1,097	815	824	LA2
Other departures (2)	Number	8,289	7,963	8,424	LA2
Compensation					
			Note RG		
Total gross compensation	€ million	see p. 341	10.1	7,494	
Part-time employees	Number	11,491	11,977	12,943	LA1
Absenteeism					
Absenteeism: Average number of days lost through illness and accidents	Number	9.2	9.1	8.8	
Health and safety conditions					
Fatal accidents	Number	3	4	4	LA7
Accident frequency rate (4)		3.2	3.1	3.1	LA7
Workplace accidents involving at least one lost day	Number	757	694	750	LA7
Accident severity rate (5)		0.20	0.17	0.16	
Employee relations					
Employees covered by collective bargaining agreements	%	90	91	89	LA4
Training					
Hours of training provided	Number	9,085,028	8,915,338	8,636,882	
Number of employees benefiting from training	Number	138,839	135,040	134,910	LA10
Employment and integration of employees with disabilities					
Number of employees with disabilities (6)	Number	5,232	5,086	4,645	LA13

(1) This % represents the number of women in managerial positions/number of women employees.

(2) Entries and exits from scope are accounted for under "Other arrivals" and "Other departures" respectively. Entries of work-study employees are accounted for under "Other entries".

(3) The end of special contracts (including work-study employees) are counted under "Other departures", regardless of whatever may be the action taken. Departures during trial periods are counted under "Other departures".

(4) The frequency rate represents the number of workplace accidents involving at least one lost day for every million hours worked.

(5) The accident severity rate represents the number of days lost for every thousand hours worked.

(6) In certain subsidiaries, this data is declarative.

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ENVIRONMENTAL AND SOCIETAL INFORMATION – HUMAN RESOURCES ENVIRONMENTAL AND SOCIAL INDICATORS

EDF	Unit	2015	2014	2013	Ref. GRI
Workforce as of 31/12 & distribution					
Statutory employees (as of 31/12)	Number	67,088	67,567	66,561	LA1
Employees under unlimited-term contracts (CDI) not covered by collective bargaining agreement	Number	479	461	434	LA1
Employees under fixed-term contracts (CDD) not covered by collective bargaining agreement	Number	4,013	4,153	4,094	LA1
Total not covered by collective bargaining agreements	Number	4,492	4,614	4,528	LA1
Total workforce	Number	71,580	72,181	71,088	LA1
Managers	Number	31,192	30,701	29,595	LA1
Women at managerial level	%	28.4	27.8	26.8	LA13
Non-management employees	Number	40,388	41,480	41,493	LA13
Technicians and supervisory staff	Number	33,016	33,531	33,410	LA13
Operatives	Number	7,372	7,949	8,084	LA13
Gender equality					
Male workforce	Number	49,099	49,524	48,991	LA13
Female workforce	Number	22,481	22,657	22,097	LA13
Male managers	Number	22,315	22,175	21,650	LA13
Female managers	Number	8,877	8,526	7,945	LA13
Hires/departures					
Hires	Number	2,760	4,236	4,433	LA2
Integration & rehiring	Number	256	230	249	LA2
Other arrivals (1)	Number	2,809	3,022	3,598	LA2
Retirement departures/inactive employees	Number	2,433	2,499	2,134	LA2
Resignations	Number	110	107	109	LA2
Redundancies – dismissals – people made inactive	Number	23	9	16	LA2
Deaths	Number	77	68	81	LA2
Other departures (1)	Number	3,786	3,713	3,725	LA2
Overtime					
Overtime worked hours	€ thousands	2,835	2,770	2,847	
Outside contractors					
Monthly average of temporary employees $\ensuremath{^{(2)}}$	Number	(not available)	(not available)	1,948	LA1
Organization of working hours					
Full-time employees	Number	64,318	64,534	62,990	LA1
Part-time employees	Number	7,262	7,647	8,098	LA1
Employees working shifts	Number	6,860	6,955	6,917	LA1
Absenteeism					
Absenteeism	%	3.7	3.7	3.8	LA7
Hours of maternity or paternity leave/hours worked	%	0.8	0.8	0.8	LA7

(not available) : not available.

(1) The arrivals and departures of seasonal fixed-term contract employees have been excluded from the counting.

(2) Data for 2015 is not available upon the date of the present document.

EDF	Unit	2015	2014	2013	Ref. GRI
Health and safety conditions					
Work-related illnesses reported in the year to Social Security		64	51	53	
Fatal accidents	Number	0	2	0	LA7
Accident frequency rate		2.6	2.8	2.7	LA7
Accident severity rate		0.16	0.14	0.14	LA7
Workplace accidents involving at least one lost day	Number	261	284	273	LA7
Compensation/social security payments/profit-sharing					
Main monthly compensation					
Managers	euros	4,361	4,334	4,327	EC1
Technicians and supervisory staff	euros	2,606	2,608	2,615	EC1
Operatives	euros	1,871	1,864	1,870	EC1
Personnel expenses	€ million	6,525	6,408	6,366	EC1
Average amount of profit-sharing per employee	euros	2,107	1,980	1,820	EC1
Employee relations					
Collective bargaining agreements signed in France	Number	2	3	8	HR5
Employees covered by collective bargaining agreements $^{\scriptscriptstyle (3)}$	%	93	93	93	LA4
Training					
Number of employees benefiting from training	Number	63,748	63,252	62,074	LA10
Employment and integration of employees with disabilities					
Number of employees with disabilities	Number	2,157	2,093	1,946	LA13
Number of employees hired with disabilities	Number	91	112	110	LA13
Social work					
Charitable works Committee budgets (fulfilling 1% requirement)	€ million	201	199	205	

(3) EDF employees are not covered by a legally-defined collective agreement but benefit from the status of the electricity and gas industry.

3.6 Assurance report of one of the Statutory Auditors

Report by one of the Statutory Auditors, appointed as independent third-party, on the consolidated human resources, environmental and social information published in the management report included in the reference document

This is a free English translation of the Statutory Auditors' 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 standards applicable in France.

For the year ended 31 December 2015

To the Shareholders,

In our capacity as Statutory Auditor of Électricité de France, appointed as independent third party and certified by COFRAC under number 3-1048¹, we hereby report to you on the consolidated human resources, environmental and social information for the year ended 31 December, 2015 included in the management report (hereinafter named "CSR Information"), pursuant to Article L. 225-102-1 of the French Commercial Code (*Code de commerce*).

Company's responsibility

The Board of Directors of Électricité de France is responsible for preparing a company's management report including the CSR Information required by Article R. 225-105-1 of the French Commercial Code in accordance with the reporting protocols and guidelines used by the Company (hereafter the "Guidelines"), summarized in the section entitled "Methodological elements on the social and environmental data" in the management report included in the reference document and available on request from the company's head office.

Independence and quality control

Our independence is defined by regulatory texts, the French Code of ethics (code de déontologie) of our profession and the requirements of article L. 822-11 of the French Commercial Code. In addition, we have implemented a system of quality control including documented policies and procedures regarding compliance with the ethical requirements, French professional standards and applicable legal and regulatory requirements.

Statutory Auditor's responsibility

On the basis of our work, our responsibility is to:

- attest that the required CSR Information is included in the management report or, in the event of non-disclosure of a part or all of the CSR Information, that an explanation is provided in accordance with the third paragraph of Article R. 225-105 of the French Commercial Code (Attestation regarding the completeness of CSR Information);
- express a limited assurance conclusion that the CSR Information taken as a whole is, in all material respects, fairly presented in accordance with the Guidelines (Conclusion on the fairness of CSR Information);
- 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 3 of the Reference Document was prepared, in all material respects, in accordance with the Reporting Guidelines.

Our work involved eleven persons and was conducted between September 2015 and February 2016 during a fifteen week period. We were assisted in our work by our sustainability experts.

We performed our work in accordance with the French professional standards and with the order dated 13 May, 2013 defining the conditions

2. ISAE 3000 – Assurance engagements other than audits or reviews of historical financial information.

under which the independent third party performs its engagement and with ISAE 3000² concerning our conclusion on the fairness of CSR Information and the reasonable assurance report.

1. ATTESTATION REGARDING THE COMPLETENESS OF CSR INFORMATION

Nature and scope of our work

On the basis of interviews with the individuals in charge of the relevant departments, we obtained an understanding of the Company's sustainability strategy regarding human resources and environmental impacts of its activities and its social commitments and, where applicable, any actions or programmes arising from them.

We compared the CSR Information presented in the management report with the list provided in Article R. 225-105-1 of the French Commercial Code.

For any consolidated information that is not disclosed, we verified that explanations were provided in accordance with Article R. 225-105, paragraph 3 of the French Commercial Code.

We verified that the CSR Information covers the scope of consolidation, i.e., the Company, its subsidiaries as defined by article L. 233-1 and the controlled entities as defined by Article L. 233-3 of the French Commercial Code within the limitations set out in the methodological note, presented in paragraph 3.4.2 of the Reference Document.

Conclusion

Based on the work performed and given the limitations mentioned above, we attest that the required CSR Information has been disclosed in the management report.

2. CONCLUSION ON THE FAIRNESS OF CSR INFORMATION

Nature and scope of our work

We conducted around a hundred interviews with the persons responsible for preparing the CSR Information in the departments in charge of collecting the information and, where appropriate, responsible for internal control and risk management procedures, in order to:

- assess the suitability of the Guidelines in terms of their relevance, completeness, reliability, neutrality and understandability, and taking into account industry best practices where appropriate;
- verify the implementation of data-collection, compilation, processing and control process to reach completeness and consistency of the CSR Information and obtain an understanding of the internal control and risk management procedures used to prepare the CSR Information.

^{1.} Whose scope is available at www.cofrac.fr.

ENVIRONMENTAL AND SOCIETAL INFORMATION – HUMAN RESOURCES ASSURANCE REPORT OF ONE OF THE STATUTORY AUDITORS

We determined the nature and scope of our tests and procedures based on the nature and importance of the CSR Information with respect to the characteristics of the Company, the human resources and environmental challenges of its activities, its sustainability strategy and industry best practices.

Regarding the CSR Information that we considered to be the most important, listed in Annex 1 of this report:

- at parent entity level, we referred to documentary sources and conducted interviews to corroborate the qualitative information (organisation, policies, actions), performed analytical procedures on the quantitative information and verified, using sampling techniques, the calculations and the consolidation of the data. We also verified that the information was consistent and in agreement with the other information in the management report;
- at the level of a representative sample of entities, listed in Annex 2 of this report, selected by us on the basis of their activity, their contribution to the consolidated indicators, their location and a risk analysis, we conducted interviews to verify that procedures are properly applied and we performed tests of details, using sampling techniques, in order to verify the calculations and reconcile the data with the supporting documents. The selected sample represents 69% of headcount and between 17% and 100% of quantitative environmental data.

For the remaining consolidated CSR Information, we assessed its consistency based on our understanding of the company.

We also assessed the relevance of explanations provided for any information that was not disclosed, either in whole or in part.

We believe that the sampling methods and sample sizes we have used, based on our professional judgement, are sufficient to provide a basis for our limited assurance conclusion; a higher level of assurance would have required us to carry out more extensive procedures. Due to the use of sampling techniques and other limitations inherent to information and internal control systems, the risk of not detecting a material misstatement in the CSR information cannot be totally eliminated.

Conclusion

Based on the work performed, no material misstatement has come to our attention that causes us to believe that the CSR Information, taken as a whole, is not presented fairly in accordance with the Guidelines.

3. REASONABLE ASSURANCE REPORT ON A SELECTION OF CSR INFORMATION

Nature and scope of our work

For the information selected by the company, listed in Annex 1 of this report 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 to be the most important, in particular concerning the number of tests.

The selected sample represents 69% of the workforce and 51% of $\mathrm{CO}_{\rm 2}$ emissions.

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, 15 February 2016 One of the Statutory Auditors Deloitte & Associés

Patrick E. Suissa Partner, Audit Florence Didier-Noaro Partner, Sustainability Services

ENVIRONMENTAL AND SOCIETAL INFORMATION – HUMAN RESOURCES ASSURANCE REPORT OF ONE OF THE STATUTORY AUDITORS

ANNEX 1 CSR INFORMATION CONSIDERED TO BE MOST IMPORTANT

Quantitative social data under reasonable assurance

EDF group:

- Total EDF group workforce as of 31 December
- Employee breakdown by age
- Male workforce
- Female workforce

Quantitative social data under limited assurance

EDF group:

- 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 (employees)
- Fatal accidents (third party provider)
- 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

EDF:

Work-related illnesses reported in the year to Social Security

Quantitative environmental data under reasonable assurance

EDF group:

 CO₂ emissions from electricity and heat production (including installations not subject to quotas)

Quantitative environmental data under limited assurance

EDF group:

- 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 fresh water
- Cooling water returned
- Cooling water returned, of which fresh water
- Air gas emissions
 - SO₂ emissions
 - NO_x emissions
 - Dusts
 - 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 (other than hydropower)
- Nuclear Indicators EDF:
- Nuclear fuel loaded in reactors
 - Radioactive emissions to air
 - Carbon-14
 - Tritium
 - Radioactive emissions to water
 - Carbon-14
 - Tritium
- Transported spent nuclear fuel
- Decommissioning nuclear waste
 - Very Low-Level radioactive Waste (VLLW)
 - Low and Intermediate-Level radioactive Waste (LLW and ILW)
- 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 reactor (Advanced Gas-cooled Reactor)
 - Tritium PWR reactor (Pressurised Water Reactor)
 - Radioactive emissions to air
 - Carbon 14 AGR reactor
 - Carbon 14 PWR reactor
 - Tritium AGR reactor
 - Tritium PWR reactor
 - Uranium sent off site
 - Transported low-level radioactive waste
 - Generated Intermediate-Level radioactive waste

Qualitative social information reviewed at Group level

- Paragraph "Skill development: preparing for the future"
- Paragraph "Guaranteeing better health & safety conditions at work"
- Paragraph "Organization and working hours"
- Paragraph "High Quality social dialogue"

Qualitative environmental information reviewed at Group level

Paragraph "Environmental management system (EMS)"

ANNEX 2 SELECTED ENTITIES

Selected entities for EDF

- Rouen HR agency
- Marseille HR agency
- Paluel Nuclear Electricity Generation Centre
- Nogent Nuclear Electricity Generation Centre
- Chooz B Nuclear Electricity Generation Centre
- Chooz A plant in decommissioning
- Chinon A plant in decommissioning
- Cordemais Thermal Power Plant
- Le Havre Thermal Power Plant
- Montereau Thermal Power Plant
- Pointe-des-Carrières Thermal Power Plant
- Richemont Thermal Power Plant in decommissioning
- Vaires-sur-Marne exploitation engineering unit
- Guerledan Hydraulic Production Station
- Hydroelectric Engineering and Production Division (DPIH)
- Nuclear Production Division Exploitation engineering unit (DPN UNIE)
- Nuclear Production Division Operational technic unit (DPN UTO)
- Nuclear Engineering Division Decommissioning and waste projects Division (DP2D)
- Nuclear Fuel Division (DCN)

Selected entities for ERDF

- Lorraine electricity network unit
- Midi-Pyrénées Sud electricity network unit
- Unité Service Régionale Sud-Ouest
- Unité Service Régionale Méditerranée

Selected entities in Asia Pacific

MECO Site

- Paragraph "Adapting the Group's business to climate change"
- Paragraph "Impact on water"
- Paragraph "Protection of biodiversity"

Qualitative societal information reviewed at Group level

- Paragraph "Ethics and compliance"
- Paragraph "Dialogue with stakeholders"
- Paragraph "Contributing to local economic and social development"
- Paragraph "Responsible purchasing"
- Paragraph "Responsible sub-contracting: a reality

Selected entities for EDF Energy

- Combined Cycle Gas Turbine of Cottam
- Nuclear power plant of Dungeness B
- Nuclear power plant of Sizewell B
- HR centre of Crawley

Selected entities for EDF Énergies Nouvelles

- EDF EN France (RH)
- Reetec (RH)

Selected entities for Edison, exploration-production activities

- Norway (waste)
- Abu Qir (emissions and waste)

Selected Entities for Fenice

- Mirafiori
- Fenice Italy (HR)

Selected entities for TIRU

Verification of consolidated data for TIRU

Seleted entities for Dalkia

Verification of consolidated data for Dalkia



Alignment of wind turbines at Chemin d'Ablis ©EDF - Marc Didier

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4.1 Corporate Governance Code

EDF has signed up to the consolidated AFEP-MEDEF Code, 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 members of the Board of Directors (see section 4.2.1 "Members of the Board of Directors");
- the terms and conditions for the appointment of the Chairman & Chief Executive Officer of EDF (see section 4.2.2.3 "Method of Executive Management – appointment and powers of the Chairman & Chief Executive Officer");
- the terms and conditions for the setting of the compensation of the Chairman & Chief Executive Officer (see section 4.6.1.1.1 "Terms and conditions for the setting of compensation"); or
- the method of Executive Management (see section 4.2.2.3 "Method of Executive Management – appointment and powers of the Chairman & Chief Executive Officer").

Relevant section

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:

AFEP-MEDEF Code recommendation	Company's position	Explanation	of the reference document
Staggered re-election of the Board of Directors Recommendation 14: "Terms should be staggered so as to avoid replacement of the entire body and to favour a smooth replacement of directors."	The replacement of the entire Board of Directors every five years is no longer mandatory in accordance with the Order of 20 August 2014 but the Company has not implemented the staggered re-election of the Board of Directors.	The Company modified its articles of association at the Shareholders' Meeting of 21 November 2014 with a view to implementing the new membership of the Board of Directors based on the order of 20 August 2014 and reducing the term of office of directors to 4 years. Regarding the staggering of the re-election to offices, this option is now available to the Company and can therefore be examined by the Board of Directors.	See section 4.2.2.1 ("Term of office of directors")
Holding of Company shares by directors Recommendation 20: "The director should be a shareholder personally and hold a fairly significant number of shares in relation to the directors' fees; if he or she does not hold these shares when assuming office, he or she should use his or her directors' fees to acquire them."	The Company's articles of association and the Board's internal rules of procedure do not specify that directors must possess a fairly significant 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. Taking account of the wide range of situations, the Board has not established a unique rule on the holding of the Company's shares. Each director must also act in the Company's best interests, irrespective of the number of Company shares they hold personally.	See section 4.6.1.2 ("Total compensation of directors") and 4.5 ("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.



AFEP-MEDEF Code recommendation	Company's position	Explanation	Relevant section of the reference document
Holding of Company shares by the Chairman & Chief Executive Officer Recommendation 23.2.1: "The Chairman of the Board, the Chief Executive Officer, () are required to hold until the end of their term of office a significant number of registered shares periodically determined by the Board of Directors or the Supervisory Board. The number of shares, which may be made up of exercised stock options or performance shares, must be significant and increasing, where necessary, to a level determined by the Board."	The Company's articles of association and the Board's internal rules of procedure do not require the Chairman & Chief Executive Officer to hold a fairly significant number of shares periodically determined by the Board of Directors.	The Chairman & Chief Executive Officer does not receive directors' fees. His compensation is limited in accordance with Decree no. 2012-915 of 26 July 2012 modifying Decree no. 53-707 of 9 August 1953. Finally, the Company has not put in place a stock and/or performance stock option plan in favour of corporate officers and executives. Accordingly, it was decided to not implement this recommendation. Furthermore, each corporate officer and executive must also act in the Company's best interests, irrespective of the number of Company shares they hold personally.	See sections 4.6.1.1 ("Total compensation of the Chairman & Chief Executive Officer"), 4.6.2 ("Stock options – Bonus shares") and 4.5 ("Shareholding by directors and trading in EDF securities by corporate officers and executives").
Rules for the distribution of directors' fees Recommendation 21: the method of allocation of directors' compensation "should take account, in such ways as it shall determine, of the directors' actual attendance at meetings of the Board and committees, and therefore include a preponderant variable portion".	A significant but not "preponderant" share of the directors' fees is dependent upon actual attendance by the directors of 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 share of compensation paid in directors' fees is not preponderant, the Company considers that it is nonetheless significant and appropriate, insofar as the variable share that compensates the actual presence of directors accounts for 50% of the total budget of directors' fees. Incidentally, the attendance rate of directors at meetings of the Board is greater than 96%.	See section 4.6.1.2 ("Total compensation of directors")

4.2 Members and functioning of the Board of Directors

4.2.1 MEMBERS OF THE BOARD OF DIRECTORS

Until the General 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 General Shareholders' Meeting, six directors representing the French State were appointed by decree and finally six directors were elected by the employees.

The General Shareholders' Meeting held on 21 November 2014 modified the Company's articles of association in order to implement the provisions of Order no. 2014-948 of 20 August 2014 relating to governance of 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 General 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 had eighteen members:

- eleven directors appointed by the General Shareholders' Meeting, including five on recommendation from the French State;
- six directors elected by the employees;
- one Representative of the French State.

The Government Commissioner ² and Head of the French State General Economic and Financial Supervisory Mission to the Company ³ as well as the Secretary of the Central Works Council attend the meetings of the Board of Directors, but only with an advisory vote. However, in accordance with Article L. 311-5-7 of the French Energy Code, based on Law no. 2015-992 of 17 August 2015 relating to the Energy Transition for Green Growth, the Government Commissioner is informed of investment decisions and can oppose decisions whose implementation would be incompatible with the objectives of the strategic plan developed by the Company or with those of the multi-year energy program.

^{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.

Since 1 January 2015 and until the date of filing of this reference document, the following modifications have been made to the membership of the Board of Directors:

First name, surname	Director	Date of appointment	Replacing
Mr. Martin Vial	Representative of the French State	Order of 9 September 2015	Mr. Régis Turrini

Taking account of the discussions entered into between EDF and AREVA in 2015 (see section 1.4.1.2.3.2 "Memorandum of understanding with AREVA"), Mr. Philippe Varin suspended, from 9 June 2015, his attendance of the meetings of EDF's Board of Directors for the duration of these discussions. By letter of 31 March 2016, Mr. Varin expressed his decision to resign from his Director office. This resignation shall take effect from the date of the General Meeting summoned 12 May 2016. The appointment of Mrs. Claire Pedini, deputy CEO in charge of the human resources of Saint-Gobain is to be proposed to the General Meeting of 12 May 2016 succeding to Mr. Varin, taking effect at the end of the General Meeting.

Balanced representation of women and men on Boards of Directors

In accordance with Article L. 225-18-1 of the French Commercial Code and the Order of 20 August 2014, EDF, as a listed company and a Stateowned company is subject to the rules relating to balanced representation of women and men on Boards of Directors and Supervisory Boards and the Company must comply with a proportion of 40% women on the Board of Directors in 2017. 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 directors representing the employees). After the General Meeting of 12 May 2016, should the appointment of Mrs. Claire Pedini be approved, the Board of Directors will includea total of 6 women, i.e. a proportion of women equal to 33.33%.

Information regarding the directors.

The list of directors, their personal details as well as information on their offices on 31 January 2016¹ are provided below.

^{1.} Unless otherwise stated in the table.



DIRECTORS APPOINTED BY THE GENERAL SHAREHOLDERS' MEETING

Jean-Bernard LÉVY, 61 years old

Position held

within the Company Chairman & Chief Executive Officer since 27 November 2014⁽¹⁾

Date of appointment to the Board

23 November 2014

Expiry of current term

General Shareholders' Meeting called to approve the financial statements for the fiscal year closing 31 December 2018

Other position(s)

Chairman of the Strategy Committee

Shares held

Nationality

French

A former student of École Polytechnique (graduating in 1973) and Telecom Paris Tech, Jean-Bernard Lévy 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. From 1993 to 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 & Chief Executive Officer of the Thales defence and aerospace group. EDF director since 23 November 2014, Jean-Bernard Lévy has been the Company's Chairman & Chief Executive Officer since 27 November, 2014⁽¹⁾.

Offices and positions held during 2015

Principal position held within the Company

Chairman & Chief Executive Officer of EDF

Office/Position	Name	Country	
Chairman & Chief Executive Officer	EDF	France	L
Chairman of the Board of Directors	Edison	Italy	G/L
Chairman of the Board of Directors	EDF Energy Holdings	United Kingdom	G
Chairman of the Board of Directors	EDF Foundation	France	G
Director	Dalkia	France	G
Director	EDF Energies Nouvelles	France	G
Director	Société Générale	France	L
Director	Institut Pasteur	France	
Deputy Chairman of the Board of Directors	Eurelectric	Belgium	
Representative of EDF	French High Committee for Transparency and Information on Nuclear Safety	France	

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

In France

- Chairman & Chief Executive Officer of Thales
- Chairman & Chief Executive Officer of SFR
- Chairman of the Board of Directors of Institut Mines Télécom (formerly Institut Télécom)
- Chairman of the Board of Directors of Institut Télécom
- Chairman of JBL Consulting & Investments
- Chairman of the Supervisory Board of Viroxis
- Chairman of the Management Board of Vivendi
- 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
- Director of Vinci

Abroad

- 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

(1) Mr. Jean-Bernard Lévy was appointed temporary Chairman & Chief Executive Officer from 23 November 2014, by ministerial decisions of 21 November 2014.



Olivier APPERT, 66 years old

Position held

within the Company Director appointed by the General Shareholders' Meeting on recommendation from the French State

Date of appointment to the Board

17 June 2013

Last re-elected

23 November 2014

Expiry of current term

Shareholders' Meeting called to approve the financial statements for the fiscal year closing 31 December 2018

Other position(s)

Member of the Nuclear Commitments Monitoring Committee and the Strategy Committee

Shares held

0

Nationality

French

A former student of the École Polytechnique and a Corps des Mines engineer, Olivier Appert 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 Minister for Industry's office from 1984 to 1986. In 1987 he became Director of Strategy at Télécommunications Radioélectriques & 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). From 2003 to 2015, he was Chairman & Chief Executive Officer of IFP, which became IFP Énergies Nouvelles (IFPEN) in July 2010. Olivier Appert has been general representative of the National Academy of Technologies of France since March 2015 and Chairman of the Conseil Français de l'Énergie (French Energy Council) since 2010, and has also been a director of Technip since 2003.

Offices and positions held during 2015

Principal positions held outside the Company

- General representative of the National Academy of Technologies of France
 - Chairman of the Conseil Français de l'Energie (French Energy Council)

Office/Position	Name	Country	
General representative	National Academy of Technologies of France	France	
Chairman	French Energy Council	France	
Director	Technip	France	L

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

In France

- Chairman & Chief Executive Officer of IFP Énergies Nouvelles
- Director of CGG
- Director of Storengy
- Director of the *Institut de physique du globe de Paris* (Paris Institute of Earth Physics)



Philippe CROUZET, 59 years old

Position held

within the Company Director appointed by the General Shareholders' Meeting

Date of appointment to the Board

23 November 2009

Last re-elected

23 November 2014

Expiry of current term

Ordinary Shareholders' Meeting called to approve the financial statements for the fiscal year closing 31 December 2018

Other position(s)

Chairman of the Nuclear Commitments Monitoring Committee and the Audit Committee

Shares held 200

Nationality French 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 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).

Offices and positions held during 2015

Principal position held outside the Company

Chairman of the Management Board of Vallourec

Office/Position	Name	Country	
Chairman of the Management Board	Vallourec	France	L
Chairman	Vallourec Tubes	France	
Director	<i>Théâtre National de l'Opéra-Comique</i> and <i>Théâtre de la Ville</i> (Paris)	France	
Deputy Chairman	Institut de l'Entreprise	France	
Director	Vallourec Tubos do Brasil SA	Brazil	

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

In France

- Chairman and member of the Supervisory Board of Vallourec Tubes France
- Director of Vallourec Oil & Gas France



Bruno LAFONT, 59 years old

Position held

within the Company Director appointed by the General Shareholders' Meeting

Date of appointment to the Board

20 May 2008

Last re-elected

23 November 2014

Expiry of current term

Ordinary Shareholders' Meeting called to approve the financial statements for the fiscal year closing 31 December 2018

Other position(s)

Chairman of the Appointments & Remuneration Committee

Shares held

150

Nationality

French

Graduate of the École des hautes études commerciales (HEC) and a former student of the École nationale d'administration (ENA), Bruno Lafont 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 & Chief Executive Officer of Lafarge from 2007 to 2015. He has been Co-Chairman of the Board of LafargeHolcim and Honorary Chairman of Lafarge since 2015. 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 Centre since February 2014.

Offices and positions held during 2015

Principal position held outside the Company

Co-Chairman of LafargeHolcim and Honorary Chairman of Lafarge

Office/Position	Name	Country	
Co-Chairman	LafargeHolcim	France	L
Honorary Chairman	Lafarge	France	L
Chairman	Lafarge Ciments	France	
Director	ArcelorMittal	Luxembourg	L
Chairman of the Sustainable Development Centre	MEDEF	France	
Member of the Executive Committee	World Business Council for Sustainable Development	Switzerland	

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

In France

- Chairman & Chief Executive Officer of Lafarge
- Chairman of the Entreprises pour l'Environnement (EPE) association

Abroad

- Director of Lafarge India
- Director of Lafarge Cement Shui On


Bruno LÉCHEVIN, 64 years old

Position held within the Company

Director appointed by the General Shareholders' Meeting on recommendation from the French State

Date of appointment to the Board

6 May 2013

Last re-elected

23 November 2014

Expiry of current term

Ordinary Shareholders' Meeting called to approve the financial statements for the fiscal year closing 31 December 2018

Other position(s)

Member of the Ethics Committee

Shares held

0

Nationality

French

Holder of a postgraduate degree from the Institut d'études politiques in Paris, Bruno Léchevin began his career at EDF and subsequently held various union roles. Federal secretary of the CFDT Gaz-Electricité 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 Federal 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, his term of office was extended for six years. General Representative of the French National Energy Mediator from March 2008 to March 2013, he was at the same time 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, energy management, the environment, 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.

Offices and positions held during 2015

Principal position held outside the Company

Chairman & Chief Executive Officer of the French Environment and Energy Management Agency (ADEME)

Office/Position	Name	Country
Chairman & Chief Executive Officer	ADEME	France
Deputy Chairman	Électriciens Sans Frontières	France

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

In France

- General Representative to the French national energy mediator
- Special advisor to the Chairman of the CRE (French Energy Regulation Commission)



Marie-Christine LEPETIT, 54 years old

Position held

within the Company Director appointed by the General Shareholders' Meeting on recommendation from the French State

Date of appointment to the Board

7 May 2012

Last re-elected

23 November 2014

Expiry of current term

Ordinary Shareholders' Meeting called to approve the financial statements for the fiscal year closing 31 December 2018

Other position(s)

Chairman of the Audit Committee and member of the Nuclear Commitments Monitoring Committee

Shares held

0

Nationality

French

A former student of the École polytechnique and the École nationale d'administration (ENA), Marie-Christine Lepetit 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 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 report by the conference of experts 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. She has been director of the Fondation nationale des sciences politiques (French national political science foundation) since 2013 and établissement Public de la Réunion des musées nationaux et du Grand Palais des Champs-Elysées since 2015.

Offices and positions held during 2015

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

Office/Position	Name	Country
Director	Fondation nationale des sciences politiques	France
Director	Établissement public de la Réunion des musées nationaux et du Grand Palais des Champs- Elysées	France

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

None.



Colette LEWINER, 70 years old

Position held

within the Company Director appointed by the General Shareholders' Meeting

Date of appointment to the Board

11 April 2014

Last re-elected

23 November 2014

Expiry of current term

Ordinary Shareholders' Meeting called to approve the financial statements for the fiscal year closing 31 December 2018

Other position(s)

Chair of the Ethics Committee and member of the Audit Committee and of the Appointments & Remuneration Committee

Shares held

1,748⁽¹⁾

Nationality

French

A former student of the École normale supérieure and holder of an Agrégation degree in physics and Doctorate in science, Colette Lewiner joined Électricité de France in 1979. In 1989 she created the Development & Commercial Strategy Division, accordingly becoming the first woman appointed Executive Vice President at EDF. From 1992 to 1998, she was Chair & Chief Executive Officer of SGN, a nuclear engineering firm and 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. Non-executive Chair of TDF (SAS) from 2010 to 2015, she is a member of the National Academy of Technologies of France and has been a 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 and Ingenico.

Offices and positions held during 2015

Principal position held outside the Company

Professional administrator

Office/Position	Name	Country	
Director	Bouygues	France	L
Director	Nexans	France	L
Director	Eurotunnel	France	L
Director	Ingenico	France	L
Member	Académie des Technologies	France	
Member	Strategic Research Committee	France	

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

In France

- Chair of the Board of Directors of TDF
- Director of Lafarge
- Director of La Poste

Abroad

- Director of Crompton Greaves
- Director of TGS Nopec

(1) Shares held directly and through a mutual fund.



Gérard MAGNIN, 65 years old

Position held

within the Company Director appointed by the General Shareholders' Meeting on recommendation from the French State

Date of appointment to the Board

23 November 2014

Expiry of current term

Ordinary Shareholders' Meeting called to approve the financial statements for the fiscal year closing 31 December 2018

Other position(s)

Member of the Ethics Committee

Shares held

0

Nationality

French

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 Université Lyon II, Gérard Magnin 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 Bourgogne Franche-Comté Economic, Social and Environmental Council.

Offices and positions held during 2015

Principal position held outside the Company

Member of the Bourgogne Franche-Comté Economic, Social and Environmental Council

Self-employed

Office/Position	Name	Country
Member	Member of the Bourgogne Franche-Comté Economic, Social and Environmental Council	France

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

In France

General Delegate for the European Energy Cities network



Christian MASSET, 59 years old

Position held within the Company

Director appointed by the General Shareholders' Meeting on recommendation from the French State

Date of appointment to the Board

26 September 2014

Last re-elected

23 November 2014

Expiry of current term

Ordinary Shareholders' Meeting called to approve the financial statements for the fiscal year closing 31 December 2018

Other position(s)

Member of the Strategy Committee

Shares held

0

Nationality

French

A former student of ENA, graduate of IEP of Paris and ESSEC, Christian Masset 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 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

Offices and positions held during 2015

Principal position held outside the Company

General Secretary at the Ministry for Foreign Affairs and International Development

Office/Position	Name	Country
Director	AREVA	France L
Director	France Médias Monde	France
Director	Agence nationale des titres sécurisés (French national agency of secure shares)	France
Director	<i>Commission de récolement des dépôts d'œuvres d'art</i> (Commission for the Verification of the Registration of Works of Art)	France
Director	Établissement de préparation et de réponse aux urgences sanitaires (Organisation for preparing for and responding to health emergencies)	France
Director	École nationale d'administration	France
Director	Institut français	France
Member	<i>Comité de l'énergie atomique</i> (French atomic energy board)	France

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

In France

- Director of the Agency for French Education Abroad
- Director of France Expertise Internationale
- Director of Culture France
- Director of the Agence Française de Développement (French development agency)
- Director of the France-Israël Foundation
- Member of the Supervisory Board of AREVA



Laurence PARISOT, 56 years old

Position held

within the Company Director appointed by the General Shareholders' Meeting

Date of appointment to the Board

23 November 2014

Expiry of current term

Ordinary Shareholders' Meeting called to approve the financial statements for the fiscal year closing 31 December 2018

Other position(s)

Member of the Audit Committee and the Strategy Committee

Shares held

0

Nationality

French

Holder of a Masters in Public Law from Université Nancy II, graduate from the Paris Institute of Political Studies (IPE) and holder of a MAS in Political Studies from IPE, Laurence Parisot 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 & 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 chairs the Scientific Board of Fondapol.

Offices and positions held during 2015

Principal position held outside the Company

Deputy Chair of the Management Board of IFOP group

Office/Position	Name	Country
Deputy Chair of the Management Board	IFOP	France
Director	BNP Paribas	France L
Chair of the Scientific Committee	Fondapol	France
0.505		

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

In France

- Director of Coface
- Member of the Supervisory Board of Fives
- Member of the Supervisory Board of Michelin
- Member of the Economic, Social and Environmental Council



Philippe VARIN, 63 years old

Position held

within the Company Director appointed by the General Shareholders' Meeting (1)

Date of appointment to the Board

23 November 2014

Expiry of current term

Ordinary Shareholders' Meeting called to approve the financial statements for the fiscal year closing 31 December 2018

Other position(s)

None

Shares held

0

Nationality

French

A former student of the École polytechnique and the École des Mines in Paris, Philippe Varin joined the Péchiney 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.

Offices and positions held during 2015

Principal position held outside the Company

- Chairman of the Board of Directors of AREVA
- Special representative to the Ministry for Foreign Affairs and International Development for ASEAN countries (Association of South-East Asian Nations)

Office/Position	Name	Country
Chairman of the Board of Directors	AREVA	France L
Director	Saint-Gobain	France L
Chairman	Cercle de l'Industrie	France

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

In France

- 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

Abroad

- Director of PCMA Holding BV
- Director of BG Group Plc.
- (1) Taking account of the discussions entered into between EDF and AREVA in 2015 (see section 1.4.1.2.3.2 "Memorandum of understanding with AREVA"), Mr. Philippe Varin temporarily suspended, from 9 June 2015, his attendance of the meetings of EDF's Board of Directors for the duration of these discussions. Additionnaly, Mr. Varin notified 31 March 2016 his decision to resign from his Director office, taking effect at the date of the General Meeting of 12 May 2016.

DIRECTOR REPRESENTING THE FRENCH STATE

Martin VIAL, 62 years old

Position held

within the Company Director – Representative of the French State

Date of appointment to the Board

9 September 2015

Expiry of current term

Ordinary Shareholders' Meeting called to approve the financial statements for the fiscal year closing 31 December 2018

Other position(s)

Member of the Appointments & Remuneration Committee and the Strategy Committee

Shares held 0

Nationality

French

Graduate of ESSEC and École nationale supérieure des postes et télécommunications, Martin Vial began his career as postal services and telecommunications director at the Financial Division of the General Postal Directorate. In 1986, he joined the Treasury Division at the Ministry for the Economy and Finance. From 1988 to 1993, he was successively Technical Advisor, Deputy Director then Director of the offices of the Minister for Postal Services and Telecommunications and Space, the Ministry for Equipment, Housing, Transport and Space, and finally the Ministry for Postal Services and Telecommunications. In 1993, Martin Vial was appointed Chairman & Chief Executive Officer of Aéropostale, an airline and joint subsidiary of Air France, La Poste and TAT, and was elected Chairman of the Chambre syndicale du transport aérien (French air transport union) and Fédération nationale de l'aviation marchande (French national commercial aviation union). At the end of 1997, he become Chief Executive Officer of La Poste group. In September 2000, he was appointed Chairman of La Poste group and at the same time Deputy Chairman of the Caisse nationale de prévoyance (CNP). Martin Vial joined the French National Audit Office in September 2002 as Chief Advisor. From 2003 to 2014, he was Chief Executive Officer of Europ Assistance group, world leader on the assistance market and director & Chief Executive Officer of Europ Assistance Holding. He also chairs several boards of directors of this group's companies. In January 2015, he founded the company Premium Care, which provides assistance to the elderly. Commissioner of the French State Shareholdings since August 2015, Martin Vial is a director of Renault, Thales and Bpifrance.

Offices and positions held during 2015

Principal position held outside the Company

Commissioner of the French State Shareholdings

Office/Position	Name	Country	
Director	Renault	France	L
Director	Thales	France	L
Director	Bpifrance	France	

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

In France

- Chief Executive Officer and director of Europ Assistance Holding
- Chairman of International Health Solutions
- Chairman of Sicav Libertés et Solidarités
- Director of Hormair Vacances
- Director of Business Solutions Capital

Abroad

- Chairman of Club Santé Afrique
- Chairman of Europ Assistance Brazil, Belgium, France, UK, USA
- Director of Europ Assistance South Africa, Germany, China, Spain, Italy, Portugal



DIRECTORS ELECTED BY THE EMPLOYEES

Christine CHABAUTY, 44 years old

Position held within the Company Director elected by the employees

Date of appointment to the Board

23 November 2009

23 November 2014

Expiry of current term 22 November 2019

Other position(s)

Member of the Ethics Committee

Shares held

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Nationality French

Jacky CHORIN, 56 years old

Position held within the Company Director elected by the employees

Date of appointment to the Board

23 November 2014 $^{\scriptscriptstyle (1)}$

Expiry of current term

22 November 2019

Other position(s)

Member of the Audit Committee, the Strategy Committee and the Ethics Committee

Shares held

 $229^{\,(2)}$

Nationality

French

A graduate in Law, Christine Chabauty gained professional experience in a legal environment and in 2000 joined EDF's Trading Department as commercial attaché to the Key Accounts Department. She now works for the Key Accounts Division's Marketing and Trading Department. Since December 2008, she has also served as a member of an elected industrial tribunal (conseiller prud'hommal). Sponsored by the CGT union, Mrs. CHABAUTY was re-elected in May 2014.

Offices and positions held during 2015

Principal position held within the Company

Commercial attaché to the EDF Trading Division Key Accounts Department

Office/Position	Name	Country
Judge	Conseil de Prud'hommes (Industrial Tribunal)	France

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

None.

A graduate from the Paris Institute of Political Studies (IPE) and a Doctor of Law, Jacky Chorin 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. He has been a member of the French Higher Energy Council since 2012 and is also a member of the French National Ecological Transition Council. Sponsored by the Force Ouvrière (FO) trade union, Mr. Chorin was a director of EDF from September 2004 to November 2009, and was re-elected in May 2014.

Offices and positions held during 2015

Principal position held within the Company

Representative of the Human Resources Manager of the EDF Generation-Engineering Division

officer osition	Name	Country
Member	French Higher Energy Council	France
Member	French National Ecological Transition Council	France

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

In France

- Member of the Economic, Social and Environmental Council
- 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 Énergies & Mines trade union, in charge of the Skills Centre

(1) Jacky Chorin was previously director of EDF (EPIC then SA) from September 2004 to November 2009.

(2) Shares held through a mutual fund.



Marie-Hélène MEYLING, 55 years old

Position held

within the Company Director elected by the employees

Date of appointment to the Board

1 September 2011

Last re-elected

23 November 2014

Expiry of current term

22 November 2019

Other position(s)

Member of the Audit Committee, Nuclear Commitments Monitoring Committee, Strategy Committee and Ethics Committee

Shares held

33

Nationality

French

A graduate in communication (Université Paris V), Marie-Hélène Meyling 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 Institute of Political Studies of Paris and the Institut Français des Administrateurs (French Institute of Directors). Sponsored by the CFDT trade union, Mrs. Meyling was re-elected in May 2014.

Offices and positions held during 2015

Principal position held within the Company

Senior Engineer at the EDF Upstream-Downstream Optimisation and Trading Division

Office/Position	Name	Country
Substitute member as representative of employees in the Electricity and Gas Industries for the CFDT union	<i>Conseil Supérieur de l'Énergie</i> (French higher energy council)	France

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

None.

Jean-Paul RIGNAC, 53 years	old		
<i>Position held</i> <i>within the Company</i> Director elected by the employees	Holder of a doctorate in ei secretary of EDF Research & a research engineer at EDF efficiency in industrial build	nergy from the Institut national polytechniqu & Development's joint generation committee for 's Research and Development Division (Renardièn dings. Sponsored by the CGT union, Mr. Rignac w	e in Toulouse, Jean-Paul Rignac served as five years. Since March 1991, he has been es Centre), and currently works on energy as re-elected in May 2014.
Date of appointment to the Board	Offices and positions hele	d during 2015	
1 November 2007	Principal position held within the Company		
<i>Last re-elected</i> 23 November 2014	 Research Engineer at the 	e EDF Research and Development Division	
Expire of current torm	Office/Position	Name	Country
22 November 2019	None.		
Other position(s)	G: EDF group company/L: listed	d company.	
Member of the Strategy Committee	Expired offices held outsing None.	ide the Company over the past five years	
<i>Shares held</i> 0			

Nationality

French



Christian TAXIL, 40 years old

Position held within the Company

Director elected by the employees

Date of appointment to the Board

23 November 2014

Expiry of current term 22 November 2019

Other position(s)

Member of the Audit Committee and the Strateg Committee

Shares held

965 (1)

Nationality

French

A graduate from the École des Mines in Douai, Christian Taxil 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 work 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 trade union, Mr. Taxil was elected in May 2014.

Offices and positions held during 2015

Principal position held within the Company

Representative of the Human Resources Division

	Office/Position	Name	Country
Ŋ	Elected representative	Board of the <i>Syndicat mixte d'electricité, de gaz et de télécommunications du Val-d'Oise</i> (SMDEGTVO)	France

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

In France

- General secretary of the Fédération CFE-CGC Énergies union
- Local councillor in Courdimanche (Val d'Oise)
- Deputy mayor in Courdimanche
- Representative to the French Higher Council of Electricity and Gas, now the Higher Energy Council

(1) Shares held through a mutual fund.

Maxime VILLOTA, 56 years old

Position held within the Company Director elected by the employees

Date of appointment to the Board

5 December 2006

Last re-elected 23 November 2014

Expiry of current term 22 November 2019

Other position(s)

Member of the Audit Committee, Nuclear Commitments Monitoring Committee and Appointments & Remuneration Committee

Shares held

 $34^{(1)}$

Nationality French Maxime Villota joined EDF in 1981. He 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, Mr. Villota was re-elected in May 2014.

Offices and positions held during 2015

Principal position held within the Company

Purchasing policy coordinator at the finance and industrial relations department of the EDF nuclear power plant (Tricastin)

Office/Position	Name	Country
None.		

G: EDF group company/L: listed company.

Expired offices held outside the Company over the past five years

None.

(1) Shares held through a mutual fund.

4.2.2 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. They also define the role and powers of the Chairman & Chief Executive Officer.

The Board's internal rules of procedure are regularly updated, particularly to take account of legislative and regulatory changes and changes to the AFEP-MEDEF Code (see section 4.1 "Corporate Governance Code"). They were last updated on 30 June 2015.

4.2.2.1 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 five 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 only has to be reelected after five years.

In accordance with the option provided by the Order of 20 August 2014, the General Shareholders' Meeting held on 21 November 2014 modified the Company's articles of association and reduced the term of office of the directors to four 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 General Shareholders' Meeting held on 21 November 2014 shall be five years and that the term of office of the directors appointed by the General Shareholders' Meeting held on 21 November 2014 shall expire at the end of the General Shareholders' Meeting called to approve the financial statements for the fiscal year ending 31 December 2018.

In accordance with the provisions of Article 2 of Decree no. 2014-949 of 20 August 2014 regarding the implementation of the Order of 20 August 2014, the Representative of the French State is appointed for a term equal to the term of office of the members of the Board of Directors.

The directors appointed by the General Shareholders' Meeting can be dismissed at any time by the Ordinary 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 employees. The Representative of the French State terminates 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.

4.2.2.2 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 (see also section 4.4.3 "Conflicts of interest"), and refraining from contributing to the discussions and 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 & 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 4.5.2 "Trading in Company securities", below), Group Ethics Code, Group CSR commitments and the AFEP-MEDEF Code of Corporate Governance.

4.2.2.3 Method of Executive Management – appointment and powers of the Chairman & 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 & 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 & 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 & 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 & Chief Executive Officer of EDF by decree of 27 November 2014.

In case of vacation of the office of Chairman & Chief Executive Officer, article 21 of the order of 20 August 2014 states that the French state can appoint someone to the role temporarily until the appointment of the new Chairman and CEO. In accordance with this text, Mr. Jean-Bernard Lévy had been appointed, by ministerial decisions of 21 November 2014, temporary Chairman & Chief Executive Officer of the Company from 23 November 2014.

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 & Chief Executive Officer provided for by the internal rules of procedure of the Board of Directors as internal rules (see section 4.2.2.4 "Powers and duties of the Board of Directors" below), the Chairman & 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 & Chief Executive Officer organises and supervises the work of the Board of Directors and reports to the General Shareholders' Meeting. They oversee the proper running of the Company's bodies and, in particular, ensure that the directors are in a position to fulfil their duties.

4.2.2.4 **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, updated on 30 June 2015, the Board of Directors has sole authority to authorise the following transactions:

- transactions of external or internal growth or disposals involving a financial exposure for the Company exceeding €350 million; this threshold falls to €150 million for acquisitions not in line with the Company's strategic objectives; prior authorisation from the Board of Directors is required for these same transactions, and according to the same thresholds, when they are carried out by a company controlled exclusively by the Company;
- coherent and inseparable industrial transactions and programs of investments or works on existing assets exceeding €350 million per program;



- 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 2015 fiscal year, the Board set: (i) at €1.5 billion, the total authorised budget for sureties, endorsements or guarantees (the Chairman & 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 according to an annual global limit set at €15 billion. For 2016, 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, equal to or exceeding €350 million, or between €200 million and €350 million if these contracts relate to a new strategic direction or a new business line for the Group; the Board is also informed of amendments signed on contracts that it authorised that result in increasing the value of the initial contract by more than 30% or by more than €350 million;
- Iong-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 CO₂;
- strategies relating to upstream and downstream operations of the nuclear fuel cycle;
- strategies relating to gas purchases;
- operations involving the transfer of obligations relating to decommissioning or downstream processes of the nuclear fuel cycle;
- strategic agreements constituting firm and irrevocable commitments relating to cooperation or partnerships with one or more foreign partners, in the nuclear industry involving significant transfers of intellectual property or technologies on the Group's part and constituting major challenges for the Group.

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 4.2.3.2 "Nuclear Commitments Monitoring Committee"). It set limits on market, counterparty and liquidity risks.

Furthermore, in accordance with the provisions of Article L. 225-37-1 of the French Commercial Code, the Board of Directors deliberates annually on the Group's policy in terms of equal access to employment and equal pay. Finally, the Board of Directors defines annually the Company's strategic aims drawn up with a view to consultation of the EDF Central Works Council in accordance with Article L. 2323-10 of the French Labour Code.

4.2.2.5 Evaluation of director independence

The AFEP-MEDEF Corporate Governance Code 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 a joint meeting on 21 January 2016, the Ethics Committee and the Appointments & Remuneration Committee reviewed the individual situations of directors appointed by the General Shareholders' Meeting. Upon recommendation from these Committees, at its meeting on 27 January 2016, the Board of Directors conducted the annual evaluation of the independence of the directors based on 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 had no relations with the Company, its Group or its Management that might compromise the exercise of their freedom of judgment. In particular, the Ethics Committee and the Appointments & Remuneration Committee examined any business ties that might exist between directors and companies at which the directors hold offices, based on invoicing flows over the 2015 fiscal year. The Board of Directors particularly observed, based on rankings of the Group's clients and suppliers and the analysis carried out by the Purchasing Division, that none of these companies could be classified as a significant Group client or supplier and therefore concluded on the absence of significant business ties involving the directors that it classified as independent.

On the date of this refrence 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.

During the joint meeting of 29 March 2016, the ethic Committee, the appointment and remuneration Committee examined Mrs. Claire Pedini's situation, whose appointment as a Directors is to be proposed to the General Meeting of 12 May 2016. After consulting the Committees, the Board of Directors proceeded, scrutinized its meeting of 30 March 2016, Pedini's independence under the criteria defined by the AFEP-MEDEF Governance Code and confirmed its independence, notably in the absence of significant business relationships lileky to jeopardize the exercise of her independent judgement. After the General Meeting of 12 May 2016, should the appointment of Mrs. Claire Pedini be approved, the Board of Directhos will be composed of, a total of 5 independent directors, i.e. a proportion of independent equal to 41,67% (see section 4.2.1 "Members of the Board of Directors").

4.2.2.6 **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 supervises annually an evaluation of 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 and that of its Committees 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.

In 2015, the annual evaluation was carried out internally via a detailed questionnaire, reviewed by the Ethics Committee before being sent to directors. Including both closed-ended questions, enabling statistical monitoring of the answers provided by directors, and open-ended questions, enabling directors to give detailed answers, provide qualitative observations and propose changes, this questionnaire is filled in anonymously by directors then analysed by the Board's Secretariat. This evaluation particularly covers the following fields:

 organisation of meetings of the Board of Directors and meetings of the Committees (number and duration, document sending deadlines, etc.);

- areas of expertise and working methods of the Board (organisation and quality of discussions, follow-up of decisions) and of the Committees;
- members of the Board of Directors;
- relations between the Board and the Chairman and Executive Management;
- information made available to the directors.

If no formal evaluation of the individual contribution of each director to the work of the Board is carried out, the evaluation carried out annually invites directors to express themselves freely, and anonymously, on the functioning of the Board, relations between the directors, the skills represented on it, their contribution to the discussions, and the observations that are made are included in the report on the evaluation submitted to the Board. The 2015 results, reviewed by the Ethics Committee on 8 December 2015 and presented to the Board on 9 December 2015 show that the directors are generally satisfied with the functioning of the Board and of the Committees. The directors consider particularly that the quality of the presentations and the discussions as well as the work of the Committees contribute to providing the information they need to vote. The number of meetings and their duration, the program of work as well as the balance of powers between the Chairman & Chief Executive Officer and the Board are deemed satisfactory. The directors consider that they have sufficient access to the Chairman & Chief Executive Officer and to the other members of the Company's Management. They particularly appreciated the holding in 2015 of an annual seminar devoted to strategy and considered the work of the independent directors' workgroup as part of the project for the strategic partnership and acquisition by EDF of the AREVA subsidiary, AREVA NP (see section 4.2.2.8 "Activity of the Board of Directors in 2015") to have been useful.

The areas for improvement identified principally concern the time spent by the Board on examining certain issues that the directors would like to see reinforced (such as core business operational activities, subsidiaries' activities, monitoring of investments or even Group social policy) and membership of the Board (the directors think that increasing the number of independent directors as well as a wider range of profiles could be considered).

The Ethics Committee accordingly presented to the Board the following proposals: adding to the 2016 program of work of the Board and of the Committees, taking account of the expectations stated, reducing the length of the presentations in order to ensure better balance between presentations and discussions and reviewing the membership of the Board, particularly with the aim of achieving in 2017 a proportion of 40% women on the Board, in accordance with the law, and increasing if applicable the number of independent directors.

The 2016 evaluation, as in 2013, shall be conducted by a specialist external firm.

4.2.2.7 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 directors. Accordingly, the directors elected by the employees can be trained in business management and the Company's specific industrial and operational fields, which can be extended to other directors.

4.2.2.8 Activity of the Board of Directors in 2015

The Board of Directors meets as often as the interest of the Company requires, in accordance with applicable legislative and regulatory provisions.

Over the 2015 fiscal year, the Board of Directors met 11 times and 23 Committee meetings were held to prepare for these meetings. The directors also met once for a strategic seminar.

Outside the meetings of the independent directors' workgroup mentioned below, no formal meetings of the members of the Board were held in 2015 without the presence of the Chairman & Chief Executive Officer and/or the directors representing the employees. Board meetings lasted an average of 3 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 96.3% in 2015.

In 2015, the Board of Directors examined and/or authorised, in addition to items relating to the Company's regular business, issues such as the investment program regarding existing nuclear facilities in France for the period 2015-2025 (Grand Carénage), nuclear fuel cycle strategy, the project for the strategic partnership between EDF and AREVA and acquisition by EDF of the company AREVA NP (see below), the progress of the project for the development of two EPRs in the United Kingdom (Hinkley Point C), EDF's strategic aims with a view to the consultation, for 2015, of the Central Works Council in accordance with Article L. 2323-10 of the French Labour Code, the items of compensation of the Chairman & Chief Executive Officer (particularly annual fixed compensation for 2014 and 2015 and severance payments in case of termination of his term of office), the project to dispose of the Company's head-office building, EDF's equal access to employment and equal pay policy, the project for EDF to dispose of its 25% shareholding in the Austrian company Energie Steiermark AG (Estag), EDF Énergies Nouvelles development projects (United States, Morocco, United Kingdom) or the interim dividend for 2015.

The Board of Directors was also informed of the list of EDF subsidiaries and shareholdings in companies based abroad in response to the request from the French Minister for Finances & Public Accounts.

Furthermore, at a one-day strategic seminar, the Board examined issues such as the progress of the CAP 2030 strategic project launched at the start of 2015 (see section 1.3.2 "Strategic vision"), the position and prospects of the energy markets in Europe, the challenges and development of digital services for private individuals, the progress of the New Model EPR (NM EPR) project as well as the EDF group's new international strategy.

Independent directors' workgroup

Following the discussions entered into in 2015 between EDF and AREVA on the project for the strategic partnership and acquisition by EDF of the AREVA subsidiary, AREVA NP, the Board of Directors met on 8 April 2015 and decided to create a workgroup featuring the independent members of the EDF Board of Directors: chaired by Mrs. Colette Lewiner, it also features Mrs. Laurence Parisot and Messrs. Philippe Crouzet and Bruno Lafont. The aim of this workgroup, in conjunction with EDF's Management, is to examine any projects resulting from the discussions between EDF et AREVA, particularly regarding its strategic and industrial interests, and its financial results and its social issues. Without replacing either the work of the Board of Directors' Committees, or the decision-making processes in place at Board level, the workgroup can make, based on its independent analysis, any useful recommendations to the Board of Directors on the project.

Accordingly, it receives from the Company the information needed to perform its duties and can contact the relevant stakeholders. It is assisted by an advisory bank, particularly to examine the valuation items, and receives technical advice from EDF's legal advisors.

This workgroup met 7 times in 2015. It issued opinions to the Board of Directors and to the Strategy Committee at different stages of the discussions with AREVA.

4.2.3 THE 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 & Remuneration Committee.

The members, 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, which appoints the Chair of each Committee. The Company's articles of association require the Committees to 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. Marie-Christine 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 & Remuneration Committee.

The membership 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.

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 falling within the remit of a Committee and the meeting of said Committee, except for meetings of the Appointments & Remuneration Committee, which can be held at any time. It also states that each Committee may employ external experts as required.

4.2.3.1 Audit Committee

Functioning and members

The Audit Committee performs 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 AFEP-MEDEF Code also states that the members of the Audit Committee must have specific skills in financial or accounting matters.

The Audit Committee is chaired by Mrs. Marie-Christine Lepetit, director appointed by the General Shareholders' Meeting on recommendation from the French State. The other members of the Committee are Mrs. Colette Lewiner and Laurence Parisot and Mr. Philippe Crouzet, independent directors appointed by the General 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.

In accordance with the provisions of Article L. 823-19 of the French Commercial Code and the recommendations of the AFEP-MEDEF Code, the Committee does not include any executive director.

At the joint meeting of 10 December 2014, the Ethics Committee and the Appointments & Remuneration Committee reviewed 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 27 January 2016, the Board of Directors also confirmed the classification as independent directors of Mrs. Colette Lewiner and Laurence Parisot and Mr. Philippe Crouzet. Mrs. Colette Lewiner and Laurence Parisot and Mr. Philippe Crouzet 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 height times in 2015. The average attendance rate for its members was 87.5%. The Committee's meetings lasted an average of 3 hours, allowing for an in-depth review and discussion of the items on the agenda.

Duties

The Audit Committee reviews and gives its opinion, before examination by the Board of Directors, on:

- the Company's financial position;
- the medium-term plan and the budget;
- the preliminary 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,
 preliminary annual report by the Chairman of the Board of Directors on
 corporate governance, internal control and risk management procedures);
- insurance policy;
- 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 4.2.2.4 "Powers and duties of the Board of Directors");
- changes to how the Group is viewed by analysts;
- 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, Group Risk Management and Internal Auditing.

Activity in 2015

In 2015, the Audit Committee, amongst other tasks, examined the halfyearly and annual financial statements as well as the related press releases, the presentation by the Auditors of the key points of the results of their work on the annual and half-yearly financial statements, press releases on quarterly sales, the 2016 budget and the 2016-2019 medium-term plan, the review of the value of assets with a view to the closing of the 2015 financial statements and the related press release, risk mapping and risk control methods, internal audit summaries and the audit program, the progress of the Hinkley point C project, the updating of the financial management strategic framework, the 2015 financial management and financial risk control agreement as well as the new organisation of auditing and internal control as part of CAP 2030. Furthermore, a presentation on off-balance sheet commitments was made to the Committee. At the three joint meetings with the Strategy Committee, the Committee reviewed the 2015 budget and the 2015-2018 medium-term plan, the progress of the Flamanville 3 EPR project and the project related to the acquisition by EDF of the control of AREVA NP.

The Committee can employ external experts as required. It did not exercise this option during the 2015 fiscal year.

4.2.3.2 Nuclear Commitments Monitoring Committee

Functioning and members

The Nuclear Commitments Monitoring Committee (NCMC), created by Article 9 of the Decree no. 2007-243 of 23 February 2007 on the securing of the financing of long-term nuclear expenses, is chaired by Mr. Philippe Crouzet, an independent director appointed by the General Shareholders' Meeting. The other members of the Committee are Mrs. Marie-Christine Lepetit and Mr. Olivier Appert, directors appointed by the General Shareholders' Meeting, as well as Mrs. Marie-Hélène Meyling and Mr. Maxime Villota, directors elected by the employees. The Nuclear Commitments Monitoring Committee met 3 times in 2015. The average attendance rate for its members was 100%. The Committee's meetings lasted an average of 2 hours and 30 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, managing, and controlling the financial risks of dedicated assets. For this purpose, it may be supported by the Nuclear Commitments Financial Expertise Committee (NCFEC) which is comprised of independent experts ¹, 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 2015

In 2015, 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 first generation nuclear power plant decommissioning program and the industrial geological storage centre project for Long-Life High- and Medium-Activity waste, the annual 2015 update letter of the three-yearly report on the securing of financing for long-term nuclear expenses and the report on internal control which it includes, the nuclear commitments discount rate, as well as the decisions and prospects for investments in the dedicated assets portfolio (see section 1.4.1.1.7 "Assets available to cover long-term nuclear commitments (outside the operating cycle)").

4.2.3.3 Strategy Committee

Functioning and members

The Strategy Committee is chaired by Mr. Jean-Bernard Lévy, Chairman & Chief Executive Officer. The other members are Mrs. Laurence Parisot and Messrs. Olivier Appert and Christian Masset, directors appointed by the General Shareholders' Meeting, Mr. Martin Vial, 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 directors who are not members of the Strategy Committee attend the meetings of the Committee.

The Strategy Committee met 6 times in 2015. The average attendance rate for its members was 94.4%. The Committee's meetings lasted an average of 2 hours and 30 minutes, allowing for an in-depth review and discussion of the items on the agenda.

^{1.} Appointed on 26 November 2013 by the Board of Directors for three years.



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 2015

In 2015, the Strategy Committee examined, amongst other items, the CAP 2030 project (see section 1.3.2 "Strategic vision"), research and development policy, the strategic context and fundamental hypotheses of the 2016-2019 medium-term plan, the strategic aims with a view to consultation, for 2015, of the Central Works Council (Article L. 2323-10 of the French Labour Code) as well as the progress of the project for the deployment of the Linky communicating meter by ERDF. At the three joint meetings with the Audit Committee, the Committee examined the 2015 budget and the 2015-2018 medium-term plan, the progress of the Flamanville 3 EPR project and the project between EDF and AREVA.

4.2.3.4 Ethics Committee

Functioning and members

The Ethics Committee is chaired by Mrs. Colette Lewiner, an independent director appointed by the General Shareholders' Meeting. The other members are Messrs. Bruno Léchevin and Gérard Magnin, directors appointed by the General 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 four times in 2015. The average attendance rate for its members was 83.3%. The Committee's meetings lasted an average of 1 hour and 30 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 EDF Mediator's annual report. Each year, it conducts an evaluation 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 4.2.2.6 "Evaluation of the functioning of the Board of Directors").

Activity in 2015

In 2015, the Ethics Committee, amongst other items, examined the specific procedure aiming to resolve situations that could cause risks of potential conflicts of interest due to the term of office as Chairman of the Board of Directors of AREVA of Mr. Philippe Varin (see section 4.4.3 "Conflicts of interest"), ethical reporting and commitments relating to the Group's corporate responsibility, the project to create a Group Ethics and Compliance Division, the issue of sub-contracting and EDF's relations with its service providers, EDF's equal access to employment and equal pay policy and the Group's health and safety policy.

4.2.3.5 Appointments & Remuneration Committee

Functioning and members

The Appointments & Remuneration Committee is chaired by Mr. Bruno Lafont, an independent director appointed by the General Shareholders' Meeting. The other members of the Committee are Mrs. Colette Lewiner, independent director appointed by the General Shareholders' Meeting, Mr. Martin Vial, 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 AFEP-MEDEF Code.

The Appointments & Remuneration Committee met twice in 2015. The average attendance rate for its members was 87.5%. The Committee's meetings lasted an average of an hour.

Duties

In accordance with the internal rules of procedure, the Appointments & Remuneration Committee submits recommendations to the Board of Directors regarding the appointment of directors by the General 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 & 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 Board of Directors for deliberation and setting of this compensation. The Committee prepares its proposals 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 public companies, in accordance with which the Chairman & Chief Executive Officer'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 2015

In 2015, the Appointments & Remuneration Committee examined, amongst other items, the 2014 and 2015 items of compensation of the Chairman & Chief Executive Officer and the award to Mr. Jean-Bernard Lévy of a severance payment in the event of termination of his term of office, the Group's executive compensation policy and the system relating to the Group succession plan charts.

4.3 Bodies created by Executive Management

The Chairman & 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 for amounts which exceed certain thresholds. The Executive Committee meets in principle each week. In order to reinforce the examination and follow-up of projects, an Executive Committee Commitments 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 twelve members and a Secretary. The list of members and their personal information appear below.

4.3.1 MEMBERS OF THE EXECUTIVE COMMITTEE

On the filing date of this reference document, the members of the Executive Committee is as follows:

Names	Position
Jean-Bernard Lévy	Chairman & Chief Executive Officer, Chairman of the Executive Committee
Marc Benayoun	Group Executive Vice President with responsibility for Gas and Italy, Chief Executive Officer of Edison. He supervises Fenice and Dunkerque LNG
Antoine Cahuzac	Group Senior Executive Vice President, Renewable Energies, Chief Executive of EDF Énergies Nouvelles
Xavier Girre	Group Senior Executive Vice President, in charge of the Group's Finance Division
Henri Lafontaine	Group Senior Executive Vice President, Customers, Services and Regional Action. He supervises Dalkia, Tiru, Citelum and Commercial Division.
Marianne Laigneau	Group Senior Executive Vice President, Human Resources
Dominique Minière	Group Senior Executive Vice President, Nuclear and Thermal
Vincent de Rivaz	Group Senior Executive Vice President, Chief Executive Officer of EDF Energy
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. He supervises EDF Trading
Xavier Ursat	Group Senior Executive Vice President, New Nuclear Projects and Engineering. He supervises Sofinel

Alexandre Perra is Director and Special Advisor to the Chairman and CEO, and is Secretary of the Executive Committee.

4.3.2 PERSONAL INFORMATION ON MEMBERS OF THE EXECUTIVE COMMITTEE

Marc Benayoun, 50 years old, a graduate of the *école supérieure des sciences économiques et commerciales*, began his career at Paribas Group in 1989, before joining the Boston Consulting Group in 1993. He became Partner and Managing Director at the Paris office in 2001 then at the Moscow office in 2008 and during this period held a range of responsibilities, including the development of skills in the natural gas sector. In 2009, he joined the EDF Group as Economics, Tariffs and Prices Director. In 2012, he became Director of the B2B Market and Trading Division with responsibility for electricity, gas and service sales. In this role, he supervised the project linked to the end of regulated electricity tariffs for businesses and local authorities (more than 400,000 sites in all, 120TWh of electrical consumption), with the objective of regaining a leading position in a competitive environment. He is a member of the Supervisory Boards of Trimet France, Netseenergy and ÉS Énergies.

Antoine Cahuzac, 61 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 three 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 Energies since March 2015. He is also a director of EDF Luminus and EDF Trading.

^{1.} Marc Benayoun has replaced Bruno Lescoeur in his functions as of 14 January 2016.

^{2.} Xavier Girre has replaced Thomas Piquemal in his functions as of 7 March 2016.

Xavier Girre, 47 years old, joined EDF in 2015 as France CFO. From 2011 to 2015, he was SVP, CFO of La Poste Group and CEO of XAnge Private equity. From 1999 to 2011, Xavier Girre was Group chief risk and audit officer at Veolia Environnement and SVP, CFO of Veolia Transportation and Environmental Services. Xavier Girre is also director and Chairman of the Audit Committee at RATP and Française des Jeux. He graduated HEC and is ENA alumni, and began his career at the French National Audit Office. Xavier Girre was appointed to the position of Group Senior Executive Vice President, Group Finance, on a temporary basis on 7 March 2016. He was confirmed in these functions on 21 April 2016

Henri Lafontaine, 59 years old, a graduate of the Supélec engineering school with 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 the Distribution Division (EDF GDF Services) in Corsica, then Director of the Distribution Division (EDF GDF Services) in 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 then 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 became Executive Vice President then Group Senior Executive Vice President in July 2013, responsible for Commerce, Optimisation, Trading and Island Energy Systems. In March 2015, he was appointed Group Senior Executive Vice President, Customers, Services and Regional Action. He is responsible for the Operational Management of the EDF Commerce Division and supervises Dalkia, TIRU and Citelum. He is also Chairman of Citelum and a director of the companies Dalkia, EDF Energy, EDF Fenice, EDF International and Fondation EDF.

Marianne Laigneau, 51 years old, a former student of École normale supérieure de Sèvres and of ENA, holder of the Agrégation degree in classics and a graduate of IEP (Paris School of Political Studies). 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 General 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 Senior 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.

Dominique Minière, 57 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 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 Assistant 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. Since March 2015, he has been Group Senior Executive Vice President, Nuclear and Thermal.

Vincent de Rivaz. 62 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 Exterior Engineering Centre, participating in the building of hydroelectric works in Africa, French Guiana 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. Between 1991 and 1994, he was Head 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 Head of the International Division, and then became Head of Projects. 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 Deputy Chief Financial Officer within the Corporate Finance Division and in 2000 became Director of Financial Strategies and Operations. Appointed Chairman & 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, and the number one producer and supplier of electricity. In 2010, he managed the implementation of the disposal of EDF Energy's distribution network activity. He led the development of EDF's new nuclear projects in Great Britain with the Hinkley Point C project as the first objective. Vincent de Rivaz is currently Chief Executive Officer of EDF Energy and has been EDF Group Senior Executive Vice President since March 2015.

Simone Rossi, 47 years old, graduate of the university of Bocconi (Milan) in business administration. Simone Rossi began his career as a consultant, firstly at KPMG Consulting in corporate finance, then from 1996 at McKinsey & Company, where he mainly specialised in the sectors of energy, financial institutions, and information and communication technologies. In 2004, he joined Edison SpA in Milan (Italy) as Head of Strategy, before being promoted to become 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 company based in Baltimore in the United States. He then became Chief Financial Officer of EDF Energy in April 2011. Since March 2015, Simone Rossi has been EDF Group Senior Executive Vice President, International Division.

Pierre Todorov, 58 years old, a graduate of the *École normale supérieure* and the *École nationale d'administration* and holder of an advanced teaching degree in philosophy. Pierre Todorov was an auditor then Counsel at the French Council of State from 1986 to 1990. He then joined Lagardère Group, where he held a range of responsibilities in the media branch, particularly serving as International Deputy Chief Executive Officer of Hacette Filipacchi. In 1997, he was appointed General Secretary of Accor Group, a position he held until 2008. Between 2008 and 2011, he was partner at the law firm Hogan Lovells LLP, then joined PSA Peugeot Citroën in 2011, as General Secretary, member of the Executive Management Committee. Pierre Todorov has been EDF Group General Secretary and a member of the Executive Committee since 2 February 2015.

Philippe Torrion, 61 years old, graduated from the *École polytechnique* and the *École nationale supérieure des Mines*. Philippe Torrion began his career at EDF in 1977 as manager at the Paris Regional Division and until 1999 held a range of positions at the company: technical manager at the Boulogne-sur-Mer distribution centre, engineer in economics then head of the Internal Economics Department at the General Economic Studies Department. He became Director of the EDF-GDF Services Centre in the Gard-Cévennes region in 1992, then five years later Head of the Economics and Systems Development section at the Generation & Transmission Division. In 1999, he was appointed head of Corporate Strategy Division, then in 2001 Delegate to Regional Action and PACA Regional Delegate, before becoming Chief Executive Officer of EDF Trading in 2005. From August 2008, he headed up the Upstream-Downstream Optimisation & Trading Division. Since March 2015, Philippe Torrion has been EDF Group Senior Executive Vice President, Innovation, Strategy and Planning. He is also Chairman of the Board of Directors of EDF Trading.

4

CORPORATE GOVERNANCE **ABSENCE OF FAMILY TIES, CONVICTIONS AND CONFLICTS OF INTEREST AMONG MEMBERS OF THE ADMINISTRATIVE BODIES AND EXECUTIVE MANAGEMENT**

Xavier Ursat, 49 years old, a graduate of the *École polytechnique* and Télécom Paris. He joined EDF in 1991, first holding various positions in the hydraulic engineering department until 2002. He oversaw the construction of EDF's hydraulic engineering centres and contributed to international projects, especially in South America. From 2002 to 2005, he was a special advisor to EDF's Deputy General Manager in charge of Production and Engineering. From 2005 to 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 Assistant 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 also a member of the Board of Directors of ONEMA (French national water and aquatic environments office), director of EDF Énergies Nouvelles and EDF Norte Fluminense, member of the French National Water Committee and governor of the World Water Council.

4.4 Absence of family ties, convictions and conflicts of interest among members of the administrative bodies and Executive Management

4.4.1 ABSENCE OF FAMILY TIES

To EDF's knowledge, there are no family ties between members of the administrative bodies or Executive Management.

4.4.2 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.

4.4.3 CONFLICTS OF INTEREST

To the Company's knowledge, on the date of filing of this reference document, there were 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 4.2.2.2 "Obligations and duties of directors").

Due to the office of Chairman of the Board of Directors of AREVA held by Mr. Philippe Varin, the Company put in place a specific procedure aiming to resolve situations that could cause potential risks of conflicts of interest. Nonetheless, taking due to the discussions which took place between EDF and AREVA in 2015 (see section 1.4.1.2.3.2. "Memorandum of understanding with AREVA"), Mr. Varin suspended his participation to the works of the Board of Directors 9 June 2015 before notifying 31 March 2016, his decision to resign from his mandate of Director (see section 4.2.1 "Members of the Board of Directors")

Subject to the specific legal and regulatory provisions applicable to the members of the Company's Board of Directors (see section 4.2.1 "Members of the Board of Directors"), 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 4.5.2 "Trading in Company securities"). 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.



4.5 **Shareholding by directors and trading in EDF securities by corporate officers and executives**

4.5.1 SHAREHOLDING BY DIRECTORS

On 31 December 2015, the members of the Company's Board of Directors held a total of 3,359 shares. The table, below, details the number of EDF shares held individually by directors on 31 December 2015:

	Number of EDF shares held on 31/12/2015
Jacky CHORIN ⁽¹⁾	229
Philippe CROUZET	200
Bruno LAFONT	150
Colette LEWINER ⁽²⁾	1,748
Marie-Hélène MEYLING	33
Christian TAXIL ⁽¹⁾	965
Maxime VILLOTA (1)	34
TOTAL	3,359

(1) Shares held through a mutual fund.

(2) Shares held directly and through a mutual fund.

Mrs. Chabauty, Lepetit and Parisot and Messrs. Appert, Léchevin, Lévy, Magnin, Masset, Rignac, Vial and Varin held no EDF shares on 31 December 2015. On 31 December 2014, the members of the Company's Board of Directors held a total of 3,316 shares. The table, below, details the number of EDF shares held individually by directors on 31 December 2014:

	Number of EDF shares held on 31/12/2014
Christine CHABAUTY ⁽¹⁾	6
Jacky CHORIN ⁽¹⁾	217
Philippe CROUZET	200
Bruno LAFONT	150
Colette LEWINER ⁽²⁾	1,771
Marie-Hélène MEYLING	28
Christian TAXIL ⁽¹⁾	912
Maxime VILLOTA (1)	32
TOTAL	3,316

(1) Shares held through a mutual fund.

(2) Shares held directly and 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.

4.5.2 TRADING IN COMPANY SECURITIES

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 Ethics Code also notes the obligations imposed on executives to declare to the AMF and to the Company trades in EDF securities. Indeed, 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 AMF General Regulations ¹ also state that the EDF Board of Directors must mention in its annual report to the 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 2015 fiscal year by members of the Company's Board of Directors and Executive Committee.

4.6 **Compensation and benefits**

4.6.1 **COMPENSATION OF CORPORATE OFFICERS**

The compensation and benefits of all kinds paid in the 2015 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 no. 2009-16, modified on 13 April 2015.

4.6.1.1 Total compensation of the Chairman & Chief Executive Officer

SUMMARY TABLE OF COMPENSATION AND OPTIONS AND SHARES AWARDED TO THE CHAIRMEN & CHIEF EXECUTIVE OFFICERS (1)

(in €)	2015 fiscal year	2014 fiscal year
Jean-Bernard Lévy, Chairman & Chief Executive Officer		
Compensation due for the fiscal year	452,868	47,368
Valuation of multi-year variable 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	452,868	47,368

(1) Table 1 of AMF position-recommendation 2009-16.

(2) As indicated in section 4.6.2, 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 & Chief Executive Officer of EDF by Decree of 27 November 2014, see section 4.6.1.1.2.

^{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.



SUMMARY TABLE OF THE COMPENSATION OF THE CHAIRMEN & CHIEF EXECUTIVE OFFICERS⁽¹⁾

The table below details the compensation of all kinds owed and paid to Jean-Bernard Lévy, Chairman & Chief Executive Officer since 23 November 2014, for the 2014 and 2015 fiscal years.

	2015 fiscal year		2014 fiscal year	
(in €)	Amounts due for the fiscal year	Amounts paid during the fiscal year	Amounts due for the fiscal year	Amounts paid during the fiscal year
Jean-Bernard Lévy				
Fixed compensation	450,000	497,368 ⁽²⁾	47,368	0
Variable compensation	0	0	0	0
Multi-year variable compensation	none	none	none	none
Exceptional compensation	none	none	none	none
Directors' fees	none	none	none	none
Benefits in kind (3)	2,868	2,868	0	0
TOTAL	452,868	500,236	47,368	0

(1) Table 2 of AMF position-recommendation 2009-16.

(2) Includes compensation due for the 2014 fiscal year.

(3) 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 4.6.1.1.2.

4.6.1.1.1 Terms and conditions for the setting of compensation

In accordance with article 3 of Decree 53-707 of 9 August 1953 and article L. 225-47 of the French Commercial Code, the items comprising the compensation of the Chairman & Chief Executive Officer are set by the Company's Board of Directors on recommendation from the Appointments & Remuneration Committee and approved by the Minister for the Economy after consultation of the relevant Ministers.

Decree 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.

4.6.1.1.2 Setting of the compensation of the Chairman & Chief Executive Officer

Compensation for the 2015 fiscal year

On recommendation from the Nominations & Remuneration Committee, the Board of Directors meeting on 8 April 2015 decided to set the gross sum of €450,000 as the fixed annual compensation of the Chairman & Chief Executive Officer for the 2014 and 2015 fiscal years and that this compensation would be calculated, for the 2014 fiscal year, in proportion to time from the appointment of Mr. Jean-Bernard Lévy as temporary Chairman & Chief Executive Officer on 23 November 2014, i.e. an amount to be paid for the 2014 fiscal year corresponding to the gross sum of €47,368.

The Board of Directors also decided to award the Chairman & Chief Executive Officer severance payments under the terms described in paragraph 4.6.1.1.3 below.

Compensation for the 2016 fiscal year

On recommendation from the Appointments & Remuneration Committee, the Board of Directors meeting on 15 February 2016 decided to maintain at the gross sum of €450,000 the fixed annual compensation of the Chairman & Chief Executive Officer for the 2016 fiscal year.

4.6.1.1.3 Other items of compensation

In 2015, Mr. Jean-Bernard Lévy did not receive any directors' fees for his duties as Chairman of the Board of Directors and director of EDF. He also did not receive any directors' fees for the positions held at companies controlled by EDF, or any compensation of any kind whatsoever from the companies it controls.

The Company allocated no stock options to the Chairman & Chief Executive Officer in 2015 and no options were exercised during the fiscal year. Similarly, no bonus shares were awarded to the Chairman & Chief Executive Officer during the past fiscal year, and none became available.

Mr. Jean-Bernard Lévy did not receive any hiring bonus from EDF.

Employment contract, supplemental pension, severance payments and non-competition clause

Chairman & Chief Executive Officer ⁽¹⁾	Employment contract	Supplemental 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 & Chief Executive Officer since 27 November 2014 ⁽²⁾	no	no	yes	no

(1) Table 11 of AMF position-recommendation 2009-16.

(2) Mr. Jean-Bernard Lévy was appointed temporary Chairman & Chief Executive Officer from 23 November 2014.

On recommendation from the Appointments & Remuneration Committee, the Board of Directors meeting on 8 April 2015 decided to award to Mr. Jean-Bernard Lévy severance payments in accordance with the provisions of the French Commercial Code and the recommendations of the AFEP-MEDEF Corporate Governance Code in case of termination of his term of office of Chairman & Chief Executive Officer of EDF. These payments are subject to the following terms and conditions:

- payment due following: definitive award of the payments by decision of the Board of Directors, only in the event of forced departure (dismissal except for gross negligence or wilful misconduct);
- calculation method and limit: initial amount of severance payment of the gross sum of €200,000 after one year of seniority from the date of initial appointment, i.e. 23 November 2014, then increased by the gross sum of €60,000 per additional quarter of seniority, without exceeding the limit of one year of compensation;
- performance criteria: the severance payments shall only be due in the event that 80% of budgeted Group EBITDA is achieved in at least two of the three last full fiscal years at the time of termination of his duties;

TABLE OF DIRECTORS' FEES PAID TO DIRECTORS

in the event that their duties are terminated during the second year of the term of office, the Board shall assess the meeting of this criterion based on the last full fiscal year; in the event that his duties are terminated during the third year of the term of office, the meeting of the criterion shall be assessed based on the last two full fiscal years.

This regulated convention, referred to by the article L. 225-42-1 of the Commercial Code was subject to a special report of the statutory auditors in date of 8 April 2015, included in the Appendix C of the 2014 reference document.

4.6.1.2 Total compensation of directors

No exceptional compensation was paid to directors during the 2015 fiscal year in return for their duties.

The table, below, shows the gross amounts of directors' fees paid during the 2014 and 2015 fiscal years to the members of the Board of Directors.

	2015 ⁽¹⁾	2014 ⁽²⁾
Directors whose terms of office are ongoing on 31 December 2015		
Olivier Appert ⁽³⁾	15,642	n. a.
Share paid to the French State budget	14,192	n. a.
Philippe Crouzet	46,479	30,000
Bruno Lafont	48,245	23,104
Bruno Léchevin (3)	15,642	n. a.
Share paid to the French State budget	15,642	n. a.
Marie-Christine Lepetit (3)	16,819	n. a.
Share paid to the French State budget	16,819	n. a.
Jean-Bernard Lévy ⁽⁴⁾	n. a.	n. a.
Colette Lewiner	39,422	4,444
Laurence Parisot (4)	16,231	n. a.
Gérard Magnin ⁽⁴⁾	15,642	n. a.
Share paid to the French State budget	10,950	n. a.
Christian Masset (3)	15,054	n. a.
Share paid to the French State budget	15,054	n. a.
Philippe Varin ⁽⁴⁾	14,466	n. a.

n. a.: non-applicable.

(1) For the second half of 2014 and the first half of 2015. On an exceptional basis, Mrs. Faugère and Messrs. Crouzet and Lafont received the entirety of their fixed share and their variable share for 2014 during the first half of the 2015 fiscal year.

(2) For the second half of 2013 and the first half of 2014.

(3) Director receiving directors' fees since 23 November 2014.

(4) Director since 23 November 2014.

	2015 ⁽¹⁾	2014 ⁽²⁾
Martin Vial (5)	n. a.	n. a.
Share paid to the French State budget	n. a.	n. a.
Directors whose terms of office had expired on 31 December 2015		
Mireille Faugère	11,274	33,448
Michael Jay	17,306	39,310
Pierre Mariani	22,602	44,138
Régis Turrini	16,231	n. a.
Share paid to the French State budget	16,231	n. a.
TOTAL (IN €)	311,055	174,444

n. a.: non-applicable.

(5) Director since 9 September 2015.

Budget and distribution of directors' fees

The directors representing the employees hold office without fees in accordance with Law no. 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 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 the limit set by the Minister for the Economy ¹ 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 that he receives for the performance of his duties is paid to the French State budget.

After the issuing of an opinion by the Appointments & Remuneration Committee and approval by the Minister for the Economy and the Minister for Energy in accordance with Article 3 of Decree 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 approved by the Board of Directors.

Given the modifications made during 2014 to the membership of the EDF Board of Directors in accordance with the Order of 20 August 2014, the Shareholders' Meeting of 21 November 2014, on recommendation from the Board of Directors after issuing of the opinion of the Appointments & Remuneration Committee, increased the budget for directors' fees allocated to the Board for the 2014 fiscal year to \leq 226,000 (compared to \leq 200,000 previously) and set the annual budget for directors' fees allocated to the Board for 2015 and subsequent years to \leq 440,000.

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, on recommendation from the Appointments

& Remuneration Committee. The total budget is distributed between 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; 50% of the fixed annual portion is paid during the fiscal year of award and the remaining 50% at the start of the following fiscal year;
- 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 Chair): a coefficient of 2 for presence at a meeting of the Board of Directors, a coefficient of 2 for presence of a Chair 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; the variable portion for a fiscal year is paid at the start of the following fiscal year.

The Board of Directors meeting on 8 March 2016 decided to submit for approval to the Shareholders' Meeting to be held on 12 May 2016 an increase of the annual budget of directors' fees, to increase it to \in 510,000, only for the 2016 fiscal year, in order to specifically compensate the work carried out during the 2015 and 2016 fiscal years by the independent directors' workgroup on the project for the acquisition by EDF of control of the company AREVA NP (see section 1.4.1.2.3.2 "Memorandum of understanding with AREVA"). Subject to approval of this new budget by the Shareholders' Meeting of 12 May 2016, the Board decided to allocate the sum of \notin 40,000 to the Chair of the independent directors' workgroup and the sum of \notin 10,000 to each member of the workgroup. The rules for the distribution of directors' fees described above adopted by the Board of Directors on 22 June 2011 remain otherwise unchanged.

4.6.2 STOCK OPTIONS – BONUS SHARES

The Company has not implemented any stock options plans and the corporate officers receive no allocation of bonus shares 2 .

^{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.

^{2.} 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.

4.7 **2015 Report by the Chairman of the EDF Board of Directors on corporate** governance, internal control and risk management procedures

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 on the Chairman and CEO's powers), the principles and rules laid down by the Board of Directors to determine the corporate officers' compensation and the provisions governing shareholder involvement in EDF general 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, a subsidiary managed with complete independence within the EDF group, 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, a subsidiary managed with complete independence within the EDF group, 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 affiliates that are jointly-controlled: "the jointly-controlled affiliates1";
- its direct or indirect holdings: "the shareholdings".

Note 1: the scope for the Group's consolidated financial statements is detailed in chapter 6 of the 2015 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 2015, except as otherwise stated. Additional information and updates are available in the EDF 2015 Reference Document, to which the report will be appended.

1 CORPORATE GOVERNANCE

1.1 Corporate Governance Code

EDF adheres to the AFEP-MEDEF Code, pursuant to Article L. 225-37 of the French Commercial Code 2 , subject to the specific provisions of the law and regulations that are applicable to it.

These specificities, which are a result of EDF being a State-owned company, and in particular the application to the Company of Order no. 2014-948 of 20 August 2014 and its implementing legislation, Law no. 83-675 of 26 July 1983 on the Democratisation of the Public Sector and Decree no. 53-707 of 9 August 1953, are detailed in this report and in the 2015 Reference Document and concern, in particular:

- the composition of the Board of Directors (see section 4.2.1 "Members of the Board of Directors");
- the rules on the appointment of the Chairman and CEO of EDF (see section 4.2.2.3 "Method of Executive Management – appointment and powers of the Chairman & Chief Executive Officer");
- the rules on the setting of the compensation of the Chairman and CEO (see section 4.6.1.1.1 "Terms and conditions for the setting of compensation"); or
- the way in which Executive Management decisions are taken and implemented (see section 4.2.2.3 "Method of Executive Management – appointment and powers of the Chairman & Chief Executive Officer").

^{1.} Within the meaning of this report, as of 31 December 2015, the term "jointly-controlled affiliate" includes affiliates and joint ventures (primarily CENG, Estag, Fuzhou and Sloe) and joint activities (Friedeburger Speicherbetriebsgesellschat GmbH (Crystal)). See chapter 6 of the 2015 Reference Document.

^{2.} After consulting the AFEP-MEDEF recommendations of October 2008 on executive director compensation, as of 17 December 2008 the Board of Directors had expressed its agreement with these recommendations, stating that they were in line with EDF's corporate governance policy and that the Company had already implemented them.

CORPORATE GOVERNANCE

4

2015 REPORT BY THE CHAIRMAN OF THE EDF BOARD OF DIRECTORS ON CORPORATE GOVERNANCE, INTERNAL CONTROL AND RISK MANAGEMENT PROCEDURES

In addition to the specificities mentioned above, the following table covers the recommendations of the AFEP-MEDEF Code that are not applied by the Company and the corresponding explanations:

AFEP-MEDEF Code recommendation	Company position	Explanation	Corresponding section of the 2015 Reference Document
Staggered renewal of the Board of Directors Recommendation no. 14: "Terms should be staggered so as to avoid replacement of the entire body and to favour a smooth replacement of directors."	The renewal of the entire Board of Directors every five years is no longer mandatory under the Order of 20 August 2014; however, the Company has not implemented the staggered renewal of the Board of Directors.	The Company amended its bylaws during the General Meeting of 21 November 2014 with a view to implementing the new composition of the Board of Directors pursuant to the Order of 20 August 2014 and reducing the directors' term of office to four years. The Company now has the possibility of staggering the renewal of the terms of office, which may thus be examined by the Board of Directors.	See section 4.2.2.1 ("Term of office of directors").
Holding of Company shares by the Directors Recommendation no. 20: "The director should be a shareholder personally and hold a fairly significant number of shares in relation to the directors' fees; if he or she does not hold these shares when assuming office, he or she should use his or her directors' fees to acquiring them."	The Company's bylaws and the Board's Internal Regulations do not provide that directors must possess a relatively significant number of shares with respect to the directors' fees received.	Pursuant to the Law of 26 July 1983, the directors who represent the employees perform their duties free of charge. Moreover, the directors' fees received by the members put forward by the State and who are civil servants are paid into the State budget. State representatives who are not civil servants can only receive 30% of the directors' fees that are owed to them; the remainder is paid into the State budget. In addition, the Chairman of the Board of Directors does not receive any directors' fees. Given the major disparity in situations, the Board has not defined a single rule on holding Company shares. Moreover, each director must act in the corporate interest, regardless of the number of shares he or she holds in the Company personally.	See section 4.6.1.2 ("Total compensation of directors") and section 4.5 ("Shareholding by directors and trading in EDF securities by corporate officers and executives").
Holding of Company shares by the Chairman and CEO Recommendation no. 23.2.1: "The Chairman of the Board, the Chief Executive Officer () are required to hold as registered shares until the end of their term of office a significant number of shares periodically determined by the Board of Directors or the Supervisory Board. The number of shares, which may be made up of exercised stock options or performance shares, must be significant and increasing, where necessary, to a level determined by the Board."	The Company bylaws and the Board Internal Regulations do not provide that the Chairman and CEO must possess a relatively significant number of shares set periodically by the Board of Directors.	The Chairman and CEO does not receive any directors' fees. His compensation is capped pursuant to Decree no. 2012-915 of 26 July 2012, which amended Decree no. 53-707 of 9 August 1953. Moreover, the Company has not implemented a stock and/or performance share plan for executive directors. Consequently, it was decided not to implement this recommendation. In addition, executive directors must act in the company interest, regardless of the number of Company shares they personally hold.	See sections 4.6.1.1 ("Total compensation of the Chairman & Chief Executive Officer"), 4.6.2 ("Stock options – bonus shares") and 4.5 ("Shareholding by directors and trading in EDF securities by corporate officers and executives").
Rules governing the allocation of directors' fees Recommendation no. 21: the method of allocation of directors' fees "should take account, in such ways as it shall determine, of the directors' actual attendance at meetings of the Board and committees, and therefore include a significant variable portion".	A significant but not "preponderant" portion of directors' fees is linked to the effective attendance of directors at Board and Committee meetings.	Specific allocation rules have been adopted, which take into account, in particular, the level of responsibilities and time devoted by the directors to their duties. Although the variable portion of the compensation that is paid in the form of directors' fees is not preponderant, the Company considers that it is still significant and appropriate, insofar as the variable portion that remunerates the effective presence of the directors' fees. Incidentally, the directors' attendance rate of Board meetings exceeds 96%.	See section 4.6.1.2 ("Total compensation of directors").

2015 REPORT BY THE CHAIRMAN OF THE EDF BOARD OF DIRECTORS ON CORPORATE GOVERNANCE, INTERNAL CONTROL AND RISK MANAGEMENT PROCEDURES

1.2 Composition and functioning of the Board of Directors

The Internal Regulations of the Board of Directors specify the principles on which the Board operates and how the Board, as well as the specialised advisory committees set up by the Board, fulfil their remits. These Regulations also stipulate the role and powers of the Chairman and CEO.

The Internal Regulations are regularly updated, in particular to take into account changes in the law and regulations, and changes in the AFEP-MEDEF Code (see section 4.1 "Corporate Governance Code" of the 2015 Reference Document). The most recent update was on 30 June 2015.

1.2.1 **Composition of the Board of Directors**

Until the General Shareholders' Meeting of 21 November 2014 and in accordance with Article 6 of Law no. 83-675 of 26 July 1983 on the democratisation of the public sector, 18 directors sat on the Board, divided into three colleges: six directors were appointed by ordinary general meetings, the six directors who represent the French State were appointed by decree and six directors were appointed by the employees.

The General Meeting that was held on 21 November 2014 amended the Company's bylaws in order to implement the new provisions of Order no. 2014-948 of 20 August 2014 on governance and equity transactions of companies with a public shareholding. Pursuant to this Order, EDF is now run by a Board of Directors with between three and eighteen members,

including members appointed by Ordinary General Meetings, as necessary following a proposal by the State in accordance with Article 6 of the Order, one representative of the State chosen by the Minister for the Economy from the ranks of the civil service in accordance with Article 4 of the Order, and one-third of directors representing employees in accordance with the provisions of the Law of 26 July 1983¹.

The conditions under which directors may be removed from office are described in section 4.2.2.1 ("Term of office of directors") of the 2015 Reference Document.

As of the date of this report, the Board of Directors has 18 members:

- eleven directors appointed by general shareholders' meetings, five of whom were appointed following a proposal by the State²: Jean-Bernard Lévy, the Chairman and CEO, Marie-Christine Lepetit, Colette Lewiner, Laurence Parisot, Olivier Appert, Philippe Crouzet, Bruno Lafont, Bruno Léchevin, Gérard Magnin, Christian Masset and Philippe Varin;
- one director, who is the State's Representative: Martin Vial³;
- six directors elected by the employees: Christine Chabauty, Marie-Hélène Meyling, Jacky Chorin, Jean-Paul Rignac, Christian Taxil and Maxime Villota.

The directors' personal details are provided in section 4.2.1 ("Members of the Board of Directors") of the 2015 Reference Document.

Since 1 January 2015 and up through the date of this report, the following changes have been made to the composition of the Board of Directors.

First name, surname	College	Date of appointment	To replace
Martin VIAL	Director representing the State	9 September 2015	Régis TURRINI

Given the discussions held between EDF and AREVA in 2015 (see section 1.4.1.2.3.2 "Memorandum of understanding with AREVA" of the 2015 Reference Document), as from 9 June 2015, Philippe Varin temporarily suspended his involvement in the work of the EDF Board of Directors during these discussions.

Pursuant to Article L. 225-18-1 of the French Commercial Code and the Order of 20 August 2014, EDF, as a listed State-owned company, is subject to the rules on the balanced representation of women and men on boards of directors and supervisory boards, and the Company must ensure that 40% of its directors are women in 2017. As of the date of this report, the EDF Board of Directors has five female board 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 Commissioner⁴ and the Head of the French State's Economic and Financial Verification Mission for EDF ⁵, as well as the Secretary of the Central Works Council attend the meetings of the Board of Directors in an advisory capacity. However, pursuant to Article L. 311-5-7 of the French Energy Code, which was adopted in light of Law no. 2015-992 of 17 August 2015 on energy transition for green growth, the Government Commissioner must be informed of investment decisions and may object to any decisions, which, if implemented, would be incompatible with the objectives of the strategic plan adopted by the Company or with those of the multi-year energy plan.

1.2.2 **Obligations and duties of directors**

The Internal Regulations of the Board of Directors provide that Board members' obligations include: acting in the interest of the Company, informing the Board of Directors of any conflicts of interest (see section 4.4.3 "Conflicts of interest" of the 2015 Reference Document) and abstaining from participating in discussions and voting in any deliberation involving a potential conflict of interest, respecting the confidentiality obligation and complying with EDF's Stock Market Compliance Charter.

The members of the Board of Directors, and the Chairman and CEO are required to inform the Board of Directors immediately of all agreements entered into by the Company in which they have a direct or indirect interest or that are entered into by an intermediary.

Each director receives a regularly updated Director's Handbook that is primarily a compendium of the Company's bylaws, the Internal Regulations of the Board of Directors and its Committees, the Stock Market Compliance Charter (see section 4.5.2 "Trading in Company securities" of the 2015 Reference Document), the Group Ethics Charter, the Group's corporate social responsibility commitments and the AFEP-MEDEF Corporate Governance Code for Listed Companies.

4. Article 15 of the Order of 20 August 2014.

^{1.} The employees' representatives mentioned in Section I of Article 7 of the Order of 20 August 2014, with respect to their election and their status, are subject to the same rules as those stipulated for the representatives of employees of undertakings that fall within the scope of the Law of 26 July 1983, to Chapters II and III of Section II of said law.

^{2.} Pursuant to the Order of 20 August 2014: Marie-Christine Lepetit, Olivier Appert, Bruno Léchevin, Gérard Magnin and Christian Masset.

^{3.} Appointed by Order of the Minister for Finances and Public Accounts and the Minister for the Economy, Industry and Digital Affairs of 9 September 2015, published in the Official Journal of the French Republic of 18 September 2015.

^{5.} 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 audit procedures.



1.2.3 **Executive Management method, powers** and responsibilities of the Chairman and CEO

In accordance with the option provided for in Article 18 of the Order of 20 August 2014, the EDF bylaws stipulate that the Chairman of the Board of Directors is responsible for the Executive Management of the Company and has the title of Chairman and Chief Executive Officer (CEO). EDF's bylaws therefore state that the duties of Chairman and CEO are not conferred on separate persons. The Board's Internal Regulations and, in particular, the limits they place on the CEO's powers, ensure a balance of power between the executive director and the Board of Directors, while maintaining the requisite flexibility, efficiency and responsiveness in the administration and management of the Company.

The EDF Chairman and CEO is appointed by Presidential decree on the basis of a proposal of the Board of Directors and may also be removed from office by such a decree, in accordance with Article 20 of the Order of 20 August 2014. Pursuant to the provisions of Article 13 of the Constitution, the Chairman is appointed after candidates have been interviewed and once the standing commissions of the National Assembly and Senate have been consulted. Jean-Bernard Lévy was appointed Chairman and CEO of EDF, upon completion of this process, by Decree of 27 November 2014.

If the Chairman and CEO vacates his position before the end of his term of office, Article 21 of the Order of 20 August 2014 provides that the State may appoint an interim Chairman and CEO until the new officer is appointed. Pursuant to this legislation, by ministerial decisions of 21 November 2014, Jean-Bernard Lévy was appointed as the interim Chairman and CEO of the Company as from 23 November 2014.

Subject to the specific provisions of the law relating to public sector companies and the powers that the law or the bylaws expressly reserve for the Board of Directors or Shareholders' Meetings, as well as the limits on the powers of the Chairman and CEO set forth in the Board of Directors' Internal Regulations as an internal rule (see § 1.2.4), the Chairman and CEO is vested with the broadest powers to act on behalf of the Company in all circumstances, within the limit of the corporate purpose. The Chairman and CEO organises and oversees the Board of Directors' work, on which he reports to general meetings. He ensures that the various corporate bodies function correctly and, in particular, verifies that the directors are able to fulfil their remits.

1.2.4 **Powers and remits of the Board of Directors**

In accordance with the law, the Board of Directors determines the Company's business policies and ensures that these policies are implemented. It defines the major strategic, economic, financial and technological policies of the Company and the Group. Subject to the powers that are expressly conferred on shareholders' meetings and within the limit of the corporate purpose, the Board of Directors may take it upon itself to review all matters that are related to the smooth running of the Company, and settles the issues that concern it through its decisions.

Pursuant to its Internal Regulations, which were updated on 30 June 2015, solely the Board of Directors can authorise the following operations:

- acquisition-based and internal growth operations or disposals that represent financial exposure for the Company in excess of €350 million. This threshold is reduced to €150 million for acquisitions that are not consistent with the Company's strategy policies; the Board of Directors' prior authorisation is required for these same transactions, which are subject to the same thresholds when performed by an undertaking that is exclusively controlled by the Company;
- industrial operations and programmes that are consistent with and inseparable from investments in or work on existing assets, in excess of €350 million per programme;

- real estate transactions that exceed €200 million;
- certain financial transactions for which the amount exceeds the value determined each year by a specific Board decision; for the 2015 fiscal year, the Board set (i) the total amount of the aggregate authorisation for guarantees, endorsements and sureties at €1.5 billion (the Chairman and CEO reports to the Board on all transactions of this type for which the unit amount exceeds €100 million, which are granted on behalf of the Company or by a subsidiary that is controlled by the Company) and (ii) the nominal amount of certain financial transactions at €5 billion, subject to an annual aggregate limit set at €15 billion. For 2016, the Board of Directors decided to renew the same authorisation thresholds;
- procurement contracts (for supplies, works or services, with or without a financial commitment) for which the amount, including that of any successive riders entered into during the same year, is equal to or higher than €350 million, or between €200 and €350 million if these procurement contracts correspond to a new Group strategic policy or business line; the Board is moreover informed of any rider that is signed to the procurement contracts it authorised, which leads to the amount of the initial contract being increased by more than 30% or more than €350 million;
- Iong-term contracts for the purchase or sale of energy, or CO₂ emission credit and allowances, which were entered into by the Company or by a company under its exclusive control, for annual volumes or amounts in excess of 10TWh for electricity, 20TWh for gas (detailed information on long-term contracts for the sale or purchase of gas for more than 5TWh and less than 20TWh is also provided during the Board meeting that follows their signature) and €250 million for coal and CO₃;
- strategies related to nuclear fuel cycle front-end and back-end operations;
- strategies related to gas purchases;
- operations to transfer obligations relating to decommissioning or the back-end of the nuclear fuel cycle;
- strategic agreements that constitute firm and irrevocable cooperation or partnership agreements with one or more foreign partners in the nuclear field, which involve significant transfers of intellectual property or technologies by the Group and that are of major strategic importance for the Group.

The Board of Directors establishes the framework for the policy on the constitution, management and financial risk control of the assets used to cover the nuclear commitments of EDF SA, and votes, in particular, on assetliability management, the asset allocation strategy, the quality of the assets and the method used to select any financial intermediaries. In the event of a negative opinion by the Nuclear Commitments Monitoring Committee on a project to invest in private equity for dedicated assets, only the Board of Directors has authority to authorise such a project (see § 1.4.2.2). The Board sets the market, counterparty and liquidity risk limits.

Moreover, pursuant to the provisions of Article L. 225-37-1 of the French Commercial Code, the Board of Directors deliberates annually on the Company's policy on professional gender equality and equal pay. Lastly, the Board of Directors defines annually the Company's strategy policies that are defined with a view to consulting the EDF Central Works Council pursuant to Article L. 2323-10 of the French Labour Code.

1.2.5 Assessment of director independence

The AFEP-MEDEF Corporate Governance Code recommends that, in controlled companies, at least one-third of the seats on the Board of Directors should be held by independent directors and states that directors who represent employees are not taken into account to determine the percentage of independent directors.

Given the specific legal framework that applies to the Company, out of a total of 18 members, the Board of Directors has one director representing the French State, who cannot therefore meet the independence criteria defined by the AFEP-MEDEF Code, as well as six directors who represent employees, who are not taken into account when determining the proportion of independent directors. Moreover, the Chairman and CEO, in his capacity of executive director, cannot be deemed to be independent in light of the applicable criteria defined by the AFEP-MEDEF Code.

During the joint meeting of 21 January 2016, the Ethics Committee and the Appointments and Remuneration Committee reviewed the individual position of directors appointed by the general shareholders' meeting. On the basis of these Committees' findings, during its meeting of 27 January 2016, the Board of Directors carried out the annual assessment of the directors' independence in light of the criteria defined by the AFEP-MEDEF Corporate Governance Code and confirmed that Colette Lewiner, Laurence Parisot, Philippe Crouzet and Bruno Lafont qualify as independent directors. In the Board's opinion, these directors have no ties with the Company, its Group or its Management that would be liable to compromise their freedom of judgement. In particular, the Ethics Committee and the Appointments and Remuneration Committee examined the existence of possible business ties that could exist between the Company and the companies in which the directors hold offices, via invoicing flows identified over the course of the 2015 fiscal year. The Board of Directors noted, in particular, on the basis of the rankings of the Group's clients and suppliers and the analysis performed by the Purchasing Division, that none of these companies could be described as a significant client or supplier of the Group and therefore found that there were no significant business ties involving any of the directors who qualify as independent directors.

As of the date of this report, the Company Board of Directors therefore has four independent directors out of the 12 who are taken into account for the calculation in accordance with the revised AFEP-MEDEF Code, i.e. a one-third proportion of independent directors, in accordance with the Code recommendations.

1.2.6 Functional assessment of the Board of Directors

In accordance with the provisions of the AFEP-MEDEF Code, the Board of Directors' Internal Regulations require the Ethics Committee to oversee an annual functional assessment of the Board of Directors and to suggest areas that require improvement. Consequently, once a year the Board of Directors devotes an agenda item to this assessment and discusses how the Board and its Committees function, in order to improve the Board's effectiveness, and to verify that major issues are properly prepared and discussed within the Board. Moreover, every three years, an outside consultant performs this assessment, which is overseen by the Ethics Committee.

In 2015, the annual assessment was performed internally, via a detailed questionnaire, which the Ethics Committee reviewed before it was sent to the directors. This questionnaire, which contains both closed-ended questions, which allow for statistical monitoring of the answers given by the directors, and open-ended questions, which allow the directors to detail their answers and make observations on quality, as well as proposals for change, is filled out anonymously by the directors then analysed by the Board Secretariat. The assessment thus performed covers the following areas in particular:

- the organisation of meetings of the Board of Directors and Committee meetings (number and duration, timeframes for sending files, etc.);
- the Board's areas of responsibility and working methods (organisation and quality of the discussions and follow-up on decisions) and those of the Committees;
- the composition of the Board of Directors;
- relations between the Board, the Chairman and the General Management;
- the information made available to the directors.

While no formalised assessment is made of the individual contribution by each director to the Board's work, the assessment, which is performed annually, asks the directors to express themselves freely and anonymously on the functioning of the Board, relations between directors, the skills that are represented on the Board, their contribution to the discussions; the observations that are made are quoted in the report on the assessment that is provided to the Board.

On the basis of the 2015 findings reviewed by the Ethics Committee on 8 December 2015, which were presented to the Board of Directors on 9 December 2015, we can see that the directors are in general satisfied with how the Board and the Committees are run. According to the directors, in particular, the quality of the presentations and the discussions, as well as of the Committees' work, help to inform their votes. The number and duration of meetings, the work programme, and the balance of powers between the Chairman and CEO and the Board are deemed to be satisfactory. The directors feel that they have sufficient access to the Chairman and CEO, and to the other members of the Company's management. They particularly appreciated the holding, in 2015, of an annual seminar devoted to strategy and deemed the work of the working group made of independent directors as part of the strategic partnership for EDF's acquisition of AREVA's subsidiary, AREVA NP, to be useful (see § 1.3 "Board activity in 2015").

The areas for improvement identified primarily concern the time that the Board devotes to the review of certain subjects that the directors would like to be increased (such as core business operations activities, the activities of the subsidiaries, the monitoring of investments, or the Group's manpower policy) and the composition of the Board (the directors are of the opinion that an increase in the number of independent directors could be considered, as well as greater diversification in the directors' profiles).

The Ethics Committee thus submitted the following proposals to the Board: enrich the 2016 work programme for the Board and the Committees, taking into account the expectations expressed, reduce the duration of presentations in order to ensure better balance between presentations and discussions, and reflect on the composition of the Board, in particular with a view to attaining a 40% female membership of the Board by 2017, in accordance with the law, and increasing, if necessary, the number of independent directors.

A specialised outside firm will carry out the 2016 assessment, in the same way as the 2013 assessment.

1.2.7 Director information and training

In accordance with the Board of Directors' Internal Regulations, the directors periodically receive information on the Company's and the Group's financial position, cash flow and commitments, as well as data such as the financial outcome of contracts awarded by the Company for the purchase of nuclear fuels, a performance review of the Company's main subsidiaries when the annual and half-yearly financial statements are released, the customer policy, the procurements and sub-contracting policy and the human resources policy.

A document that focuses on current affairs in the Group's major areas of business, market trends, and the economic, financial and institutional environment is prepared for each Board meeting.

Directors are informed of the main events involving the Company that occur in between Board meetings, as well as the follow-up on decisions taken by the Board.

The directors may supplement this information by meeting with senior managers from the Company or Group.

Moreover, informational meetings are held on complex matters or matters of major strategic importance, as well as areas in which the directors wish to receive training. Thus, the directors who are elected by the employees may receive training on corporate management, as well as the industrial and operational specificities of the Company, which may be extended to the other directors.



1.3 **Board activity in 2015**

The Board of Directors meets as often as the interest of the Company requires, in accordance with the provisions of the laws and regulations.

During the 2015 fiscal year, the Board of Directors met 11 times and 23 Committee meetings were held in order to prepare these meetings. The directors also met once for a strategy seminar.

Other than the Working Group meetings for independent directors mentioned below, in 2015 no formalised meetings were held of the Board members that were not attended by the Chairman and CEO and/or the directors who represent the employees.

On average, Board meetings lasted three hours, which allowed for an indepth review and discussion of the agenda items.

The directors' average attendance rate at Board meetings was 96.3% in 2015.

In 2015, in addition to the numerous matters linked to the day-to-day running of the company, the Board of Directors reviewed and/or authorised matters such as the investments programme for the existing nuclear fleet in France for the period 2015-2025 (Grand carénage), the strategy for the nuclear fuel cycle, the planned strategic partnership between EDF and AREVA and the plan for EDF to acquire AREVA NP (see below), the progress of the project to develop two EPR in the United Kingdom (Hinkley Point C), EDF's strategic policies, in respect of 2015, with a view to consulting the Central Works Council pursuant to Article L. 2323-10 of the French Labour Code, the Chairman and CEO's compensation components (in particular, the annual fixed compensation in respect of 2014 and 2015 and the severance indemnity if he is removed from office), the plan to sell the building where the Company's registered office is located, EDF's gender balance policy in the workplace and equal pay policy, the planned disposal by EDF of its 25% stake in the Austrian company Energie Steiermark AG (Estag), and EDF Energies Nouvelles' development projects (in the USA, Morocco and the United Kingdom) or the interim dividend for 2015.

The Board of Directors was also informed of the list of EDF's subsidiaries and EDF's shareholdings in companies that are based outside France, in response to the request by the Minister for Public Finances and Accounts.

Moreover, as part of the one-day strategy seminar, the Board reviewed matters such as the progress of the CAP 2030 strategic project that was launched early in 2015 (see section 1.3.2 "Strategic vision" of the 2015 Reference Document), the status of and prospects for the energy markets in Europe, the key issues surrounding and the development of digital services for household customers, the progress of the New Model EPR project (NM EPR), and the EDF group's new international strategy.

Independent directors' working group

As part of the discussions initiated in 2015 between EDF and AREVA on the project for a strategic partnership and the acquisition by EDF of AREVA's subsidiary, AREVA NP, the Board of Directors' meeting of 8 April 2015 decided to set up a working group made up of the independent members of the EDF Board of Directors: it is chaired by Colette Lewiner, and also includes Laurence Parisot, Philippe Crouzet and Bruno Lafont.

The remit of this working group, in liaison with the EDF Management, is to review all projects that would result from discussions between EDF and AREVA, in particular in light of their strategic and industrial interest, their financial aspects and their key social issues. Without being a substitute for the work of the Committees that report to the Board of Directors, or for the decision-making processes that have been implemented at Board level, the working group may, on the basis of its independent analysis, make all useful recommendations to the Board of Directors on the projects. Within this framework, it receives from the Company the information that is needed to fulfil its remit and may meet with the stakeholders concerned. It is assisted by an advisory bank, in particular for the review of valuation information, and benefits from the technical expertise of the EDF's legal advisors.

This working group met seven times in 2015. It issued opinions for the Board of Directors and the Strategy Committee at various stages of the discussions with AREVA.

1.4 Committees that report to the Board of Directors

For the performance of its remits, the Board of Directors is assisted by five committees, which are tasked with reviewing and preparing specific files, prior to their presentation to the full Board. These specialised committees are: the Audit Committee, the Nuclear Commitments Monitoring Committee, the Strategy Committee, the Ethics Committee and the Appointments and Remuneration Committee.

The membership, functioning and remits of the Committees are governed by the Board of Directors' Internal Regulations.

The Committees are made up of at least three directors chosen by the Board of Directors, which appoints the Chair of each Committee. The Company bylaws provide that the Committees created by the Board must include at least one director who represents the employees.

As of the date of this report, the Board Committees have the following Chairs:

- Jean-Bernard Lévy, Strategy Committee;
- Marie-Christine Lepetit, Audit Committee;
- Philippe Crouzet, Nuclear Commitments Monitoring Committee;
- Colette Lewiner, Ethics Committee;
- Bruno Lafont, Appointments and Remuneration Committee.

The composition of each of the Committees is described below.

The Government Commissioner and the Head of the French State's Economic and Financial Verification Mission for EDF attend committee meetings.

The Committees' work is organised within the framework of an annual programme. Meetings are recorded in written minutes. Each committee Chair provides written reports to the Board of Directors. Meetings last long enough for the matters over which the Committees have authority to be analysed and discussed in depth.

The Board of Directors' Internal Regulations provide for a minimum of three business days between a meeting of the Board of Directors for which the agenda includes a review of matters that fall under the remit of a Committee and the meeting of said Committee, with the exception of the Appointments and Remuneration Committee, which may meet at any time. They also provide that each Committee may call on outside 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. The AFEP-MEDEF Code also provides that the members of the Audit Committee must have financial or accounting expertise.

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The Audit Committee is chaired by Marie-Christine Lepetit, a director who was appointed by the general shareholders' meeting in response to a proposal by the State. The other Committee members are Colette Lewiner, Laurence Parisot and Philippe Crouzet, independent directors who were appointed by the general shareholders' meeting, as well as Marie-Hélène Meyling, Jacky Chorin, Christian Taxil and Maxime Villota, directors who were elected by the employees. The Committee therefore has three independent directors out of the four who are taken into account when calculating the proportion of independent directors (which therefore excludes the directors who represent employees), i.e. a proportion of three-quarters compared to the minimum of two-thirds recommended by the AFEP-MEDEF Code.

In accordance with the provisions of Article L. 823-19 of the French Commercial Code and the recommendations of the AFEP-MEDEF Code, no executive directors sit on the Committee.

During the joint meeting of 10 December 2014, the Ethics Committee and the Appointments and Remuneration Committee reviewed the position of Colette Lewiner, Laurence Parisot and Philippe Crouzet and issued an opinion that was presented to the Board of Directors. During the Board meeting of 10 December 2014, the directors noted that Colette Lewiner, Laurence Parisot and Philippe Crouzet have specific financial and accounting skills, as per the criteria recommended by the French financial markets authority (*Autorité des marchés financiers* – AMF) in its report on the Audit Committee dated 22 July 2010. On 27 January 2016, the Board of Directors moreover confirmed that Colette Lewiner, Laurence Parisot and Philippe Crouzet qualify as independent directors. Colette Lewiner, Laurence Parisot and Philippe Crouzet therefore meet both the skills and independence criteria mentioned in Article L. 823-19 of the French Commercial Code.

The Audit Committee met eight times in 2015. The average rate of attendance for its members was 87.5%. On average, the Committee meetings lasted for three hours, which allowed for in-depth review and discussion of the items on the agenda.

1.4.1.2 **Remits**

Prior to review by the Board of Directors, the Audit Committee analyses and issues an opinion on:

- the Company's financial position;
- the medium-term plan and the budget;
- the draft financial reports prepared by the Corporate Finance Division (parent company financial statements for the Company, Group consolidated financial statements and Group management report);
- the monitoring of the Company's risks (in particular, the review each half-year of the Group's risk mapping and risk mitigation methods);
- audit and internal control (organisation, deployment and assessment of internal control, the annual audit programme, main findings and resulting corrective measures, follow-up on their implementation, the draft annual report by the Chairman of the Board of Directors on corporate governance, the internal control and risk management procedures);
- the insurance strategy;
- the selection of Statutory Auditors, while verifying their independence and the fees paid to them;
- the financial aspects of external growth operations or disposals that are particularly significant in nature (see § 1.2.4);
- the changes in analysts' perception of the Group;
- the energy markets risk policy and the risk policy for Group counterparty default.

The Committee's review of the financial statements is accompanied by a presentation prepared by the Statutory Auditors that emphasises the bases on which the financial statements were prepared, the mandatory applicable accounting standards, the audit approach used and the findings of their audit work.

As part of its work, the Committee is in regular contact with the Statutory Auditors and the Executive Management, as well as the Corporate Finance, Corporate Risk Management and Internal Audit Divisions.

1.4.1.3 **Activities in 2015**

In 2015, 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 guarterly sales figures, the 2016 budget and the 2016-2019 medium-term forecasts, the review of the value of the assets with a view to closing off the 2015 financial statements and finalising the corresponding press release, the risk mapping and risk control methods, the internal audit summary reports and the audit programme, the progress of the Hinkley Point C project, the updating of the strategic framework for financial management, the 2015 financial management and financial risk management mandate, as well as the new organisation of the audit and internal control functions as part of CAP 2030. The off-balance sheet commitments were also presented to the Committee. During three joint meetings with the Strategy Committee, the Committee reviewed the 2015 budget and the 2015-2018 medium-term forecasts, the progress of the Flamanville 3 EPR construction and the project involving EDF and AREVA.

As required, the Committee may call on outside experts. It did not use this option during the 2015 fiscal year.

1.4.2 Nuclear Commitments Monitoring Committee

1.4.2.1 Functioning and composition

The Nuclear Commitments Monitoring Committee (CSEN), which was created by Article 9 of the Decree of 23 February 2007 on the securing of the financing of nuclear expenses, is chaired by Philippe Crouzet, an independent director appointed by the general shareholders' meeting. The other committee members are Marie-Christine Lepetit and Olivier Appert, two directors who were appointed by the general shareholders' meeting, and Marie-Hélène Meyling and Maxime Villota, two directors who were elected by the employees.

The CSEN met three times in 2015. The average attendance rate for its members was 100%. On average, the Committee meetings lasted for two hours and thirty minutes, which allowed for in-depth review and discussion of the items on the agenda.

1.4.2.2 **Remits**

The Nuclear Commitments Monitoring Committee is tasked with monitoring changes in nuclear provisions, commenting on governance issues related to dedicated assets and the rules for matching assets and liabilities and strategic allocation, as well as ensuring the compliance of the Company's asset management within the framework of the policy on the constitution, management and control of the financial risks associated with dedicated assets. To this end, it relies on the work of the Nuclear Commitments Financial Expertise Committee (CEFEN), which comprises independent experts ¹. The CEFEN's remit is to assist the Company and its governance bodies in this area.

Moreover, the Committee issues an opinion prior to any investment in private equity for all projects for which the unit amount exceeds \notin 400. million as well as for any project (excluding real estate) for which the unit amount exceeds \notin 200 million that leads to full consolidation of the target investment by the Company. In the event of a negative opinion by the Committee on an investment project, only the Board of Directors has the authority to authorise such a project.

^{1.} Appointed by the Board of Directors on 26 November 2013, for three years.



1.4.2.3 Activities in 2015

In 2015, 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 (CIGEO) for high-level waste and long-lived intermediate-level waste, the 2015 annual update letter on securing the long-term financing of nuclear expenses (see § 2.3.3.1) and the report on internal control that is included therein, the discounting rate for nuclear commitments, as well as investment decisions and prospects in the portfolio of dedicated assets.

1.4.3 Strategy Committee

1.4.3.1 **Functioning and composition**

Jean-Bernard Lévy, the Chairman and CEO, chairs the Strategy Committee. The other members are Laurence Parisot, Olivier Appert and Christian Masset, three directors who were appointed by the general shareholders' meeting, Martin Vial, the State Representative, along with Marie-Hélène Meyling, Jacky Chorin, Jean-Paul Rignac and Christian Taxil, the directors who were elected by the employees.

The directors who are not members of the Strategy Committee attend Committee meetings.

The Strategy Committee met six times in 2015. The average attendance rate for its members was 94.4%. On average, the Committee meetings lasted for two hours and thirty minutes, which allowed for in-depth review and discussion of the items on the agenda.

1.4.3.2 **Remits**

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 2015

In 2015, the Strategy Committee reviewed, in particular, the CAP 2030 project (see section 1.3.2 "Strategic vision" of the 2015 Reference Document), the research and development policy, the strategic context and the hypotheses underlying the 2016-2019 medium-term forecasts, the strategic policies with a view to the consultation, in respect of 2015, of the Central Works Council (Article L. 2323-10 of the French Labour Code), as well as the progress of the project to deploy the Linky smart meter by ERDF. During three joint meetings with the Audit Committee, the Committee reviewed the 2015 budget and the 2015-2018 medium-term forecasts, the progress of the Flamanville 3 EPR construction and the projects involving EDF and AREVA.

1.4.4 Ethics Committee

1.4.4.1 **Functioning and composition**

Colette Lewiner, an independent director who was appointed by the general shareholders' meeting, chairs the Ethics Committee. The other members are Bruno Léchevin and Gérard Magnin, two directors who were appointed by the general shareholders' meeting, along with Christine Chabauty, Marie-Hélène Meyling and Jacky Chorin, three directors who were elected by the employees.

The Ethics Committee met four times in 2015. The average attendance rate for its members was 83.3%. On average, the Committee meetings lasted for one hour and thirty minutes, which allowed for in-depth review and discussion of the items on the agenda.

1.4.4.2 **Remits**

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 EDF Mediator. Moreover, each year the Ethics Committee oversees an assessment on 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 outside consultant (see § 1.2.6).

1.4.4.3 **Activities in 2015**

In 2015, among other things, the Ethics Committee reviewed the specific procedure designed to resolve situations that could give rise to possible conflicts of interests due to Philippe Varin's position as Chairman of the AREVA Board of Directors (see section 4.4.3 "Conflicts of interests" of the 2015 Reference Document), the ethics reporting and the commitments concerning the Group's corporate responsibility, the plan to update the Stock Market Compliance Charter, the plan to set up the Group Ethics and Compliance Division, the issue of sub-contracting and EDF's relations with its service provider undertakings, EDF's professional gender equality and equal pay policy and the Group's health and safety policy.

1.4.5 **Appointments and Remuneration Committee**

1.4.5.1 Functioning and composition

Bruno Lafont, an independent director who was appointed by the general shareholders' meeting, chairs the Appointments and Remuneration Committee. The other members of the Committee are Colette Lewiner, an independent director appointed by the general shareholders' meeting, Martin Vial, the State Representative, and Maxime Villota, a director elected by the employees.

The Committee is chaired by an independent director and made up of a majority of independent directors, since it includes two independent directors out of the three taken into account for the calculation of this proportion (excluding the directors who represent the employees), in accordance with the recommendations of the AFEP-MEDEF Code.

The Appointments and Remuneration Committee met twice in 2015. The average attendance rate for its members was 87.5%. On average, the Committee meetings lasted for one hour.

1.4.5.2 **Remits**

Pursuant to the Internal Regulations, the Appointments and Remuneration Committee submits proposals to the Board of Directors with a view to directors being appointed by the general shareholders' meeting. The committee sends the Minister responsible for the Economy and Finance, and the Minister responsible for Energy, an opinion, for approval, on the salary, variable compensation (criteria used to determine the variable portion and assessment of the results obtained compared to the targets set), and peripheral compensation of the Chairman and CEO. It also sends this opinion to the Board of Directors, with a view to the Board discussing and determining these compensation components. The Committee designs its proposals within the limits provided for by Decree no. 2012-915 of 26 July 2012 on the State control of the compensation of executives of public institutions, pursuant to which the annual compensation of the Chairman and CEO must not exceed a gross limit of €450,000.

Where applicable, the Committee reviews the compensation paid to Vice-Presidents. It sends its proposals and recommendations, for approval, to the Ministers responsible for the Economy and for Energy, and also sends them to the Board of Directors, which then deliberates on and determines these compensation amounts.

It provides an opinion to the Board of Directors on the conditions for establishing the compensation of the principal senior executives (fixed and variable components, calculation method and indexing), as well as on the amount and conditions for allocating the directors' fees. The Committee ensures that succession plan charts exist for the positions on the Executive Committee.

1.4.5.3 **Activities in 2015**

In 2015, among other matters, the Appointments and Remuneration Committee reviewed the 2014 and 2015 compensation components for the Chairman and CEO and the award to Jean-Bernard Lévy of a severance indemnity in the event of his removal from office, the compensation policy for the Group's senior executives, and the system for the succession tables in the Group.

1.5 **Compensation**

In 2015, Jean-Bernard Lévy did not receive any directors' fees in respect of his office as Chairman of the Board of Directors and EDF director. Moreover, he 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 CEO in 2015, and no options were exercised during the fiscal year. Moreover, no performance shares were awarded to the Chairman and CEO during the past fiscal year, and no performance shares became available.

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 2015, are detailed in section 4.6 ("Compensation and benefits") of the 2015 Reference Document.

1.6 Shareholders' Meetings

The rules governing shareholder involvement in General Meetings are set out in Article 20 of the Company bylaws, and are described in section 7.2.7 of the 2015 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 emphasise the control procedures that concern activities or risks that are deemed to be significant, as well as the main long-term procedures in effect in 2015, 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.

Executive Committee

The Chairman and CEO is supported by an Executive Committee comprising representatives from all the Group's business lines.

The Executive Committee membership is as follows:

- Jean-Bernard Lévy, Chairman and CEO, Chairman of the Executive Committee;
- Marc Benayoun, Group Executive Vice President with responsibility for Gas and Italy, Chief Executive Officer of Edison²;
- Antoine Cahuzac, Group Senior Executive Vice President, Renewable Energies, Chief Executive of EDF Energies Nouvelles;
- Henri Lafontaine, Group Senior Executive Vice President, Customers, Services, and Regional Action;
- Marianne Laigneau, Group Senior Executive Vice President, Human Resources;
- Dominique Minière, Group Senior Executive Vice President, Nuclear and Thermal;
- Thomas Piquemal, Group Senior Executive Vice President, who is in charge of the Group's Finance Division⁴;
- Vincent de Rivaz, Group Senior Executive Vice President, Chief Executive of EDF Energy;
- 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, Director and Special Advisor to the Chairman and CEO, is the Executive Committee Secretary.

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 "risk committee" meetings are devoted to the review and management of risks, as well as to reviewing audit activities.

At the start of 2015, the Chairman and CEO and the Executive Committee launched the "CAP 2030" project, in order to determine where EDF will be by 2030. Various workshops that correspond to the analyses and actions to be undertaken as a priority for the success of the project have been implemented. The executive committee will review these workshops regularly.

Commitments Committee within the Group Executive Committee

In order to boost project analysis and monitoring, a Commitments Committee within the Group Executive Committee³ (CECEG) 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.

^{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.

^{2.} Marc Benayoun replaced Bruno Lescœur in these positions starting on 1 January 2016.

^{3.} The composition of the Commitments Committee within the Group Executive Committee is the same as that of the Executive Committee.

^{4.} Xavier Girre replaced Thomas Piquemal in his functions as of 7 March 2016.

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Risks Committee

The Risks Committee ¹ was set up early in 2015. It is a decision-making forum designed to improve the mitigation of the risks to which the Group is exposed: it reviews the mapping of the Group's risks, which it uses to identify the priority risks for the Group and share the strategy for handling them. It is also a forum for discussion and issuing warnings on emerging risks. Each of the members of the Executive Committee is the "sponsor" of one or more priority risks. Sponsors are in charge of defining the strategy for handling the risk and the corresponding action plans, including those defined following audits. The committee met twice in 2015, and, among other things, approved the list of priority risks for the Group.

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 CEO, 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 CEO, 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 CEO 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.

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 in 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 Manual² has been written and is offered to each entity³ as a standard for the implementation of its own internal control system. This manual describes the various forms of cross-functional risk that affect the Group as a whole, and identifies the main requirements to be monitored. 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 2015, each of the 66 entities concerned produced an annual report on internal control that primarily included a self-assessment⁴ of the risk management and the activities that concern them, and the description of the actions designed to ensure progress. Each self-assessment gives rise to a commitment by the Director of the entity on the level of risk management to be attained and on the actions taken. This is the ninth consecutive year that the Group has commissioned this report⁵. 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 CEO and the Audit Committee, then to the Board of Directors.

The Audit Division performs full audits on these entities, which include a review of the robustness of their internal control, at a frequency of 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 audits⁶.

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.

In 2015, as part of the "CAP 2030" project launched by the Executive Committee, a project to overhaul the Internal Control function was initiated. Its main objectives were approved by the Chairman and CEO in September 2015. This project aims to propose actions to improve the internal control function, by increasing the responsibility of managers, by simplifying self-assessment tools and by clarifying the various requirement benchmarks identified in the internal control guide. This project has been implemented gradually since 2015, and aims to publish all its findings by the end of 2016 or the start of 2017.

^{1.} The composition of the Risks Committee is the same as that of the Executive Committee. It met for the first time on 13 April 2015.

^{2.} 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. In 2015, the Internal Control Manual was restructured in order to improve the clarity of the requirements and to facilitate oversight of their implementation.

^{3.} Since 2015, Dalkia and Citelum have been fully integrated into the EDF internal control and risk management system.

^{4.} 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.

^{5.} New self-assessment models are being experimented for the 2015 fiscal year.

^{6.} For regulated subsidiaries, these responsibilities are exercised within the limits laid down by the regulations in force.

2.1.3 The contribution to internal control by the Risk Management Division, the Group Audit function, the Corporate Finance Division and the Legal Affairs Division

2.1.3.1 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 Risk Management Division (DRG), 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 CEO 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 sector-specific 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 § 2.3.1.1.2);
- 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);
- defining, coordinating and deploying the prevention and control systems that are needed to manage risks of fraud and commercial noncompliance¹ (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 CEO, the management of this function is entrusted to the Group Senior Vice President, Audit. The audit function includes the Corporate Audit Division and the audit teams that are specific to each of the main French and foreign subsidiaries and affiliates. 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 subsidiary Audit Directors by the Corporate Audit Division – excluding RTE and ERDF – exchanges of best practices, training initiatives, pooling of tools and methods, etc.). In 2015, the Group Audit function employed 116 persons².

One of the components of the "CAP 2030" project is audit. Further to the steps to improve internal control that the management has been asked to take, the objective, which was approved in September 2015³ by the Executive Committee, involves refocusing the audit of the Group on its role as a third line of defence. With this in mind, some business line audit teams, whose role was more that of a second level of internal control, should expect to be reassigned to the internal control of the structures concerned⁴.

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 CEO, 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 CEO and reports on audit work to the Audit Committee; he provides relevant information to the Audit Committee on the adequacy of the audit manpower for the assurance assignments to be carried out.
- 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 IFACI⁵, which certified that its practices comply with the international standards for the profession, as it did in 2008, then in 2011 and 2012.

5. The French Institute of Audit and Internal Control.

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^{1.} A transfer of this activity to the new Group Ethics and Compliance Division has been approved for 2016.

^{2.} Full-Time Equivalent in 2015 for the scope of EDF SA, EDF Energy and EDF Trading, Edison, EDF Luminus, EDF Polska, EDF EN and Dalkia

^{3.} After review by the Executive Committee, meeting as a committee on change, and presentation to the Audit Committee.

^{4.} Business line audit teams for EDF SA (Production, Engineering, Trade and Asia Pacific), and audit teams for EDF Polska, EDF Trading and EDF Luminus.
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Operating rules for EDF and the controlled subsidiaries

- The Corporate Audit Division and the subsidiary audit divisions oversee the internal control procedures in the various divisions and controlled subsidiaries. The Corporate Audit Division conducts crosscutting corporate and subsidiary audits, and also audits on their scope of responsibility. The Corporate Audit Division is the only structure that is authorised to perform subsidiary audits that involve a corporate-level risk.
- The audit programme is reviewed by the Chairman and CEO and the Risk Committee, 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 main "Head of Group" accounting and financial processes (human resources and information systems);
 - major projects;
 - 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,
 - monitoring of decisions taken by Executive Management.
- The plan for the subsidiary 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 the key audit facts for the entire scope of the Group audit function, the main corporate audit findings and the corresponding recommendations, as well as the results of corporate audits conducted 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. It provides an overview through the audit of the level of risk control in the Group. This report is presented first to the Chairman and CEO, 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 key requirements, 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;

- 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 business line 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 business 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.

The accounting internal control policies for the subsidiaries are the responsibility of each legal structure concerned.

Moreover, the investment projects that are assessed by the CECEG are appraised and analysed upstream, prescriptively, in order to anticipate the impacts and ensure the reliability of the potential financial trajectories for the Group balance sheet and income statements.

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 CEO 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. CORPORATE GOVERNANCE 2015 REPORT BY THE CHAIRMAN OF THE EDF BOARD OF DIRECTORS ON CORPORATE GOVERNANCE, INTERNAL CONTROL AND RISK MANAGEMENT PROCEDURES

In addition, the Legal Affairs Division has set up a knowledge management system in order to capitalise on, harmonise and share 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 CEO 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 exercise of the nuclear operator's responsibility is delegated by the Chairman and CEO to the Group Senior Executive Vice President, Nuclear and Thermal and to the Group Senior Executive Vice President, New Nuclear Projects and Engineering, who, in turn, subdelegate to the Directors of the Divisions concerned, who themselves have sub-delegated powers to the unit directors.

Each facility head, subject to prior evaluation of the appropriate skills, issues authorisations. 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 released in November 2008, was updated and 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 & compliance initiative

In a decision dated 2 April 2013 issued to the members of the Executive Committee and the Group Management Committee, the CEOs of the Group Companies and to the Country Directors, the Chairman and CEO 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 SA. 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 SA, 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.

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 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 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.

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).

In 2015, the EDF's Ethics function was enhanced: the ethics committee meeting of 15 June decided to structure the Ethics & Compliance function at the level of the EDF group. It approved the scope, remits and organisational principles of the function.

The first task of the Group Ethics & Compliance Division (DECG), which was set up in December 2015, will be to propose a "Group ethics & compliance programme" to the EDF Chairman, in order to federate the monitoring of EDF's compliance with the national and international laws and regulations to which the Group is subject due to its activity and geographical locations.

As support for the procedures that have already been implemented by certain Group companies that operate in national regulatory environments (EDF Energy, Edison, EDF Inc. and EDF Energies Nouvelles) or specific regulatory environments (EDF Trading), the DECG will be tasked with giving the EDF group (i) an ethics and compliance policy for the Group as whole (benchmarks, etc.), (ii) a harmonised and consistent Group-wide framework for management and control, and (iii) increased visibility of the Group's capacity to mitigate compliance-related risks.

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;
- siving 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 "CAP 2030" strategic project, which aims to make EDF "*a successful and responsible energy company, the champion of low-carbon growth*", adds new prospects to the Group's Sustainable Development and environmental drive. Sustainable Development Targets, which are linked to CAP 2030 and that specify the Group's trajectory are currently being defined and will be implemented early in 2016. The policies in this area will be aligned with these objectives.

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.

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The EDF Group maintains its ISO 14001 certification, which was obtained for the first time on 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, Edison and EDF Luminus. In May 2015, the independent organisation Afnor Certification issued a new ISO 14001 certificate to the expanded Group, following the addition of Dalkia in particular. Certification now covers 98% of the Group's 2015 consolidated revenue.

The processes implemented within the framework of this certification help strengthen the management of the Group's environmental risks, in particular the regulatory aspect and the challenging environmental topics, by giving its stakeholders the assurance of a structured and adapted organisation.

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 either by one of the EDF Committees mentioned in paragraph 2.1.1 or by the Committee of the Heads of Information Systems or the IS Group Committee, on which the Group's subsidiaries are also represented, with the exception of the regulated subsidiaries. An IT Industrial Policy Committee decides on the industrial IT strategies for the scope of EDF SA and makes recommendations for the subsidiaries.

Moreover, the Group IS Division, which reports to the Group Executive Vice President, Finance, 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, was 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 (*Cour des Comptes*), State Auditors, the Inspectorate of 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.

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.

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. Regular reports are provided on the management of Group risks during Risks Committee meetings.

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 separate ¹ 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, 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 priority risks falls to one or more risk "sponsors" on the Executive Committee.

1. Function comprising the establishment managers for risk mapping and control (see § 2.3.1.1).

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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.

The consolidated risk mapping drawn up at the end of the year is approved by the Risks Committee and, following review by the Audit Committee, presented to the EDF Board of Directors.

Since 2015, as part of the group risk mapping process, the Risks Committee has identified a more restricted set of "priority risks", which were selected due to their operational or strategic importance. The connection between these risks and the "CAP 2030" strategic project was given priority so that, to the extent possible, risk management plans are included in the corresponding workshops.

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 the "risk factors" chapter of the 2015 Reference Document, in accordance with the consolidated risk mapping for the Group at the end of 2015.

2.2.3 Crisis management policy

The crisis management policy, which was formalised by a decision of the Chairman and CEO 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 subsidiaries¹ – 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 correct functioning of internal processes

2.3.1.1 Sector-specific 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 Risk Management Division (DRG) 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 CEO 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 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 control², 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 trading activities;
- 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 changes to be made to it proposed by the DRG.

2.3.1.1.2 Financial and investment risk control

The 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 support and 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 and on a weekly basis, 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 DRG are represented) checks and reviews monthly, as required, requests for exemptions from the framework and investment requests for new products;

^{1.} For RTE, coordination during crisis periods is organised under the aegis of the authorities.

^{2.} For regulated subsidiaries, these responsibilities are exercised within the limits laid down by the regulations in force.

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- 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. The policy for identifying, managing and mitigating EDF SA's financial risks was updated and approved by the EDF Board meeting of 11 February 2015. An annual risk management mandate, as well as specific working environments, have been implemented by the Risk Management Division in order 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 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 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), which is made up of all the members of the Executive Committee, 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 million ¹;
- 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 5 TWh for electricity, 10 TWh 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 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 CEO in January 2013 and have been implemented. These "golden rules" constitute a framework, which, when associated with a monitoring process, makes 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 key requirements that are common to the entire Group) 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 Act on Information Technology, Data Files and Civil Liberties.

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 Group IS Division ensures close coordination between the IS Risk and Internal Control Officers' and the IS Security Managers' (RSSI) networks, thereby making it possible to improve risk coverage and internal control for EDF. These networks will be progressively extended to include the subsidiaries.

The Committee of the IS Directors in France mandates the Security Committee (COSEC) to plan and coordinate cross-functional security work. It fulfils the following roles, in particular:

- contribution to the preparation and updating of the documents that make up the EDF SA security guidelines. Coordination of leadership, raising awareness, training and support for the service lines of the IT function in the field of Information System security;
- taking into account institutional and technical monitoring of security on the basis of global feedback (implementation, compliance, effectiveness, incidents, reporting, reviews and audits);
- review of complex applications for derogations from the security policy.

The EDF group's Information Systems Security Policy (PSSI) structures the information system security policies and organisation for the Group's IS. The IS Group Committee receives reports on the implementation of the PSSI. The adjustment of this policy, as well as the level of security, are monitored for EDF SA and in the Group's subsidiaries through two dedicated committees:

- for EDF SA, on a monthly basis by a committee 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 a committee chaired by the Head of EDF Group Information Systems Security, which brings together the Heads of Information Systems Security at the main subsidiaries.

^{1.} 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.

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Actions in the field of IS security

Key points for 2015 were:

- the framing of strategic policies objectives in the field of IS security with a 2020 horizon, in order to adapt the IS vision for 2020 mentioned in paragraph 2.1.6;
- the publication, by business lines, of a mapping of applications with increased security, and the implementation of a procedure to centralise this mapping;
- the performance of a "cyber attack" crisis exercise with the involvement of part of EDF's top management;
- the implementation of two "Business Continuity Plan" exercises for the two EDF data centres, and the implementation 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 commissioning of cyber surveillance tools in order to provide better visibility of IS security incidents through the generation of alerts and reporting data;
- the signature, by the Chairman, of a framework agreement between the Ministry of Defence and the EDF group concerning the Cyber Excellence Unit.

2.3.1.2.3 Administration and monitoring of subsidiaries

Under the new "Corporate Officers" policy signed by the Chairman and CEO on 15 January 2015, 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 CEO of EDF.

This policy also includes 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 Chief Financial Officer 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.

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 insurable risks.

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 Group (the scope of the Group's consolidated financial statements is detailed in the notes to the consolidated financial statements (*cf.* Chapter 6 of the 2015 Reference Document) 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 2015. 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 consolidation scope is defined after identifying all the undertakings that are controlled, jointly controlled or under significant influence that is material in nature. The non-significant nature of shareholdings that potentially fall within the scope of the Group's consolidation is reviewed each quarter, and submitted to the auditors for review once a year.

The half-yearly consolidated financial statements are presented to the Audit Committee then to the Board of Directors, at each half-yearly closing off of the accounts.

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 these financial statements 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.

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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 the results 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 Consolidation Accounting 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 Board of Directors closes off the half-yearly parent company financial statements on 30 June of the fiscal year. EDF's transactional accounting (excluding 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 or, as applicable, the accounting operators located in the operations business lines, and the Consolidation Accounting Division.

Meetings are held each quarter with EDF SA's divisions in order to prepare the financial statements and anticipate changes in certain types of accounting treatment, in order to ensure the reliability of the accounting and financial information that is published.

Each operating branch and functional Head makes an annual commitment regarding the quality of the Internal Control system in the field of Accounting and Finance, the improvement targets for the coming period, and the accuracy and exhaustiveness of the accounting information for which he or she is responsible by sending a letter of commitment to the Head of Accounting Consolidation.

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;
- 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 CEO launched an anti-corruption compliance programme that is applicable to all business lines, divisions and subsidiaries controlled by the EDF Group. A mechanism to prevent corruption is included in the compliance policy that will be deployed over the course of 2016 by the Group Ethics and Compliance Division.

A control mechanism for consultants (as in "intermediaries and business providers") has also been set up at EDF; it is run by the General Secretariat. It includes, in particular, an analysis of the reputation and probity of the Group's counterparties.

2.3.3.1 Regulations relating to industrial operations

2.3.3.1.1 The nuclear sector

Numerous control procedures exist in the field of industrial operations.

For the nuclear sector, the 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 and Security" 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 and New Projects (DIPNN), the verification work of which makes it possible to regularly assess the level of safety in all the various operations and engineering entities;
- the Audit function carries out various audits each year in the nuclear field (engineering, fuels and operations).

Articles L. 594-1 *et seq.* of the French Environment Code and the implementing legislation (the Decree of 23 February 2007 and the 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.

Two laws were enacted in 2015:

- Law no. 2015-992 of 17 August 2015 on energy transition for green growth;
- Law no. 2015-715 of 6 August 2015 for growth, business and equal opportunities, known as the "Macron Act".

Various pieces of legislation will be adopted to implement these laws, in particular concerning environmental assessment and public involvement, a subject that has major implications for the completion of the Group's industrial projects.

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 Order of 7 February 2012 that laid down the basic rules on Basic Nuclear Facilities (BNF), is part of the recasting of the general regulations that are applicable to BNF. Along with the amended Decree no. 2007-1557 of 2 November 2007, known as the "Procedures" Decree, this Order, most of the articles of which entered into force on 1 July 2013, is a major implementing piece of legislation for the Nuclear Transparency and Safety Act, which is now incorporated into the French Environment Code, for which the application rules are explained by ASN decisions and guides.

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 2016 the FARN has been in a position to intervene in six phases 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 three international peer reviews on French nuclear power stations in 2015, at Golfech, Penly and Cattenom. 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, the 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 2015, three follow-up reviews were conducted at Civaux, Fessenheim and Blayais. 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 OSART (Operational SAfety Review Team – review of a nuclear power station organised by the IAEA) was conducted in Dampierre in 2015.

2.3.3.1.2 The hydropower sector

In the hydropower sector, safety is ensured by all the steps taken when the hydropower facilities are designed and during their operation, in order to ensure the protection of persons and property against the dangers linked to water and that are due to the presence or operation of the structures. Hydropower safety is a major, ongoing concern of the producer. It has three main aspects:

- the mitigation of risks linked to operations: changes in the level of bodies of water or the flow rate of waterways upstream of the structures;
- the management of the structures during high-water periods, in order to ensure the safety of the facilities and the populations;
- the prevention of the major risk represented by the failure of a hydropower structure, via the surveillance and maintenance of the structures under the monitoring of the State departments, primarily the Regional Directorates for the Environment, Development and Housing (DREAL). Sixty-eight of the largest dams must follow a specific administrative procedure ("specific intervention plan") that is implemented by the Prefect who has jurisdiction over them.

EDF regularly monitors and maintains its dams, in particular by ongoing physical examination. Real-time sampling and analysis of multiple data parameters (measurements of settling, pressure and leaks, combined with the visual inspection of the concrete and checks on the mechanical sections, etc.) enable EDF to obtain regular diagnoses of the state of its dams. In Grenoble and Toulouse, EDF's teams can analyse remotely and, if need be, in real time, the largest or most difficult to access dams, using a series of sensors.

Moreover, for each of the 150 major dams, a complete overhaul is performed every ten years, combined with drainage or an inspection of the structure using underwater apparatus. These operations are performed under the strict supervision of the State departments (the DREAL and STEEGBH – Technical Department for the Electrical Energy of Major Dams and Hydropower).

In 2015, EDF carried out 120 safety reviews of structures that are currently being operated (see Chapter 1 of the Reference Document).

2015 REPORT BY THE CHAIRMAN OF THE EDF BOARD OF DIRECTORS ON CORPORATE GOVERNANCE, INTERNAL CONTROL AND RISK MANAGEMENT PROCEDURES



From an organisational standpoint, each year the Hydropower Safety Inspector prepares a report for the Chairman and CEO of EDF, to whom he directly reports, as well as for the hydropower safety stakeholders. The purpose of this report is, on the basis of analysis, inspection and assessment work performed by the Hydropower Safety Inspector, to provide an opinion on the level of hydropower safety of the Group's facilities and to provide avenues for reflection and progress in order to guarantee the improvement and consolidation thereof. This report is made public on the Group's website.

In other operations-related fields, each entity is responsible for defining and implementing the adequate control procedures.

2.3.3.2 Other regulations

For the safety of its facilities, EDF implements the measures stipulated by the public authorities for the protection of these facilities, on all its sites.

Control procedures are also used for the application of labour and employment regulations.

Since January 2014, the Group's health and safety policy defines a framework for common consistency of which the policies of the Group's various subsidiaries and their action plans are a part. This Group policy applies to all companies controlled by the EDF Group in all countries where EDF operates, and concerns its employees, as well as those of its sub-contractors who work on its facilities and on its premises. It provides for the implementation of an annual group safety review by the EDF Executive Committee.

In 2015, during the first annual review of the Group, the major strategic health and safety policies were defined for the CAP 2030 programme, which is the foundation for the three-year action plans and will be adapted for implementation in each of the Group's companies.

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 a Stock Market Compliance Charter that summarises the principles and rules that are applicable to transactions involving EDF securities or those of the EDF group's listed subsidiaries. In parallel with the publication of this Code, initiatives to raise awareness of stock market rules have been taken visà-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 prepared by a working group coordinated by the EDF Corporate Audit Division, which includes representatives of the Legal Affairs, Corporate Risk Management and Corporate Finance Divisions, as well as the General Secretary to the Board of Directors. Various contributors, such as the Group Ethics and Compliance Division, the Information Systems Division, the Sustainable Development Division and the Investors and Markets Division were also involved. This report was discussed with the statutory auditors. It was successively reviewed by the Financial Disclosure Committee (4 February 2016) and the Group General Secretary (4 February 2016) before being approved by the Board of Directors' meeting of 15 February 2016, in accordance with Article L. 225-37 of the French Commercial Code.

> Paris, 15 February 2016. The Chairman and CEO of EDF, Jean-Bernard Lévy

CORPORATE GOVERNANCE **AUDITORS' REPORT, PREPARED IN ACCORDANCE WITH ARTICLE L. 225-235 OF THE FRENCH COMMERCIAL CODE, ON THE REPORT BY THE CHAIRMAN OF THE BOARD OF DIRECTORS**

4.8 Auditors' Report, prepared in accordance with article L. 225-235 of the French Commercial Code, on the report 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 Commercial Code 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 2015

To the shareholders,

In our capacity as Statutory Auditors of Électricité de France S.A. ("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 2015.

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

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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, 15 February 2016

The Statutory Auditors

KPMG Audit Department of KPMG SA

k

Jacques-Francois Lethu

Deloitte & Associés

Patrick E. Suissa



EDF Lab Paris Saclay site's follow-up ©EDF - Philippe Eranian

The Group's performance in 2015 and financial outlook

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5.1 **Operating and financial review**

The elements of chapter 5.1 come from the 2015 management report as adopted by the Company's Board of Directors, meeting on 15 February 2016¹.

5.1.1 KEY FIGURES

Pursuant to European regulation no. 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 2015 are prepared under the international accounting standards published by the IASB and approved by the European Union for application at 31 December 2015. These international standards are IAS (International Accounting Standards), IFRS (International Financial Reporting Standards), and SIC and IFRIC interpretations.

The Group's accounting policies are presented in note 1 to the consolidated financial statements at 31 December 2015.

The figures presented in this document are taken from the EDF group's consolidated financial statements at 31 December 2015.

The comparative figures for 2014 have been restated to reflect the impact of retrospective application of IFRIC 21 "Levies". This interpretation has been applicable since 1 January 2015 and is applied retrospectively in compliance with IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors".

For the Group, the main consequence of this change in accounting method concerns the recognition of certain taxes, which are no longer spread over the year but recorded as soon as the triggering event for those taxes arises, which in most cases is during the first half-year.

The taxes concerned by this change in recognition practice essentially relate to operation of the EDF group's businesses in France. Many of them are taxes for which the triggering event arises on 1 January, such as the tax on nuclear facilities, the tax on network firms (IFER), land tax, pylon tax and hydropower tax.

The application of IFRIC 21 has no significant impact on the annual consolidated financial statements.

The Group's key figures for 2015 are shown in the following tables.

EXTRACT FROM THE CONSOLIDATED INCOME STATEMENTS

				Variation	Organic growth
(in millions of Euros)	2015	2014 ⁽¹⁾	Variation	(%)	(%)
Sales	75,006	73,383	1,623	+2.2	-1.8
Operating profit before depreciation and amortisation (EBITDA)	17,601	17,279	322	+1.9	-0.6
Operating profit (EBIT)	4,280	7,984	(3,704)	-46.4	-48.8
Income before taxes of consolidated companies	1,692	5,433	(3,741)	-68.9	-71.3
EDF net income	1,187	3,701	(2,514)	-67.9	-69.7
Net income excluding non-recurring items ⁽²⁾	4,822	4,852	(30)	-0.6	-2.1

(1) EDF Energy's transactions on the wholesale electricity markets (excluding trading activities), which showed a net short position at 31 December 2014, have been reclassified from energy purchases to sales in the amount of €509 million.

(2) 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 5.1.4.9 "Net income excluding non-recurring items").

EXTRACT FROM THE CONSOLIDATED BALANCE SHEETS

(in millions of Euros)	31/12/2015	31/12/2014 (1)
Non-current assets	149,439	146,078
Inventories and trade receivables	36,973	37,923
Other assets	69,536	65,567
Cash and cash equivalents, other liquid assets, loans to RTE and joint ventures	22,993	18,361
Assets held for sale	-	18
TOTAL ASSETS	278,941	267,947
Equity (EDF's share)	34,749	35,246
Equity (non-controlling interests)	5,491	5,419
Special concession assets	45,082	44,346
Provisions	75,327	73,850
Loans and other financial liabilities	60,388	52,569
Other liabilities	57,904	56,517
Liabilities related to assets classified as held for sale	-	-
TOTAL EQUITY AND LIABILITIES	278,941	267,947

(1) The comparative figures for 2014 have been restated to reflect the impact of retrospective application of IFRIC 21.

1. See in chapter 8.4.2 for the concordance table.

GROUP CASH FLOW

				Variation
(in millions of Euros)	2015	2014	Variation	(%)
Group cash flow (1)	(2,064)	(4,007)	1,943	+48.5

(1) Group cash flow 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 net change in working capital, net investments, the impact of the European Commission decision concerning the French General Electricity Network, allocations and withdrawals from dedicated assets, and dividends.

DETAILS OF NET INDEBTEDNESS

(in millions of Euros)	31/12/2015	31/12/2014	Variation	Variation (%)
Loans and other financial liabilities	64,183	55,652	8,531	+15.3
Derivatives used to hedge liabilities	(3,795)	(3,083)	(712)	+23.1
Cash and cash equivalents	(4,182)	(4,701)	519	-11.0
Available-for-sale financial assets – Liquid assets	(18,141)	(12,990)	(5,151)	+39.7
Loan to RTE	(670)	(670)	_	_
NET INDEBTEDNESS ⁽¹⁾	37,395	34,208	3,187	+9.3

(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.

5.1.2 ECONOMIC ENVIRONMENT

5.1.2.1 Trends in market prices for electricity and the principal energy sources

In an increasingly interconnected European market, analysis of market prices in France and the rest of Europe provides vital context.

Spot electricity prices in Europe were higher overall during 2015 than 2014. The sharper temperatures of 2015, with a colder first quarter and hotter summer than the previous year, counterbalanced the downward pressure on prices associated with the fall in fuel prices. Only German spot prices decreased, due to a substantial rise in energy generation from renewable sources.

5.1.2.1.1 Spot electricity prices in Europe¹

	France	United Kingdom	Italy	Germany	Belgium
Average baseload price for 2015 (€/MWh)	38.5	55.7	52.3	31.6	44.7
Variation in average baseload prices, 2015/2014	+11.1%	+6.7%	+0.4%	-3.5%	+9.5%
Average peakload price for 2015 (€/MW/h)	46.6	61.8	58.6	39.1	54.0
Variation in average peakload prices, 2015/2014	+6.4%	+5.3%	0.0%	-4.7%	+11.1%

 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 ≤ 38.5 /MWh in 2015, ≤ 3.8 MWh higher than in 2014. This price rise was mainly driven by temperatures which, compared to 2014, were 1.8° C colder in the first quarter and 0.7° C higher in the third quarter, and also by lower water levels.

The rise in demand in the first quarter was partly met by more extensive use of fossil-fired thermal plants. Despite the higher demand, the increase in spot prices was limited by the fall in gas and coal prices. Second and third quarter spot prices were relatively similar to 2014, although consumption levels were lower year-on-year in May (which contained several public holidays) and December (when temperatures were well above normal for the month).

2015 was marked by stable availability for the nuclear power plants, higher wind power and photovoltaic power output, and lower levels of hydropower generation.

In the **United Kingdom**, spot electricity prices rose by ≤ 3.5 /MWh compared to 2014 to an average ≤ 55.7 /MWh. The rise occurred in the second and third

quarters, which showed respective year-on-year increases of ${\in}10.1/MWh$ and ${\in}9.0/MWh.$

In Italy, average spot prices remained stable (+0.2%) compared to 2014, at €52.3/MWh.

In **Germany**, spot prices stood at an average \in 31.6/MWh, \in 1.1/MWh lower than their 2014 level. This was the lowest average price since 2005. Despite lower temperatures than the previous year, the supply/demand balance was relaxed on the whole, helped by plentiful supplies of wind power in particular while photovoltaic solar power output remained stable overall. Total wind power output for 2015 was 8.6GW, up by 2.5GW from 2014.

In **Belgium**, spot prices were up by ≤ 3.9 /MWh compared to 2014, with an average price of ≤ 44.7 /MWh. This rise is attributable to the markedly lower available nuclear capacity. The Doel 1 plant, which was shut down in February 2015 to prepare for a 10-year extension of its operating life after 40 years of use, only started up again on 30 December 2015. Two nuclear power plants (Doel 3 and Tihange 2) which had been shut down in late March 2014 also received authorisation to restart in December 2015.

5.1.2.1.2 Forward electricity prices in Europe¹

	France	United Kingdom	Italy	Germany	Belgium
Average forward baseload price under the 2016 annual contract for 2015 (€/MWh)	38.2	58.8	47.2	31.0	43.3
Variation in average forward baseload price under the annual contracts, 2015/2014	-10.1%	-6.8%	-12.3%	-11.7%	-7.5%
Forward baseload price under the 2016 annual contract at 28 December 2015 (€/MWh)	33.8	49.2	46.2	28.1	33.3
Average forward peakload price under the 2016 annual contract for 2015 (€/MWh)	47.0	66.5	52.7	39.1	51.9
Variation in average forward peakload price under the annual contracts, 2015/2014	-11.5%	-6.7%	-12.2%	-12.0%	-9.3%
Forward peakload price under the 2016 annual contract at 28 December 2015 (€/MWh)	42.3	56.9	52.5	34.8	42.1

Annual contract prices for baseload and peakload electricity were lower on average than in 2014 in Europe, mainly due to lower fuel prices.

In **France**, the annual contract baseload price was 10.1% (-€4.3/MWh) lower on average than in 2014. This decrease is primarily due to the fall in coal, oil and gas prices, although it was slightly offset by the rise in CO₂ emission prices and changes in the EUR/USD exchange rate. Apart from an increase after the announcement in February of production restrictions for the Groningen gas field in the Netherlands and a tense short-term supply/demand balance during the summer which affected the forward contract, electricity prices dropped sharply along with fuel prices, and the movement was accentuated in November by the announced restart of the Belgian Tihange 2 and Doel 3 nuclear plants.

In the **United Kingdom**, the April Ahead contract baseload price for 1 April Y+1 to 31 March Y+2 decreased by 6.8%, in keeping with the downward trend in gas prices. This decline was slightly offset by the rise in the UK's carbon tax on electricity generation, which was increased from around £9.0/t to £18.08/t from 1 April 2015.

In **Italy**, the annual contract baseload price also registered a substantial downturn and was ≤ 6.5 /MWh lower on average than in 2014. This drop was caused by lower gas prices and the progression in installed renewable energy capacity.

In **Germany**, the annual contract baseload price was down by an average ≤ 4.1 /MWh from 2014. This decrease is attributable to falling fuel prices, which were slightly counterbalanced by a rise in CO₂ emission prices and the effect of the EUR/USD exchange rate, together with the expansion of almost 10GW in wind farms and photovoltaic plants in Germany. German prices moved in line with French prices for the whole year apart from April, July and October.

In **Belgium**, the annual contract baseload price was lower than in 2014 by 7.5% on average, standing at \leq 43.3/MWh. This decrease is explained by the fall in fuel prices, and the restart of operations by the Doel 3 and Tihange 2 reactors announced in November.

(1) France and Germany: average year-ahead EEX price;

Belgium and Italy: average year-ahead EDF Trading price;

United Kingdom : average ICE annual contract prices, April 2015 then April 2016 (in the UK, annual contract deliveries take place from 1 April to 31 March).



5.1.2.1.3 CO₂ emission rights prices¹

The price of CO₂ emission rights for delivery in December 2016 rose by $\leq 1.1/t$ to end the year at $\leq 8.3/t$. This increase took place gradually, with rising phases followed by stabilisation phases. The main factor in CO₂ price movements was the votes and announcements concerning the Market Stability Reserve

(MSR), a system set up to support CO_2 prices, which monitors volumes accessible through auction and places the surplus volumes in a reserve. The MSR was adopted by the European Parliament in early July 2015, but uncertainties over its application and its effective date (2019 or 2021) helped to keep up market activity until the summer.



CO₂ EMISSION RIGHTS PRICES

1. Average ICE prices for the annual contract, Phase III (2013-2020).

5.1.2.1.4 Fossil fuel prices¹

	Coal (US\$/t)	Oil (US\$/bbl)	Natural gas (€/MWhg)
Average price for 2015	54.6	53.5	20.4
Average price variation, 2015/2014	-30.2%	-46.2%	-17.7%
Highest price in 2015	65.3	67.8	23.6
Lowest price in 2015	43.7	36.1	15.6
Closing price, 2014	65.9	57.3	21.8
Closing price, 2015	44.0	37.3	15.8

Forward prices for **coal** delivered in Europe continued their decline in 2015 and the supply/demand balance was very relaxed. They declined progressively over the year, from US\$65.9/t to US\$44/t at the year-end. Demand remained subdued, with a sluggish outlook for China, compounded in September by restrictions on poor-quality coal imports into China. Coal supplies remained plentiful from both Russia and South Africa, which sent some of their production to Europe rather than Asia. A few individual events caused tensions during the year, such as the landslide in Russia's Kuzbass coalmining area, and uncertainties over the nocturnal operation of the Colombian railway line that carries more than half of the 90 million tonnes of coal produced in Colombia every year.

At 31 December 2015, the **crude oil** price stood at US\$37.3/bbl, a yearon-year drop of US\$20/bbl. This decrease masks contrasting movements over the year. February was initially marked by a rise in the price per barrel to more than US\$62/bbl due to supply-side tensions (conflicts in Libya and Iraq, restrictions on North Sea oil production, reduction of shale oil

NATURAL GAS AND OIL PRICES

production in America). Prices then relaxed in response to information on an imminent agreement for Iranian nuclear power, and rose rapidly in April to reach US\$67.8/bbl on 6 May, boosted by a significant downturn in US production. Since then, the price has gradually declined, with the prospect of higher supply on the market following the agreement on Iranian nuclear power, plus a relatively large supply coming from the main oil-producing countries (Saudi Arabia, Russia, the United States) and the prospect of a fall in Chinese demand.

Natural gas prices under the annual contract in France were lower than in 2014. Despite production restrictions at the Groningen gas field in the Netherlands, prices declined due to greater availability of LNG in Europe caused by lower demand in Asia, and an easing of the tensions between Russia and Ukraine. The downturn in oil prices also led to a fall in long-term supply contracts which are partly indexed on oil commodity prices. Russian gas supplies to Europe also increased between 2014 and 2015.



Coal: average ICE prices for delivery in Europe (CIF ARA) for the next calendar year (US\$/t);
 Oil: brent first reference crude oil barrel, IPE index (front month) (US\$/barrel);
 Natural gas: average ICE OTC prices, for delivery starting from October of the following year in France (PEG Nord) (€/MWhg).

5.1.2.2 Electricity¹ and gas² consumption

Overall electricity consumption in **France** in 2015 was up by 2.2% from 2014. Electricity consumption for the first half-year was 4.2% higher in 2015 than 2014 because of colder temperatures, principally in the first four months. July and August were warmer in 2015 than 2014, boosting demand. But the last quarter, despite a cool October which caused a 7.8% increase in consumption, could not offset the 10.6% year-on-year decrease observed for the single month of December.

After correction for weather effects, electricity consumption in France was up slightly by 0.5% after three years of stability. Consumption by small and medium-sized businesses and residential customers was also up by 0.6%, while consumption by large industrial customers was stable (+0.2%) compared to 2014.

In the **United Kingdom**, estimated electricity consumption was down by 0.4% from 2014, mainly due to improvements in energy efficiency. In **Italy**, electricity consumption was up by 1.5% as a result of exceptional temperatures in the third quarter of 2015.

Natural gas consumption in **France** rose by 8.1% in 2015. The main reason for this increase was the relatively mild weather of 2014 and a colder February and October 2015 with below-normal temperatures. But in December 2015, temperatures were 3.9°C above seasonal norms: it was the warmest December on record in France since 1900, with lower year-on-year gas consumption.

Estimated natural gas consumption in the **United Kingdom** was up by 4.1% from 2014 due to lower temperatures and higher demand. In **Italy**, domestic demand for natural gas increased by +9.1% as a result of favourable weather conditions, leading to a rise in consumption on the residential market and for thermal power generation.

5.1.2.3 Electricity and natural gas sales tariffs

For details of recent developments concerning tariffs in France, see section 5.1.3.6.1.5, "Regulated electricity sales tariffs in France".

In the United Kingdom, there were two tariff changes in 2015:

- on 11 February 2015, fixed gas tariffs were reduced by 1.3%. This decrease is explained by the fall in gas prices on the wholesale markets and is coherent with the reduction in fixed gas tariffs applied by the five other largest energy suppliers in the UK;
- in early March 2015, new, more competitive fixed-tariff products were introduced on the B2C segment. The "Blue Price Promise June 2016" guarantees a fixed price of £965 per year up to and including June 2016, and the "Blue Price Promise February 2017" guarantees a fixed price of £999 a year up to and including February 2017.

5.1.2.4 Weather conditions: temperatures and rainfall

2015 was a particularly warm year. In France, average temperatures were 0.3°C above normal levels, making 2015 the third-warmest year since 1900 after 2014 and 2011.

Widely contrasting temperatures were recorded during the year:

- February temperatures were 2°C below normal, and the early autumn (September and October) was relatively cool;
- the summer (July and August) was around 2°C warmer than in 2014;
- December was exceptionally warm, registering average temperatures that were 3.9°C above normal.

 Sources: France: unadjusted data and data adjusted for weather effects provided by RTE. United Kingdom: Department of Energy and Climate Change for the first three quarters, local subsidiary estimation for the final quarter. Italy: unadjusted data and data provided by Terna, the Italian national grid operator and adjusted by Edison.
 Sources: France: unadjusted data from Smart GRTqaz.

United Kingdom: Department of Energy and Climate Change data for the first three quarters, local subsidiary estimation for the final quarter. Italy: Ministry for Economic Development (MSE), Snam Rete Gas data restated by Edison on the basis 1Bcm = 10.76TWh.



(1) Average temperatures recorded in 32 cities weighted by electricity consumption.

(2) Source: Miréor (data from Météo-France).

2015 was marked by a significant shortfall in annual precipitation in many European countries contained in a wide band of land stretching from the Iberian peninsula to the former USSR countries, and therefore comprising France.

The opposite situation was observed in Northern Europe (the British Isles and Scandinavia) and Southern Europe (South Italy, the Balkans and Turkey), where there was surplus precipitation.



WATER LEVELS IN FRANCE IN 2015 AND 2014⁽¹⁾

TEMPERATURES^{(1) (2)} IN FRANCE IN 2015 AND 2014

(1) Weekly monitoring by EDF's OSGE energy observatory of French reservoir levels (Miréor project) as far as the coast.

In France, except in the Pyrenees which registered surplus precipitation, there was a shortfall in precipitation in the first half of 2015, particularly in the Southern Alps and the central regions. A heat wave in July accentuated this shortfall and led to severely low water levels before a rainy month of August improved the situation. Autumn brought further shortfalls, especially in December, which was a very mild, dry month.

As a consequence of these unusual weather conditions, French hydropower capacity was below normal for every month of the year, particularly in the second half of the year when the shortage gradually worsened until it reached the lowest point of the year in December. The cumulative shortfall for the year 2015 was the fourth most serious in more than 30 years after 1989, 2005 and 2011.

5.1.3 SIGNIFICANT EVENTS OF 2015¹

5.1.3.1 European Commission decision on the tax treatment of provisions established between 1987 and 1996 for renewal of the General Network

On 22 July 2015 the European Commission adopted a new decision classifying the tax treatment of provisions established between 1987 and 1996 for renewal of the General Network facilities as state aid that is incompatible with European Union rules.

This decision followed the European Union General Court's cancellation, through a decision of December 2009 upheld by the Court of Justice of the European Union in June 2012, of the Commission's initial decision of 16 December 2003 on the grounds that when making its decision the Commission should have applied the private investor principle to determine whether or not the action constituted state aid.

Following this cancellation the French state repaid €1,224 million to EDF on 30 December 2009, corresponding to the sum paid by EDF to the French state in February 2004 (the respective shares of ERDF and RTE² had already been transferred). The European Commission then decided in May 2013 to reopen the proceedings.

In the decision of 22 July 2015 the Commission concluded that state aid incompatible with the common market had indeed been given. As a result of this decision the French state ordered EDF to reimburse the amount corresponding to the alleged aid, plus interest calculated as determined by the Commission.

In response to this decision EDF reimbursed the sums demanded. However, the Group contests the existence of unlawful state aid and filed an action for annulment before the European Union General Court on 22 December 2015.

Following this decision, on 13 October 2015 EDF made a payment of \leq 1,383 million to the French state, which was partly offset by a reimbursement of \leq 375 million received from RTE. The detailed impact on the Group's consolidated financial statements at 31 December 2015 is presented in note 3.3 to these financial statements.

5.1.3.2 Liberalisation of hydropower concessions in France

The European Commission (EC) Directorate-General for Competition has begun proceedings against the French state concerning hydropower concessions in France, on the grounds of Article 106, Chapter 1 of the Treaty on the Functioning of the EU (TFEU), read in conjunction with Article 102 of the same Treaty.

The European Commission therefore sent a formal notice to the French state on 22 October 2015, stating that it considered the fact that most hydropower concessions in France are attributed to and reserved for EDF as a violation of the above articles, since these measures reinforced EDF's dominant position on the French retail electricity markets.

The State had two months to reply to this notice, which marked the beginning of an adversarial exchange of positions between the State and the EC, without prejudice to the final outcome. As the principal interested party, EDF received a copy of this notice. It sent the EC its observations in response to the notice on 4 January 2016, firmly contesting the EC's analysis and the grounds for this analysis.

5.1.3.3 Strategic development

Agreements for construction of the Hinkley Point C nuclear power plant

EDF and China General Nuclear Power Corporation (CGN) signed a strategic investment agreement on 21 October 2015 for a joint investment in the construction of two reactors at Hinkley Point C.

The agreement includes a broad UK partnership to develop new nuclear power plants at Sizewell and Bradwell. Contracts between the British government and EDF, and contracts with Hinkley Point C's four main suppliers, have also been finalised.

Under the Strategic Investment Agreement, EDF's share in Hinkley Point C should be 66.5% and CGN's should be 33.5%. Without reducing this initial stake below 50%, EDF will in due course consider bringing other investors into the project.

EDF and CGN have also agreed the principal terms of a wider partnership for the joint development of new nuclear power stations at Sizewell in Suffolk and Bradwell in Essex. These terms will be finalised before the final investment decision for Hinkley Point C.

The stages involved in a final investment decision are as follows:

- finalisation by EDF of its financing plan and contribution by CGN of guarantees for its own financing;
- approval by the EDF and CGN Boards of Directors;
- clearance by merger control and other governmental authorities in China and Europe;
- finalisation of contractual documentation based on agreements signed in October 2015.

5.1.3.4 New investments and partnerships

5.1.3.4.1 New investments and partnerships concerning EDF

5.1.3.4.1.1 Investment by Electranova in an eighth start-up: FirstFuel

On 27 May 2015 Electranova Capital, an investment fund managed by Idinvest Partners in partnership with EDF and backed by Allianz and BPI, announced its eighth investment, in the North American start-up FirstFuel. FirstFuel's software platform provides an understanding of energy expenditure for commercial and office buildings, developing new opportunities for energy efficiency. Since its commercial launch in 2012, FirstFuel has analysed more than a million electricity meters, and identified annual savings of more than US\$400 million and 5TWh.

1. A full list of press releases is available from the EDF website: www.edf.fr.

^{2.} ERDF and RTE are independently-managed regulated subsidiaries in the EDF Group, referred to in the rest of this document simply as RTE and ERDF without necessarily repeating this information.

5.1.3.4.1.2 Extension of a series of existing agreements with EDF's Chinese partners

As part of their strategic partnerships, EDF and China General Nuclear Power Group (CGN) announced on 29 January 2015 that they had signed a new agreement to share their experience 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. The three key areas of focus are combinedcycle gas-turbine power plants, hydropower plants and renewable energies.

During his visit to France on 30 June 2015 the Chinese Prime Minister and French Prime Minister made a joint declaration on French-Chinese cooperation in nuclear energy. They asked industrial operators to work together more closely to design safe, competitive new third-generation reactors that meet the needs of the global market.

Together with AREVA, EDF therefore signed agreements with its Chinese partners CGN and CNNC to develop the approaches required by the two governments.

5.1.3.4.1.3 Snam, GIC and EDF Invest sign an agreement with Crédit Agricole Assurances for its investment in TIGF

In January 2015, Snam, GIC, and EDF Invest announced that they had concluded an agreement with Crédit Agricole Assurances for its entry into the share capital of TIGF with a 10% stake. The transaction was finalised on 26 February 2015. Upon its completion, Snam, GIC, EDF Invest and Crédit Agricole Assurances now hold respectively 40.5%, 31.5%, 18% and 10% of the share capital of TIGF indirectly.

5.1.3.4.1.4 EDF Invest finalises the acquisition of Madrileña Red de Gas

In May 2015, EDF Invest and two other long-term investors finalised the acquisition of a minority shareholding in Madrileña Red de Gas (MRG). MRG was formed in 2009 after a spinoff of some of the assets of Gas Natural Fenosa, and is a regulated gas distribution network operator exclusively in the Madrid region. The company is accounted for by the equity method in the Group's consolidated financial statements at 31 December 2015.

5.1.3.4.1.5 Ardian and EDF Invest sign a firm agreement for acquisition of a majority stake in Géosel from Total

In December 2015 Ardian and EDF Invest, as equal shareholders in a consortium, completed their acquisition from the Total group of an investment of more than 50% in Géosel, a hydrocarbon storage company based in Manosque, France.

Total has retained a minority stake and will continue to use Géosel's infrastructures for its own requirements.

With a capacity of almost 9 million m³, Géosel owns a critical site for management of French strategic hydrocarbon reserves. The company owns and operates underground storage cavities and related pipelines linked to the Fos-Marseille seaport terminals and the petrochemical facilities of étang de Berre (Fos-Lavera), all located in France.

This investment has been allocated to EDF Invest's "Infrastructures" pocket alongside TIGF, Porterbrook and RTE.

5.1.3.4.2 New investments and partnerships concerning Group subsidiaries

5.1.3.4.2.1 ERDF: rollout of the "Linky" smart meter

The work done by ERDF throughout 2015 on the Linky smart meter project reached a key Part 1 milestone on 1 December: the start of the rollout phase. Installation of Linky meters began all over France except in the Paris region where union negotiations were not yet complete. By the end of December 2015, more than 24,000 smart meters were in service and more than 3,000 data concentrators had been installed in substations.

5.1.3.4.2.2 Dalkia

Finalisation of Dalkia's acquisition of Cesbron

On 24 March 2015, Dalkia announced the completion of its acquisition of 100% of Cesbron, an industrial and commercial refrigeration and HVAC (heating, ventilation and air conditioning) specialist. Dalkia and Cesbron will develop commercial synergies in order to improve their market shares and respond positively to the challenges posed by the energy transition. The closer relationship between the two companies means that integrated offerings can be developed for customers looking for energy savings.

Dalkia's acquisition of Zaklady Energetyki Cieplnej Katowice SA

On 2 September 2015 Dalkia announced its acquisition of 100% of Zaklady Energetyki Cieplnej Katowice SA (ZEC), a company that essentially specialises in production and distribution of heat in the Katowice region of Poland, and its subsidiary EC Szopienice.

The company's development plan, which focuses on mine gas recovery and expanding heating networks, is set to decarbonise the region's energy mix while making the best use of local resources and drawing on more efficient processes.

The acquisition of ZEC is Dalkia's first international external growth operation since it became part of the EDF group. This ambitious project will make full use of Dalkia's expertise in heat networks and energy services for industrial customers.

5.1.3.4.2.3 **EDF Luminus**

Finalisation of the agreement between EDF Luminus and ATS

On 27 May 2015, EDF Luminus' acquisition of a majority stake in ATS SA was finalised after clearance by the Belgian competition authority. As well as electric equipment, ATS sells fully-integrated solutions for electricity and heating: design and engineering, installation and maintenance of industrial electric networks, automation projects, industrial refrigeration, fire detection and hydraulics. EDF Luminus and ATS will be able to better assist their industrial customers and the service and public sectors through an enhanced range of solutions for energy efficiency and optimisation of consumption.

New agreement on the EDF Luminus shareholder pact

On 26 October 2015 Publilec, Socofe, Ethias and Nethys, shareholders of EDF Luminus, and the EDF group signed an amendment to the shareholder pact, reaffirming their intent to support the company's development.

This move put an end to the IPO process initiated the previous May.

The amendment signed extends the shareholder pact to 2025, providing for the following reorganisation in the ownership structure (the control exercised by the Group is unaffected):

- four Belgian shareholders will remain: Publilec (26.4%), Socofe (4.7%), Ethias (0.2%) and Nethys (0.1%). Under the shareholder pact, they will benefit from a liquidity mechanism allowing them to exit the capital of EDF Luminus from the end of 2018, subject to certain conditions;
- the EDF group's stake will rise from 63.5% to 68.6%, as a result of the Group's acquisition of the shares in EDF Luminus held by Publilum and VEH for €58 million.

5.1.3.4.2.4 EDF Énergies Nouvelles

Investments and disposals by EDF Énergies Nouvelles

Following the third call for tenders from Hydro-Québec Distribution in 2013, EDF Énergies Nouvelles announced on 17 February 2015 that it had won the contract for the Nicolas-Riou wind farm project (224.4MW) in Quebec, through its local subsidiary EDF EN Canada. Construction should start in the spring of 2016 and the plant is expected to be commissioned at the end of 2017. This project is owned 50% by EDF EN Canada and 33% by Énergie Éolienne Bas-St-Laurent. The remaining 17% belongs to La Régie Inter-Municipale de l'Énergie Gaspésie-Îles-de-la-Madeleine. The companies have jointly signed a 25-year electricity supply contract with Hydro-Québec Distribution.

On 25 February 2015, EDF Énergies Nouvelles announced the creation of a local subsidiary, EDF EN do Brasil based in Rio, marking its move into the Brazilian market. EDF EN do Brasil started its local activities by acquiring a majority stake in an 800MW portfolio of wind farm projects from SOWITEC, a leading international renewable energy developer. This portfolio will be jointly developed by EDF EN do Brasil and SOWITEC, which continues to be involved in the projects in development through a minority 20% stake. Located in one of the windiest areas in the state of Bahia, the portfolio includes an initial 70MW project due to be commissioned by the end of 2017. The electricity produced will be sold under a 20-year Power Purchase Agreement (PPA) that has been signed with ANEEL. On 26 November 2015, following an auction organised by the Brazilian government, EDF Énergies Nouvelles announced through its subsidiary EDF EN do Brasil that it had been awarded a long-term PPA for 117MW of wind power capacity.

On 14 April 2015, EDF Énergies Nouvelles announced its arrival on the Chilean market. Its new local subsidiary, EDF EN Chile, signed a financing contract and a partnership agreement for a 146MWp solar photovoltaic generation plant named Laberinto. Located in the Atacama Desert in northern Chile, this project is owned in equal shares by EDF Énergies Nouvelles and Marubeni. EDF Énergies Nouvelles has obtained long-term project funding from a consortium of local and international banks. A local dedicated subsidiary of EDF Énergies Nouvelles will handle construction, operating and maintenance of the solar plant.

On 23 June 2015 EDF Énergies Nouvelles announced the acquisition of the Salt Fork wind farm project in Texas via its North American subsidiary EDF Renewable Energy. With a maximum capacity of 200MW, this wind farm, initially developed by Cielo Wind Power, is due to be commissioned in late 2016. The electricity generated by the first 150MW from Salt Fork will be sold to Garland Power & Light under a long-term power purchase agreement.

On 12 November 2015 EDF Énergies Nouvelles announced the acquisition of the Dorenell wind farm project in Scotland by its UK subsidiary, EDF Energy Renewables, which will build the facility. This large-scale project of at least 177MW capacity will ultimately be the largest onshore wind farm built by the Group in the United Kingdom.

On 26 November 2015 EDF Énergies Nouvelles announced its acquisition of two wind farms with total capacity of 44MW, located in the *départements* of Meuse (Trois-Sources) and Doubs (Lomont). They have been in operation since 2007 and 2008. With this acquisition, after the commissioning of several wind farms throughout France, the Group reached the 1GW milestone for installed onshore wind power capacity in France.

EDF Énergies Nouvelles also sold several power plants during 2015 for a net total capacity of 623MW. Most of the facilities sold were wind farms. The principal disposal took place in Canada and concerned 42.5% of the Rivière-du-Moulin plant (148.8MW).

Development of EDF Énergies Nouvelles' operating and maintenance activities

On 5 March 2015, EDF Énergies Nouvelles announced the deployment through its dedicated subsidiary EDF EN Services of its operating and maintenance (O&M) service activities for renewable energy installations in Belgium, with the creation of EDF EN Services Belgium. The new subsidiary is jointly held with EDF Luminus, one of the EDF group's companies in Belgium, and offers wind farm and solar plant management services in Belgium for EDF Luminus and non-group owner-operators.

Long-term power purchase agreement between EDF Énergies Nouvelles and Google

On 3 December 2015 EDF Énergies Nouvelles announced the signature of a long-term Power Purchase Agreement (PPA) between Google and its north American subsidiary EDF Renewable Energy. The electricity will be generated by the future 201MW Great Western wind farm in Oklahoma. The Great Western project is the second wind farm operation concerned by an agreement between EDF Renewable Energy and Google.

Agreement between EDF Énergies Nouvelles and Procter & Gamble for construction of wind farms in Texas

On 20 October 2015, EDF Énergies Nouvelles, through its subsidiary EDF Renewable Energy, entered into a partnership with Procter & Gamble (P&G) to supply wind-generated electricity to all P&G's north american sites manufacturing laundry and household cleaning products. The electricity sold to P&G, under a long-term Power Purchase Agreement, will be generated by a wind farm in Cooke County, Texas, due to start operation in late 2016.

5.1.3.4.2.5 EDF Energy: acquisition of a wind farm in the United Kingdom

On 2 April 2015 EDF Energy Renewables (owned 50% by EDF Energy and 50% by EDF Énergies Nouvelles) announced the takeover of the plan to construct a wind farm at Corriemoillie in Scotland, which will ultimately have 19 turbines and total installed capacity of 45MW.

5.1.3.4.2.6 Edison: arbitration concerning the long-term Libyan gas supply contract

On 27 November 2015, the International Chamber of Commerce Court of Arbitration notified Edison and ENI of its decision regarding arbitration concerning the long-term Libyan gas contract price. This decision led to a positive impact of €855 million on the Group's operating profit before depreciation and amortisation for 2015.

5.1.3.4.2.7 Finalisation of the sales of Budapesti Erőmű Zrt (BE Zrt) and Energie Steiermark Holding AG (Estag)

Sale of BE Zrt

On 10 December 2015, the EDF group finalised the sale of its majority 95.6% stake in the Hungarian company Budapesti Erőmű Zrt (BE Zrt) to EP Energy.

Sale of Estag

On 21 December 2015, the EDF group completed the sale of its minority 25% stake in Energie Steiermark Holding AG (Estag) following the signature on 10 July 2015 of an agreement for this operation with Macquarie Infrastructure and Real Assets.

The impact of these two sales on the Group's consolidated financial statements is not very significant.

5.1.3.5 Investment projects

5.1.3.5.1 France

5.1.3.5.1.1 Flamanville EPR

On 7 April 2015, AREVA and EDF announced that they had informed the French Nuclear Safety Authority (ASN) that a new series of tests would be launched to qualify the Flamanville EPR reactor vessel head and bottom. This series of tests follows chemical and mechanical tests performed on a representative component of the reactor vessel head and bottom, which showed that one of the criteria was not fulfilled. The industrial processes used on the Flamanville 3 reactor vessel are compliant with the mechanical requirements implemented and validated for the French nuclear reactor programme. The robustness of these processes has been demonstrated through the 1,700 nuclear reactor years of safe operation. However, since the 2005 order on nuclear pressure equipment (ESPN Order), the ASN has required equipment to comply with new mechanical specifications to be implemented at Flamanville 3. The EDF and AREVA teams are working to complete the additional tests as soon as possible, following ASN approval of the test conditions, and will provide the ASN with all the information required to demonstrate the safety and quality of the equipment concerned.

On 12 December 2015, the ASN issued a position statement concerning the approach used to demonstrate the mechanical properties of the Flamanville 3 EPR reactor pressure vessel (RPV) closure head and bottom head proposed by AREVA. Subject to its observations and requests being taken into consideration, the ASN considers the approach proposed by AREVA acceptable in principle, and has no objection to the initiation of a new test programme.

In a letter of 12 June 2015, the President of the ASN acknowledged receipt of the application for commissioning of Flamanville 3 remitted by EDF on 19 March 2015, and requested additional information.

On 3 September 2015, EDF presented a new organisational structure for the Flamanville EPR project, with a view to improving industrial construction site management until commissioning has been completed.

The new structure involves:

 a complete review of the project organisation and working methods, centred around streamlined management reporting directly to Mr Xavier Ursat, Group Senior Executive VP in charge of New Nuclear Projects and Engineering, and Mr Jean-Bernard Lévy, EDF's Chairman and CEO;

- introduction of new bodies with involvement of both EDF and its partners, to provide close leadership, coordination and monitoring of the project;
- greater on-site accountability and stronger managerial presence as the construction phase comes to a close and test preparation gets underway;
- new contractual frameworks with key suppliers;
- enhanced dialogue with the ASN, particularly in respect of the new regulations on nuclear pressure equipment.

Significant progresses have been made on the construction site recently. 98% of the civil engineering structure has been completed, as has 60% of the electromechanical assembly. Pre-stressing operations on the reactor building inner containment have been carried out, and the control room has been commissioned.

The new roadmap, to which EDF and its partners are committed, aims to optimise management of the project. The new timetable sets outs three key milestones:

- primary circuit mechanical erection to be finalised in the first quarter of 2016;
- electromechanical erection to be completed and system performance testing to begin in the first quarter of 2017;
- first fuel loading and start-up of the reactor in the fourth quarter of 2018.

In response to this new start-up date, on 9 October 2015 EDF submitted a request to the Ministry for Ecology, Sustainable Development and Energy to change the final deadline for commissioning of the new reactor, which was initially set at April 2017 in the authorisation decree.

Following assessment of all the industrial and financial parameters, project costs have been revised to \leq 10.5 billion.

5.1.3.5.1.2 Commissioning of new facilities by the subsidiary EDF Production Électrique Insulaire (EDF PEI)

In keeping with its objectives to implement 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 five Diesel generators of the Pointe-Jarry plant in Guadeloupe during the first half of 2015. By the end of the year, all four of EDF PEI's power plants were in operation, with a total generation capacity of close to 750MW.

5.1.3.5.1.3 **Programme of investment in existing nuclear** facilities in France

On 22 January 2015, EDF's Board of Directors approved the principle of the major industrial overhaul programme (*Grand carénage*) to refurbish the French nuclear fleet, enhance reactor safety, and extend operating lives when the circumstances are suitable. The Board of Directors also expressed its wish that the investment programme should be conducted, monitored and controlled to the most exacting standards.

The cost of this investment programme is estimated at a maximum of ϵ_{2013} 55 billion by 2025 for the 58 reactors currently operating. This estimated figure will be progressively confirmed after the optimisation of solutions for rolling out the programme, additional review work, and consideration of the multi-year energy plans (*Programmations Pluriannuelles de l'Énergie* or PPE, and the strategic plan) as set out in the energy transition Law for green growth.

This industrial programme will be implemented gradually, in compliance with that law, the multi-year energy plans, the opinions and orders of the French Nuclear Security Authority (ASN), and the authorisation procedures required for reactors to run for more than 40 years.

5.1.3.5.2 Other activities

5.1.3.5.2.1 Principal wind farms and photovoltaic power plants commissioned

EDF Énergies Nouvelles commissioned a number of wind farms in North America during 2015. With the new Longhorn (200MW) and Spinning Spur 3 (194MW) facilities in Texas, the Roosevelt (250MW) wind farm in New Mexico, the Pilot Hill (175MW) plant in Illinois and Slate Creek (150MW) in Kansas, the Group now has more than 3GW of gross installed capacity for renewable energy. In Canada, with the second tranche of the Rivière-du-Moulin (200MW) and Mont-Rothery (74MW) wind farms, EDF Énergies Nouvelles has reached a total of 1.4GW in renewable energy.

EDF Énergies Nouvelles also continued its development in Europe, notably Turkey where the third section of the Soma wind farm (100MW) was commissioned, and Poland where 58MW of capacity was installed at the Rzepin wind farm.

Since starting up in South Africa early in the year, the Group has constructed three wind farms (Grassridge, Chaba and Waainek) with total installed capacity of more than 100MW.

In solar power, the Group commissioned two solar power plants totalling 150MWp of installed capacity in the Indian states of Rajasthan and Odisha.

5.1.3.5.2.2 Green bonds: issuance and allocation

In October 2015, EDF successfully placed the largest ever US dollar green bond issue by an industrial company. With a maturity of 10 years, a total amount of US\$1.25 billion and an annual fixed coupon of 3.625%, this new green bond will support further investment by the Group in renewable energies. By 31 December 2015, US\$500 million had been allocated to construction of three wind farms.

The Group successfully issued its first green bond in Euros in November 2013, raising ≤ 1.4 billion to finance EDF Énergies Nouvelles' renewable energy projects. The total ≤ 1.4 billion had been allocated by 30 June 2015.

The funds raised by these two issues have financed a total of fifteen renewable energy projects (wind power, photovoltaic solar power, and biomethane plants), located in France and North America and developed by EDF Énergies Nouvelles. These projects represent total capacity of nearly 2.1GW.

5.1.3.6 Regulatory environment

5.1.3.6.1 France

5.1.3.6.1.1 Energy transition Law for green growth

After a final reading, on 22 July 2015 the French National Assembly adopted the energy transition Law for green growth, marking the end of a long legislative process. The resulting law no. 2015-992 of 17 August 2015 on the energy transition for green growth was promulgated in the *Journal officiel* of 18 August 2015 after a decision by the Constitutional Council of 13 August 2015.

5.1.3.6.1.2 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 12.3TWh for the first half of 2015. This volume decreased substantially in the second half of 2015 to 3.8TWh, principally because of the sharp decline in prices

on the wholesale market, which is becoming a more attractive source of energy supplies, and also due to termination of framework contracts with several suppliers. No ARENH applications were made at the end of 2015 for supplies in the first half of 2016.

The ARENH price has been set at €42/MWh since 1 January 2012, and is 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 French Energy Regulator CRE. It is still under examination by the European Commission, which must approve the price formula. The French government has deferred the application date of the new decree until the conclusions of discussions with the European Commission are available.

5.1.3.6.1.3 **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 particular¹. The CSPE is collected directly from the end-user.

The CSPE system was reformed by the amended finance law for 2015, published in the Journal officiel on 30 December 2015. The charges for the public energy service (electricity and gas) will be incorporated into the French national budget in 2016. The finance law introduces a special "Energy Transition" budget item of €4.4 billion, which will be funded in 2016 by the TICFE tax on consumption of electricity (Taxe intérieure sur la consommation finale d'électricité), less €2 billion, plus 2.16% of the TICGN tax on gas consumption (Taxe Intérieure de Consommation sur le Gaz Naturel). This budget will cover expenses borne by obligated suppliers, such as the additional cost associated with contracts obliging them to purchase renewable energies and biogas, the difference between forecast and actual expenses, the annual contribution to repayment of the accumulated shortfall due to EDF, for which the schedule will be set by an official decision, and reimbursement of CSPE advances for industrial operators who were exempt prior to 2016. Solidarity charges, purchase obligations excluding renewable energies, and the cost of applying the standard national tariffs to areas not connected to France's mainland network are covered by the national budget through the €2 billion "Public Energy Service" budget item.

The law also introduces changes to energy taxes, increasing the TICGN and coal tax in 2016 and 2017 and replacing the TICFE by the new CSPE. CSPE rates are set at ≤ 22.5 /MWh for 2016, ≤ 2 /MWh, ≤ 5 /MWh or ≤ 7.5 /MWh for electro-intensive users based on a criterion of kilowatthours per Euro of value added, and ≤ 0.5 /MWh for hyper-electro-intensive users.

The draft "CSPE" decree was presented to France's Higher Energy Board (*Conseil supérieur de l'énergie*, or CSE) on 21 December 2015. Under this proposed decree, the public financial organisation *Caisse des Dépôts et Consignations* (CDC) would be required to make the payments to obligated suppliers, one of which is EDF, and keep the "Public Energy Service" and "Energy Transition" accounts. The CRE would be required to determine the amount of the charges for the public energy service (actual and forecast). The procedures for compensating obligated suppliers for these charges are also laid down in the proposed decree.

The estimated amount of expenses to be covered by compensation for EDF for 2015 is ≤ 6.3 billion, 7% more than in 2014. The main explanation for this rise is the lower level of market prices, which increases the surplus costs of energy covered by purchase obligations to be compensated by the CSPE, and a rise in the volume output by photovoltaic and wind power facilities. The amounts received during 2015 total ≤ 6.1 billion, 17.6% more than in 2014. This rise principally results from the CSPE increase applicable since 1 January 2015 (an increase of ≤ 3 /MWh compared to 2014, taking the CSPE to ≤ 19.5 /MWh for the year 2015).

^{1.} Local distribution companies and Électricité de Mayotte also make small contributions to the system.

The agreement signed in early 2013 by EDF and the French authorities, providing for progressive reimbursement to EDF by 31 December 2018 of the receivable consisting of the CSPE shortfall at 31 December 2012 and the costs of bearing this shortfall for the Group, was updated in late 2015 by a ministerial letter received on 26 January 2016. The State has acknowledged the further shortfalls that arose between 2013 and 2015 and the associated interest, estimated at a total €644 million, and authorises EDF to allocate this receivable to dedicated assets in 2016. The amount of the receivable due to EDF is thus €5.9 billion at 31 December 2015 (see note 36.3 of the consolidated financial statements at 31 December 2015). The repayment schedule has been adjusted such that this receivable will be fully reimbursed by 2020. It will be set out in a ministerial order.

5.1.3.6.1.4 "TURPE 4" Network access tariffs

On 28 May 2015 the French Energy Regulator (*Commission de Régulation de l'Énergie* – CRE) published its resolution on changes from 1 August 2015 in the TURPE distribution tariffs, which were raised by 0.4%. This rise reflects the stabilisation of the clearance coefficient for the income and expenses adjustment account (CRCP¹), and a 0.4% increase in inflation.

TURPE transmission tariffs were also increased by 2.4% from 1 August 2015, again corresponding to 2% for the clearance of the CRCP, and 0.4% for inflation.

On 7 May 2014, the CRE had also decided to apply an exceptional 50% reduction to the electricity transmission bills of industrial sites that are large electricity consumers. This measure was initially applicable from 1 August 2014 to 31 July 2015. In its decision of 11 June 2015 setting the changes in TURPE transmission tariffs, the CRE extended this 50% reduction for electro-intensive users to 31 December 2015. It is now laid down in Article L.341-4-2 of the Energy Code introduced by Article 157 of the energy transition Law, and can be increased up to 90%. The loss of income for RTE will be compensated through future tariff changes thanks to the CRCP mechanism.

The CRE also began during 2015 to examine the future structure of tariffs for using the public electricity networks (the TURPE 5 tariffs). On 22 July 2015 it presented its preliminary analyses on the TURPE 5 tariffs structure for a consultation process. The responses, submitted by 25 September 2015, specifically concerned the tariff structure, i.e. the way network costs are allocated between different user types through tariff components, chiefly extraction, injection, metering and management. A further consultation will take place concerning the tariff scale itself.

5.1.3.6.1.5 Regulated electricity sales tariffs in France

On 15 July 2015 the CRE published its 2015 report on France's regulated sales tariffs for electricity, in which it reported a tariff shortfall of \notin 922 million for 2014 in addition to previous shortfalls that had not been compensated.

A decision of 30 July 2015 set the regulated sales tariffs that took effect from 1 August 2015. The average increases were 2.5% for the "blue" residential customers' tariffs, 0.9% for the "yellow" tariffs and 4% for the "green" tariffs, while the "blue" tariffs for non-residential customers remained unchanged.

31 December 2015 saw the end of the "yellow" and "green" regulated tariffs. By 1 January 2016 around three quarters of the sites concerned had signed a market-rate contract with their chosen supplier. The remaining quarter who had not yet signed up with a supplier continued to receive electricity from their former supplier, under a transitional contract valid for a maximum period of six months.

5.1.3.6.1.6 Ministerial order concerning the cost of the Cigéo storage project

On 15 January 2016 the Ministry of Ecology, Sustainable Development and Energy issued an order setting the cost associated with implementation of long-term management solutions for long-lived medium and high-level radioactive waste under the Cigéo storage project at €25 billion under 2011 economic conditions. This cost valuation is required by Article L. 542-12 of France's Energy Code.

The cost stated in the order constitutes an objective to be met by the French Agency for Radioactive Waste Management (ANDRA), in compliance with safety standards set by the Nuclear Safety Authority (ASN), in close cooperation with operators of nuclear installations. In application of this order, the cost of the Cigéo project will be regularly updated, at least at each key milestone of the project's development (authorisation to create the facility, commissioning, end of the "pilot industrial phase", safety reviews) in accordance with the opinion of the ASN.

The cost of the Cigéo project set by the ministerial order is €25 billion under the economic conditions of 2011. This figure replaces the estimated benchmark cost of €20.8 billion used by the EDF group for its consolidated financial statements at 31 December 2014 and 30 June 2015.

At 31 December 2015, the new cost figure has resulted in an increase of around €820 million in the provisions for long-term radioactive waste management established to cover future expenses relating to the Cigéo deep storage project.

This increase in provisions has a negative impact of \in 509 million, net of taxes, on EDF net income for 2015.

5.1.3.6.1.7 AGIRC-ARRCO agreement of 30 October 2015

On 30 October 2015 the social partners reached an agreement intended to balance the accounts of the AGIRC-ARRCO public pension body.

This agreement contains several sets of measures, some of which apply from 1 January 2016: smaller adjustments to pensions from 2016 to 2018, moving the pension value adjustment date from 1 April to 1 November, a lower return on plan assets, extending the basis for AGFF's contribution to tranche C of the AGIRC scheme, and other measures aiming to improve management of pension and related systems.

The special pension system for France's electricity and gas sector has been affiliated to the AGIRC-ARRCO standard national system since 2005. Since the new agreement does not change IEG beneficiaries' pension rights, the increase in obligations resulting from this affiliation, amounting to ≤ 1 billion, is recorded in actuarial adjustments.

5.1.3.6.2 United Kingdom

On 19 March 2014, the British government confirmed that it was setting up a capacity market. EDF Energy took part in the second capacity auction in December 2015 for agreements starting from October 2019, with 94.6% of its capacity or 8.8GW 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/t from April 2016 until 2020.

1. A mechanism to measure and offset differences between the actual figures and the forecasts on which tariffs are based.

5

During the week of 6 July 2015, the British Competition and Markets Authority (CMA) published its provisional findings and proposals for possible solutions as identified during its preliminary investigation into the "supply and acquisition of energy in Great Britain".

These provisional findings confirmed the lack of any significant effect concerning generation, sharing generation and supply resources (vertical integration) and the efficiency of wholesale electricity and gas markets. However, the CMA provisionally reached the conclusion that the "weak customer response" both by residential and very small business customers gives suppliers a competitive advantage over inactive customers, and that they exploit that advantage through their pricing policies.

The CMA therefore proposed 18 solutions, many of them stated only in general terms at this stage, which will be the basis for consultation with stakeholders. The majority of these potential solutions focus on selling and the regulatory framework as expected, particularly measures that can improve customer involvement. Later in the year, the CMA will publish a provisional decision document covering all the solutions it will recommend applying. This will be followed by a further consultation period.

In late September 2015, the regulatory deadline for publication of the CMA's final report, initially set at 25 December 2015, was put back to 25 June 2016. This extension will enable the CMA to take the view of consumer associations and industrial operators into account.

5.1.3.6.3 Belgium

Nuclear power plants

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.

In June 2015 the Belgian federal parliament approved the law (known as "the first bill") to extend the operating lifetimes of the oldest nuclear reactors in Belgium. On 30 November 2015, the Prime Minister's office announced that an agreement had been reached between Electrabel and the federal government to extend operations at Doel 1 and Doel 2, which are wholly-owned by Electrabel, until 2025. Associations opposing this extension filed an action to cancel this law before the Constitutional Court. The Council of State, in its opinion on this bill, expressed doubts as to its compatibility with European law.

In parallel to the decision to extend operations by Doel 1 and Doel 2, an agreement was reached concerning the nuclear annuity, which affects EDF Luminus for the Tihange 2, Doel 3 and Doel 4 plants. The agreement sets a transitional period for 2015 and 2016, when the nuclear tax is a standard amount (€200 million in 2015 and €130 million in 2016) followed for the years 2017 to 2026 by a variable nuclear operator's contribution, consisting of 38% (before a sliding scale) of the margin generated by nuclear activities, with a guaranteed minimum for the State which is set at €150 million for the three-year period 2017 to 2019.

Thermal power plants

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. In 2014 the Seraing CCGT plant, fully-owned by EDF Luminus, was selected for a 3-year period starting in winter 2014, ending preparations for the plant's temporary shutdown announced in March 2013. The open cycle plants Izegem and Angleur 3, also fully-owned by EDF Luminus, were selected in the 2015 call for tenders for a 1-year period from winter 2015. Since 1 November 2015, the three selected power plants can be activated by the Belgian network operator Elia at any moment in the event of a risk of energy shortages during the winter.

Offshore wind farms

The Belgian government has reached an agreement on a new system of subsidies for offshore wind farms. Firms will receive fewer subsidies. The aim of reducing subsidies for offshore wind farms is to avoid further rises in the cost of electricity for consumers.

5.1.3.7 Other significant event

Nuclear plants in Belgium

After 10 months of outage for the Doel 3 and Tihange 2 nuclear power plants (in which EDF Luminus holds 10.2% drawing rights) for inspections of the reactor vessels, which had been found to have microcracks during the summer of 2012, the Federal Nuclear Control Agency (AFCN) gave its authorisation on 17 May 2013 for both plants 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 were available. On 13 May 2015 Electrabel issued a statement that the shutdown of Doel 3 and Tihange 2 would be extended to 1 November 2015, to give the AFCN further time to finalise the additional analyses.

On 17 November 2015, the AFCN announced its authorisation for resumption of operation by Doel 3 and Tihange 2 until 2022 and 2023, the date set for their final shutdown. Further tests are to be conducted during the next reactor outage in September 2016 and February 2017. Both plants were in operation in January 2016.

5.1.3.8 Governance – Board of Directors

Mr Martin Vial, Commissioner of State Holdings, succeeded Mr Régis Turrini as Representative of the French state on EDF's Board of Directors from 9 September 2015.

5.1.4 ANALYSIS OF THE BUSINESS AND THE CONSOLIDATED INCOME STATEMENTS FOR 2014 AND 2015

Presentation and analysis of the consolidated income statements for 2014 and 2015 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.

(in millions of Euros)	2015	2014 ⁽¹⁾
Sales	75,006	73,383
Fuel and energy purchases	(38,775)	(37,213)
Other external purchases	(9,526)	(9,181)
Personnel expenses	(12,529)	(11,785)
Taxes other than income taxes	(3,641)	(3,593)
Other operating income and expenses	7,066	5,668
Operating profit before depreciation and amortisation (EBITDA)	17,601	17,279
Net changes in fair value on Energy and Commodity derivatives, excluding trading activities	175	203
Net depreciation and amortisation	(9,009)	(7,940)
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(102)	(157)
(Impairment)/reversals	(3,500)	(1,189)
Other income and expenses	(885)	(212)
Operating profit (EBIT)	4,280	7,984
Cost of gross financial indebtedness	(1,994)	(2,243)
Discount effect	(2,812)	(2,996)
Other financial income and expenses	2,218	2,688
Financial result	(2,588)	(2,551)
Income before taxes of consolidated companies	1,692	5,433
Income taxes	(483)	(1,839)
Share in net income of associates and joint ventures	192	179
GROUP NET INCOME	1,401	3,773
EDF net income	1,187	3,701
Net income attributable to non-controlling interests	214	72
EARNINGS PER SHARE (EDF SHARE) (IN EUROS)		
Earnings per share	0.32	1.78
Diluted earnings per share	0.32	1.78

(1) EDF Energy's transactions on the wholesale electricity markets (excluding trading activities), which showed a net short position at 31 December 2014, have been reclassified from energy purchases to sales in the amount of €509 million.

5.1.4.1 Sales

Consolidated sales were up by 2.2% while showing an organic decline of 1.8%.

5.1.4.1.1 Change in Group sales

(in millions of Euros)	2015	2014 ⁽¹⁾	Variation	Variation (%)	Organic growth (%)
Sales	75,006	73,383	1,623	+2.2	-1.8

(1) EDF Energy's transactions on the wholesale electricity markets (excluding trading activities), which showed a net short position at 31 December 2014, have been reclassified from energy purchases to sales in the amount of €509 million.

Sales amounted to \notin 75,006 million in 2015, an increase of \notin 1,623 million (+2.2%) from 2014. Excluding the effects of exchange rates (+ \notin 1,216 million), principally the pound sterling's rise against the Euro, and changes in the scope of consolidation (+ \notin 1,727 million) essentially relating to the takeover

of Dalkia in France on 25 July 2014, sales showed an organic decline of 1.8%. After eliminating the €921 million impact of 2012-2013 regulated sales tariffs which were recognised in 2014, the organic decline in Group sales was 0.6%.

5.1.4.1.2 Change in sales by segment

(in millions of Euros)	2015	2014	Variation	Variation (%)	Organic growth (%)
France	39,619	39,910	(291)	-0.7	-0.3
United Kingdom (1)	11,618	10,669	949	+8.9	-1.7
Italy	11,677	12,687	(1,010)	-8.0	-8.1
Other International	5,634	5,603	31	+0.6	-0.3
Other activities	6,458	4,514	1,944	+43.1	+0.4
Total excluding France	35,387	33,473	1,914	+5.7	-3.6
GROUP SALES	75,006	73,383	1,623	+2.2	-1.8

(1) EDF Energy's transactions on the wholesale electricity markets (excluding trading activities), which showed a net short position at 31 December 2014, have been reclassified from energy purchases to sales in the amount of €509 million.

Sales outside the France segment represented 47.2% of total consolidated sales in 2015, compared to 45.6% in 2014.

5.1.4.1.2.1 France

Change in sales in the France segment

France's contribution to Group sales amounted to $\leq 39,619$ million, corresponding to an organic decline of ≤ 115 million (-0.3%) compared to 2014. Excluding the ≤ 908 million impact of 2012-2013 regulated sales tariffs which were recognised in 2014, sales showed organic growth of 2.0% (≤ 793 million). This growth mainly results from favourable weather effects with a ≤ 562 million impact, reflected in higher sales volumes (+7.7TWh).

Sales revenues benefited from the rise in tariffs (\in 724 million), but were adversely affected by falling market prices resulting in lower volumes sold under the ARENH system (-55TWh) and an equivalent rise in volumes sold at market prices.

Gas sales to final customers increased by €99 million, largely driven by the weather (+0.6TWh).

At 31 December 2015, EDF's volume market share for electricity sales to all final customers was 77.4%, down by 1.4 point from 31 December 2014. EDF's share of the natural gas market was 5.0%, a year-on-year gain of 0.3 point.

Breakdown of sales for the France segment between generation and supply (deregulated) activities¹, network activities² and island activities³

(in millions of Euros)	2015	2014	Variation	Variation (%)	Organic growth (%)
Generation and supply (deregulated) activities	37,088	37,678	(590)	-1.6	-1.1
Network activities	13,544	13,276	268	+2.0	+2.0
Island activities	1,083	1,071	12	+1.1	+1.1
Eliminations	(12,096)	(12,115)	19		
SALES FOR THE FRANCE SEGMENT	39,619	39,910	(291)	-0.7	-0.3

 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.

^{1.} Generation, supply and optimisation in mainland France, and sales of engineering and consulting services.

^{3.} EDF's generation and distribution activities in the island energy systems (IES and PEI).

There was a 1.1% organic decline in sales by the deregulated activities. Excluding the \in 881 million impact of 2012-2013 regulated sales tariffs which were recognised in 2014, sales showed an organic increase of 1.3% (\notin 467 million) driven by colder weather in the early part of the year compared to 2014. It also reflects the higher energy component in regulated tariffs at 1 November 2014 and 1 August 2015.

Sales by the network activities were up by 2.0%, as the transmission volumes rose due to the colder weather at the start of 2015 compared to 2014.

Electricity generation

Nuclear generation produced 416.8TWh in 2015, compared to 415.9TWh for 2014, an increase of +0.9TWh. This surpassed the Group's 410-415TWh target announced to the market for 2015. This improvement was achieved by controlling the duration of scheduled outages.

Hydropower output stood at 32.1TWh, down by 5.4TWh from 2014 due to less favourable hydrological conditions (see section 5.1.2.4 "Weather conditions: temperatures and rainfall").

Fossil-fired thermal generation produced 6.8TWh, -0.1TWh less than in 2014.

Sales volumes to final customers (a market segment that includes local distribution firms) were up by +1.2TWh, including +7.9TWh resulting from the temperature differential. The impact of lost customers was -7.8TWh, including -5.4TWh concerning customers who paid the regulated "yellow" and "green" tariffs.

The effects of discontinuation of the VPP¹ system, which had begun in 2012, caused a 2.7TWh downturn in sales compared to 2014. Electricity supplies under the ARENH system totalled 16.2TWh, 55.1TWh less than in 2014.

EDF was a net seller on the wholesale markets to the extent of 82.7TWh. The 55.8TWh increase in market sales compared to 2014 is explained by a 54.5TWh decline in structured demand (ARENH supplies).

5.1.4.1.2.2 United Kingdom

The **United Kingdom's** contribution to Group sales amounted to \notin 11,618 million in 2015, an increase of \notin 949 million including a foreign exchange effect of \notin 1,129 million. The organic change was -1.7% compared to 2014.

The primary reason for the lower level of sales is the decrease in electricity sales to final customers, which reflects the falling customer numbers resulting from strong competition, and lower gas tariffs.

5.1.4.1.2.3 Italy

Italy contributed €11,677 million to consolidated sales, down by 8.0% from 2014 (-8.1% in organic terms).

This decrease, which principally concerns Edison, was essentially driven by the market context, which saw a sharp drop in brent oil prices and falling average sales prices on the electricity and gas markets.

In the electricity business, sales were down by 18%, mainly due to the fall in sale prices, but also due to a decrease in volumes. In the hydrocarbon business, in contrast, sales increased by 9%: demand recovered after the significantly negative weather effect experienced in 2014 which had a strong impact on volumes sold to residential customers and thermal power plants. This trend, combined with a high increase in sales volumes on the wholesale markets, more than offset the fall in gas and brent oil prices.

Fenice registered sales of ${\in}387$ million, an organic decline of -€9 million compared to 2014.

5.1.4.1.2.4 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 €5,634 million to Group sales in 2015, €31 million or +0.6% more than in 2014. Excluding foreign exchange effects (-€3 million) and changes in the scope of consolidation (+€52 million), sales declined by 0.3% in organic terms from 2014.

The downturn essentially comes from:

- Asia (-€74 million organic decline), where the decrease in sales is essentially explained by the handover of the Figlec concession in early September 2015;
- Brazil (-€9 million organic decline), due to the lower spot market prices;
- Hungary (-€23 million organic decline), where sales were affected by the decrease in regulated tariffs for electricity and heat introduced in the second half of 2014, and the lower market prices for electricity associated with declining gas prices.

In **Belgium**, in contrast, sales registered organic growth of €62 million. The rise in gas volumes sold, driven by a very positive weather effect, and the growth in business for auxiliary services largely offset the fall in wholesale market prices for electricity and gas.

Poland also saw organic growth of \in 26 million in its sales, thanks to higher electricity prices and heat tariffs.

5.1.4.1.2.5 Other activities

Other activities comprise, among other entities, EDF Énergies Nouvelles, EDF Trading, Électricité de Strasbourg and Dalkia.

The contribution by the **Other activities** segment to Group sales amounted to \in 6,458 million in 2015, an increase of \in 1,944 million or 43.1% from 2014, corresponding to organic growth of \in 19 million (+0.4%). The effect of changes in scope totalled + \in 1,833 million and mostly reflects the takeover of Dalkia's activities in France from July 2014.

EDF Énergies Nouvelles' contribution to Group sales showed an organic increase of €14 million (+1.7%) compared to 2014. In 2015 EDF Énergies Nouvelles continued to develop its operation and maintenance activity.

EDF Trading's sales also showed an organic decline of €210 million (-24.5%) from 2014, explained by a poorer performance on the North American market after the particularly good levels of business in 2014, and difficult market conditions, particularly in Europe.

1. Virtual Power Plant capacity auction system, generating deliveries for periods ranging from a few months to 3 years.

Sales by Électricité de Strasbourg totalled €802 million, with organic growth of €33 million (+4.3%) compared to 2014. The rise was mainly attributable to the higher volumes of electricity and gas sold as a result of more favourable weather early in the year in 2015 than 2014.

Sales by the **gas activities** amounted to \leq 594 million in 2015, compared to \leq 191 million in 2014. These activities were part of the "France" segment in the first half of 2014. The organic growth of \leq 227 million corresponds to an increase in volumes, driven by a favourable weather effect and optimisation of storage activities.

Dalkia contributed €2,878 million to Group sales, reflecting the takeover of Dalkia's activities in France from 25 July 2014. The organic decline of €70 million ¹ (-5.3%) is principally explained by a downturn in energy prices and the industrial work activity, which was not offset by the positive impact of commercial development.

5.1.4.2 **Operating profit before depreciation and amortisation (EBITDA)**

EBITDA rose by 1.9%, with an organic decrease of -0.6%. Excluding the impact of the regulated tariff catch-up for 2012-2013 recognised in 2014, organic growth was 3.9%.

(in millions of Euros)	2015	2014 ⁽¹⁾	Variation	Variation (%)	Organic growth (%)
Sales	75,006	73,383	1,623	+2.2	-1.8
Fuel and energy purchases	(38,775)	(37,213)	(1,562)	+4.2	+1.1
Other external expenses	(9,526)	(9,181)	(345)	+3.8	-5.1
Personnel expenses	(12,529)	(11,785)	(744)	+6.3	+1.4
Taxes other than income taxes	(3,641)	(3,593)	(48)	+1.3	+0.6
Other operating income and expenses	7,066	5,668	1,398	+24.7	+23.9
EBITDA	17,601	17,279	322	+1.9	-0.6

(1) EDF Energy's transactions on the wholesale electricity markets (excluding trading activities), which showed a net short position at 31 December 2014, have been reclassified from energy purchases to sales in the amount of €509 million

5.1.4.2.1 Change in consolidated EBITDA and analysis

Consolidated **EBITDA** for 2015 amounted to €17,601 million, up by 1.9% from 2014. After adjustment for the positive €155 million scope effect, essentially related to the takeover of Dalkia's activities in France in July 2014 and favourable foreign exchange effects of €271 million, mainly resulting from the pound sterling's rise against the Euro, organic growth was -0.6%.

The Group's **fuel and energy purchases** amounted to €38,775 million in 2015, up by €1,562 million (+4.2%) from 2014, or an organic increase of €415 million (+1.1%). In **France**, the organic increase of €1,144 million (+7.6%) is essentially driven by obligations to purchase renewable energies, nuclear fuel costs and ERDF network access costs. **Italy** registered an organic decline of €793 million (-7.4%), essentially due to the fall in prices and the arbitration ruling on the Libyan gas contract, which offset the effect of higher fuel and energy purchase volumes. The organic decrease observed in the **United Kingdom** (€173 million or -2.8%) relates to the organic downturn in sales.

Other external expenses amounted to €9,526 million for 2015, €345 million (+3.8%) higher than in 2014 but corresponding to an organic decline of €464 million (-5.1%). In the **United Kingdom**, the organic decrease of €156 million (-12.9%) reflects EDF Energy's efforts to control its costs, the lower year-on-year charges on the ECO energy efficiency programme, and costs associated with inspections and repairs of steam

generators in 2014, which had no equivalent in 2015. In **Italy**, the organic decrease of \in 112 million mainly relates to an operating cost-cutting plan. In **France**, the \in 81 million decline (-1.5%) reflects efforts made to reduce costs, particularly in thermal generation and commercial activities.

The Group's **personnel expenses** totalled €12,529 million, an increase of €744 million from 2014, or €166 million (+1.4%) in organic growth. In **France**, personnel expenses totalled €9,209 million, an organic rise of €138 million (+1.5%) compared to 2014, notaby due to growth in the workforce, particularly in the nuclear activities in 2014. Excluding the Linky project, the workforce was 0.5% lower than in 2014, thanks to efforts in the thermal generation, commercial and general functions.

Taxes other than income taxes amounted to €3,641 million for 2015, up by €48 million or +1.3% from 2014 (+0.6% in organic growth).

Other operating income and expenses generated net income of €7,066 million for 2015, up by €1,398 million from 2014 (an organic rise of €1,355 million or +23.9%). In **France**, other operating income and expenses registered organic growth of €610 million, particularly because of the rise in the CSPE. In **Italy** the organic rise was €588 million, mainly attributable to the effects in 2015 of arbitration concerning the long-term gas contract with Libya, and a significant reduction in bad debt following action to recover outstanding payments. The **Other activities** segment saw an organic increase of €278 million, principally as a result of real estate sales.

^{1.} Dalkia's contribution for the first half-year of 2015 is considered non-organic.

5.1.4.2.2 Change in consolidated EBITDA and analysis by segment

(in millions of Euros)	2015	2014	Variation	Variation (%)	Organic growth (%)
France	11,517	12,198	(681)	-5.6	-6.0
United Kingdom	2,242	1,941	301	+15.5	+4.9
Italy	1,345	886	459	+51.8	+51.5
Other International	609	632	(23)	-3.6	-3.5
Other activities	1,888	1,622	266	+16.4	+6.2
Total excluding France	6,084	5,081	1,003	+19.7	+12.4
GROUP EBITDA	17,601	17,279	322	+1.9	-0.6

5.1.4.2.2.1 France

Change in EBITDA for the France segment

France contributed $\leq 11,517$ million of consolidated EBITDA for 2015, down by 5.6% (organic decline of -6.0%) compared to 2014. After eliminating the effect of the regulated sales tariff catch-up for the period 23 July 2012 to 31 July 2013 following the Council of State's decision of 11 April 2014, which was recorded in 2014 in the amount of ≤ 731 million, EBITDA was stable.

The France segment's contribution represented 65.4% of EBITDA in 2015 compared to 70.6% in 2014.

Breakdown¹ of EBITDA for the France segment between generation and supply (deregulated) activities, network activities and island activities

(in millions of Euros)	2015	2014	Variation	Variation (%)	Organic growth (%)
Generation and supply (deregulated) activities	6,936	7,929	(993)	-12.5	-13.2
Network activities	3,834	3,558	276	+7.8	+7.8
Island activities	747	711	36	+5.1	+5.1
EBITDA FOR THE FRANCE SEGMENT	11,517	12,198	(681)	-5.6	-6.0

EBITDA for the **generation and supply** (deregulated) activities was down by 12.5%. After adjustment for the \in 731 million impact of the regulated sales tariff catch-up for 2012-2013 recognised in 2014 and the \in 53 million scope effect related to the transfer of upstream gas portfolio management activities to the "Other activities" segment, EBITDA was down by \in 317 million or -4.4%.

The good performance by nuclear generation +0.9TWh and more favourable weather conditions (+7.9TWh) had a combined effect of + \in 41 million. Hydropower output, in contrast, was down by 5.4TWh (- \in 207 million).

2015 was marked by less favourable market conditions which had a - ϵ 437 million impact. With the discontinuation of the "yellow" and "green" regulated sales tariffs, losses of customers (-7.9TWH) had a negative impact of - ϵ 149 million. The decline in market prices led to lower volumes sold under the ARENH system and an equivalent increase in sales at market prices. The impact of lower take-up of the ARENH system amounted to approximately - ϵ 230 million in 2015.

These effects were counterbalanced by the rise in regulated sales tariffs at 1 November 2014 and 1 August 2015 which contributed $+ \in 800$ million to EBITDA.

The growth in other external purchases and personnel expenses was controlled (+0.1%). Cost adjustment campaigns have been initiated, particularly in the commercial and thermal generation activities and general functions.

A final factor in the decrease in EBITDA for the deregulated activities was the non-recurring changes in provisions, including for nuclear fuel processing.

EBITDA for the **network activities** increased by +7.8%. This rise is explained by the less mild weather in the early part of the year in 2015 than 2014 (+ \in 122 million), a lower cost of purchases to compensate for network losses due to falling electricity market prices, and favourable changes in provisions and non-recurring expenses.

EBITDA for the **island activities** was up by €36 million (+5.1%), primarily due to new power plants commissioned by the subsidiary EDF Production Électrique Insulaire (EDF PEI).

^{1.} Further details of this breakdown can be found in section 5.1.4.1.2.1.

5.1.4.2.2.2 United Kingdom

The **United Kingdom**'s contribution to Group EBITDA for 2015 was \notin 2,242 million, up by +15.5% from 2014 corresponding to organic growth of +4.9%. The decline in the Euro against the pound sterling had a favourable impact of \notin 205 million compared to 2014.

Nuclear generation output amounted to 60.6TWh for 2015, a rise of +4.4TWh over 2014. This increase essentially resulted from the end of inspection and repair work on the steam generators at the Heysham 1 and Hartlepool power plants: three of the reactors resumed operation in late 2014, and the fourth in early 2015. Generation by the rest of the nuclear fleet registered a very good operating performance.

EDF Energy also began a cost saving plan across all activities and successfully reduced its charges under the ECO energy efficiency programme in 2015.

5.1.4.2.2.3 **Italy**

The **Italy** segment contributed \leq 1,345 million to the Group's consolidated EBITDA, 51.8% more than in 2014 corresponding to organic growth of 51.5%.

This movement essentially concerned Edison, and includes the €855 million positive effects of the international arbitration court's decision in the dispute between Edison and ENI over revision of the long-term Libyan gas contract prices.

This growth in EBITDA covers contrasting situations across the different activities.

EBITDA for the electricity activities reflects a contraction in margins on thermal power generation, less favourable hydrological conditions than the exceptionally good weather conditions of 2014, and an adverse trend in average sales prices.

In contrast, EBITDA in the hydrocarbon activities registered a rise of €749 million. The positive impact of the arbitration decision was partly counterbalanced by falling brent oil prices which adversely affected exploration and production activities.

A cost-cutting plan was also implemented from the start of the year, to adapt to the new market situation.

Excluding the effects of revisions of Russian contract prices in 2014 and Libyan contract prices in 2015, the rise in EBITDA for the hydrocarbon activities was €294 million. EBITDA for the overall Italy segment was nonetheless stable despite an unfavourable price environment.

Fenice contributed \in 85 million to Group EBITDA in 2015, a decrease of 1.2% from 2014 due to unfavourable foreign exchange effects, but an organic increase of 1.2%.

5.1.4.2.2.4 Other international

EBITDA for the **Other international** segment stood at \in 609 million in 2015, a decrease of 3.6% from 2014 corresponding to an organic decline of -3.5%.

This change was essentially attributable to Asia, with the end of the Figlec concession in early September 2015, and Brazil, where the \in 26 million organic decline in EBITDA principally related to the maintenance programme of 2015 which had no equivalent in 2014. The impact of falling electricity prices on the spot market was counterbalanced by the decrease in the purchase price for gas.

In contrast, EBITDA for **Belgium** showed an organic rise of €44 million, thanks to progression in wind power output following the start of operations by new facilities (+37% of installed wind power capacity since 31 December 2014) and the rise in business for auxiliary services. EBITDA was affected by the shutdown since 25 March 2014 of the Doel 3 and Tihange 2 plants, which only received authorisation to restart in December 2015.

There was an organic rise of \in 37 million in EBITDA in **Poland**, thanks to better margins due to higher prices and control of operating costs.

5.1.4.2.2.5 **Other activities**

Other activities contributed \in 1,888 million to Group EBITDA for 2015, an organic rise of 6.2% from 2014.

EDF Énergies Nouvelles' contribution to consolidated EBITDA totalled €818 million in 2015. The organic year-on-year growth of €69 million (+10.0%) was mainly driven by higher generation output following commissioning of new facilities in 2015, good weather conditions in Europe and active business in Development and Sales of Structured Assets.

EBITDA at **EDF Trading** amounted to €495 million in 2015, an organic decline of €139 million (-22.0%) from 2014. This decrease is directly associated with a deterioration of the trading margin observed on sales (see section 5.1.4.1.2.5) which was partly offset by gains on sales made in 2015.

Dalkia contributed \in 217 million to Group EBITDA, corresponding to organic growth of \in 38 million ¹ compared to 2014, notably achieved through operating efficiency and commercial development plans.

Sales of real estate property in 2015 also contributed to the organic growth in Group EBITDA.

^{1.} Dalkia's contribution for the first half-year of 2015 is considered non-organic.

5.1.4.3 **Operating profit (EBIT)**

EBIT decreased by 46.4%.

(in millions of Euros)	2015	2014	Variation	Variation (%)
EBITDA	17,601	17,279	322	+1.9
Net changes in fair value on Energy and Commodity derivatives, excluding trading activities	175	203	(28)	-13.8
Net depreciation and amortisation	(9,009)	(7,940)	(1,069)	+13.5
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(102)	(157)	55	-35.0
(Impairment)/reversals	(3,500)	(1,189)	(2,311)	+194.4
Other income and expenses	(885)	(212)	(673)	+317.5
EBIT	4,280	7,984	(3,704)	-46.4

The Group's consolidated **EBIT** amounted to \leq 4,280 million for 2015, down by \leq 3,704 million from 2014. This decrease is primarily explained by higher net depreciation and amortisation, especially in France and the United Kingdom, and an increase in impairment.

5.1.4.3.1 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, decreased from +€203 million in 2014 to +€175 million in 2015. This change was mainly located in **Italy**, where it concerned economic hedging of the industrial gas portfolio. It principally reflects settlement upon maturity of economic hedging instruments that generated positive results in 2014, plus the change in positive fair value of hedging instruments hedging gas positions beyond 2015.

5.1.4.3.2 Net depreciation and amortisation

Net depreciation and amortisation was €1,069 million higher than in 2014.

France registered a \in 347 million increase in net depreciation and amortisation, essentially explained by investments in the generation fleet (new industrial facilities commissioned and nuclear maintenance) and distribution assets.

In the **United Kingdom**, the \notin 409 million rise in net depreciation and amortisation (an organic increase of \notin 303 million) essentially reflects the higher investments in maintenance for nuclear plants and coal-fired plants.

In Italy, net depreciation and amortisation was up by \in 142 million, particularly due to the rise in exploration expenses.

The \in 95 million increase in EBITDA in the **Other activities** segment essentially relates to the inclusion of Dalkia in the consolidation since July 2014.

5.1.4.3.3 Net increases in provisions for renewal of property, plant and equipment operated under concessions

The \in 55 million decrease between 2014 and 2015 in the net increases in provisions for renewal of property, plant and equipment operated under concessions is mainly attributable to ERDF.

5.1.4.3.4 Impairment/reversals

In 2015, impairment amounted to €3,500 million and principally concerned:

- the United Kingdom (€1,096 million). In view of the low additional income generated by the capacity premium mechanism, the narrower spreads on forward and long-term horizons and the lack of an upward market response to the 2015 announcement of reduced operating time for certain assets, impairment of €811 million was booked in respect of the Cottam and West Burton A coal-fired power plants, and to a lesser extent the West Burton B gas-fired plant commissioned in 2013. Finally, lower volatility levels affected the possible benefits of flexibility in gas storage cavities, leading to recognition of impairment of €285 million on gas storage assets;
- Edison (€1,419 million). Poor market conditions that led to significantly reduced options for asset portfolio optimisation, low demand, and downward revision of the capacity premium led to recognition of €868 million of impairment, mainly concerning the thermal, hydropower and wind power plants. In view of the long-term downturn in brent crude oil and gas prices over the market horizon, impairment of €551 million was also recorded on Edison's exploration-production activities;
- Poland (€206 million). The worsening of clean dark spreads adversely affected performance at certain Polish fossil-fired plants, particularly facilities that are fully exposed to market prices.

Details of other impairment are given in note 13 to the 2015 consolidated financial statements, "Impairment/reversals".

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 market price assumptions;

- 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 after the number of storage cavities put into development was reduced 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 falling market prices.

5.1.4.3.5 Other income and expenses

Other income and expenses generated a net expense of €885 million in 2015, compared to €212 million in 2014.

In 2015, the main components of other income and expenses were:

a €820 million increase to provisions following the decision of 15 January 2016 concerning the cost of implementing long-term management solutions for long-lived medium and high-level radioactive waste under the Cigéo storage project (see section 5.1.3.6.1.6 "Ministerial order concerning the cost of the Cigéo storage project");

- a €590 million increase to provisions following updating of the industrial scenario and contractor quotes for decommissioning nuclear power plants that are permanently shut down, less a reversal of €332 million from the provision for long-term radioactive waste management resulting from updating of this scenario, giving a net effect of €258 million;
- income of €287 million in connection with the agreement signed on 30 June 2015 between EDF and Engie concerning the compensation system for employee benefits in kind in the form of energy. This agreement entailed a contractual change in the number of beneficiaries covered by the Group;
- income of €154 million associated with the change in EDF Energy's defined-benefit pension plans.

Other income and expenses in 2014 included:

- a gain on sale of €217 million from operations in connection with the Group's investment in Dalkia;
- an expense of €388 million relating to decommissioning of French nuclear power plants that have been permanently shut down (natural uranium graphite gas-cooled (UNGG) plants, Creys-Malville, Brennilis and Chooz A).

5.1.4.4 Financial result

(in millions of Euros)	2015	2014	Variation	Variation (%)
Cost of gross financial indebtedness	(1,994)	(2,243)	249	-11.1
Discount effect	(2,812)	(2,996)	184	-6.1
Other financial income and expenses	2,218	2,688	(470)	-17.5
FINANCIAL RESULT	(2,588)	(2,551)	(37)	+1.5

The financial result for 2015 corresponds to a financial expense of €2,588 million, €37 million more than in 2014. This change is explained by:

- a decrease in net indebtedness due notably to the positive impact of variabilisation of the debt;
- a €184 million decrease in discount expenses compared to 2014, essentially concerning provisions for employee benefits;
- a €470 million downturn in other financial income and expenses, as the increase in capital gains on divestment of dedicated assets was more than outweighed by the €360 million financial interest associated with the European Commission's decision of 22 July 2015 (see section 5.1.3.1 "European commission decision on the tax treatment of provisions established between 1987 and 1996 for renewal of the General Network").

5.1.4.5 Income taxes

Income taxes amounted to €483 million, corresponding to an effective tax rate of 28.5% in 2015. The effective tax rate was 33.8% in 2014.

The effective tax rate was driven up by impairment; after adjustment to eliminate this factor, it stood at 24.3% in 2015 compared to 32.2% in 2014.

The main explanations for the fall in the effective tax rate between 2014 and 2015 are the lower income tax rate and cancellation of the "Robin Hood" tax in **Italy**, and the lower income tax rate in the **United Kingdom**.

5.1.4.6 Share in net income of associates and joint ventures

The Group's share in net income of associates and joint ventures was a positive \leq 192 million in 2015, compared to \leq 179 million in 2014. This rise essentially results from higher year-on-year net income at RTE, as the weather was more favourable than in 2014.

The share in net income of associates in 2015 also includes impairment totalling €549 million, including:

■ Alpiq (€196 million). Against a background of persistently low prices on the wholesale markets, the Group booked impairment in respect of Alpiq's Swiss assets, corresponding to its share of the impairment recorded in Alpiq's published financial statements at 30 June 2015.

If the Alpiq group finds itself obliged to recognise additional impairment in its consolidated financial statements for 2015, the EDF group will be obliged to reflect that in its half-yearly financial statements at 30 June 2016 ;

 CENG (€271 million). This impairment was booked in view of lower forward prices and long-term electricity prices caused by the long-term decline in gas prices.

In 2014 impairment of €425 million was recorded, including €206 million in respect of Alpiq, €122 million on CENG and €83 million on the investment in the joint venture Estag (Austria).

5.1.5 CASH FLOW AND NET INDEBTEDNESS

5.1.5.1 Cash flows

5.1.4.7 Net income attributable to non-controlling interests

Net income attributable to non-controlling interests amounted to \in 214 million in 2015, \in 142 million more than in 2014. This change is essentially explained by the rise in Centrica's revenues on nuclear generation activities.

5.1.4.8 **EDF net income**

EDF net income totalled \leq 1,187 million for 2015, down by \leq 2,514 million (-67.9%) compared to 2014.

5.1.4.9 Net income excluding non-recurring items

The Group's net income excluding non-recurring items ¹ stood at \notin 4,822 million for 2015, down by 0.6% from 2014.

(in millions of Euros)	2015	2014	Variation	Variation (%)
Net cash flow from operating activities	12,730	10,625	2,105	+19.8
Net cash flow used in investing activities	(18,839)	(12,393)	(6,446)	+52.0
Net cash flow from financing activities	5,574	1,223	4,351	n.a.
NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS	(535)	(545)	10	-1.8
Cash and cash equivalents – opening balance	4,701	5,096	(395)	-7.8
Net increase (decrease) in cash and cash equivalents	(535)	(545)	10	-1.8
Effect of currency fluctuations	(36)	113	(149)	n.a.
Financial income on cash and cash equivalents	13	17	(4)	-23.5
Effect of other reclassifications	39	20	19	+95.0
CASH AND CASH EQUIVALENTS – CLOSING BALANCE	4,182	4,701	(519)	-11,0

n.a. = not applicable.

+€124 million of net changes in fair value on Energy and Commodity derivatives, excluding trading activities, net of tax in 2015, compared to +€139 million in 2014.

^{1.} Group net 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:

^{■ -€3,759} million for miscellaneous risks and impairment in 2015, compared to -€1,290 million in 2014;

5.1.5.1.1 Net cash flow from operating activities

(in millions of Euros)	2015	2014	Variation	Variation (%)
Income before taxes of consolidated companies	1,692	5,433	(3,741)	-68.9
(Impairment)/reversals	3,500	1,189	2,311	n.a.
Accumulated depreciation and amortisation, provisions and changes in fair value	11,392	8,981	2,411	+26.8
Financial income and expenses	951	1,068	(117)	-11.0
Dividends received from associates and joint ventures	322	672	(350)	-52.1
Capital gains/losses	(1,593)	(1,311)	(282)	+21.5
Change in working capital	132	(1,041)	1,173	-112.7
Net cash flow from operations	16,396	14,991	1,405	+9.4
Net financial expenses disbursed	(1,252)	(1,752)	500	-28.5
Income taxes paid	(1,508)	(2,614)	1,106	-42.3
European Commission decision (1)	(906)	-	(906)	n.a.
NET CASH FLOW FROM OPERATING ACTIVITIES	12,730	10,625	2,105	+19.8

n.a. = not applicable.

(1) On 22 July 2015, the European Commission issued a new decision classifying the tax treatment of provisions established between 1987 and 1996 for renewal of French General Electricity Network facilities as State aid incompatible with European Union rules (see Section 5.1.3.1).

The net cash flow from operating activities amounted to $\leq 12,730$ million in 2015, $\leq 2,105$ million more than in 2014.

This change primarily reflects a \leq 1,405 million increase in the net cash flow from operations, chiefly resulting from:

- the income before taxes of consolidated companies after adjustment for impairment, depreciation and amortisation, provisions and changes in fair value, which amounted to €16,584 million in 2015 compared to €15,603 million in 2014 (+€981 million compared to 2014);
- the improvement in working capital (+€1,173 million compared to 2014).

These effects were partly offset by the lower amount of dividends received from associates and joint ventures (- \in 350 million, including - \notin 290 million corresponding to the exceptional dividend received from CENG in 2014 which had no equivalent in 2015), and higher capital gains (- \notin 282 million).

The variation in the net cash flow from operating activities also reflects the lower amount of income taxes paid (+ \in 1,106 million), and the unfavourable impact of the European Commission's decision of 22 July 2015 (- \in 906 million).

5.1.5.1.2 Net cash flow used in investing activities

The net cash outflow for investing activities amounted to \leq 18,839 million in 2015, compared to \leq 12,393 million in 2014. 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:

(in millions of Euros)	2015	2014	Variation	Variation (%)
Investments in intangible assets and property, plant and equipment	(14,789)	(13,721)	(1,068)	+7.8
Net proceeds from sale of intangible assets and property, plant and equipment	964	314	650	n.a.
Net Capex	(13,825)	(13,407)	(418)	+3.1
Acquisitions/disposals of equity investments, net of cash acquired/transferred	586	1,308	(722)	-55.2
Changes in financial assets	(5,600)	(294)	(5,306)	n.a.
NET CASH FLOW USED IN INVESTING ACTIVITIES	(18,839)	(12,393)	(6,446)	+52.0

n.a. = not applicable.

Net capex

Net capital expenditure amounted to \in 13,825 million in 2015, up by \in 418 million (+3.1%) from 2014. Changes in the Group's net capital expenditure over the period were as follows:

(in millions of Euros)	2015	2014	Variation	Variation (%)
Generation and supply (deregulated activities)	5,688	5,579	109	+2.0
Network activities	3,154	2,974	180	+6.1
Island activities	437	446	(9)	-2.0
France	9,279	8,999	280	+3.1
United Kingdom	1,821	1,585	236	+14.9
Italy	586	403	183	+45.4
Other International	693	508	185	+36.4
Total international	3,100	2,496	604	+24.2
Total Other activities	1,446	1,912	(466)	-24.4
NET CAPEX	13,825	13,407	418	+3.1

Capital expenditure is one of the components of net investments for which details are given in section 5.1.5.2 "Net indebtedness".

Acquisitions/disposals of equity investments, net of cash acquired/transferred

Net equity investments decreased by €722 million in 2015 to €586 million. They mainly concern the sales of the Group's investments in BE Zrt and Estag.

In 2014, net equity investments mainly concerned the finalisation of the operations relating to Dalkia, and the sale of the Group's investment in the South Stream gas pipeline.

Changes in financial assets

The overall change in financial assets in 2015 was -€5,600 million, principally reflecting the acquisition of liquid assets.

In 2014, the -€294 million change in financial assets essentially reflected the Group's investments in construction of the South Stream gas pipeline (which have since been sold) and the ultra-supercritical coal-fired power plant on the Fuzhou site in China.

5.1.5.1.3 Net cash flow from financing activities

(in millions of Euros)	2015	2014	Variation	Variation (%)
Transactions with non-controlling interests (1)	64	355	(291)	-82.0
Dividends paid by parent company	(1,420)	(2,327)	907	-39.0
Dividends paid to non-controlling interests	(326)	(229)	(97)	+42.4
Purchases/sales of treasury shares	(14)	2	(16)	n.a.
Cash flows with shareholders	(1,696)	(2,199)	503	-22.9
Issuance of borrowings	9,422	6,894	2,528	+36.7
Repayment of borrowings	(2,336)	(7,470)	5,134	-68.7
Issuance of perpetual subordinated bonds	-	3,970	(3,970)	n.a.
Payments to bearers of perpetual subordinated bonds	(591)	(388)	(203)	+52.3
Funding contributions received for assets operated under concessions	152	177	(25)	-14.1
Investment subsidies	623	239	384	n.a.
Other cash flows from financing activities	7,270	3,422	3,848	n.a.
NET CASH FLOW FROM FINANCING ACTIVITIES	5,574	1,223	4,351	n.a.

n.a. = not applicable.

(1) Contributions via capital increases and acquisitions of additional interests in controlled companies.
5.1.5.2 Net indebtedness

Cash flows related to financing activities generated a net inflow of \in 5,574 million in 2015, an increase of \in 4,351 million from 2014. This change primarily reflects:

- an increase of €7,662 million in issuance of borrowings (net of redemptions);
- the issuance of perpetual subordinated bonds in 2014 which had no equivalent in 2015;
- the lower level of dividends paid in cash by EDF in 2015 compared to 2014.

Changes in the Group's net indebtedness were as follows:

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 \leq 37,395 million at 31 December 2015 compared to \leq 34,208 million at 31 December 2014.

(in millions of Euros)	2015	2014 restated ⁽¹⁾	Variation	Variation (%)
Operating profit before depreciation and amortisation (EBITDA)	17,601	17,279	322	+1.9
Cancellation of non-monetary items included in EBITDA	(1,610)	(1,901)	291	
Net financial expenses disbursed	(1,252)	(1,752)	500	
Income taxes paid	(1,508)	(2,614)	1,106	
Other items including dividends received from associates and joint ventures	271	679	(408)	
Operating cash flow (2)	13,502	11,691	1,811	+15.5
Change in working capital	132	(1,041)	1,173	
Net investments (3)	(12,672)	(11,887)	(785)	
Cash flow after net investments	962	(1,237)	2,199	
European Commission decision (4)	(906)	_	(906)	
Dedicated assets	217	174	43	
Cash flow before dividends (5)	273	(1,063)	1,336	
Dividends paid in cash	(2,337)	(2,944)	607	
Group cash flow	(2,064)	(4,007)	1,943	
Issuance of perpetual subordinated bonds	-	3,970	(3,970)	
Other monetary changes	(278)	(44)	(234)	
(Increase)/decrease in net indebtedness, excluding the impact of changes in exchange rate	(2,342)	(81)	(2,261)	
Effect of change in exchange rate	(951)	(990)	39	
Effect of other non-monetary changes	106	296	(190)	
(Increase)/decrease in net indebtedness	(3,187)	(775)	(2,412)	
NET INDEBTEDNESS AT BEGINNING OF PERIOD	34,208	33,433		
NET INDEBTEDNESS AT END OF PERIOD	37,395	34,208		

(1) 2014 figures are restated following reclassification of investments in strategic operations as net investments.

(2) 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.

(3) Net investments are operating investments 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, non-Group partner investments, and new developments including the Linky project and the asset disposals that finance them.

(4) On 22 July 2015 the European Commission issued a new decision classifying the tax treatment of provisions established between 1987 and 1996 for renewal of the General Network facilities as state aid that is incompatible with European Union rules (see section 5.1.3.1).

(5) 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 (2) after the change in working capital, net investments (see note (3)), the European Commission decision concerning the French General Electricity Network and net allocations to dedicated assets.

5.1.5.2.1 Operating cash flow

The operating cash flow amounted to $\leq 13,502$ million in 2015 compared to $\leq 11,691$ million in 2014, an increase of $\leq 1,811$ million (+15.5%).

This change mainly reflects:

- the rise in EBITDA (+€322 million), and lower eliminations of non-monetary items included in EBITDA (-€1,610 million in 2015, compared to -€1,901 million in 2014), notably due to the closing of favourable positions on trading activities recorded in late 2014;
- the lower level of net financial expenses disbursed (€1,252 million in 2015 compared to €1,752 million in 2014), essentially explained by the full-year effect in 2015 of the campaign to variabilise rates on borrowings between January and June 2014;
- a decrease in income taxes paid (-€1,508 million in 2015 versus -€2,614 million in 2014), essentially as a result of differences in France in the balance of income tax due for previous years, and the lower advance instalments of income tax paid in France in 2015 as a result of lower taxable income.

These rises were partly offset by the lower amount of dividends received (- \in 350 million), primarily explained by the exceptional dividend received from CENG in 2014 which had no equivalent in 2015.

5.1.5.2.2 Change in working capital

The change in working capital over 2015 amounted to + \in 132 million, and is mainly explained by:

- collection of trade receivables related to the regulated sales tariff catch-up for 2012-2013 (increase of +€775 million);
- gains resulting from the working capital improvement plan, essentially on inventories and trade receivables (approximately +€700 million);
- an unfavourable foreign exchange and price effect on uranium in France and the United Kingdom (approximately -€400 million);
- the rise in the CSPE operating receivable (-€230 million);
- the weather impact in France, which was not very significant in 2015;
- other operating effects (approximately -€300 million).

The difference between the 2015 and 2014 change in working capital (+ \in 1,173 million) essentially results from the favourable effect of the regulated sales tariff catch-up for 2012-2013 (approximately + \in 1.8 billion), gains resulting from the working capital improvement plan (approximately - \in 350 million), and an unfavourable price and foreign exchange effect in 2015 on nuclear fuel inventories in France and the United Kingdom (approximately - \in 200 million).

5.1.5.2.3 Net investments

Net investments amounted to €12,672 million in 2015 compared to €11,887 million in 2014, an increase of €785 million (+6.6%). Details are as follows:

	2045	2014(1)	Variation	Variation
(In millions of Euros)	2015	2014 **	variation	(%)
Generation and supply (deregulated) activities	5,684	5,574	110	+2.0
Network activities	2,885	2,722	163	+6.0
Island activities	430	438	(8)	-1.8
France	8,999	8,734	265	+3.0
United Kingdom	1,111	977	134	+13.7
Italy	585	78	507	n.a.
Other International	922	488	434	+88.9
International	2,618	1,543	1,075	+69.7
Other activities	825	1,198	(373)	-31.1
NET INVESTMENTS EXCLUDING NEW DEVELOPMENTS AND ASSET DISPOSALS	12,442	11,475	967	+8.4
NEW DEVELOPMENTS NET OF ASSET DISPOSALS	230	412	(182)	-44.2
NET INVESTMENTS	12,672	11,887	785	+6.6

n.a. = not applicable.

(1) 2014 figures are restated, principally by eliminating net investments in the UK Nuclear New Build programme, which are now included in new developments.

In France, net investments were up by +€265 million or +3%.

- In the generation and supply (deregulated) activities, the increase in net investments (+€110 million) mainly resulted from nuclear maintenance activities.
- In the network activities, the rise in net investments (+€163 million) primarily resulted from payments made during 2015 for investments undertaken in late 2014. The lower investments in customer connections were offset by higher investments to improve network coverage quality and network reinforcement.

In the International segment, net investments were up by ${\in}1,075$ million or +69.7%.

- In the United Kingdom, the increase of €134 million or +13.7% is largely explained by an unfavourable foreign exchange effect.
- In Italy, the rise of €507 million was principally due to development of projects already launched in exploration-production, and sales of assets during 2014 which had no equivalent in 2015.

The increase in the Other International segment's net investments (+€434 million) is notably explained by investments to bring coal-fired and cogeneration plants in Poland up to the latest standards, and investments in Belgium relating to reorganisation of EDF Luminus' shareholding structure.

In the Other activities segment, net investments were down by €373 million or -31.1%. This decrease primarily resulted from EDF Énergies Nouvelles, where the ongoing capacity development required high levels of investment but benefited from higher subsidies received in 2015, mainly for wind farm projects in the United States.

New developments and asset disposals correspond to the Group's new development projects and sales of assets undertaken to fund them. They also include Linky investments. In 2015 and 2014 these new developments mainly concerned New Nuclear investments in the United Kingdom, and to a smaller degree investments in Linky meters and offshore wind farm projects. Asset disposals essentially concerned real estate property, sales of assets by EDF Trading and sales of the Group's investments in Estag and BE Zrt.

5.1.5.2.4 French General Electricity Network

Following the European Commission's decision of 22 July 2015 classifying the tax treatment of provisions established between 1987 and 1996 for renewal of the General Network facilities as state aid that is incompatible with European Union rules, EDF repaid the sums demanded: the amount of the state aid (€889 million) plus interest (€494 million) as calculated on terms set by the Commission.

The impact relating to the French General Network totals ${\in}906$ million, comprising:

- payment to the State of €1,383 million, which was partly offset by a reimbursement of €375 million received from RTE;
- a tax saving of €102 million associated with the decline in taxable income.

5.1.5.2.5 Dedicated assets

In compliance with the French law no. 2006-739 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 \leq 23,480 million at 31 December 2015.

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 movements of \in 217 million in 2015 correspond to the second and third types of change described above.

5.1.5.2.6 Cash flow before dividends

The cash flow before dividends in 2015 was positive at \notin 273 million (compared to a negative \notin 1,063 million in 2014) and is mainly explained by the following factors:

- operating cash flow of +€13,502 million;
- net investments of -€12,672 million;
- the payment related to the French General Network with a net effect of -€906 million.

The + \in 1,336 million improvement from 2014 is essentially due to the \in 1,811 million increase in operating cash flow, although this effect was reduced by the payment related to the French General Network in 2015 (- \in 906 million).

5.1.5.2.7 Dividends paid in cash

Dividends paid in cash during 2015 (-€2,337 million) comprise:

- the balance of the 2014 dividends (€1,268 million);
- the interim dividend for 2015 (€152 million) decided by the Board of Directors on 4 November 2015 and paid on 18 December 2015 at the rate of €0.57 per share;
- payments made in 2015 to bearers of perpetual subordinated bonds for the "hybrid" bond issues of January 2013 and January 2014 (€591 million);
- dividends paid by Group subsidiaries to their minority shareholders (€326 million).

The favourable difference of \in 607 million compared to 2014 is principally attributable to payment of the interim dividend for 2015 in the form of a scrip dividend to 85.63% of shareholders.

5.1.5.2.8 Group cash flow

The Group cash flow after dividends amounted to -€2,064 million compared to -€4,007 in 2014. The €1,943 million improvement primarily reflects the €1,336 million change in cash flow before dividends and €607 million decrease on dividends paid in cash.

5.1.5.2.9 Effect of change in exchange rate

The foreign exchange effect (rise of the pound sterling and US dollar against the Euro¹) had an unfavourable impact of -€951 million on the Group's net indebtedness at 31 December 2015.

^{1.} The pound sterling rose by 6.1% against the Euro, from €1.284/£1 at 31 December 2014 to €1.362/£1 at 31 December 2015. The US dollar rose by 11.5% against the Euro, from €0.824/\$1 at 31 December 2014 to €0.919/\$1 at 31 December 2015.

5.1.6 MANAGEMENT AND CONTROL OF MARKET RISKS

5.1.6.1 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 Strategic 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 Strategic Financial Management Framework (July 2015). This department, which has reported to the Group's Risk 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.

5.1.6.1.1 Liquidity position and management of liquidity risks

5.1.6.1.1.1 Liquidity position

At 31 December 2015, the Group's liquidities, consisting of liquid assets, cash and cash equivalents, totalled $\leq 22,323$ million and available credit lines amounted to $\leq 11,380$ million.

For 2016, the Group's scheduled debt repayments (principal and interest) are forecast at €12,799 million at 31 December 2015, including €3,751 million for bonds (excluding hybrid bonds).

At 31 December 2015, no Group company was in default on any borrowing.

5.1.6.1.1.2 Management of liquidity risk

On 18 April 1996, EDF set up a programme to issue debt securities in the form of Euro Medium Term Notes (the "EMTN" programme). This programme was regularly renewed until May 2009, when an EMTN programme governed by French law was established for EDF's EMTN issues from that date. The new programme has also been regularly renewed since then, and its current ceiling is €45 billion.

On 25 September 2015, EDF issued a senior "Formosa bond" on the Taiwanese market for a total US\$1,500 million, with 30-year maturity and a 4.75% fixed coupon.

On 8 October 2015 EDF also issued a US\$4,750 million senior bond in five tranches:

- a US\$1,500 million bond with 5-year maturity and a 2.35% fixed coupon;
- a US\$1,250 million green bond with 10-year maturity and a 3.625% fixed coupon;
- a US\$500 million bond with 20-year maturity and a 4.75% fixed coupon;
- a US\$1,150 million bond with 30-year maturity and a 4.95% fixed coupon;
- a US\$350 million bond with 40-year maturity and a 5.25% fixed coupon.

The green bond issue of US\$1.25 billion with 10-year maturity and a 3.625% fixed coupon is enabling EDF to continue its investments for development of renewable energies. This operation is based on the structure of EDF's bond issue of November 2013 which is a benchmark for the market, and demonstrates EDF's ongoing commitment to development of the green bond market and its support for best practices, in line with the Green Bond Principles ¹:

- the funds raised by the green bond are exclusively dedicated to financing renewable energy projects developed by EDF Énergies Nouvelles;
- the projects funded are selected through a stringent, documented process based on ESG criteria validated by the extra-financial rating agency, Vigeo²;
- the funds raised are managed and monitored under strict segregation principle, from their receipt in EDF's cash until allocation to eligible green projects.

EDF will regularly report on the amounts allocated from the green bond, the portfolio of projects financed and the associated environmental benefits. A statement by Deloitte & Associés on respect of EDF's commitments will be included in the 2015 Reference Document.

These operations contribute to the Group's investment strategy and are part of its policy to extend the average maturity of its debt.

Details of the Group's bond borrowings are given in note 38.2 to the 2015 consolidated financial statements.

The average maturity of Group debt was 13 years at 31 December 2015, compared to 13.2 years at 31 December 2014. For EDF SA, the average maturity of debt was 13.9 years at 31 December 2015, against 14.4 years at 31 December 2014.

2. ESG (Environmental, Social, Governance) criteria cover five areas: respect for human rights and governance in the project's host country; management of environmental impacts; protection of employee health and safety; promotion of responsible relationships with suppliers; and dialogue with local stakeholders.

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^{1.} The Green Bond Principles, updated in March 2015, are voluntary guidelines for issuance of green bonds. They recommend transparency and disclosure to support development of the green bond market and promote integrity. For more information, see http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/green-bonds/ green-bond-principles.

At 31 December 2015, 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 2015):

		Hedging instruments (1)			
31 December 2015 (in millions of Euros)	Debt	Interest rate swaps	Currency swaps	Guarantees given on bonds	
2015	12,799	(554)	11	407	
2016-2019	23,024	(1,916)	38	497	
2020 and later	64,176	(3,093)	(32)	146	
TOTAL	99,999	(5,563)	17	1,050	
Debt repayment	62,882				
Interest expense	37,117				

(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 SA 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 standby credit lines provided for subsidiaries, which may also be granted revolving credit from the Group. EDF SA and the investment subsidiary EDF Investissements Groupe (EDF IG), set up in partnership with the bank Natixis Belgique Investissements, also provide medium and longterm financing for EDF group operations outside France, arranged by EDF SA and EDF IG on a totally independent basis: each 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, US\$10 billion for its US commercial paper and €1.5 billion for its Euro market commercial paper.

At 31 December 2015, the amount of commercial paper outstanding was \in 3,744 million for French commercial paper, and US\$3,232 million for US commercial paper. No Euro market commercial paper has been issued. EDF has access to the world's main bond markets: the Euro markets through its EMTN programme, which currently has a ceiling of \in 45 billion, particularly for Euro and sterling issues; and the domestic markets used for stand-alone issues in US dollars (144A bonds), yen (samurai bonds) and Swiss francs.

The table below sets forth the Group's borrowings of more than €650 million or the equivalent value in other currencies at issue as reported in the consolidated financial statements, by type and by maturity at 31 December 2015:

Type of borrowing (in millions of currency units)	Fntity	lssue date (1)	Maturity	Nominal	Currency	Rate
Euro MTN	EDE	10/2001	10/2016	1 100	FLIR	5 50%
Dand		01/2001	01/2017	1,100	LOR	1 1 5 0/
Borid	EDF	01/2014	01/2017	1,000	USD	1.15%
Euro MIN	EDF	02/2008	02/2018	1,500	EUR	5.00%
Bond	EDF	01/2009	01/2019	2,000	USD	6.50%
Bond	EDF	01/2014	01/2019	1,250	USD	2.15%
Bond	EDF	01/2010	01/2020	1,400	USD	4.60%
Bond	EDF	10/2015	10/2020	1,500	USD	2.35%
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%
Bond (green bond)	EDF	10/2015	10/2025	1,250	USD	3.63%
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%
Bond	EDF	01/2014	01/2044	1,000	USD	4.88%
Bond	EDF	10/2015	10/2045	1,500	USD	4.75%
Bond	EDF	10/2015	10/2045	1,150	USD	4.95%
Euro MTN	EDF	09/2010	09/2050	1,000	GBP	5.13%
Bond	EDF	01/2014	01/2114	1,350	GBP	6.00%

(1) Date funds were received.

EDF has an overall amount of €9,906 million in available credit facilities (syndicated credit and bilateral lines).

Syndicated credit lines amount to €4 billion with maturities extending to November 2020. No drawings had been made on these syndicated credit lines at 31 December 2015.

Credit lines represent an available amount of €5,906 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 €500 million credit line between EDF and the European Investment Bank was totally drawn at 31 December 2015, and the other credit line of €200 million between EDF and the European Investment Bank was drawn to the extent of €70 million at the same date. EDF Energy has an external credit line of ± 500 million which was totally drawn.

Since December 2015, EDF IG has had a new syndicated credit facility for \leq 1,000 million (maturing in September 2020). At 31 December 2015 drawings on this credit facility amounted to \leq 488 million.

In November 2014 Edison subscribed a €500 million credit line with a pool of banks (maturing in November 2016). No drawings had been made on this credit line at 31 December 2015. Edison also has an external €140 million credit line which was drawn to the extent of €5 million.

5.1.6.1.2 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 2015:

Company	Agency	Long-term rating (LT)	Short-term rating (ST)
	Standard & Poor's	A+, negative outlook	A-1
	Moody's	A1, negative outlook	P-1
EDF	Fitch Ratings	A stable outlook	F1
EDF Trading	Moody's	Baa1, negative outlook	n.a.
EDF Energy	Standard & Poor's	A-, negative outlook	A-1
	Standard & Poor's	BBB+, negative outlook	A-2
Edison	Moody's	Baa3, stable outlook	n.a.

n.a. = not applicable.

5.1.6.1.3 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 ratio varies from 41% to 73% 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 Strategic 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 2015 breaks down as follows by currency after hedging:

GROSS DEBT STRUCTURE BY CURRENCY, BEFORE AND AFTER HEDGING

31 December 2015 (in millions of Euros)	Initial debt structure	Impact of hedging instruments ⁽¹⁾	Debt structure after hedges	% of debt
EUR	31,731	16,731	48,462	76%
USD	19,137	(17,250)	1,887	3%
GBP	11,677	382	12,059	19%
Other currencies	1,638	137	1,775	3%
TOTAL DEBT	64,183	-	64,183	100%

(1) Hedges of liabilities and net assets of foreign subsidiaries.

The table below presents the impact of a variation in exchange rates on the Group's gross debt at 31 December 2015.

SENSITIVITY OF THE GROUP'S GROSS DEBT TO FOREIGN EXCHANGE RATE RISKS

31 December 2015 (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	48,462	_	48,462
USD	1,887	188	2,075
GBP	12,059	1,206	13,265
Other currencies	1,775	176	1,951
TOTAL DEBT	64,183	1,570	65,753

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 2015 ⁽¹⁾ (in millions of currency units)	Net assets	Bonds	Derivatives	Net assets after management
USD	5,268	3,200	(848)	2,916
CHF (Switzerland)	681	600	(100)	181
HUF (Hungary)	105,289	-	43,000	62,289
PLN (Poland)	2,892	_	2,085	807
GBP (United Kingdom)	14,994	5,435	2,158	7,401
BRL (Brazil)	1,065	_	_	1,065
CNY (China)	9,770	_	_	9,770

(1) Net assets at 31 December 2015 including significant adjustments made in the final quarter; derivatives and bonds at 31 December 2015. The net positions shown exclude certain non-significant exposures.

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 2015, 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

	31 December 2015 ⁽¹⁾			31 December 2014			
(in millions of currency units)	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	2,916	2,678	268	2,241	1,845	185	
CHF (Switzerland)	181	167	17	420	349	35	
HUF (Hungary)	62,289	197	20	7,480	24	2	
PLN (Poland)	807	189	19	1,967	460	46	
GBP (United Kingdom)	7,401	10,084	1,008	6,390	8,204	820	
BRL (Brazil)	1,065	247	25	833	259	3	
CNY (China)	9,770	1,384	138	8,007	1,063	106	

(1) Net assets at 30 September 2015.

The foreign exchange risk on available-for-sale securities is mostly concentrated in EDF's dedicated asset portfolio, which is discussed in section 5.1.6.1.6 "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 2015.

5.1.6.1.4 Management of interest rate risk

The exposure of the Group's net indebtedness to interest rate fluctuations covers two types of risk: a risk of change in the net financial expenses on floating-rate financial assets and liabilities, and a risk of change in the value of financial assets invested at fixed rates. These risks are managed by monitoring

the floating-rate portion of net indebtedness, defined by reference to the risk/return for net financial expenses, taking into consideration expected movements in interest rates.

Some of the debt is variabilised and the Group may use interest rate derivatives for hedging purposes. The distribution of exposure between fixed and floating rates is monitored.

The Group's debt after hedging instruments at 31 December 2015 comprised 54.09% at fixed rates and 45.91% at floating rates.

A 1% uniform annual rise in interest rates would generate an approximate €296 million increase in financial expenses at 31 December 2015, based on gross floating-rate debt after hedging.

The average cost of Group debt (weighted interest rate on outstanding amounts) was 2.92% at the end of 2015.

The table below sets forth the structure of Group debt and the impact of a 1% variation in interest rates at 31 December 2015. The impact of the change in interest rates was \in 73 million higher than in 2014.

GROUP DEBT STRUCTURE AND SENSITIVITY TO INTEREST RATES

31 December 2015 (in millions of Euros)	Initial debt structure	Impact of hedging instruments	Debt structure after hedging	Impact on income of a 1% variation in interest rates
Fixed rate	56,840	(22,261)	34,579	-
Floating rate	7,343	22,261	29,604	296
TOTAL	64,183	_	64,183	296

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 2015	Value	Impact on income of a 1% variation	Value after a 1% variation
(in millions of Euros)		of interest rates	in interest rates
FLOATING-RATE INSTRUMENTS	1,824	(18)	1,806

5.1.6.1.5 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 5.1.6.1.6 "Management of financial risk on EDF's dedicated asset portfolio".

Coverage of employee benefit obligations for EDF SA, 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.

29.5% of the assets covering EDF's employee benefit obligations were invested in equities at 31 December 2015, representing an amount of \in 3.1 billion of equities.

At 31 December 2015, 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 36.2% in equities and equity funds, representing an amount of £438 million of equities.

At 31 December 2015, the British Energy pension funds were invested to the extent of 33.9% in equities and equity funds, representing an amount of £1,707 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 2015.

Direct investment

At 31 December 2015, EDF's investment in AREVA amounted to \leq 46.5 million, with estimated volatility of 36.0% (annualised volatility of monthly returns observed over three years).

5.1.6.1.6 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 2015, "Dedicated assets".

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 and control processes for the 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 funds.

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: MSCI World AC DN hedged in Euros 50% (excluding emerging country currencies) for the equities sub-portfolio, and a composite index of 60% Citigroup EGBI and 40% Citigroup EuroBIG corporate for the bonds sub-portfolio.

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 "secondary asset class";

- selection of investment funds, aiming for diversification:
 - by style (growth securities, unlisted securities, high-return securities),
 - by capitalisation (major stocks, medium and small stocks),
 - 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 Committee ¹ 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.

Change in regulations

The Decree of 24 March 2015 contains two new measures concerning dedicated assets:

- the annual allocation to dedicated assets, net of any increases to provisions, must be positive or zero as long as their realisable value is below 110% of the amount of the provisions concerned;
- subject to certain conditions, real estate property owned by the operators
 of nuclear facilities may be allocated to coverage of these provisions.

Changes in the portfolio during 2015

In 2015 EDF Invest and two other long-term investors completed acquisition of a minority shareholding in Madrileña Red de Gas (MRG), a regulated operator for the Madrid region gas distribution network.

Also, EDF Invest and Ardian, through a consortium held in equal shares, acquired an investment of more than 50% in Géosel, a hydrocarbon storage company based in Manosque in France, from the Total group.

Both these investments (see sections 5.1.3.4.1.4 "EDF Invest finalises the acquisition of Madrileña Red de Gas" and 5.1.3.4.1.5 "Ardian and EDF Invest sign a firm agreement for acquisition of a majority stake in Géosel from Total") were allocated to EDF Invest's "Infrastructures" pocket along with RTE, TIGF and Porterbrook.

Over the year EDF Invest also continued to build up its real estate and investment fund portfolio.

The non-exclusive real estate investment fund created in late 2014 at the initiative of EDF Invest and Amundi undertook a second real estate investment in Germany during 2015.

EDF Invest also signed a contract with Nexity in September 2015 for the off-plan purchase of the Smart Side office and service "campus". This development will be located on the edge of Paris in the towns of Saint-Ouen and Clichy, and its address will be in Paris' 17th arrondissement.

1. A permanent internal committee for evaluation, consultation and operational decision-making in the management of dedicated assets.

Changes in the financial portfolio are described in the following section, under the heading "Performance of EDF's dedicated asset portfolio".

The CSPE receivable is a financial receivable (bearing interest at 1.72%). It will be repaid under a revised schedule extending to the end of 2020, which is to be set out in a decision as stated in a ministerial letter of 26 January 2016. In that letter the State also acknowledged the shortfall that arose between 2013 and 2015, estimated at €644 million and included in the revised repayment schedule, and authorised its allocation to dedicated assets.

The allocation to dedicated assets for 2015 was €38 million, resulting from allocation during the second half-year of shares already owned by EDF SA

(no allocations were made to dedicated assets in 2014). As increases to provisions that must be offset by allocations to dedicated assets under the Decree of 24 March 2015 amount to \leq 1,010 million over the year 2015, the allocations to dedicated assets yet to be made amount to \leq 972 million at 31 December 2015. These allocations must be made within a maximum of three years from that date.

Disbursements relating to decommissioning expenses incurred in 2015 were financed by the dedicated asset portfolio to the extent of \leq 378 million, compared to \leq 403 million in 2014.

Content and performance of EDF's dedicated asset portfolio

BREAKDOWN OF THE PORTFOLIO

	31/12/2015	31/12/2014
Equities sub-portfolio	31.1%	32.9%
Bonds sub-portfolio	28.5%	27.9%
Cash sub-portfolio	1.2%	2.8%
CSPE after funding	22.3%	22.3%
Unlisted assets (EDF Invest)	16.9%	14.2%
TOTAL	100%	100%

At 31 December 2015, the total value of the portfolio was €23,480 million compared to €23,033 million in 2014.

The content of the financial portfolio is also presented in note 47 to the 2015 consolidated financial statements.

PORTFOLIO CONTENT UNDER THE CLASSIFICATION FROM ARTICLE 4, DECREE 2007-243 OF 23 FEBRUARY 2007

Cotogorios	31 Decem	iber 2015	31 Decem	31 December 2014		
(in millions of Euros)	Book value	Realisable value	Book value	Realisable value		
OECD government bonds and similar	3,486	3,784	3,332	3,627		
OECD corporate (non-government) bonds	595	630	901	968		
Funds investing in the above two categories	2,701	2,840	2,300	2,483		
Equities traded on a recognised market	-	-	_	_		
Funds not exclusively invested in OECD bonds	5,643	7,019	5,891	7,578		
Hedges, deposits, amounts receivable	7	7	(23)	(23)		
TOTAL FINANCIAL PRODUCT PORTFOLIO	12,432	14,280	12,401	14,633		
RTE (50% of the Group's investment)	2,015	2,580	2,015	2,555		
Other unlisted securities and real estate assets	1,249	1,395	604	709		
TOTAL EDF INVEST	3,264	3,975	2,619	3,264		
CSPE after funding	5,225	5,225	5,136	5,136		
TOTAL DEDICATED ASSETS	20,921	23,480	20,156	23,033		

PERFORMANCE OF EDF'S DEDICATED ASSET PORTFOLIO

The table below presents the performance by portfolio at 31 December 2015 and 31 December 2014:

	31/12/2015	31/12/2015 Performance for 2015		31/12/2014	Performance for 2014		
(in millions of Euros)	Stock market or realisable value	Portfolio	Benchmark index ⁽¹⁾	Stock market or realisable value	Portfolio	Benchmark index (1)	
Equities sub-portfolio	7,304	6.1%	4.9%	7,574	11.8%	14.1%	
Bonds sub-portfolio	6,694	1.3%	0.8%	6,419	9.9%	11.2%	
TOTAL FINANCIAL PORTFOLIO	13,998	3.5%	3.0%	13,993	10.7%	12.6%	
Cash sub-portfolio	282	0.4%	-0.1%	640	0.7%	0.1%	
TOTAL FINANCIAL AND CASH PORTFOLIO	14,280	3.5%	3.0%	14,633	10.3%	12.6%	
CSPE after funding	5,225	1.7%	-	5,136	1.7%	_	
EDF INVEST ⁽²⁾	3,975	5.3%	-	3,264	8.4%	-	
including RTE shares	2,580	4.6%	_	2,555	4.4%	-	
TOTAL DEDICATED ASSETS	23,480	3.5%	-	23,033	7.9%	_	

(1) Benchmark index: 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) Performance for assets held at the start of the year. The RTE shares are included at their equity value in the consolidated financial statements (to the extent of their allocation to the dedicated asset portfolio), i.e. they are not adjusted to fair value. By limiting the value of certain investments in compliance with Article 16 of Decree 2007-243 concerning calculation of the regulatory realisable value of dedicated assets which must be equal to or greater than long-term nuclear provisions, the amount of this regulatory realisable value has been reduced to €3,887 million for EDF Invest assets and a total €23,392 million for all dedicated assets.

There were three major events in 2015: the continued decline in oil prices, which accelerated towards the end of the year, the growth dichotomy between developed countries and emerging countries, and the divergent developments in the principal countries' monetary policies.

After recovering by almost 30% in the first half-year, oil resumed its dramatic fall and the price per barrel was halved. This had major impacts for emerging countries that produce commodities, while the positive impact on consumers remained more diffuse. This "black gold" price pattern certainly contributed to the economic divergence between developed countries, although growth figures were satisfactory, including in Europe and emerging countries. The situation was particularly worrying in Brazil and Russia, but the slowdown in China and the decision by the People's Bank of China to widen the yuandollar rate band were the main causes of the summer's emphatic stock market correction. The ongoing fall in oil prices and anxieties over Chinese policy affected the markets again at the end of the year. The first increase for more than 10 years in Federal Reserve rates also added to the climate of feverish uncertainty, and investors did not consider further monetary policy relaxation by the ECB sufficient to make up for these points of concern. The geopolitical environment was another source of volatility, with terrorist attacks in France, poorly coordinated international intervention in the Middle East, rivalry between Iran and Saudi Arabia, and more.

In the Euro zone, tensions appear to have faded after an acute crisis phase in Greece during the summer. Action by the ECB, especially its Quantitative Easing policy, helped considerably to stabilise peripheral spreads at low levels, although the fragile political situation in the Iberian peninsula is still being closely watched by the market.

These events led to a deliberate but moderate devaluation of the Euro against the dollar.

Against this background, after a relatively volatile year, stock markets rose over the year. The world equities markets (MSCI World AC DN index hedged in Euros 50%, excluding emerging country currencies) were up by 4.9%. The European bond index (60% Citigroup EGBI and 40% Citigroup EuroBIG corporate) progressed by 0.8%. This is close to the coupon on bonds, as rates ultimately moved little overall. After a marked decrease early in the

year and a strong rebound in the second quarter, rates stabilised during the second part of the year at close to their initial level.

In this market environment, the financial portfolio performance was positive at +3.5%. This should be compared with the composite benchmark, which rose by +3.0%. Given the lack of visibility from the summer onwards, the bond/equities allocation was kept close to neutral in the second part of the year. However, geographical allocations that prioritised Europe and Japan over North America and emerging countries in particular were continued. The +50 bp difference is principally explained by the good active management performance in Europe and North America, and foreign exchange exposures: overweighting in the Swiss franc and pound sterling at the beginning of the year, and in the Yen at the end of the year. In bonds, sensitivity management and credit management brought profitable results.

In 2015, the overall after-tax performance of dedicated assets (impacts on reserves and net income) was +€516 million: +€309 million on the financial portfolio and cash (+506 million before tax), +€53 million for the CSPE receivable after funding (+€86 million before tax) and +€153 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 €7,304 million at 31 December 2015. The volatility of the equities sub-portfolio can be estimated through the volatility of its benchmark index, which at 31 December 2015 was 15.5% based on 52 weekly performances, compared to 12.4% at 31 December 2014. 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 €1,132 million. This volatility is likely to affect the Group's equity.

At 31 December 2015, the sensitivity of the bond sub-portfolio (\notin 6,694 million) was 5.52, i.e. a uniform 100 base point rise in interest rates would result in a \notin 369 million decline in market value which would

be recorded in consolidated equity. The sensitivity was 5.38 at the end of 2014. While the sensitivity of the bond sub-portfolio was higher than in 2014, it remained below the sensitivity of the benchmark index (6.19).

5.1.6.1.7 Management of counterparty/credit 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.

The Group has a counterparty risk management policy which applies to the parent company and all operationally controlled subsidiaries. This policy, updated in September 2014, sets out the governance associated with monitoring for this type of risk, 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).

The table below gives details, by rating, of the EDF group's consolidated exposure to counterparty risk. At 30 September 2015, 86% 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	Α	BBB	BB	В	CCC/C	Unrated	Total
31/03/2015	2%	20%	41%	22%	4%	1%	0%	10%	100%
30/09/2015	2%	19%	37%	21%	11%	1%	0%	9%	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
31/03/2015	6%	1%	8%	74%	11%	100%
30/09/2015	11%	1%	8%	70%	10%	100%

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 affecting a counterparty.

As the situation in the Euro zone is still unstable, EDF has 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 maximum maturities of three years for Italy and Spain (no exposure in Portugal, Greece, Cyprus, etc). Only "investment grade" banking counterparties are authorised, for limited amounts and maturities.

5.1.6.2 Management and control of energy market risks

5.1.6.2.1 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 continue to be 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.

5.1.6.2.2 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 Comex to set out and monitor 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, supply and trading activities, 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.

5.1.6.2.3 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 2015 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 2015, 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 2015, 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 exposure ³ is calculated based on the 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 fair value hedges of the Group's commodities, see note 41.5 to the 2015 consolidated financial statements. For details of commodity derivatives not classified as hedges by the Group, see note 42.3 to the same consolidated financial statements.

5.1.6.3 Management of insurable risks

The EDF group has an extensive insurance programme that covers EDF SA and its controlled subsidiaries as they are integrated. 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 for energy operators, OIL⁵. Additional insurance coverage is provided by EDF's captive insurance subsidiary Wagram Insurance Company Ltd⁶., other insurers and reinsurers;
- 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), European Mutual Association for Nuclear Insurance (EMANI), and the insurer Northcourt.

In connection with CENG's operations in the United States, EDF Inc. is a member of $\mathsf{NEIL}^{\,7};$

- 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 with the insurance company AGCS

- 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.
- 7. Nuclear Electric Insurance Limited.

^{1.} EDF Trading estimates the VaR by the "Monte Carlo" method, which is based on volatilities and historical correlations measured using observed market prices over the 40 most recent business days. The VaR limit applies to the total EDF Trading 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.

(formerly called Allianz) and the mutual insurance company European Liability Insurance for the Nuclear Industry (ELINI).

For onsite accidents, total cover is \in 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 do not include an excess. However, Océane Re, a Group reinsurance company, shares this risk through reinsurance agreements entered into with the insurers stated above.

The ≤ 91.5 million cover will be raised to ≤ 700 million from 18 February 2016 in line with the law of 17 August 2015 on the energy transition for green growth, which raises the ceilings for indemnities in the event of a nuclear accident (to ≤ 700 million for installations, ≤ 70 million for lower-risk installations and ≤ 80 million for transport), without extending the scope of liability.

Consequently, EDF put out a call for tenders in August 2015 to set up the appropriate coverage and related claim management.

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 the European mutual insurance company ELINI and Wagram Insurance Company Ltd. Océane Re is associated with this risk through 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 US\$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 defence costs and other financial consequences arising from third party claims against the Group's managers and key executives, either individually or jointly, for any proven or alleged misconduct in the course of their duties;
- 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 SA financial statements;

- exploration and production: Edison had a specific insurance policy providing damage and civil liability coverage worth €2.2 billion for these assets, 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;
- ERDF's overhead distribution network: on 11 August 2011, ERDF took out a policy with Natixis/Swiss Re that runs until 5 May 2016 for coverage of its overhead distribution network against the consequences of exceptional events such as storms and gales. This "cat-bond" provided maximum cover of €150 million, with payouts based on a parametric index dependent on wind speed. It was redeemed early on 15 September 2015 in accordance with the conditions for ERDF trigger levels, as stipulated in the issuance contract for Pylon II Capital Ltd Catastrophe Bonds.

ERDF therefore put out a European call for tenders to select an arrangement, structuring and placement company to set up new cover for storm risks, through parametric insurance running for five winters.

In the meantime, on 25 September 2015 ERDF signed a "bridge policy" equivalent to Pylon II for the period 25 September 2015 to 30 April 2016, so that the network is insured against high-intensity gales and storms during that time.

The underlying Pylon II cover with €40 million capacity, which was signed on 16 November 2011, terminated on 27 December 2015. Until its storm cover is renewed, ERDF signed a "bridge cover" contract on 14 December 2015, providing equivalent coverage to the Pylon II underlying for the period 28 December 2015 to 30 April 2016. This reinforces the network insurance for storm and gale risks during that period.

The total value of premiums for all types of coverage provided by EDF's insurance programmes and Group programmes managed by EDF Assurances was €154.3 million in 2015, excluding insurance covering people, and €17.5 million for coverage of ERDF's overhead networks.

5.1.7 INFORMATION UNDER ARTICLE L. 441-6-1 OF THE FRENCH COMMERCIAL CODE

Since 1 December 2008, EDF has applied the law no. 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 SA's trade payables excluding invoices receivable amounted to €2,560 million at 31 December 2015 and to €2,540 million at 31 December 2014, distributed as follows:

	31 Decembe	er 2015	31 December 2014		
	(in millions of Euros)	(in %)	(in millions of Euros)	(in %)	
Invoices due	6	0.2	23	0.9	
Invoices payable within 60 days	2,554	99.8	2,497	98.3	
Invoices payable after 60 days	-	-	20 (1)	0.8	

(1) Most supplier invoices payable after 60 days relate mainly to contracts for nuclear activities that were negotiated before 1 January 2009, whose renegociation will only take effect from 2015.

5.2 Subsequent events

This chapter presents the material events which occurred between 15 February 2016, when the Board of Directors closed the financial statements, and the date of filing of this Reference Document (see note 50 of the Appendix to the consolidated financial statements for the fiscal year ended 31 December 2015).

FLAMANVILLE EPR: 1ST MILESTONE ACHIEVED WITH FINALISATION OF THE PRIMARY CIRCUIT MECHANICAL ERECTION

On 24 March 2016, the EDF group announced that the mechanical erection of the Flamanville EPR's main primary circuit¹ had been completed, as the large components had been installed and assembled (four steam generators, reactor vessel, pressuriser and reactor coolant pumps).

This stage marks the achievement of the first key milestone set by the EDF Group for the first quarter of 2016, in compliance with the schedule updated overt the summer of 2015.

Quality inspections performed demonstrated that all assembly operations fulfil the expected requirements. Only one weld out of the 32 performed on the primary circuit has to be reworked to ensure compliance.

After completion of the main building structure at the end of 2015 and finalisation of the primary circuit mechanical erection, construction of the Flamanville EPR continues to advance at a sustained pace towards the 2nd milestone as electromechanical erection accelerates and plant system test phases start (system by system). These operations will intensify in the second half of the year, in coordination with the suppliers and the teams in charge of reactor operation in order to prepare for system performance testing planned for 2017.

HANDLING ACCIDENT AT PALUEL POWER PLANT

Thursday 31 March 2016, a handling accident occurred in the reactor building of Unit 2, shut down since May 2015 with its tank completely defueled.

During a handling operation on a used steam generator, carried out as part of its replacement, it has switched to its height to be grounded.

The first elements of controls, carried out by a technical team of EDF, establish that the steam generator is partly positioned on the concrete of the reactor building, and partly on the protection plates of the pool of the reactor building, some of which have been damaged.

The event had no impact on the health of participants, nor on plant safety or the environment.

The ASN was informed of the event and visited the site. The expertise needed to understand the causes of the event are ongoing and an inspection program was engaged to assess the work to lead and define the terms of resumption of handling operations on the steam generator.

The reactor should remain stopped several months.

FLAMANVILLE EPR: ADVANCEMENT OF REACTOR VESSEL TESTING PROGRAMME

On 13 April 2016, AREVA, together with EDF, has recommended to the French Nuclear Safety Authority (ASN) to adapt the testing programme of the Flamanville 3 EPR reactor vessel head and bottom, as decided at the end of 2015.

Initial analyses conducted on two parts similar to those at Flamanville 3 have shown that the carbon segregation phenomena extend beyond mid-thickness on one of them.

As specified in the initial strategy approved by the ASN, the material sampling and related tests will be extended to three-fourths of the thickness of the part concerned.

The purpose of these initial analyses is also to better specify the variability of the main manufacturing parameters of the different parts. AREVA and EDF have therefore proposed extending the testing programme to include a third part to strengthen the robustness of the demonstration.

These adaptations to the testing programme will double the number of samples analysed. A total number of 1200 material samples will be taken to consolidate the representative nature of the three forged parts tested, both for carbon content and required mechanical properties.

The ASN has approved this addition to the testing programme, which will continue through the end of 2016, when the final report will be submitted.

EDF and AREVA have reaffirmed their confidence in their ability to demonstrate the quality and safety of the reactor vessel for the start-up of the Flamanville 3 reactor planned for the last quarter of 2018. The assembly and testing activities are going ahead at the construction site in line with the announced schedule.

EDF, THE CEA AND AREVA ESTABLISH THE FRENCH NUCLEAR PLATFORM

On 31 March 2016, in order to develop aligned positions to meet the major challenges facing the French nuclear sector and to prepare the appropriate decisions, EDF, the CEA and AREVA have decided to found the French Nuclear Platform (Plateforme France Nucléaire – PFN), a tripartite body to discuss the major transversal topics for the nuclear sector in France and abroad.

This body will unite, on a quarterly basis, six key managers from the three entities, including the Chairmen of the CEA, EDF and AREVA. Its chairmanship will be decided on a rotating basis, with the Chairman's mandate lasting one year. The first mandate will be entrusted to the Chairman of AREVA.

The purpose of the PFN is to improve the joint effectiveness of the three entities, in particular to devise a shared vision of the medium- and long-term goals for the sector, which will contribute to the preparation and implementation of decisions taken by the French Presidential Nuclear Policy Council (Conseil de Politique Nucléaire).

The PFN will establish by the end of 2016 a working agenda that will to cover the current priority topics: the prospects for the French nuclear sector in accordance with France's Energy Transition law, the sector's international strategy established in cooperation with the French Ministry of Foreign Affairs

^{1.} The primary circuit is a closed loop circuit, containing pressurised water. This water is heated in the reactor vessel when in contact with the fuel assemblies. The acquired heat is transferred to the secondary coolant in the steam generators to produce steam to drive the turbine generator.

and International Development and other concerned ministries, the review of technological options for the EPR NM, the consolidation of relations with SMEs in the sector in coordination with the French Industry Strategic Committee (Comité Stratégique de Filière Nucléaire), and the coordination of positions on regulatory changes notably regarding safety requirements and objectives. The PFN will also work together on the future of the closed fuel cycle in France and abroad, the optimization of the CIGEO deep waste disposal project, the development of dismantling technologies, as well as the R&D program for fourth generation reactors.

It was imperative for EDF, the CEA and AREVA to form a consultative body to be able to best confront the profound changes currently underway in the highly-competitive nuclear.

EDF AND STUDSVIK SIGN AN AGREEMENT IN DECOMMISSIONING AND RADIOACTIVE WASTE MANAGEMENT ACTIVITIES

EDF and Sweden-based Studsvik signed on 20 April 2016 an agreement regarding decommissioning and radioactive waste management activities. EDF thus completes its low-level radioactive waste treatment activities by reinforcing the existing capacity of its French subsidiary Socodei.

According to this agreement, EDF Development Environnement SA, a 100% subsidiary of EDF SA, will acquire Studsvik's Waste Treatment business and facilities in Sweden and the UK. The scope of the transaction includes Studsvik's waste treatment assets and facilities for metal recycling, incineration and pyrolysis ¹ situated at the Studsvik site, near Nykoping in Sweden, as well as the Metal Recycling Facility (MRF) near Workington in the UK.

As part of the transaction, EDF and Studsvik have also signed a cooperation agreement in the areas of nuclear decommissioning and waste management. This agreement will enable both companies to pool their expertise and to grow their activity in order to become benchmark operators in the sector.

The acquisition of Studvisk's waste treatment activity will significantly increase EDF's industrial capacity and represents a major milestone for EDF's development in waste management and decommissioning activities.

EDF is expected to take over the operations on completion of the transaction when all necessary licenses and permits have been granted by the relevant authorities in relation to the Waste Treatment business to be acquired. Closing is expected during the third quarter of 2016.

BOARD OF DIRECTORS' MEETING HELD ON 22 APRIL 2016

During its meeting held on 22 April 2016, EDF's Board of Directors reviewed the Group's long term financial trajectory under the new adverse market price conditions.

A responsible, efficient electricity producer that champions low carbon growth, EDF group' ambitions are consistent with its CAP 2030 strategy priorities:

- proximity to customers and local communities;
- low carbon generation, with a balanced mix of nuclear and renewable energy;
- international expansion.

An action plan was presented to the Board of Directors which includes:

- net investments (excluding Linky and excluding new developments) optimised by close to €2 billion in 2018 compared to 2015. Net investments should reach €10.5 billion in 2018;
- a reduction in operational expenditures of at least €1 billion in 2019 compared to 2015;
- an assets disposals plan of c. €10 billion by the 2020 horizon.

These measures will be included in the Group's Medium Term Plan to be presented to the Board of Directors in December as every year.

The Board of Directors examined the need to increase the company's equity capital:

- EDF shared its intention to propose an option to pay the dividend related to fiscal years 2016 and 2017 in shares and to submit to the Board of Directors, by the closure date of the 2016 accounts and subject to market conditions, a capital increase project via a market operation for an amount of around €4 billion;
- the French State informed the Board of its position on the matter: it is disclosed separately.

Wholesale power prices – ranging between 25 and 28 €/MWh since the beginning of 2016 – are at an all-time low. Prices could stay at this low level in France and in Europe over the next two to three years. In France, the end of regulated tariffs for businesses at end 2015 increases EDF's exposure to wholesale market prices. Around 65% of EDF's generation output in France is now exposed to market prices.

EDF announces consequently an action plan² in order to enable the company, despite these adverse market conditions, to continue its strategic development within the CAP 2030 framework.

1. Investments optimisation and selectivity in accordance with the CAP 2030 strategy

Investments on the existing scope will be reduced by close to $\in 2$ billion between 2015 and 2018, with the objective to reach $\in 10.5$ billion by then.

Investments excluding existing scope representing close to $\in 2$ billion per year are planned until 2018 in regulated activities (Linky meters whose rollout is already under way, construction of new generation units from renewable energy sources, Hinkly Point C project).

The total amount of Group investments should hence range between \in 12.5 billion and \in 13.5 billion per year over the next three years.

2. Reduction in operational expenditures

The Group already reduced cost by around €300 million in 2015 compared to 2014 and announced, during the presentation of its annual results on 16 February 2016, a cost reduction objective of €700 million in 2018 compared to 2015.

Cost reductions are strengthened and furthered. The reduction objective is reinforced to at least \leq 1 billion in 2019 compared to 2015.

3. Assets disposals plan to finance the Group's new developments

The disposals plan initiated in 2015 to contribute to financing investments corresponding to new developments is strengthened. The Group sets an assets disposals target of around €10 billion between 2015 and the 2020 horizon, including an evolution of RTE's equity capital, thermal power generation assets outside of France and minorities stakes.

^{1.} Pyrolisis is a thermochemical decomposition of organic material at elevated temperatures.

^{2.} These figures do not include the projected acquisition of a controlling stake in AREVA NP.

5.3 Changes in market prices from January to March 2016

In France, the electricity prices of the day for the day after (spot) amounted on the first quarter 2016 to \leq 28.8/MWh on average and on basis (- \leq 16.1/MWh compared to the first quarter 2015), to \leq 25.2/MWh in Germany (- \leq 6.9/MWh) and \leq 45.1/MWh in England (- \leq 9.8/MWh). This difference can be explained by the more relaxed climatic conditions compared to last year and by the decrease of commodity prices which resulted in a sharp decrease of the operating cost of thermal power plants in all countries.

The price of the Brent barrel reached \$27.9/bbl on 20 January 2016, its lowest level in 12 years. It then climbed gradually to close the quarter at \$39.6/bbl. Over the quarter, it sharply decreased compared to the first quarter of 2015 (an average of \$35.2/bbl, a drop of \$19.9/bbl).

The (spot) gas prices in the French market for PEG Nord were at ≤ 13.1 /MWh on average over the first quarter 2016, a drop of ≤ 8.7 /MWh in comparison with the same period last year. This drop is due to the drop in the price of oil, through the indexing of gas supply contracts, and to the significant increase of supply volumes by pipeline from Russia to Western Europe. Lastly, the relatively gentle weather conditions did not contribute to supporting the temperature-sensitive portion of natural gas demand (heating).

The prices of CO_2 are lower in comparison to last year (\in 5.6/t against \in 7.2/t for the same time period). This drop can be explained by a decrease

in the demand for quotas, because of the subdued industrial perspectives and because of projected operation being reviewed downwards, even to the extent of closing of several carbon-fired power plants, mainly in the United Kingdom.

The (spot) coal prices are on average at \$45.3/t, a drop of 25% in comparison to the price (spot) of the first quarter 2015. Supply is still abundant, in the face of depressed demand, in Asia in particular. Russian coal exports also increased, the production of coal having become very competitive in that country, owing to the depreciation of the ruble in relation to the dollar. That is also the case in Colombia and in South Africa. The drop in the price of oil also brought about a drop in production costs, which was particularly marked in the open-pit mines. However, some mines begin to close because they are not profitable at this price level.

The forward electricity baseload price in France for delivery the following year reached ≤ 27.5 /MWh on average on the quarter, in comparison to ≤ 38.9 / MWh in the first quarter 2015. This strong drop is linked in particular to the drop in the price of fuels, gas, coal, as well as the drop in the price of CO₂.

Forward prices in neighboring countries also dropped, especially in England and in Germany.

5.4 **Outlook**

2016 TARGETS

On 16 February 2016, the Group announced the following financial objectives for 2016:

- Group EBITDA: €16.3 to 16.8 billion;
- Net financial debt/EBITDA: between 2× and 2.5×;
- Pay-out ratio, based on net income excluding non-recurring items¹ post-hybrid: 55% to 65%.

With regard to operations in France, the Group expects for 2016 a higher volume of planned outages than in 2015, with six 10-year inspections, the replacement of the steam generators of two reactors, and the gradual deployment of backup diesel generators as part of post-Fukushima works. EDF is targeting between 410TWh and 415TWh of nuclear output.

Also, in the United Kingdom, EDF Energy plans to reach a nuclear output equivalent to 2015.

2018 OUTLOOK

In February 2014, the Group announced its ambition of achieving a positive cash flow after dividends excluding Linky in 2018. This objective has been confirmed during the presentation of the annual results on 16 February 2016.

With respect to the net investment trajectory excluding new developments such as Hinkley Point C or Linky, net of disposals, the Group confirms its

ambition for the investments to reach a maximum of ≤ 10.5 billion in 2018. A plan of disposals has been set up to contribute to the financing of new developments.

The action plan is, in addition, reliant upon the pursuit of improving the working-capital requirement, with the objective of optimising the cash flow by \in 1.8 billion in 2018, on a standardised reference. At the end of 2015, this plan has already implied an optimisation of the 2015 working-capital requirement by \in 0.7 billion.

Lastly, the plan relies on a decrease in the Group's operating costs, which will be in 2018 \in 700 million below the 2015 cost base.

These targets and forward-looking statements are based on reasonable figures, assumptions and estimations. 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 2 ("Risk factors and control framework") 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 1.3 ("Group 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. Net income excluding non-recurring items adjusted for remuneration from hybrid emissions recognised in equity.



Montahut hydropower plant, Herault ©EDF - Jean-marie Taddei

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6.1 **Consolidated Financial Statements at 31 December 2015**

CONSOLIDATED INCOME STATEMENTS

(in millions of Euros)	Notes	2015	2014 ⁽¹⁾
Sales	7	75,006	73,383
Fuel and energy purchases	8	(38,775)	(37,213)
Other external expenses	9	(9,526)	(9,181)
Personnel expenses	10	(12,529)	(11,785)
Taxes other than income taxes	11	(3,641)	(3,593)
Other operating income and expenses	12	7,066	5,668
Operating profit before depreciation and amortisation		17,601	17,279
Net changes in fair value on Energy and Commodity derivatives, excluding trading activities		175	203
Net depreciation and amortisation		(9,009)	(7,940)
Net increases in provisions for renewal of property, plant and equipment operated under concessions		(102)	(157)
(Impairment)/reversals	13	(3,500)	(1,189)
Other income and expenses	14	(885)	(212)
Operating profit		4,280	7,984
Cost of gross financial indebtedness	15.1	(1,994)	(2,243)
Discount effect	15.2	(2,812)	(2,996)
Other financial income and expenses	15.3	2,218	2,688
Financial result	15	(2,588)	(2,551)
Income before taxes of consolidated companies		1,692	5,433
Income taxes	16	(483)	(1,839)
Share in net income of associates and joint ventures	23	192	179
GROUP NET INCOME		1,401	3,773
EDF net income		1,187	3,701
Net income attributable to non-controlling interests		214	72
Earnings per share (EDF share) in Euros:	17		
Earnings per share		0.32	1.78
Diluted earnings per share		0.32	1.78

(1) EDF Energy's transactions on the wholesale electricity markets (excluding trading activities), which showed a net short position at 31 December 2014, have been reclassified from energy purchases to sales in the amount of €509 million.

STATEMENTS OF NET INCOME AND GAINS AND LOSSES RECORDED DIRECTLY IN EQUITY

	2015			2014			
(in millions of Euros)	EDF net	Net income attributable to non-controlling interests	Total	EDF net income	Net income attributable to non-controlling interests	Total	
Group net income	1,187	214	1,401	3,701	72	3,773	
Gross change in fair value of available-for-sale financial assets (1)	(703)		(703)	535		535	
Related tax effect	214	-	214	(160)	-	(160)	
Associates' and joint ventures' share of fair value of available-for-sale financial assets	(103)	-	(103)	3	_	3	
Change in fair value of available-for-sale financial assets	(592)	-	(592)	378	-	378	
Gross change in fair value of hedging instruments (1)	(600)	(5)	(605)	(1,984)	(19)	(2,003)	
Related tax effect	(14)	2	(12)	427	5	432	
Associates' and joint ventures' share of fair value of hedging instruments	(3)	-	(3)	(27)	-	(27)	
Change in fair value of hedging instruments	(617)	(3)	(620)	(1,584)	(14)	(1,598)	
Translation adjustments - controlled entities	1,199	159	1,358	1,395	187	1,582	
Translation adjustments - associates and joint ventures	426	-	426	482	_	482	
Translation adjustments	1,625	159	1,784	1,877	187	2,064	
Gains and losses recorded directly in equity that will be reclassified subsequently to profit or loss	416	156	572	671	173	844	
Gross change in actuarial gains and losses on post-employment benefits	1,009	(9)	1,000	(4,629)	18	(4,611)	
Related tax effect	(153)	1	(152)	245	(4)	241	
Associates' and joint ventures' share of change in actuarial gains and losses on post-employment benefits	35	-	35	(177)	_	(177)	
Actuarial gains and losses on post-employment benefits	891	(8)	883	(4,561)	14	(4,547)	
Gains and losses recorded directly in equity that will not be reclassified subsequently to profit or loss	891	(8)	883	(4.561)	14	(4,547)	
Total gains and losses recorded directly in equity	1.307	148	1.455	(3.890)	187	(3,703)	
NET INCOME AND GAINS AND LOSSES	.,		.,	((-,)	
RECORDED DIRECTLY IN EQUITY	2,494	362	2,856	(189)	259	70	

(1) 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	31/12/2015	31/12/2014 ⁽¹⁾
Goodwill	18	10,236	9,694
Other intangible assets	19	8,889	8,884
Property, plant and equipment operated under French public electricity distribution concessions	20	51,600	50,257
Property, plant and equipment operated under concessions for other activities	21	7,645	7,851
Property, plant and equipment used in generation and other tangible assets owned by the Group	22	71,069	69,392
Investments in associates and joint ventures	23	11,525	10,983
Non-current financial assets	36	35,238	33,485
Other non-current receivables	26	1,830	2,024
Deferred tax assets	16.3	2,713	2,590
Non-current assets		200,745	195,160
Non-current assets Inventories	24	200,745 14,714	195,160 14,747
Non-current assets Inventories Trade receivables	24 25	200,745 14,714 22,259	195,160 14,747 23,176
Non-current assets Inventories Trade receivables Current financial assets	24 25 36	200,745 14,714 22,259 27,019	195,160 14,747 23,176 20,752
Non-current assets Inventories Trade receivables Current financial assets Current tax assets	24 25 36	200,745 14,714 22,259 27,019 1,215	195,160 14,747 23,176 20,752 600
Non-current assets Inventories Trade receivables Current financial assets Current tax assets Other current receivables	24 25 36 26	200,745 14,714 22,259 27,019 1,215 8,807	195,160 14,747 23,176 20,752 600 8,793
Non-current assets Inventories Trade receivables Current financial assets Current tax assets Other current receivables Cash and cash equivalents	24 25 36 26 37	200,745 14,714 22,259 27,019 1,215 8,807 4,182	195,160 14,747 23,176 20,752 600 8,793 4,701
Non-current assets Inventories Trade receivables Current financial assets Current tax assets Other current receivables Cash and cash equivalents Current assets	24 25 36 26 37	200,745 14,714 22,259 27,019 1,215 8,807 4,182 78,196	195,160 14,747 23,176 20,752 600 8,793 4,701 72,769
Non-current assets Inventories Trade receivables Current financial assets Current tax assets Other current receivables Cash and cash equivalents Current assets Assets classified as held for sale	24 25 36 26 37 46	200,745 14,714 22,259 27,019 1,215 8,807 4,182 78,196	195,160 14,747 23,176 20,752 600 8,793 4,701 72,769 18

(1) The figures published for 2014 have been restated for the impact of retrospective application of IFRIC 21 (see note 2).

EQUITY AND LIABILITIES

(in millions of Euros)	Notes	31/12/2015	31/12/2014 ⁽¹⁾
Capital	27	960	930
EDF net income and consolidated reserves		33,789	34,316
Equity (EDF share)		34,749	35,246
Equity (non-controlling interests)	27.5	5,491	5,419
Total equity	27	40,240	40,665
Provisions related to nuclear generation - back-end of the nuclear cycle, plant decommissioning and last cores	29	44,825	42,398
Provisions for decommissioning of non-nuclear facilities	30	1,447	1,297
Provisions for employee benefits	31	21,511	23,060
Other provisions	28	2,190	1,841
Non-current provisions	28	69,973	68,596
Special French public electricity distribution concession liabilities	33	45,082	44,346
Non-current financial liabilities	38	54,159	47,274
Other non-current liabilities	35	5,126	4,956
Deferred tax liabilities	16.3	4,122	4,315
Non-current liabilities		178,462	169,487
Current provisions	28	5,354	5,254
Trade payables	34	13,284	14,864
Current financial liabilities	38	17,473	14,184
Current tax liabilities		506	441
Other current liabilities	35	23,622	23,052
Current liabilities		60,239	57,795
Liabilities related to assets classified as held for sale	46	-	-
TOTAL EQUITY AND LIABILITIES		278,941	267,947

(1) The figures published for 2014 have been restated for the impact of retrospective application of IFRIC 21 (see note 2).

CONSOLIDATED CASH FLOW STATEMENTS

(in millions of Euros)	otes	2015	2014
Operating activities:			
Income before taxes of consolidated companies		1,692	5,433
Impairment/(reversals)		3,500	1,189
Accumulated depreciation and amortisation, provisions and changes in fair value		11,392	8,981
Financial income and expenses		951	1,068
Dividends received from associates and joint ventures		322	672
Capital gains/losses		(1,593)	(1,311)
Change in working capital	43.1	132	(1,041)
Net cash flow from operations		16,396	14,991
Net financial expenses disbursed		(1,252)	(1,752)
Income taxes paid		(1,508)	(2,614)
European Commission decision of 22 July 2015 (1)	3.3	(906)	-
Net cash flow from operating activities		12,730	10,625
Investing activities:			
Acquisitions/disposals of equity investments, net of cash (acquired/transferred)		586	1,308
Investments in intangible assets and property, plant and equipment	43.2	(14,789)	(13,721)
Net proceeds from sale of intangible assets and property, plant and equipment		964	314
Changes in financial assets		(5,600)	(294)
Net cash flow used in investing activities		(18,839)	(12,393)
Financing activities:			
Transactions with non-controlling interests (2)		64	355
Dividends paid by parent company	27.3	(1,420)	(2,327)
Dividends paid to non-controlling interests		(326)	(229)
Purchases/sales of treasury shares		(14)	2
Cash flows with shareholders		(1,696)	(2,199)
Issuance of borrowings		9,422	6,894
Repayment of borrowings		(2,336)	(7,470)
Issuance of perpetual subordinated bonds	27.4	-	3,970
Payments to bearers of perpetual subordinated bonds	27.4	(591)	(388)
Funding contributions received for assets operated under concessions		152	177
Investment subsidies		623	239
Other cash flows from financing activities		7,270	3,422
Net cash flow from financing activities		5,574	1,223
Net increase/(decrease) in cash and cash equivalents		(535)	(545)
CASH AND CASH EQUIVALENTS – OPENING BALANCE		4,701	5,096
Net increase/(decrease) in cash and cash equivalents		(535)	(545)
Effect of currency fluctuations		(36)	113
Financial income on cash and cash equivalents		13	17
Effect of reclassifications		39	20
CASH AND CASH EQUIVALENTS – CLOSING BALANCE	37	4,182	4,701

(1) On 22 July 2015 the European Commission issued a new decision classifying the tax treatment of provisions established between 1987 and 1996 for renewal of French general electricity network facilities as State aid incompatible with European Union rules (see note 3.3).

(2) Contributions via capital increases or reductions and acquisitions of additional interests in controlled companies.



CHANGES IN CONSOLIDATED EQUITY

(in millions of Euros)	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
Equity at 31/12/2013	930	(47)	847	62	32,415	34,207	4,998	39,205
Restatements due to change of accounting method (1)	_	_	_	_	55	55	_	55
Equity at 31/12/2013 (restated) ⁽¹⁾	930	(47)	847	62	32,470	34,262	4,998	39,260
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 $^{\scriptscriptstyle (3)}$	_	_	_	-	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 (restated) ⁽¹⁾	930	(41)	2,724	(1,144)	32,777	35,246	5,419	40,665
Gains and losses recorded directly in equity	_	-	1,625	(1,209)	891	1,307	148	1,455
Net income	-	-	-	-	1,187	1,187	214	1,401
Net income and gains and losses recorded directly in equity	_	_	1,625	(1,209)	2,078	2,494	362	2,856
Payments on perpetual subordinated bonds	_	_	-	_	(591)	(591)	_	(591)
Dividends paid	_	_	-	_	(2,327)	(2,327)	(327)	(2,654)
Purchases/sales of treasury shares	-	3	-	-	-	3	-	3
Capital increase by EDF (4)	30	-	-	-	876	906	-	906
Other changes (5)	-	-	-	-	(982)	(982)	37	(945)
EQUITY AT 31/12/2015	960	(38)	4,349	(2,353)	31,831	34,749	5,491	40,240

(1) Figures published for 2014 have been restated for the impact of retrospective application of IFRIC 21 (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 \in 3,970 million net of transaction costs (see note 3.6.3).

(4) In 2015, the capital increase and issue premium, totalling €906 million, relate to payment of the scrip interim dividend for 2015 (see note 27.3).

(5) "Other changes" mainly includes the effect of the European Commission decision of 22 July 2015 (see note 3.3).

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Notes to the consolidated financial statements

Electricité 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 2015 were prepared under the responsibility of the Board of Directors and approved by the Directors at the Board meeting held on 15 February 2016. They will become final after approval at the General Shareholders' Meeting to be held on 12 May 2016.

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 2015 are prepared under the international accounting standards published by the IASB and approved by the European Union for application at 31 December 2015. These international standards are IAS (International Accounting Standards), IFRS (International Financial Reporting Standards), and SIC and IFRIC interpretations.

The comparative figures for 2014 presented in the notes to these consolidated financial statements have been restated for the impact of retrospective application of IFRIC 21 (see note 2).

1.2 CHANGES IN ACCOUNTING METHODS AT 31 DECEMBER 2015

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 2015 are identical to those used in the consolidated financial statements for the year ended 31 December 2014.

1.2.1 Accounting changes introduced in the consolidated financial statements at 31 December 2015: First application of IFRIC 21

IFRIC Interpretation 21 was published in May 2013 by the IFRS Interpretations Committee (IFRS IC) to clarify the triggering event for recognising a liability for levies (duties and taxes other than income taxes). This interpretation defines the triggering event for a tax liability as the activity that makes the levy due, in application of the relevant laws and regulations.

IFRIC 21 was adopted by the European Union on 13 June 2014 and has been applied by the EDF group since 1 January 2015, with retrospective application to the consolidated financial statements published for 2014. In compliance with IAS 8 "Accounting policies, changes in accounting estimates and errors", the resulting impacts on the Group's consolidated financial statements are disclosed in note 2.1.

This interpretation changes existing practices for annual taxes that become due if an entity is in operation at a specified date or if it reaches a minimum threshold in its activity.

Certain taxes are no longer spread over the year, but recognised in full as soon as the triggering event arises, which is in most cases the first half-year.

1.2.2 Standards and amendments adopted by the European Union but not yet mandatory in 2015 and not applied early by the Group

The Group has decided against early application of the following amendments which have been adopted by the European Union but were not mandatory for years beginning on 1 January 2015:

amendments to IAS 19 entitled "Defined benefit plans – Employee contributions";

- amendments to IAS 16 and IAS 38 entitled "Clarification of acceptable methods of depreciation and amortisation";
- amendments to IAS 1 entitled "Disclosure initiative";
- amendments to IFRS 11 entitled "Accounting for acquisitions of interests in joint operations".

The Group considers that future application of the amendments to IAS 1, IAS 19, IAS 16 and IAS 38 will not have a significant impact on the annual consolidated financial statements.

The amendments to IFRS 11 "Accounting for acquisitions of interests in joint operations", which must be applied prospectively for financial years beginning on or after 1 January 2016, could have impacts if the Group acquires initial or additional interests in a joint operation that constitutes a business as defined by IFRS 3.

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";
- IFRS 16 "Leases";
- amendments to IFRS 10 and IAS 28 entitled "Sale or contribution of assets between an investor and its associate or joint venture";
- amendments to IFRS 10, IFRS 12 and IAS 28 entitled "Investment entities: Applying the consolidation exception";
- amendments to IAS 12 "Recognition of Deferred Tax Assets for Unrealised Losses";
- amendments to IAS 7, as part of the "Disclosure initiative" project.

Subject to approval by the European Union, application of IFRS 15 "Revenue from contracts with customers" will be mandatory for financial years beginning on or after 1 January 2018.

The Group is currently reviewing all significant contracts with its customers in order to be able to determine the new standard's potential impact on recognition of sales revenues (in terms of valuation and timing of revenue recognition).

Subject to approval by the European Union, application of IFRS 9 "Financial instruments" 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".

Subject to approval by the European Union, application of IFRS 16 "Leases" will be mandatory for financial years beginning on or after 1 January 2019.

IFRS 16 requires all leases other than short-term leases and leases of low-value assets to be recognised in the balance sheet. Currently, leases classified as "operating leases" are reported as off-balance sheet items.

The potential impact of the other standards and amendments listed above 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 operating 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 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 technical processes, costs, inflation rates, long-term discount rates, the useful life of plants currently in operation 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 relating to nuclear provisions are presented in note 29.1.5.

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 2015 are presented in note 31. These assumptions are updated annually. The Group considers the actuarial assumptions used at 31 December 2015 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 classify the type of partnership arrangement represented by a jointly-controlled entity.

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 Réseau de Transport d'Électricité (RTE), but EDF ceased exercising control (exclusive or joint) over RTE in 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 its 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 (see note 47.3). 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, since 2014 the Group has held a 30% investment in Edens, with F2i. However, the governance arrangements and contractual agreements introduced for Edens in connection with this transaction give Edison exclusive control over the company. In application of IFRS 10, Edens is therefore fully consolidated (via Edison) in the Group's consolidated financial statements.

To determine the appropriate joint arrangement classification for each jointly-controlled entity, the Group examines 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.

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 affect the amount of 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 Groupcontrolled 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 beginning 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 (stock options, stock 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 previouslyheld 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. After initial recognition, goodwill is carried at cost less any impairment recognised.

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.

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 1.3.28);
- 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
- fossil-fired 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
i	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.

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 successing 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 provided 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 and commodity 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. Medium and long-term energy and commodity prices are determined based on macroeconomic assumptions and fundamental supply-demand balance models, whose results are regularly compared to the figures issued by forecasting bodies for the energy sector. More specifically, medium and long-term electricity prices are determined using models for forecast electricity demand, medium- and long-term forecasts for fuel and CO₂ prices, and expected changes in installed capacity and the mix in technologies used by the generation fleet in the electric system.

These calculations may be influenced by several variables:

changes in interest rates and market risk premiums;

- changes in tariff regulations and market prices for energy and commodities market levels;
- the Group's market share, and the attrition rate on customer portfolios;
- the useful lives of facilities and concessions where relevant;
- 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 fairvalue 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 Loans and financial liabilities

When specific hedge accounting treatments are not applied (see note 1.3.16.1.6 (A)), loans and 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 loan or 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 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.

Loans and financial liabilities include bonds that are covered by a fair value hedge. In application of hedge accounting, their balance sheet value is adjusted for changes in fair value attributable to the hedged risks (foreign exchange and interest rate risks).

(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-forsale 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-forsale 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; and
- 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. fluoration, 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 fossil-fired 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 1.3.28);
- 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 immediately available liquidities and very short-term investments that are readily convertible into a known amount of cash, 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

In 2013 and 2014 EDF issued perpetual subordinated bonds comprising several tranches in Euros, US dollars and pounds sterling (a "hybrid" bond issue). These bonds are redeemable at the initiative of EDF after a minimum period that depends on the specific terms of the issue, 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 fixed and reviewable based on contractual clauses that vary according to the specific terms of the issue. There is no obligation for EDF to make any payment, due to the existence of contractual clauses that allow it to defer payment indefinitely. However, those clauses stipulate that deferred payments must be made if it is decided to pay dividend to EDF's shareholders. All these features give EDF an unconditional right to avoid paying out cash or another financial asset in redemption or interest on the principal. Consequently, in compliance with IAS 32, these bonds are recorded in equity and any payment made is treated as dividends.

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 1.3.28).

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, EDF 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 sector 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 and Engie groups 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 Engie;
- 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, subject to a ceiling) 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 three 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;
- the EDF Energy Pension Scheme (EEPS). This scheme was established in March 2004 and membership remains open to new employees.

In 2015 a ceiling was introduced on pensionable pay in the BEGG and EEGSG plans. This ceiling will be adjusted annually based on a specific index, with a maximum increase of 1% for employees whose basic salary is above the ceiling (see note 31.1.2).

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 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 the plan 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 workrelated 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 yearend 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 1.6%, less the asset's historical value. This amount is based on the wear and tear on the asset and discounted at a rate of 4.3%;
- amortisation of the grantor's financing is also discounted at the rate of 4.3%.

The following table shows the impacts of this simulation for EDF and ERDF in 2015:

IMPACTS ON THE INCOME STATEMENT

(in millions of Euros and before taxes)	2015
Operating profit	420
Financial result	(550)
Income before taxes of consolidated companies	(130)

IMPACTS ON THE BALANCE SHEET - EQUITY

(in millions of Euros and before taxes)	2015
At opening date	2,095
At closing date	1,965

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 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).

1.3.28 Environment

1.3.28.1 Greenhouse gas emission rights

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 no consideration 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.

1.3.28.2 Renewable energy certificates

In application of EU Directive 2009/28/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 until 2015, Poland and Belgium).

The renewable energy certificates system may apply to:

- non-obligated electricity producers when the obligation applies to energy sales (EDF Énergies Nouvelles, Poland);
- 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.

1.3.28.3 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. A provision is recognised if the energy savings achieved are lower than the cumulative energy savings obligation. The amount of the provision is equal to the cost of actions still to be taken to meet the obligations related to the energy sales made.

1.3.28.4 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: FIRST APPLICATION OF IFRIC 21

IFRIC 21 became mandatory on 1 January 2015 and is applied retrospectively, in compliance with IAS 8.

For the Group, the main consequence of this change in accounting method concerns the recognition of certain taxes, which are no longer spread over the year but recorded as soon as the triggering event for those taxes arises, which in most cases is during the first half-year.

The taxes concerned by this change in accounting method essentially relate to the EDF group's businesses in France. Many of them are taxes for which the triggering event arises on 1 January, such as the tax on nuclear facilities, the tax on network firms (IFER), land tax, pylon tax and hydropower tax.

Application of IFRIC 21 has no significant impact on the annual consolidated financial statements.

Note 3 Significant events and transactions

3.1 MINISTERIAL ORDER CONCERNING THE COST OF THE CIGÉO STORAGE PROJECT

On 15 January 2016 the Ministry of Ecology, Sustainable Development and Energy issued an order setting the cost associated with implementation of long-term management solutions for long-lived medium and high-level radioactive waste under the Cigéo storage project at €25 billion under 2011 economic conditions. This cost valuation is required by Article L. 542-12 of France's Energy Code.

The cost stated in the order constitutes an objective to be met by the French Agency for Radioactive Waste Management (ANDRA), in compliance with safety standards set by the Nuclear Safety Authority (ASN), in close cooperation with operators of nuclear installations. In application of this order, the cost of the Cigéo project will be regularly updated, at least at each key milestone of the project's development (authorisation to create the facility, commissioning, end of the "pilot industrial phase", safety reviews) in accordance with the opinion of the ASN.

The cost of the Cigéo project set by the Ministerial Order is €25 billion under the economic conditions of 2011. This figure replaces the estimated benchmark cost of €20.8 billion used by the EDF Group for its consolidated financial statements at 31 December 2014 and 30 June 2015.

At 31 December 2015, the new cost figure has resulted in an increase of around €820 million in the provisions for long-term radioactive waste management established to cover future expenses relating to the Cigéo deep storage project.

This increase in provisions has a negative impact of \in 509 million, net of taxes, on EDF net income for 2015.

3.2 EDISON: ARBITRATION CONCERNING LONG-TERM GAS SUPPLY CONTRACTS

On 27 November 2015, the International Chamber of Commerce Court of Arbitration notified Edison and ENI of its decision regarding arbitration concerning the long-term Libyan gas contract price. This decision led to a positive impact of €855 million on the Group's operating profit before depreciation and amortisation for 2015.

On 29 August 2014, the Arbitration Institute of the Stockholm Chamber of Commerce notified Edison and Promgas of its ruling on revision of gas prices with Russia. This ruling had a positive impact of \notin 80 million on the Group's operating profit before depreciation and amortisation for 2014 (including compensation received for previous years).

3.3 EUROPEAN COMMISSION DECISION ON THE TAX TREATMENT OF PROVISIONS ESTABLISHED BETWEEN 1987 AND 1996 FOR RENEWAL OF THE GENERAL NETWORK

On 22 July 2015 the European Commission adopted a new decision classifying the tax treatment of provisions established between 1987 and 1996 for renewal of the General Network facilities as state aid that is incompatible with European Union rules.

This decision followed the European Union General Court's cancellation, through a decision of December 2009 upheld by the Court of Justice of the European Union in June 2012, of the Commission's initial decision of 16 December 2003 on the grounds that when making its decision the Commission should have applied the private investor principle to determine whether or not the action constituted state aid.

Following this cancellation the French state repaid €1,224 million to EDF on 30 December 2009 (€889 million in principal and €335 million in interest), corresponding to the sum paid by EDF to the French state in February 2004 (the respective shares of ERDF and RTE had already been transferred). The European Commission then decided in May 2013 to reopen the proceedings.

In its decision of 22 July 2015 the Commission concluded that state aid incompatible with the common market had indeed been given. As a result of this decision the French state ordered EDF to reimburse the amount corresponding to the alleged aid, plus interest calculated as determined by the Commission.

In response to this decision EDF reimbursed the sums demanded. However, EDF contests the existence of unlawful state aid and filed an action for annulment before the European Union General Court on 22 December 2015.

EDF has recognised the consequences of this decision as follows in its consolidated financial statements at 31 December 2015:

- in a symmetrical approach to the impacts recorded in the financial statements at 31 December 2009:
 - the principal amount of tax (€889 million) is charged to the Group's consolidated equity,
 - concerning the associated financial interest, amounting to €494 million, the portion concerning EDF and ERDF is included in "Other financial income and expenses" and the portion concerning RTE is included in "Share in net income of associates and joint ventures". The impact on EDF net income amounts to €(354) million;
- on 13 October 2015, EDF made a corresponding payment of €1,383 million to the French state, which was partly offset by a reimbursement of €375 million received from RTE;
- the value of RTE shares is thus reduced by a net-of-tax amount equivalent to its share in the above principal and interest (in "Investments in associates and joint ventures").

The Commission's decision leads to a net-of-tax increase of ${\leqslant}906$ million in net indebtedness for the Group.

3.4 **ISSUANCE OF SENIOR BONDS**

On 8 October 2015 EDF issued several tranches of a senior bond in US dollars:

- US\$1,500 million with 5-year maturity and a 2.35% fixed coupon;
- US\$500 million with 20-year maturity and a 4.75% fixed coupon;
- US\$1,150 million with 30-year maturity and a 4.95% fixed coupon;
- US\$350 million, with 40-year maturity and a 5.25% fixed coupon.

On the same date, EDF launched a US\$1,250 million green bond with 10-year maturity and a fixed coupon of 3.625%.

These issues follow a US\$1,500 million senior "Formosa Bond" issue on the Taiwanese market on 25 September 2015 (30-year maturity and a 4.75% fixed coupon).

These transactions enable the Group to further strengthen its balance sheet.

3.5 AGREEMENTS FOR CONSTRUCTION OF THE HINKLEY POINT C NUCLEAR POWER PLANT

On 21 October 2015, EDF and China General Nuclear Power Corporation (CGN) signed a strategic investment agreement for joint investment in the construction of two reactors at Hinkley Point C.

The agreement includes a broad UK partnership to develop new nuclear power plants at Sizewell and Bradwell. Contracts between the British Government and EDF, and contracts with Hinkley Point C's four main suppliers, have also been finalised.

Under the Strategic Investment Agreement, EDF's share in Hinkley Point C should be 66.5% and CGN's should be 33.5%. Without reducing this initial stake below 50%, EDF will in due course consider bringing other investors into the project.

EDF and CGN have also agreed the principal terms of a wider partnership for the joint development of new nuclear power stations at Sizewell in Suffolk and Bradwell in Essex. These terms will be finalised before the final investment decision for Hinkley Point C. The stages involved in a final investment decision are as follows:

- finalisation by EDF of its financing plan and contribution by CGN of guarantees for its own financing;
- approval by the EDF and CGN Boards of Directors;
- clearance by merger control and other governmental authorities in China and Europe;
- finalisation of contractual documentation based on agreements signed in October 2015.

3.6 SIGNIFICANT EVENTS AND TRANSACTIONS OF 2014

3.6.1 **Dalkia**

3.6.1.1 **History**

Under the terms of the 25 March 2014 agreement, the EDF group took over all the Dalkia group's activities in France (including Citelum), while Dalkia International's activities were taken over by Veolia Environnement (VE).

As part of the transaction, VE paid the EDF group a net amount of \in 661 million in compensation for the difference in value between the stakes owned by the two shareholders in the various Dalkia entities.

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.

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 around 12,000 people (excluding Citelum).

The Citelum subgroup was also included in Dalkia's French activities that were 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).

3.6.1.2 Accounting treatment in the EDF consolidated financial statements

The acquisition of Dalkia was reflected in the following items in the Group's consolidated financial statements at 31 December 2014:

- a gain on sale of €217 million recorded in "Other income and expenses", resulting from a new fair value measurement of the investment previously held in Dalkia at the date control was acquired;
- recognition of goodwill of €392 million.

This operation enables the Group to develop its involvement in energy services.

3.6.1.3 Dalkia – 2014 scope effect

The income statement for 2014 does not include Dalkia's activities for the first half of the year, because EDF only took control of Dalkia on 25 July 2014.

If the takeover of Dalkia had taken place at 1 January 2014, the Group's sales and operating profit before depreciation and amortisation for 2014 would have been higher by approximately ≤ 1.4 billion and ≤ 0.1 billion respectively.

3.6.2 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 a special dividend of US\$400 million (€290 million), funded by a loan to CENG from Exelon. CENG undertook a commitment that once this loan is fully repaid, it will pay Exelon a dividend of present value equivalent to US\$400 million. EDF was also 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

Note 4 Regulatory events in France

4.1 REGULATED ELECTRICITY SALES TARIFFS IN FRANCE

On 15 July 2015 the French Energy Regulator (*Commission de Régulation de l'Energie* – CRE) published its 2015 report on France's regulated sales tariffs for electricity, in which it reported a tariff shortfall of €922 million for 2014 in addition to previous shortfalls that had not been compensated.

A decision of 30 July 2015 set the regulated sales tariffs that took effect from 1 August 2015. The average increases were 2.5% for the "blue" residential customers' tariffs, 0.9% for the "yellow" tariffs and 4% for the "green" tariffs, while the "blue" tariffs for non-residential customers remained unchanged.

31 December 2015 saw the end of the "yellow" and "green" regulated tariffs. By 1 January 2016 around three quarters of the sites concerned had signed a market-rate contract with their chosen supplier. The remaining quarter who had not yet signed up with a supplier continued to receive electricity from their former supplier, under a transitional contract valid for a maximum period of six months.

4.2 **"TURPE 4" NETWORK ACCESS TARIFFS**

On 28 May 2015 the CRE published its resolution on changes from 1 August 2015 in the TURPE distribution tariffs, which were raised by 0.4%. This rise reflects the stabilisation of the clearance coefficient for the income and expenses adjustment account (CRCP)¹, and a 0.4% increase in inflation.

TURPE transmission tariffs were also increased by 2.4% from 1 August 2015, again corresponding to 2% for the clearance of the CRCP, and 0.4% for inflation.

by the new standards IFRS 10 and IFRS 11, examination of the clauses of the new agreement led 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.

3.6.3 **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.

These issues are recorded in equity from the date of reception of the funds (see note 1.3.20.4).

On 7 May 2014, the CRE had also decided to apply an exceptional 50% reduction to the electricity transmission bills of industrial sites that are large electricity consumers. This measure was initially applicable from 1 August 2014 to 31 July 2015. In its resolution of 11 June 2015 setting the changes in TURPE transmission tariffs, the CRE extended this 50% reduction for electro-intensive users to 31 December 2015. It is now laid down in Article L. 341-4-2 of the Energy Code introduced by Article 157 of the energy transition Law, and can be increased up to 90%. The loss of income for RTE will be compensated through future tariff changes thanks to the CRCP mechanism.

The CRE also began during 2015 to examine the future structure of tariffs for using the public electricity networks (the "TURPE 5" tariffs). On 22 July 2015 it presented its preliminary analyses on the TURPE 5 tariff structure for a consultation process. This consultation, to which the responses were submitted by 25 September 2015, specifically concerned the tariff structure, i.e. the way network costs are allocated between different user types through tariff components, chiefly extraction, injection, metering and management. A further consultation will take place concerning the tariff scale itself.

4.3 **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 collected directly from the end-user.

The CSPE system was reformed by the amended finance Law for 2015, published in the *Journal officiel* on 30 December 2015. The charges for the public energy service (electricity and gas) will be incorporated into the French national budget in 2016. The finance Law introduces a special "Energy Transition" budget item of \leq 4.4 billion, which will be funded

1. A mechanism to measure and offset differences between the actual figures and the forecasts on which tariffs are based.

2. Local distribution companies and Électricité de Mayotte also make small contributions to the system.

in 2016 by the TICFE tax on consumption of electricity (*Taxe Intérieure sur la Consommation Finale d'Électricité*), less \in 2 billion, plus 2.16% of the TICGN tax on gas consumption (*Taxe Intérieure de Consommation sur le Gaz Naturel*). This budget will cover expenses borne by obligated suppliers, such as the additional cost associated with contracts obliging them to purchase renewable energies and biogas, the difference between forecast and actual expenses, the annual contribution to repayment of the accumulated shortfall due to EDF, for which the schedule will be set by an official decision, and reimbursement of CSPE advances for industrial operators who were exempt prior to 2016. Solidarity charges, purchase obligations excluding renewable energies, and the cost of applying the standard national tariffs to areas not connected to France's mainland network are covered by the national budget through the \notin 2 billion "Public Energy Service" budget item.

The Law also introduces changes to energy taxes, increasing the TICGN and coal tax in 2016 and 2017 and replacing the TICFE by the new CSPE. CSPE rates are set at €22.5/MWh for 2016, €2/MWh, €5/MWh or €7.5/MWh for electro-intensive users based on a criterion of kilowatthours per Euro of value added, and €0.5/MWh for hyper-electro-intensive users.

The draft CSPE Decree was presented to France's Higher Energy Board (*Conseil supérieur de l'énergie*, or CSE) on 21 December 2015. Under this proposed Decree, the public financial organisation *Caisse des dépôts (et Consignations)* (CDC) would be required to make the payments to obligated suppliers, one of which is EDF, and keep the "Public Energy Service" and "Energy Transition" accounts. The CRE would be required to determine the amount of the charges for the public energy service (actual and forecast). The procedures for compensating obligated suppliers for these charges are also laid down in the proposed Decree.

The estimated amount of expenses to be covered by compensation for EDF for 2015 is ≤ 6.3 billion, 7% more than in 2014. The main explanation for this rise is the lower level of market prices, which increases the surplus costs of energy covered by purchase obligations to be compensated by the CSPE, and a rise in the volume output by photovoltaic and wind power facilities. The amounts received during 2015 total ≤ 6.1 billion, 17.6% more than in 2014. This rise principally results from the CSPE increase applicable since 1 January 2015 (an increase of ≤ 3 /MWh compared to 2014, taking the CSPE to ≤ 19.5 /MWh for the year 2015).

The agreement signed in early 2013 by EDF and the French authorities, providing for progressive reimbursement to EDF by 31 December 2018 of the receivable consisting of the CSPE shortfall at 31 December 2012 and the costs of bearing this shortfall for the Group, was updated in late 2015 by a ministerial letter received on 26 January 2016. The State has acknowledged the further shortfalls that arose between 2013 and 2015 and the associated interest, estimated at a total €644 million, and authorises EDF to allocate this receivable to dedicated assets in 2016. The amount of the receivable due to EDF is thus €5.9 billion at 31 December 2015 (see note 36.3). The repayment schedule has been adjusted such that this receivable will be fully reimbursed by 2020. It will be set out in a Ministerial Order.

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 12.3 TWh for the first half of 2015. This volume decreased substantially

in the second half of 2015 to 3.8TWh, principally because of the steady decline in prices on the wholesale market, which is becoming a more attractive source of energy supplies, and also due to the termination of framework contracts with several suppliers. No ARENH applications were made at the end of 2015 for supplies in the first half of 2016.

The ARENH price has been set at €42/MWh since 1 January 2012, and is 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 French Energy Regulator CRE. It is still under examination by the European Commission, which must approve the price formula. The French government has deferred the application date of the new Decree until the conclusions of discussions with the European Commission are available.

4.5 ENERGY TRANSITION LAW FOR GREEN GROWTH

After a final reading, on 22 July 2015 the French National Assembly adopted the energy transition Law for green growth, marking the end of a long legislative process. The resulting Law no. 2015-992 of 17 August 2015 on the energy transition for green growth was promulgated in the *Journal officiel* of 18 August 2015 after a decision by the Constitutional Council of 13 August 2015.

4.6 AGIRC-ARRCO AGREEMENT OF 30 OCTOBER 2015

On 30 October 2015 the social partners reached an agreement intended to balance the accounts of the AGIRC-ARRCO public pension body.

This agreement contains several sets of measures, some of which apply from 1 January 2016: smaller adjustments to pensions from 2016 to 2018, moving the pension value adjustment date from 1 April to 1 November, a lower return on plan assets, extending the basis for AGFF's contribution to tranche C of the AGIRC scheme, and other measures aiming to improve management of pension and related systems.

The special pension system for France's electricity and gas sector has been affiliated to the AGIRC-ARRCO standard national system since 2005. Since the new agreement does not change IEG beneficiaries' pension rights, the increase in obligations resulting from this affiliation, amounting to ≤ 1 billion, is recorded in actuarial adjustments.

4.7 ROLLOUT OF THE "LINKY" SMART METER

The work done by ERDF throughout 2015 on the Linky smart meter project reached a key Part 1 milestone on 1 December 2015: the start of the rollout phase. The installation of Linky meters began all over France except in the Paris region where union negotiations were not yet complete. By the end of December 2015, more than 24,000 smart meters were in service and more than 3,000 data concentrators had been installed in substations.

Note 5 Changes in the scope of consolidation

The main changes in the scope of consolidation during 2015 concern the following entities:

5.1 BUDAPESTI ERŐMŰ ZRT (BE ZRT)

On 10 December 2015, the EDF group finalised the sale of its majority 95.6% stake in the Hungarian company Budapesti Erőmű Zrt (BE Zrt) to EP Energy. This operation has no significant impact on the consolidated financial statements.

5.2 **ESTAG**

On 21 December 2015, the EDF group completed the sale of its minority 25% stake in Energie Steiermark Holding AG (Estag) following signature of an agreement for this operation with Macquarie Infrastructure and Real Assets in July 2015.

This operation has no significant impact on the consolidated financial statements.

5.3 NEW AGREEMENT ON THE EDF LUMINUS SHAREHOLDER PACT

On 26 October 2015 Publilec, Socofe, Ethias and Nethys, shareholders of EDF Luminus, and the EDF group signed an amendment to the shareholder pact, reaffirming their intent to support the company's development. This move put an end to the IPO process initiated the previous May.

The amendment signed extends the shareholder pact to 2025, providing for the following reorganisation in the ownership structure (the control exercised by the Group is unaffected):

- four Belgian shareholders will remain: Publilec (26.4%), Socofe (4.7%), Ethias (0.2%) and Nethys (0.1%). Under the shareholder pact, they will benefit from a liquidity mechanism allowing them to exit the capital of EDF Luminus from the end of 2018, subject to certain conditions;
- the EDF Group's stake will rise from 63.5% to 68.6%, as a result of the Group's acquisition of the shares in EDF Luminus held by Publilum and VEH for €58 million.

5.4 CHANGES IN THE SCOPE OF CONSOLIDATION IN 2014

Apart from the Group's takeover of Dalkia group activities and its sale of the activities of Dalkia International described in note 3.6.1, the main changes in the French scope of consolidation during 2014 are presented below.

5.4.1 EDF NORTE FLUMINENSE

5.4.1.1 Acquisition of minority interests

On 11 April 2014, the EDF group acquired the 10% investment held by the Brazilian company Petrobas in the EDF Norte Fluminense SA fossil-fired power plant located in Brazil. The Group now owns 100% of the company's capital. Acquisition of Petrobas' investment had a negative \in 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.

5.4.1.2 Investment in Compagnie Énergétique de Sinop

In December 2014, EDF Norte Fluminense took a 51% investment in Compagnie Énergétique de Sinop (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.

5.4.2 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.

5.4.3 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.

Note 6 Segment reporting

At 31 December 2015

6.1.1

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'Électricité) 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.

		United		Other	Other	Inter- seament	
(in millions of Euros)	France	Kingdom	Italy	international	activities	eliminations	Total
Income statements:							
External sales	39,619	11,618	11,677	5,634	6,458	-	75,006
Inter-segment sales	949	4	17	193	1,765	(2,928)	-
TOTAL SALES	40,568	11,622	11,694	5,827	8,223	(2,928)	75,006
OPERATING PROFIT BEFORE DEPRECIATION AND AMORTISATION	11,517	2,242	1,345	609	1,888	_	17,601
OPERATING PROFIT	4,620	(217)	(814)	(382)	1,073	-	4,280
Balance sheet:							
Goodwill	_	9,163	_	15	1,058	-	10,236
Intangible assets and property, plant and equipment	100,372	14,668	7,350	3,907	12,906	-	139,203
Investments in associates and joint ventures	5,625	61	171	4,891	777	-	11,525
Other segment assets (1)	30,982	5,044	3,196	1,033	7,355	-	47,610
Assets classified as held for sale	_	_	_	-	_	-	-
Other non-allocated assets	_	_	_	-	_	-	70,367
TOTAL ASSETS	136,979	28,936	10,717	9,846	22,096	-	278,941
Other information:							
Net depreciation and amortisation	(5,690)	(1,416)	(856)	(461)	(586)	-	(9,009)
Impairment	(259)	(1,096)	(1,420)	(473)	(252)	-	(3,500)
Equity (non-controlling interests)	-	3,174	633	640	1,044	-	5,491
Investments in intangible assets and property, plant and equipment	9,297	1,823	587	696	2,386	-	14,789

(1) Other segment assets include inventories, trade receivables and other receivables.

At 31 December 2014 6.1.2

		United		Other	Other	Inter-	
(in millions of Euros)	France	Kingdom ⁽²⁾	Italy	international	activities	eliminations	Total
Income statements:							
External sales	39,910	10,669	12,687	5,603	4,514	-	73,383
Inter-segment sales	931	-	3	193	1,374	(2,501)	-
TOTAL SALES	40,841	10,669	12,690	5,796	5,888	(2,501)	73,383
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	5,022	582	-	10,983
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							62,128
TOTAL ASSETS	132,660	28,153	12,996	10,396	21,614	-	267,947
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

Other segment assets include inventories, trade receivables and other receivables.
 EDF Energy's transactions on the wholesale electricity markets (excluding trading activities), which showed a net short position at 31 December 2014, have been reclassified from energy purchases to sales in the amount of €509 million.

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 highvoltage 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).

	Generation /					
(in millions of Euros)	Supply	Distribution	Transmission	Other	Eliminations	Total
2015						
External sales:						
France	25,036	14,612	_	331	(360)	39,619
 International and other activities 	29,556	910	275	4,646	-	35,387
TOTAL SALES	54,592	15,522	275	4,977	(360)	75,006
2014						
External sales:						
France	26,030	14,317	_	460	(897)	39,910
 International and other activities⁽¹⁾ 	29,937	588	245	2,703	-	33,473
TOTAL SALES	55,967	14,905	245	3,163	(897)	73,383

(1) EDF Energy's transactions on the wholesale electricity markets (excluding trading activities), which showed a net short position at 31 December 2014, have been reclassified from energy purchases to sales in the amount of €509 million.

"Other" sales in 2015 include a scope effect due to the acquisition of Dalkia (energy services) on 25 July 2014 (see note 3.6.1.3).

INCOME STATEMENTS

Note 7 Sales

Sales are comprised of:

(in millions of Euros)	2015	2014 ⁽¹⁾
Sales of energy and energy-related services	72,768	70,958
Other sales of goods and services	1,557	1,515
Trading	681	910
SALES	75,006	73,383

(1) EDF Energy's transactions on the wholesale electricity markets (excluding trading activities), which showed a net short position at 31 December 2014, have been reclassified from energy purchases to sales in the amount of €509 million.

Sales of energy and energy-related services for 2014 included the €0.9 billion effects of regularisation of regulated sales tariffs for the period 23 July 2012 to 31 July 2013, and the €1.4 billion effect of consolidation of Dalkia sales from 25 July 2014.

After eliminating these effects, sales for 2015 were down slightly, with lower sales in Italy mainly as a result of unfavourable price effects on the energy sold, and higher sales in France due to rises in the integrated tariffs and a slightly more favourable weather effect than in 2014 which more than made up for unfavourable market conditions.

Note 8 Fuel and energy purchases

Fuel and energy purchases comprise:

(in millions of Euros)	2015	2014 ⁽¹⁾
Fuel purchases used - power generation	(13,572)	(12,307)
Energy purchases	(15,870)	(15,889)
Transmission and delivery expenses	(9,462)	(9,316)
Gain/loss on hedge accounting	(209)	(122)
(Increase)/decrease in provisions related to nuclear fuels and energy purchases	338	421
FUEL AND ENERGY PURCHASES	(38,775)	(37,213)

(1) EDF Energy's transactions on the wholesale electricity markets (excluding trading activities), which showed a net short position at 31 December 2014, have been reclassified from energy purchases to sales in the amount of €509 million.

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:

(in millions of Euros)	2015	2014
External services	(11,631)	(11,316)
Other purchases (excluding external services, fuel and energy)	(2,617)	(2,707)
Change in inventories and capitalised production	4,509	4,673
(Increase)/decrease in provisions on other external expenses	213	169
OTHER EXTERNAL EXPENSES	(9,526)	(9,181)

After elimination of changes in the scope of consolidation (particularly Dalkia from 25 July 2014), other external expenses were down across all sectors, with an overall decrease of (5.1)% from 2014.

Note 10 Personnel expenses

10.1 **PERSONNEL EXPENSES**

Personnel expenses comprise:

(in millions of Euros)	2015	2014
Wages and salaries	(7,878)	(7,426)
Social contributions	(1,867)	(1,668)
Employee profit sharing	(274)	(257)
Other contributions related to personnel	(388)	(373)
Other expenses linked to short-term benefits	(236)	(242)
Short-term benefits	(10,643)	(9,966)
Expenses under defined-contribution plans	(949)	(852)
Expenses under defined-benefit plans	(952)	(723)
Post-employment benefits	(1,901)	(1,575)
Other long-term expenses	11	(237)
Termination payments	4	(7)
Other personnel expenses	15	(244)
PERSONNEL EXPENSES	(12,529)	(11,785)

10.2 AVERAGE WORKFORCE

	2015	2014
IEG status	104,186	103,088
Other	52,126	44,936
AVERAGE WORKFORCE	156,312	148,024

Average workforce numbers for the controlled entities and joint operations are reported on a full-time equivalent basis.

The rise observed in 2015 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:

(in millions of Euros)	2015	2014
Payroll taxes	(258)	(243)
Energy taxes	(1,505)	(1,494)
Other non-income taxes	(1,878)	(1,856)
TAXES OTHER THAN INCOME TAXES	(3,641)	(3,593)

Taxes other than income taxes are essentially land tax, the French business taxes on land and value added, and the economic and regional contribution.

Note 12 Other operating income and expenses

Other operating income and expenses comprise:

(in millions of Euros)	Notes	2015	2014
Operating subsidies	12.1	6,552	6,116
Net income on deconsolidation	12.2	319	254
Gains on disposal of fixed assets	12.2	138	(153)
Net increase in provisions on current assets		(10)	(195)
Net increase in provisions for operating contingencies and losses		(168)	(142)
Other items	12.3	235	(212)
OTHER OPERATING INCOME AND EXPENSES		7,066	5,668

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 $\in 6,320$ million for 2015 ($\in 5,888$ million for 2014). The difference is largely attributable to the decline in market electricity prices and the rise in purchase volumes of wind power and photovoltaic energy, which had the effect of increasing the subsidy receivable for purchase obligations.

12.2 NET INCOME ON DECONSOLIDATION AND GAINS ON DISPOSAL OF FIXED ASSETS

In 2015, net income on deconsolidation and gains on disposal of property, plant and equipment mainly includes:

- gains on sales of EDF Énergies Nouvelles' generation assets as part of the Development and Sale of Structured Assets (DSSA) activities, amounting to €340 million (€225 million for 2014);
- gains on sales of real estate assets in France, amounting to €236 million (€17 million for 2014).

12.3 OTHER ITEMS

Other items notably include losses on non-recoverable operating receivables, which were slightly higher than in 2014. In 2015, another main component of other items is the prior-year effects of arbitration rulings in favour of Edison for the revision of long-term gas supply contract prices (see note 3.2).

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	2015	2014
Impairment of goodwill	18	(34)	(298)
Impairment of other intangible assets	19	(210)	(74)
Impairment of tangible assets and discontinued operations	21-22-46	(3,256)	(832)
Reversal of provision for risk related to Italy		-	15
IMPAIRMENT NET OF REVERSALS		(3,500)	(1,189)

In 2014, the \in (1,189) million of impairment recorded principally included \in (586) million related to EDF Luminus, \in (169) million related to EDF Energy and \in (167) million related to Edison.

In 2015, impairment amounts to €(3,500) million. Details are given below.

13.2 IMPAIRMENT TESTS ON GOODWILL AND OTHER ASSETS AND RECOGNITION OF IMPAIRMENT

The following tables present the results of impairment tests carried out on the main goodwill, intangible assets with indefinite useful lives and other Group assets in 2015, and the key assumptions used.

IMPAIRMENT OF GOODWILL AND INTANGIBLE ASSETS WITH INDEFINITE USEFUL LIVES

Operating segment	Cash-Generating Unit or asset	WACC after tax	Growth rate to infinity	Impairment 2015 (in millions of Euros)
United Kingdom	EDF Energy goodwill	6.7%	-	-
Italy	Edison brand	7.5% – 9.3%	2.0%	-
Other international	EDF Polska goodwill	7.8%	n.a.	(20)
Other activities	Dalkia goodwill and brand	5.8%	1.7%	-
Other impairment of goodwill		_	-	(14)
IMPAIRMENT OF GOODWILL AND IN	ITANGIBLE ASSETS WITH INDEFINITE	USEFUL LIVES		(34)

n.a. = not applicable.

IMPAIRMENT OF OTHER INTANGIBLE ASSETS AND PROPERTY, PLANT AND EQUIPMENT

Operating segment	Cash-Generating Unit or asset	Impairment indicators	WACC after tax	Impairment 2015 (in millions of Euros)
United Kingdom	Thermal assets (coal and gas)	Decline in spreads and assumptions for capacity premiums	6.5% – 6.7%	(1,096)
Italy	Edison assets (principally Power and E&P)	Falling electricity and commodity prices (particularly brent prices)	6.5% – 10.2%	(1,419)
Other international	EDF Polska's thermal assets	Decline in clean dark spreads	7.8%	(186)
Other international	EDF Luminus' thermal assets (Belgium)	Change of model for return on assets	6.4%	(198)
Other international	Gas storage in Germany	Decline in seasonal spreads and volatility	5.9%	(117)
Other activities	EDF Énergies Nouvelles' CGU	Country risk in Greece Poor performance in some activities	4.7% - 13.1%	(107)
France, Other international	Other impairment of assets			(343)
IMPAIRMENT OF OTHER INTAN	IGIBLE ASSETS AND PROPERTY, P	LANT AND EQUIPMENT		(3,466)

General assumptions

Discount rates in the benchmark countries remained relatively stable between 2014 and 2015, as the fall observed in the risk-free rate was offset by a rise in the market risk premium given the relative stability of the expected return on equities markets in the long term.

The recoverable value of all Cash Generating Units (CGUs) was determined by reference to their value in use, based on discounted future cash flows.

At 31 December 2015, market factors continued to influence the profitability of generation facilities in Europe, in an environment marked by:

- (i) long-term scenarios confirm the durable tensions on European energy markets. Falling prices, lower demand, the rise of renewable energies and surplus capacities are all affecting the profitability of coal and gas-fired generation facilities in particular;
- (ii) forward electricity prices showed a significant decrease, notably driven by the fall in oil and gas prices;
- (iii) the capacity premium mechanisms considered as a way of keeping generation facilities online for peakload supplies and sending a sufficient price signal to trigger the investments necessary for network security are not having the intended effect on prices.

United Kingdom – EDF Energy

EDF Energy's goodwill amounted to €9,163 million at 31 December 2015 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 value in use of the generation units incorporates the extension of useful lives of existing nuclear reactors and an assumption that two new EPRs with a 60-year useful life will be commissioned at the Hinkley Point site.

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 for a period of 35 years from the date the two EPRs are first commissioned: if market prices fall below the CfD exercise price, EDF Energy will receive an additional payment.

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.

A 100 base point increase in the WACC would not lead to any impairment of goodwill or existing nuclear assets.

Several new factors led to recognition of impairment in respect of EDF Energy's thermal assets in 2015:

- the lower spreads over the forward and long-term horizons;
- the low level of additional income generated by the capacity premium mechanism;
- the lack of an upward market response to the 2015 announcement of reduced operating time for certain assets.

Impairment of \in (811) million was thus recognised, mainly concerning the Cottam and West Burton A coal-fired plants, and to a lesser extent the West Burton B gas-fired plant commissioned in 2013.

Finally, the lower volatility levels affected the possible benefits of flexibility in gas storage cavities, leading to recognition of impairment of €(285) million related to gas storage assets.

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, €(868) million of impairment was recognised in respect of electricity generation assets.

Most of this impairment concerns fossil-fired plants, which were penalised by market conditions that led to significantly reduced options for asset portfolio optimisation, low demand and downward revision of the capacity premium. It also concerns hydropower and wind power generation assets, which were directly exposed to the fall in market prices.

Impairment of \in (551) million was also recorded in 2015 (including \in (59) million at 30 June) on Edison's exploration-generation activities, due to the long-term downturn in brent crude oil and gas prices over the market horizon. The amount of this impairment takes into account the significant drop in forward brent and gas prices in the last months of the year, caused by unfavourable developments in market conditions. In view of the impairment recorded, the value of these assets is now very sensitive to hydrocarbon prices.

Other international

EDF Polska

The worsening of clean dark spreads adversely affected performance at certain Polish fossil-fired plants, particularly facilities that are fully exposed to market prices. This led to recognition of impairment of \in (206) million: \in (20) million in respect of goodwill and \in (186) million in respect of property, plant and equipment.

EDF Luminus

In view of recent developments in the economic model for the fossil-fired fleet (changes in regulations: setting up strategic reserves, use of power plants in energy auctions, etc), this group of assets is analysed separately from 2015. The corresponding portfolio review led to recognition of impairment of €(198) million on fossil-fired plants, bringing their book value down to zero.

On 17 November 2015, the Belgian nuclear authority AFCN announced its authorisation for resumption of operation by the Doel 3 and Tihange 2 reactors, in which EDF owns a 10.2% share, the rest being held by Electrabel. The two plants were restarted in January 2016.

Germany – gas storage

The lower volatility levels captured by gas storage facilities led to recognition at 31 December 2015 of impairment of \notin (117) million related to German gas storage facility held jointly with EnBW, bringing its book value to zero at that date.

Other activities

EDF Énergies Nouvelles

At 31 December 2015, impairment of \in (107) million (including \in (30) million already recognised at 30 June) was recorded in respect of the various CGUs of EDF Énergies Nouvelles.

Note 14 Other income and expenses

Other income and expenses in 2015 mainly include:

- a €820 million increase to provisions following the decision of 15 January 2016 concerning the cost of implementing long-term management solutions for long-lived medium and high-level radioactive waste under the Cigéo storage project (see notes 3.1 and 29.1.2);
- a €590 million increase to provisions following updating of the industrial scenario and contractor quotes for decommissioning nuclear power plants that are permanently shut down (see note 29.1.3), less a reversal of €332 million from the provision for long-term radioactive waste management resulting from updating of this scenario (see notes 29.1.2 and 29.1.3), giving a net effect of €258 million;

This impairment essentially concerns biogas and biomass projects in the United States, which performed less well than forecast in the initial business plans, and business in Greece due to a higher country risk.

Other impairment of assets

Impairment of \in (316) million was also recognised after the discontinuation of certain projects in France and the United States, and to reflect the closure of the Aramon fossil-fired plant in early 2016.

Impairment of \in (549) million was booked in connection with associates at 31 December 2015 (see note 23).

- income of €287 million in connection with the agreement signed on 30 June 2015 between EDF and Engie concerning the compensation system for employee benefits in kind in the form of energy (see note 31.1.2);
- income of €154 million associated with the change in EDF Energy's defined-benefit pension plans (see note 31.1.2).

Other income and expenses in 2014 included:

- a gain on sale of €217 million from operations in connection with the Group's investment in Dalkia;
- an expense of €(388) million relating to the decommissioning of French nuclear power plants that have been permanently shut down (natural uranium graphite gas-cooled plants (UNGG), Creys-Malville, Brennilis and Chooz A).

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:

(in millions of Euros)	2015	2014
Interest expenses on financing operations	(1,955)	(2,207)
Change in the fair value of derivatives and hedges of liabilities	(9)	(10)
Transfer to income of changes in the fair value of cash flow hedges	(57)	3
Net foreign exchange gain on indebtedness	27	(29)
COST OF GROSS FINANCIAL INDEBTEDNESS	(1,994)	(2,243)

15.2 **DISCOUNT EFFECT**

The cost of unwinding the discount 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 the final discount effect are as follows:

(in millions of Euros)	2015	2014
Provisions for long-term and post-employment employee benefits	(1,070)	(1,273)
Provisions for the back-end of the nuclear cycle, decommissioning and last cores (1)	(1,639)	(1,633)
Other provisions and advances	(103)	(90)
DISCOUNT EFFECT	(2,812)	(2,996)

(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:

(in millions of Euros)	2015	2014
Financial income on cash and cash equivalents	13	17
Gains/(losses) on available-for-sale financial assets	1,174	1,258
Gains/(losses) on other financial assets	408	376
Changes in financial instruments carried at fair value with changes in fair value included in income	(96)	16
Other financial expenses	(491)	(191)
Foreign exchange gain/loss on financial items other than debts	132	124
Return on hedging assets	538	594
Capitalised borrowing costs	540	494
OTHER FINANCIAL INCOME AND EXPENSES	2,218	2,688

Gains net of losses on available-for-sale financial assets include gains on disposals, interest income, and dividends.

In 2015, gains and losses on available-for-sale financial assets include net gains on sales of EDF's dedicated assets, amounting to €972 million (€894 million in 2014).

Other financial expenses mainly include the financial interest at 31 December 2015 in connection with the European Commission's decision of 22 July 2015, amounting to \in (360) million (see note 3.3).

Note 16 Income taxes

16.1 BREAKDOWN OF TAX EXPENSE

Details are as follows:

(in millions of Euros)	2015	2014
Current tax expense	(1,028)	(2,115)
Deferred taxes	545	276
TOTAL	(483)	(1,839)

In 2015, \in (467) million of the current tax expense relates to EDF's tax consolidated group in France, and \in (561) million relates to other subsidiaries (\in (1,499) million and \in (616) million respectively in 2014).

The decline in the Group's tax expense is principally due to lower pre-tax income, notably explained by impairment recognised in 2015.

16.2 **RECONCILIATION OF THE THEORETICAL AND EFFECTIVE TAX EXPENSE (TAX PROOF)**

(in millions of Euros)	2015	2014
Income of consolidated companies before tax	1,692	5,433
Income tax rate applicable to the parent company	38.00%	38.00%
Theoretical tax expense	(643)	(2,065)
Differences in tax rate	229	87
Permanent differences	(266)	34
Taxes without basis	222	94
Unrecognised deferred tax assets	(24)	8
Other	(1)	3
ACTUAL TAX EXPENSE	(483)	(1,839)
EFFECTIVE TAX RATE	28.55%	33.85%

The effective tax rate for 2015 and 2014 was driven up by impairment. After adjustment for this factor, the effective tax rate is 24.3% for 2015 and 32.2% for 2014.

The main factors explaining the difference between the theoretical tax rate and the effective rate are:

- 2015:
 - the positive impact of differences in tax rates applicable to foreign subsidiaries (€229 million, including €158 million relating to the 2-point decrease in the UK tax rate by 2020, and €142 million relating to cancellation of Italy's "Robin Hood" tax following the decision by the Constitutional Court),
- the favourable impact of payments made to the bearers of perpetual subordinated bonds (€225 million);
- 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 (€148 million).

16.3 CHANGE IN DEFERRED TAX ASSETS AND LIABILITIES

(in millions of Euros)	2015	2014
Deferred tax assets	2,590	2,135
Deferred tax liabilities	(4,315)	(4,242)
NET DEFERRED TAXES AT 1 JANUARY	(1,725)	(2,107)
Change in net income	547	276
Change in equity	(147)	258
Translation adjustments	(75)	(101)
Changes in scope of consolidation	(1)	(67)
Other movements	(8)	16
NET DEFERRED TAXES AT 31 DECEMBER	(1,409)	(1,725)
Deferred tax assets	2,713	2,590
Deferred tax liabilities	(4,122)	(4,315)

€(152) million of the change in deferred tax assets in 2015 included in equity results from actuarial gains and losses on post-employment benefits (€241 million in 2014).

16.4 BREAKDOWN OF DEFERRED TAX ASSETS AND LIABILITIES BY NATURE

(in millions of Euros)	31/12/2015	31/12/2014
Deferred taxes:		
Fixed assets	(6,458)	(7,072)
Provisions for employee benefits	7,292	7,723
Other provisions and impairment	395	318
Financial instruments	(58)	179
Tax loss carryforwards and unused tax credits	1,171	839
Other	46	225
Total deferred tax assets and liabilities	2,388	2,212
Unrecognised deferred tax assets	(3,797)	(3,937)
NET DEFERRED TAXES	(1,409)	(1,725)

At 31 December 2015, unrecognised deferred tax assets represent a potential tax saving of \leq 3,797 million (\leq 3,937 million at 31 December 2014). Of the potential tax saving in 2015, \leq 2,912 million relates to deferred tax assets, mainly on employee benefits in France (\leq 3,097 million in 2014).

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:

(in millions of Euros)	2015	2014
Net income attributable to ordinary shares	1,187	3,701
Payments on perpetual subordinated bonds	(591)	(388)
Effect of dilutive instruments	-	-
Net income used to calculated earnings per share	596	3,313
Average weighted number of ordinary shares outstanding during the year	1,859,988,148	1,858,467,505
Average weighted number of diluted shares outstanding during the year	1,859,988,148	1,858,467,505
Earnings per share (in Euros):		
EARNINGS PER SHARE	0.32	1.78
DILUTED EARNINGS PER SHARE	0.32	1.78

In December 2015, payment of the scrip interim dividend for 2015 led to an increase of €30 million in the share capital and an issue premium of €876 million, corresponding to the issuance of 60,130,559 shares.

OPERATING ASSETS AND LIABILITIES, EQUITY

Note 18 Goodwill

18.1 CHANGES IN GOODWILL

Goodwill on consolidated entities comprises the following:

(in millions of Euros)	31/12/2015	31/12/2014
Net book value at opening date	9,694	9,081
Acquisitions	67	394
Disposals	(3)	-
Impairment (note 13)	(34)	(298)
Translation adjustments	532	573
Other changes	(20)	(56)
NET BOOK VALUE AT CLOSING DATE	10,236	9,694
Gross value at closing date	11,122	10,624
Accumulated impairment at closing date	(886)	(930)

The changes in goodwill in 2015 primarily relate to:

- Dalkia's acquisition of CRAM and Cesbron for €57 million;
- impairment of €(34) million, including €(20) million for EDF Polska goodwill;
- translation adjustments of €532 million, largely due to the pound sterling's increase against the Euro.

acquisitions, of which €392 million result from the takeover of Dalkia;
 impairment of €(200) million, including €(281) million for EDE Luminus

The changes in goodwill in 2014 primarily related to:

- 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.

18.2 GOODWILL BY OPERATING SEGMENT

The breakdown of goodwill is as follows:

(in millions of Euros)	31/12/2015	31/12/2014
Total United Kingdom (EDF Energy)	9,163	8,652
Total Other International	15	42
Dalkia	455	392
EDF Énergies Nouvelles	178	179
Other	425	429
Total Other activities	1,058	1,000
GROUP TOTAL	10,236	9,694

Note 19 Other intangible assets

The net value of other intangible assets breaks down as follows:

At 31 December 2015

				Translation	Changes	Other	
(in millions of Euros)	31/12/2014	Acquisitions	Disposals	adjustments	in scope	movements	31/12/2015
Software	2,601	1,036	(116)	41	(4)	19	3,577
Positive fair value of commodity contracts acquired in a business combination	810	_	_	_	_	_	810
Greenhouse gas emission rights – green certificates	674	1,227	(1,230)	19	_	_	690
Other intangible assets	5,545	450	(45)	10	(24)	-	5,936
Intangible assets in development $^{\scriptscriptstyle (1)}$	2,220	(264)	-	17	-	3	1,976
Gross value	11,850	2,449	(1,391)	87	(28)	22	12,989
Accumulated amortisation and impairment	(2,966)	(1,263)	141	(6)	7	(13)	(4,100)
NET VALUE	8,884	1,186	(1,250)	81	(21)	9	8,889

(1) Increases in intangible assets in development are presented net of the effect of commissioning new assets.

The gross value of other intangible assets at 31 December 2015 included:

• the Edison brand and intangible assets related to Edison's hydropower concessions, for amounts of €945 million and €831 million respectively; Impairment of €(210) million was recorded in respect of other intangible assets in 2015.

EDF's research and development expenses recorded in the income statement total €555 million for 2015.

Impairment of €(74) million was recorded in respect of other intangible

• the Dalkia brand and intangible assets related to Dalkia's concession agreements in France, for respective amounts of €130 million and €735 million.

At 31 December 2014

€601 million.

(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 value	10,308	1,906	(1,223)	106	765	(12)	11,850
Accumulated amortisation and impairment	(2,448)	(743)	233	(24)	_	16	(2,966)
NET VALUE	7,860	1,163	(990)	82	765	4	8,884

The gross value of other intangible assets at 31 December 2014 included:

• the Edison brand and intangible assets related to Edison's hydropower concessions, for amounts of €945 million and €831 million respectively;

agreements in France, for respective amounts of €130 million and

assets in 2014. EDF's research and development expenses recorded in the income statement total €550 million for 2014. • the Dalkia brand and intangible assets related to Dalkia's concession

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)	31/12/2015	31/12/2014
Property, plant and equipment	50,093	48,746
Property, plant and equipment in progress	1,507	1,511
PROPERTY, PLANT AND EQUIPMENT OPERATED UNDER FRENCH PUBLIC ELECTRICITY DISTRIBUTION CONCESSIONS	51,600	50,257

20.2 MOVEMENTS IN PROPERTY, PLANT AND EQUIPMENT OPERATED UNDER FRENCH PUBLIC ELECTRICITY DISTRIBUTION CONCESSIONS (EXCLUDING ASSETS IN PROGRESS)

	Land and		Other installations, plant, machinery,	
(in millions of Euros)	buildings	Networks	equipment & other	Total
Gross value at 31/12/2014	2,361	81,240	3,600	87,201
Increases (1)	120	3,465	322	3,907
Decreases	(13)	(684)	(166)	(863)
Gross value at 31/12/2015	2,468	84,021	3,756	90,245
Depreciation and impairment at 31/12/2014	(1,248)	(34,906)	(2,301)	(38,455)
Net depreciation	(46)	(202)	(165)	(413)
Disposals	11	602	163	776
Other movements (2)	(8)	(1,957)	(95)	(2,060)
Depreciation and impairment at 31/12/2015	(1,291)	(36,463)	(2,398)	(40,152)
Net value at 31/12/2014	1,113	46,334	1,299	48,746
NET VALUE AT 31/12/2015	1,177	47,558	1,358	50,093

(1) Increases also include facilities provided by the concession grantors.

(2) Other movements mainly concern depreciation of assets operated under concessions, booked against amortization recorded in the special concession accounts.



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:

(in millions of Euros)	31/12/2015	31/12/2014
Property, plant and equipment	6,142	6,495
Property, plant and equipment in progress	1,503	1,356
PROPERTY, PLANT AND EQUIPMENT OPERATED UNDER CONCESSIONS FOR OTHER ACTIVITIES	7,645	7,851

21.2 **MOVEMENTS IN PROPERTY, PLANT AND EQUIPMENT OPERATED UNDER CONCESSIONS FOR OTHER ACTIVITIES (EXCLUDING ASSETS IN PROGRESS)**

	Land and	Fossil-fired &		Other installations, plant, machinery,	
(in millions of Euros)	buildings	hydropower plants	Networks	equipment & other	Total
Gross value at 31/12/2014	1,519	10,687	586	919	13,711
Increases	37	537	30	52	656
Decreases (1)	(14)	(23)	(3)	(459)	(499)
Translation adjustments	11	37	_	39	87
Changes in the scope of consolidation	9	4	_	-	13
Other movements	(149)	179	_	(2)	28
Gross value at 31/12/2015	1,413	11,421	613	549	13,996
Depreciation and impairment at 31/12/2014	(849)	(5,325)	(302)	(740)	(7,216)
Net depreciation	(30)	(436)	(19)	(56)	(541)
Impairment net of reversals	_	(555)	-	_	(555)
Disposals (1)	13	17	2	459	491
Translation adjustments	(1)	(23)	-	(36)	(60)
Changes in the scope of consolidation	(5)	(3)	-	_	(8)
Other movements	10	22	-	3	35
Depreciation and impairment at 31/12/2015	(862)	(6,303)	(319)	(370)	(7,854)
Net value at 31/12/2014	670	5,362	284	179	6,495
NET VALUE AT 31/12/2015	551	5,118	294	179	6,142

(1) The Laibin B power plant in China operated under concession by Figlec was transferred in September 2015 to the government of Guangxi province, in accordance with the clauses of the contract.

At 31 December 2015, 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:

(in millions of Euros)	31/12/2015	31/12/2014
Property, plant and equipment	50,197	50,342
Property, plant and equipment in progress	20,688	18,813
Finance-leased property, plant and equipment	184	237
PROPERTY, PLANT AND EQUIPMENT USED IN GENERATION AND OTHER TANGIBLE ASSETS OWNED BY THE GROUP	71,069	69,392

At 31 December 2015, property, plant and equipment in progress mainly concern EPR construction projects in France and the United Kingdom, and the construction of the Dunkirk methane terminal.

Impairment of \in (349) million and \in (27) million was also recorded in 2015, respectively for assets in progress and finance-leased assets.

At 31 December 2014, impairment of property, plant and equipment in progress and finance-leased property, plant and equipment amounted to \in (61) million and \in (34) million respectively.

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)

(in millions of Euros)	Land and buildings	Nuclear power plants	Fossil-fired & hydropower plants	Networks	Other installations, plant, machinery, equipment & other	Total
Gross value at 31/12/2014	12,402	64,286	20,852	17	15,381	112,938
Increases	833	2,840	1,158	_	3,221	8,052
Decreases	(204)	(1,557)	(88)	-	(642)	(2,491)
Translation adjustments	55	686	250	-	166	1,157
Changes in the scope of consolidation	7	_	(174)	_	(776)	(943)
Other movements	188	(160)	(7)	-	(277)	(256)
Gross value at 31/12/2015	13,281	66,095	21,991	17	17,073	118,457
Depreciation and impairment at 31/12/2014	(6,824)	(39,740)	(10,316)	(4)	(5,712)	(62,596)
Net depreciation	(388)	(2,837)	(939)	(4)	(1,055)	(5,223)
Impairment net of reversals	(25)	-	(1,955)	-	(345)	(2,325)
Disposals	106	1,437	85	-	416	2,044
Translation adjustments	(3)	(235)	(114)	-	(36)	(388)
Changes in the scope of consolidation	33	_	163	_	109	305
Other movements	(22)	(37)	(13)	-	(5)	(77)
Depreciation and impairment at 31/12/2015	(7,123)	(41,412)	(13,089)	(8)	(6,628)	(68,260)
Net value at 31/12/2014	5,578	24,546	10,536	13	9,669	50,342
NET VALUE AT 31/12/2015	6,158	24,683	8,902	9	10,445	50,197

22.3 FINANCE LEASE CONTRACTS

	31/12/2015				31/12/2014
		Maturity			
(in millions of Euros)	Total	< 1 year	1 - 5 years	> 5 years	Total
Future minimum lease payments receivable as lessor	53	13	32	8	58
Future minimum lease payments payable as lessee	511	62	218	231	643

The Group is the lessor in agreements classified as finance leases under IFRIC 4 and IAS 17.

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:

		31/12/2015			31/12/	2014
(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	Т	100.00	5,159	457	5,109	379
CENG	G	49.99	2,524	(284)	2,615	(101)
Alpiq ⁽²⁾	G, D, O, T	25.04	624	(192)	735	(193)
Other investments in associates and joint ventures			3,218	211	2,524	94
TOTAL			11,525	192	10,983	179

(1) G = generation, D = distribution, T = transmission, O = other.

(2) As Alpiq publishes its consolidated financial statements after the Group, the figures above include an estimate for net income at 31 December 2015.

Other investments in associates and joint ventures principally concern Taishan (TNPJVC), Nam Theun Power Company (NTPC) and certain companies owned by EDF Énergies Nouvelles and Edison.

The value of the shares of RTE has been affected by the European Commission's decision of 22 July 2015 (see note 3.3).

In 2015, €(549) million of impairment was booked in respect of investments in associates and joint ventures, including:

■ €(271) million on the assets of CENG (see note 23.2.3);

- €(196) 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);
- €(68) million on investments in associates and joint ventures held by Edison.

23.1 RTE RÉSEAU DE TRANSPORT D'ÉLECTRICITÉ (RTE)

23.1.1 RTE - financial indicators

The key financial indicators for RTE (on a 100% basis) are as follows:

(in millions of Euros)	31/12/2015	31/12/2014
Non-current assets	15,805	15,132
Current assets	2,323	3,000
Total assets	18,128	18,132
Equity	5,159	5,109
Non-current liabilities	8,157	8,623
Current liabilities	4,812	4,400
Total equity and liabilities	18,128	18,132
Sales	4,593	4,461
Operating profit before depreciation and amortisation	1,913	1,687
Net income	457	379
Net indebtedness	8,260	7,877
Gains and losses recorded directly in equity	(230)	(154)
Dividends paid to the EDF group	177	250

23.1.2 Transactions between the EDF group and RTE

At 31 December 2015 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 €3,271 million in sales revenues for RTE from ERDF over 2015.

In executing its responsibility to ensure balance in the electricity system, during 2015 RTE also undertook:

- energy purchases and sales with EDF and ERDF, amounting to €102 million and €156 million respectively;
- system service purchases from EDF amounting to €294 million.

Other transactions

The EDF group contributes to financing of RTE through a loan amounting to a total of \in 670 million at 31 December 2015 (unchanged from 31 December 2014). RTE recorded a total of \in 36 million in interest expenses on this loan in 2015.

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:

31/12/2015	31/12/2014
10,409	9,975
1,019	1,009
11,428	10,984
5,048	5,232
6,016	5,481
364	271
11,428	10,984
1,095	1,140
235	285
(568)	(202)
434	593
-	315
	31/12/2015 10,409 1,019 11,428 5,048 6,016 364 11,428 1,095 235 (568) 434

23.2.2 Transactions between the EDF group and CENG

At 31 December 2015 the main transactions between the EDF group and CENG concern the power purchase agreements between CENG and the Group (EDF Trading North America). These agreements provided 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 power purchase agreements that terminated in 2014. Since 1 January 2015, the Group has purchased 49.99% of the power output from CENG's two plants at market price.

These electricity sales by CENG to EDF Trading North America represented a volume of 14.9TWh in 2015.

23.2.3 Impairment

In 2015, impairment of \in (271) million was recorded on the Group's investment in CENG. This impairment was calculated under the usual impairment testing methodology applied in the Group. It resulted from lower forward prices and long-term electricity prices caused by the long-term decline in gas prices.

In 2014, impairment of €(122) million was booked in respect of the Group's investment in CENG following a decline in long-term price curves.

23.3 **ALPIQ**

As Alpiq publishes its consolidated financial statements after the Group, the figures presented here include an estimate for net income at 31 December 2015 (see note 2 to the table in note 23).

23.3.1 Published financial indicators

The main published indicators by the Alpiq group were as follows:

Non-current assets 6,217 7,411 Current assets 3,248 4,419 Assets classified as held for sale 400 - Total assets 9,865 11,830 Equity ⁽¹⁾ 3,919 4,756 Non-current liabilities 3,984 4,480	(in millions of Euros)	31/12/2014	31/12/2013
Current assets 3,248 4,419 Assets classified as held for sale 400 - Total assets 9,865 11,830 Equity ⁽¹⁾ 3,919 4,756 Non-current liabilities 3,984 4,480	Non-current assets	6,217	7,411
Assets classified as held for sale400Total assets9,865Equity (1)3,919Non-current liabilities3,984Constraint in bilities1,060Constraint in bilities1,060	Current assets	3,248	4,419
Total assets 9,865 11,830 Equity ⁽¹⁾ 3,919 4,756 Non-current liabilities 3,984 4,480 Constributivities 1,000 2,504	Assets classified as held for sale	400	-
Equity ⁽¹⁾ 3,919 4,756 Non-current liabilities 3,984 4,480 Construct liabilities 1000 2,504	Total assets	9,865	11,830
Non-current liabilities 3,984 4,480 Constructivities 1,000 2,504	Equity ⁽¹⁾	3,919	4,756
C	Non-current liabilities	3,984	4,480
Current liabilities 1,960 2,594	Current liabilities	1,960	2,594
Liabilities related to assets classified as held for sale 2 –	Liabilities related to assets classified as held for sale	2	-
Total equity and liabilities9,86511,830	Total equity and liabilities	9,865	11,830
Sales 6,644 7,623	Sales	6,644	7,623
Operating profit before depreciation and amortisation 257 642	Operating profit before depreciation and amortisation	257	642
Net income (744) 15	Net income	(744)	15
Gains and losses recorded directly in equity (95) 115	Gains and losses recorded directly in equity	(95)	115
Dividends paid to the EDF group 11	Dividends paid to the EDF group	11	11

Including €846 million of hybrid bonds.

On 25 April 2013, the main Swiss shareholders of Alpiq subscribed a hybrid loan of CHF366.5 million. Following this first step, on 2 May 2013 Alpiq placed a public hybrid bond amounting to CHF650 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, these hybrid loans and bonds were recorded in equity in Alpiq's consolidated financial statements. Since the EDF group did not subscribe to the operation, there was no impact on the value of the investment in Alpiq reported in "Investments in associates and joint ventures".

The difference between the share of equity as published by Alpiq and as reported in the Group's consolidated financial statements largely results from this hybrid loan.

The value of the EDF group's investment in Alpiq, valued on the basis of the stock market price at 31 December 2015, is \in 676 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 January 2015, the Swiss National Bank announced that it was discontinuing the minimum Euro exchange rate of 1.20 against the Swiss franc. Since Alpiq sells the electricity produced by its Swiss-located plants in Euros, a longterm lower Euro rate has a negative effect on the value of its power plants.

Consequently, against a background of persistently low prices on the wholesale markets, the Group booked impairment of \in (196) million in respect of Alpiq's Swiss assets, corresponding to its share of the impairment recorded in Alpiq's published financial statements at 30 June 2015.

If the Alpiq group finds itself obliged to recognise additional impairment in its consolidated financial statements for 2015, the EDF group will be obliged to reflect that in its half-yearly financial statements at 30 June 2016.

In 2014, impairment of \in (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.
Note 24 Inventories

The carrying value of inventories, broken down by nature, is as follows:

	31/12/2015			31/12/2014		
(in millions of Euros)	Gross value	Provision	Net value	Gross value	Provision	Net value
Nuclear fuel	11,104	(17)	11,087	10,807	(14)	10,793
Other fuel	1,657	(5)	1,652	1,916	(11)	1,905
Other raw materials	1,500	(276)	1,224	1,586	(266)	1,320
Work-in-progress for production of goods and services	215	(53)	162	197	(45)	152
Other inventories	613	(24)	589	596	(19)	577
TOTAL INVENTORIES	15,089	(375)	14,714	15,102	(355)	14,747

The long-term portion (more than one year) mainly concerns nuclear fuel inventories amounting to \notin 8,198 million at 31 December 2015 (\notin 7,943 million at 31 December 2014).

The value of EDF Trading's inventories stated at market value is \leq 458 million at 31 December 2015 (\leq 593 million at 31 December 2014).

Note 25 Trade receivables

Details of net trade receivables are as follows:

(in millions of Euros)	31/12/2015	31/12/2014
Trade receivables, gross value – excluding EDF Trading	20,439	21,343
Trade receivables, gross value – EDF Trading	2,974	3,108
Impairment	(1,154)	(1,275)
TRADE RECEIVABLES, NET VALUE	22,259	23,176

Most trade receivables mature within one year.

25.1 TRADE RECEIVABLES DUE AND NOT YET DUE

	31/12/2015			31/12/2014		
(in millions of Euros)	Gross value	Provision	Net value	Gross value	Provision	Net value
TRADE RECEIVABLES	23,413	(1,154)	22,259	24,451	(1,275)	23,176
overdue by up to 6 months	1,443	(279)	1,164	1,606	(245)	1,361
overdue by 6-12 months	572	(220)	352	662	(205)	457
overdue by more than 12 months	1,207	(573)	634	1,339	(623)	716
Trade receivables due	3,222	(1,072)	2,150	3,607	(1,073)	2,534
Trade receivables not yet due	20,191	(82)	20,109	20,844	(202)	20,642

25.2 SECURITISATION OPERATIONS

(in millions of Euros)	31/12/2015	31/12/2014
Trade receivables assigned and wholly retained in the balance sheet	-	17
Trade receivables assigned and partly retained in the balance sheet	39	29
Trade receivables assigned and wholly derecognised	1,544	1,225

The Group undertook securitisation of trade receivables for a total of \in 1,544 million at 31 December 2015, including \in 911 million by the Edison group (\in 1,225 million at 31 December 2014, including \in 610 million by the Edison group).

As most securitisation operations are carried out on a recurrent, withoutrecourse 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)	31/12/2015	31/12/2014
Prepaid expenses	1,532	1,585
CSPE	1,643	2,057
VAT receivables	2,795	2,678
Other tax receivables	845	822
Other operating receivables	3,822	3,675
OTHER RECEIVABLES	10,637	10,817
Non-current portion	1,830	2,024
Current portion	8,807	8,793
Gross value	10,832	10,896
Impairment	(195)	(79)

The CSPE receivable corresponds to the amount receivable at 31 December 2015, except for the portion relating to shortfalls in compensation prior to 31 December 2015, which are included in financial assets in the amount of \in 5,875 million and are covered by a repayment schedule (see notes 36.3 and 4.3).

Note 27 Equity

27.1 SHARE CAPITAL

At 31 December 2015, the share capital amounted to €960,069,513.50, comprising 1,920,139,027 fully subscribed and paid-up shares with nominal value of €0.50 each, owned 84.94% by the French State, 13.30% by the public (institutional and private investors) and 1.64% by current and retired Group employees, with 0.12% held by EDF as treasury shares.

In December 2015, payment of part of the interim dividend for 2015 in the form of a scrip dividend led to a €30 million increase in the share capital and an issue premium of €876 million following issuance of 60,130,559 new shares. The legal formalities for this operation were finalised in early January 2016.

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 2015, treasury shares deducted from consolidated equity represent 2,310,753 shares with total value of \in 38 million.



27.3 **DIVIDENDS**

The General Shareholders' Meeting of 19 May 2015 decided to distribute a dividend of \leq 1.25 per share in respect of 2014.

In application of Article 24 of the Company's articles of association, 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 \leq 1.375 per share.

As interim dividends of €0.57 per share had been paid out on 17 December 2014, the balance payable for 2014 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 5 June 2015, amounting to a total €1,268 million.

On 4 November 2015, EDF's Board of Directors decided to distribute an interim dividend of €0.57 per share in respect of 2015. This interim dividend amounting to a total of €1,059 million was paid out in the form of new

shares (scrip option) or cash on 18 December 2015. The French government opted for the scrip interim dividend. Application of the scrip option for part of the interim dividend led to a \leq 30 million increase in the share capital, corresponding to issuance of 60,130,559 shares with an issue premium of \leq 876 million.

The amount of the cash dividend paid to shareholders who did not opt for the scrip interim dividend for 2015 amounts to €152 million.

27.4 ISSUANCE OF PERPETUAL SUBORDINATED BONDS

In January 2013 and January 2014 the Group issued perpetual subordinated bonds. At 31 December 2015, perpetual subordinated bonds are carried in equity at the amount of €10,095 million (net of transaction costs).

In 2015 interest of €591 million was paid out to the bearers of perpetual subordinated bonds issued (€388 million in 2014).

PERPETUAL SUBORDINATED BONDS

(in millions of currencies)					
Entity	Issue	Issue amount	Currency	Maturity	Rate
EDF	01/2013	1,250	EUR	7 years	4.25%
EDF	01/2013	1,250	EUR	12 years	5.375%
EDF	01/2013	1,250	GBP	13 years	6.0%
EDF	01/2013	3,000	USD	10 years	5.25%
EDF	01/2014	1,500	USD	10 years	5.625%
EDF	01/2014	1,000	EUR	8 years	4.125%
EDF	01/2014	1,000	EUR	12 years	5.0%
EDF	01/2014	750	GBP	15 years	5.875%

27.5 NON-CONTROLLING INTERESTS (MINORITY INTERESTS)

27.5.1 **Details of non-controlling interests**

		31/12/2015	31/12/2014		
(in millions of Euros)	Ownership %	Equity (non-controlling interests)	Net income attributable to non-controlling interests	Equity (non-controlling interests)	Net income attributable to non-controlling interests
Principal non-controlling interests:					
EDF Energy Nuclear Generation Ltd.	20.0%	3,174	231	2,998	155
EDF Luminus	31.4%	391	(74)	539	(96)
EDF Investissements Groupe	6.1%	526	30	515	19
Other non-controlling interests		1,400	27	1,367	(6)
TOTAL		5,491	214	5,419	72

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 (see note 5.3).

27.5.2 Non-controlling interests in EDF Energy

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.

The key financial indicators (100% basis) for EDF Energy Nuclear Generation Ltd. are as follows:

(in millions of Euros)	31/12/2015	31/12/2014
Non-current assets	24,750	23,810
Current assets	3,710	3,549
Total assets	28,460	27,359
Equity	15,877	14,999
Non-current liabilities	11,465	11,141
Current liabilities	1,118	1,219
Total equity and liabilities	28,460	27,359
Sales	4,434	3,864
Net income	1,155	776
Gains and losses recorded directly in equity	758	1,060
Net cash flow from operating activities	1,655	1,335
Net cash flow from investing activities	(566)	(622)
Net cash flow from financing activities	(1,143)	(809)
Cash and cash equivalents – opening balance	466	528
Net increase/(decrease) in cash and cash equivalents	(54)	(96)
Effect of currency fluctuations	10	34
Other	-	-
Cash and cash equivalents – closing balance	422	466
Dividends paid to shares of non-controlling interests	(207)	(153)

Note 28 Provisions

The breakdown between current and non-current provisions is as follows:

			31/12/2015			31/12/2014	
(in millions of Euros)	Notes	Current	Non-current	Total	Current	Non-current	Total
Provisions for the back-end of the nuclear cycle		1,733	20,179	21,912	1,632	19,455	21,087
Provisions for decommissioning and last cores		251	24,646	24,897	290	22,943	23,233
Provisions related to nuclear generation	29	1,984	44,825	46,809	1,922	42,398	44,320
Provisions for decommissioning of non-nuclear facilities	30	75	1,447	1,522	37	1,297	1,334
Provisions for employee benefits	31	1,033	21,511	22,544	1,058	23,060	24,118
Other provisions	32	2,262	2,190	4,452	2,237	1,841	4,078
TOTAL PROVISIONS		5,354	69,973	75,327	5,254	68,596	73,850

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)	31/12/2014	Increases	Decreases	Discount effect	Translation adjustments	Other movements	31/12/2015
Provisions for spent fuel management	12,230	762	(1,210)	524	133	(70)	12,369
Provisions for long-term radioactive waste management	8,857	522	(219)	373	72	(62)	9,543
Provisions for the back-end of the nuclear cycle	21,087	1,284	(1,429)	897	205	(132)	21,912
Provisions for nuclear plant decommissioning	19,497	590	(190)	794	332	2	21,025
Provisions for last cores	3,736	-	-	190	82	(136)	3,872
Provisions for decommissioning and last cores	23,233	590	(190)	984	414	(134)	24,897
PROVISIONS RELATED TO NUCLEAR GENERATION	44,320	1,874	(1,619)	1,881	619	(266)	46,809

The breakdown of provisions by company is shown below:

	EDF	EDF Energy	Belgium	Total
(in millions of Euros)	Note 29.1	Note 29.2		
Provisions for spent fuel management	10,391	1,978	_	12,369
Provisions for long-term radioactive waste management	8,254	1,289	_	9,543
PROVISIONS FOR THE BACK-END OF THE NUCLEAR CYCLE AT 31/12/2015	18,645	3,267		21,912
Provisions for the back-end of the nuclear cycle at 31/12/2014	17,781	3,303	3	21,087
Provisions for nuclear plant decommissioning	14,930	5,890	205	21,025
Provisions for last cores	2,555	1,317	_	3,872
PROVISIONS FOR DECOMMISSIONING AND LAST CORES AT 31/12/2015	17,485	7,207	205	24,897
Provisions for decommissioning and last cores at 31/12/2014	16,279	6,759	195	23,233

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.

(in millions of Euros)	Notes	31/12/2014	Increases	Decreases	Discount effect	Other movements	31/12/2015
Provisions for spent fuel management	29.1.1	10,105	726	(826)	456	(70)	10,391
Provisions for long-term radioactive waste management (1)	29.1.2	7,676	516	(215)	339	(62)	8,254
Provisions for the back-end of the nuclear cycle		17,781	1,242	(1,041)	795	(132)	18,645
Provisions for nuclear plant decommissioning ⁽²⁾	29.1.3	13,866	590	(165)	637	2	14,930
Provisions for last cores	29.1.4	2,413	-	_	113	29	2,555
Provisions for decommissioning and last cores		16,279	590	(165)	750	31	17,485
PROVISIONS RELATED TO NUCLEAR GENERATION		34,060	1,832	(1,206)	1,545	(101)	36,130

Details of changes in provisions for the back-end of the nuclear cycle, decommissioning and last cores are as follows:

(1) Including an increase of €820 million following the Ministerial Order of 15 January 2016 concerning the cost of implementing of long-term management solutions for long-lived medium and high-level radioactive waste under the Cigéo storage project (see notes 3.1 and 29.1.2) and a reversal of €322 million from the provision for long-term radioactive waste management due to the updating of the industrial scenario for decommissioning permanently shut down nuclear power plants (see notes 29.1.2) and 29.1.3).

(2) A €590 million increase to provisions was recorded in 2015 following the update of the industrial scenario and contractor quotes for decommissioning permanently shut down nuclear power plants (see note 29.1.3). In 2014 an increase to provisions of €388 million was recorded for decommissioning of these plants.

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 1,100 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 services associated with the following:

- 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 first of these contracts was an implementation contract signed in July 2010, setting the prices and quantities of services for the period 2008-2012. The conditions for processing and recycling services over the period 2013-2015 are covered by a contract signed in May 2015. The implementation conditions for the

period 2016-2023 were also agreed in December 2015, and presented to the Board of Directors on 27 January 2016. They will give rise to signature of an amendment.

29.1.2 **Provisions for long-term radioactive** waste management

These provisions concern 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, operation and maintenance, 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 provision for long-term radioactive waste management breaks down as follows:

(in millions of Euros)	31/12/2015	31/12/2014
Very low-level and low and medium-level waste	988	997
Long-lived low-level waste	252	521
Long-lived medium and high-level waste	7,014	6,158
PROVISIONS FOR LONG-TERM RADIOACTIVE WASTE MANAGEMENT	8,254	7,676

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 Soulaines 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 currently continuing feasibility studies in liaison with the authorities. Other alternative management scenarios are also being examined, including sorting and processing solutions for graphite.

The new benchmark scenario for dismantling the UNGG plants (see note 29.1.3) involves a different sequence for dismantling operations. In particular, the aim is to consolidate experience acquired from dismantling the first caisson (UNGG reactor building) before beginning work on the other five. The new schedule also defers the dates for removal of waste (graphite and long-lived medium-level waste). This change has led to a reversal of €292 million from the provision for long-lived low-level waste, and a smaller €40 million reversal from the provision for very low-level and low and medium-level waste resulting from decommissioning of the UNGG plants, giving a total reversal of €332 million from the provision for long-term waste management.

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 for this type of waste.

The provision established for long-lived medium and high-level waste is the largest component of provisions for long-term radioactive waste management.

From 2005, the gross value and disbursement schedules for forecast expenses were 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 applied a reasonable approach to information supplied by 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 (the Cigéo project), ANDRA carried out preliminary conceptional studies from 2012, and analysed the technical optimisations proposed by the producers. The

cooperation between ANDRA and producers provided a forum for formal technical discussions that resulted in optimisation of the waste storage design (for example new sizing for the above-ground installations, a significant reduction in the length of underground structures, thinner coatings, etc) and operating conditions (such as new timetables for package transfer, leading to a substantial reduction in 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 28 June 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 focused mainly 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 sent their comments on ANDRA's report to the DGEC in February 2015 and a joint estimation of the target Cigéo storage cost in April 2015. All this information was included in the report submitted to the Minister for Ecology, Sustainable Development and Energy, who will set the new benchmark cost for storage of long-lived medium and high-level waste after consulting the Nuclear Safety Authority (ASN).

On 15 January 2016 the Ministry of Ecology, Sustainable Development and Energy issued a Ministerial Order setting the cost associated with the implementation of long-term management solutions for long-lived medium and high-level radioactive waste under the Cigéo storage project at €25 billion under 2011 economic conditions.

This cost valuation is required by Article L. 542-12 of France's Energy Code. The cost as defined constitutes an objective to be met by ANDRA, in compliance with safety standards set by the ASN, working in close liaison with the operators of nuclear installations.

In accordance with the information stated in note 29.1.2 to the consolidated financial statements at 31 December 2014, publication of this decision entails adjustment of the provision shown in the Group's financial statements.

The cost of the Cigéo project as set by this decision, \notin 25 billion under 2011 economic conditions, replaces the estimated benchmark cost of \notin 20.8 billion used by the EDF Group for its consolidated financial statements at 31 December 2014 and 30 June 2015.

In the financial statements at 31 December 2015, the new cost figure results in an increase of \in 820 million in the provisions for long-term radioactive waste management established to cover future expenses relating to the Cigéo deep storage project (see notes 3.1 and 14).

In application of this Ministerial Order, the cost of the Cigéo project will be regularly updated, at least at each key milestone in the course of the project's development (authorisation to create the facility, commissioning, end of the "pilot industrial phase", safety reviews) in accordance with the opinion of the ASN.

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 complies with France's Environmental Code, which requires as short a period as possible to elapse between final shutdown and dismantling in economically acceptable conditions and in compliance with the principles laid down in Article L. 1333-1 of the Public Health Code (radioprotection) and section II of Article L. 110-1 of the Environmental Code (protection of the environment). The intended end-state is industrial use: the sites will be restored to their original condition and will be reusable 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.

The decommissioning provisions cover future decommissioning expenses as described above (excluding the cost of removing and storing 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:

					Other	
(in millions of Euros)	31/12/2014	Increases	Decreases	Discount effect	movements	31/12/2015
Provisions for decommissioning nuclear plants in operation	11,422	_	(5)	525	2	11,944
Provisions for decommissioning permanently shut-down nuclear plants	2,444	590	(160)	112	-	2,986
DECOMMISSIONING PROVISIONS FOR NUCLEAR POWER PLANTS	13,866	590	(165)	637	2	14,930

For nuclear power plants currently in operation (PWR pressurized water reactor 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 Euros₂₀₁₃ 309 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 had no significant impact on the level of provisions at 31 December 2014.

On 15 January 2016 the DGEC published a summary of the audit report it had commissioned concerning decommissioning costs for EDF's nuclear plants currently in operation. The audit, conducted by specialised consulting firms,

took place over approximately one year between 2014 and 2015. The DGEC states that although estimating the cost of decommissioning nuclear reactors is a demanding exercise due to relatively limited past experience, the prospects of changes in techniques, and the distant timing of the expenditure, overall, the audit confirms EDF's estimate of decommissioning costs for its nuclear fleet currently in operation.

The DGEC also made a number of recommendations to EDF following this audit. EDF will incorporate these recommendations in future studies and estimates when they are likely to contribute to control of future decommissioning costs for the PWR fleet.

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: a PWR reactor at Chooz A, UNGG (natural uranium graphite gas-cooled) reactors at Bugey, St-Laurent and Chinon, a heavy water reactor at Brennilis, and a sodiumcooled fast neutron reactor at Creys-Malville. Decommissioning costs are therefore estimated individually for each site.

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.

As a result of preparatory work done in 2014 before full revision of these quotes due to take place in 2015, the provision was increased by \leq 388 million at 31 December 2014 to reflect delays in physical progress at the sites, and cost reassessments for certain contracts.

In 2015 the industrial strategy for UNGG plants was totally revised. The previously selected strategy was based on a scenario involving "underwater" dismantling of caissons (UNGG reactor buildings) for four of the reactors, with direct graphite storage in a centre currently under examination by ANDRA (see above). This scenario was re-examined in view of several new technical factors (new technical information indicating industrial difficulties in underwater dismantling in this specific case, lower visibility on the availability of graphite storage, etc). The new information also brought out an alternative "in-air" dismantling solution for the caissons, which facilitates industrial control of operations and would be more favourable in terms of safety, radioprotection and environmental impact. The company has therefore selected a new "in-air" dismantling scenario as the benchmark



strategy for all six caissons. This scenario is currently under discussion with the ASN and should lead to new decrees. For both scenarios, the studies to update contractor quotes have led to a significant increase in forecast decommissioning costs for these caissons. The selected scenario includes a consolidation phase, building on experience acquired from dismantling the first caisson before beginning work on the other five. Under this scenario, the decommissioning phase will ultimately be longer than previously planned, leading to higher contractor quotes due to the induced operating costs.

Updating the industrial decommissioning scenario for first-generation power plants, particularly UNGGs, led to a €590 million increase in the provision at 31 December 2015.

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 inflationlinked bonds.

The discount rate determined in this way is 4.5% at 31 December 2015, assuming inflation of 1.6% (4.6% and 1.7% respectively at 31 December 2014).

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 two regulatory limits. The decision of 24 March 2015 modified the rules set out by the Decree of 23 February 2007 and the decision of 21 March 2007, and the discount rate must now be lower than:

- a regulatory maximum "equal to the arithmetic average over the 120 most recent months of the constant 30-year rate (TEC 30 years), observed on the last date of the period concerned, plus one point";
- the expected rate of return on assets covering the liability (dedicated assets).

The ceiling rate based on the TEC 30-year rate is 4.6% at 31 December 2015.

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.

	31/12/20)15	31/12/2014		
(in millions of Euros)	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	
Spent fuel management	16,470	10,391	16,463	10,105	
Long-term radioactive waste management (1)	28,890	8,254	26,159	7,676	
BACK-END NUCLEAR CYCLE EXPENSES	45,360	18,645	42,622	17,781	
Decommissioning provisions for nuclear power plants (2)	26,070	14,930	22,608	13,866	
Provisions for last cores	4,123	2,555	4,050	2,413	
DECOMMISSIONING AND LAST CORE EXPENSES	30,193	17,485	26,658	16,279	

(1) The significant increase between 2014 and 2015 in the cost of long-term radioactive waste management based on year-end economic conditions is due to the consequences of the Ministerial Order of 15 January 2016 (see note 29.1.2).

(2) The significant increase between 2014 and 2015 in the cost of nuclear plant decommissioning based on year-end economic conditions reflects the revision of the benchmark industrial scenario for permanently shut-down plants (see note 29.1.3). As the new scenario notably defers the plant decommissioning phase to a later date, its impact is less sensitive to measurement of the provision at present value.

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 backend of the nuclear cycle, decommissioning of nuclear plants and last cores:

At 31 December 2015

		Sensitivity to discount rate			
	Amounts in provisions at	Balance sheet	provision	Pre-tax net i	ncome
(in millions of Euros)	present value	+0.20%	-0.20%	+0.20%	-0.20%
Back-end nuclear cycle expenses:					
 spent fuel management 	10,391	(168)	177	140	(149)
 long-term radioactive waste management 	8,254	(400)	448	337	(376)
Decommissioning and last cores:					
 decommissioning of nuclear power plants 	14,930	(496)	522	122	(131)
 last cores 	2,555	(62)	65	_	_
TOTAL	36,130	(1,126)	1,212	599	(656)

At 31 December 2014

		:	Sensitivity to di	scount rate	
	Amounts in provisions at	Balance sheet	provision	Pre-tax net i	ncome
(in millions of Euros)	present value	+0.20%	-0.20%	+0.20%	-0.20%
Back-end nuclear cycle expenses:					
 spent fuel management 	10,105	(171)	180	141	(149)
 long-term radioactive waste management 	7,676	(381)	425	327	(368)
Decommissioning and last cores:					
 decommissioning of nuclear power plants 	13,866	(431)	449	52	(54)
 last cores 	2,413	(64)	68	_	-
TOTAL	34,060	(1,047)	1,122	520	(571)

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 €10,474 million at 31 December 2015;
- 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 \notin 9,061 million at 31 December 2015 (\notin 8,617 million at 31 December 2014).

(in millions of Euros)	31/12/2014	Increases	Decreases	Discount effect	Translation adjustments	Other movements	31/12/2015
Provisions for spent fuel management	2,125	36	(384)	68	133	-	1,978
Provisions for long-term radioactive waste management	1,178	5	_	34	72	-	1,289
Provisions for the back-end of the nuclear cycle	3,303	41	(384)	102	205	_	3,267
Provisions for nuclear plant decommissioning	5,436	_	(25)	147	332	_	5,890
Provisions for last cores	1,323	-	-	77	82	(165)	1,317
Provisions for decommissioning and last cores	6,759	-	(25)	224	414	(165)	7,207
PROVISIONS RELATED TO NUCLEAR GENERATION	10,062	41	(409)	326	619	(165)	10,474

Details of changes in provisions for the back-end of the nuclear cycle and provisions for decommissioning and last cores are as follows:

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 €158 million at 31 December 2015;
- £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).

29.2.2 Provisions for the back-end of the nuclear cycle

Spent fuel from the Sizewell B PWR (pressurised 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.

	31/12/201	15	31/12/2014		
(in millions of Euros)	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	
Spent fuel management	3,037	1,978	3,192	2,125	
Long-term radioactive waste management	8,178	1,289	7,741	1,178	
BACK-END NUCLEAR CYCLE EXPENSES	11,215	3,267	10,933	3,303	

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.

	31/12/20	15	31/12/20	14
(in millions of Euros)	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
PLANT DECOMMISSIONING EXPENSES	16,997	5,732	16,088	5,268

The table above concerns decommissioning obligations excluding the present value of decommissioning contributions payable to the NLF, which is €158 million at 31 December 2015 (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 2015, EDF Energy applied a real discount rate of 3.0% to nuclear liabilities in the United Kingdom. This rate has remained unchanged since 2014.

Note 30 Provisions for decommissioning of non-nuclear facilities

The breakdown by company is as follows:

(in millions of Euros)	EDF	EDF Energy	Edison	Other entities	Total
PROVISIONS FOR DECOMMISSIONING OF NON-NUCLEAR FACILITIES AT 31/12/2015	597	99	688	138	1,522
Provisions for decommissioning of non-nuclear facilities at 31/12/2014	589	88	521	136	1,334

Provisions for decommissioning of non-nuclear facilities principally concern fossil-fired power plants and hydropower plants.

The costs of decommissioning fossil-fired 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 2015 reflects the most recent known contractor quotes and commissioning of new generation assets.

Note 31 Provisions for employee benefits

31.1 EDF GROUP

(in millions of Euros)	31/12/2015	31/12/2014
Provisions for employee benefits – current portion	1,033	1,058
Provisions for employee benefits – non-current portion	21,511	23,060
PROVISIONS FOR EMPLOYEE BENEFITS	22,544	24,118

31.1.1 Breakdown of the change in the net liability

(in millions of Euros)	Obligations	Fund assets	Net Liability
Balance at 31/12/2014	42,616	(18,498)	24,118
Net expense for 2015	1,569	(538)	1,031
Actuarial gains and losses	(1,490)	490	(1,000)
Employer's contributions to funds	-	(705)	(705)
Employees' contributions to funds	4	(4)	_
Benefits paid	(1,631)	662	(969)
Translation adjustment	507	(489)	18
Changes in scope of consolidation	8	_	8
Other movements	(16)	7	(9)
BALANCE AT 31/12/2015	41,567	(19,075)	22,492
Including:			
Provision for employee benefits			22,544
Non-current financial assets			(52)

31.1.2 **Post-employment and long-term employee benefit expenses**

(in millions of Euros)	2015	2014
Current service cost	(1,032)	(792)
Past service cost	511	75
Actuarial gains and losses – long-term benefits	22	(243)
Net expenses recorded as operating expenses	(499)	(960)
Interest expense (discount effect)	(1,070)	(1,273)
Return on fund assets	538	594
Net interest expense included in financial result	(532)	(679)
EMPLOYEE BENEFIT EXPENSES RECORDED IN THE INCOME STATEMENT	(1,031)	(1,639)
Actuarial gains and losses – post-employment benefits	1,490	(7,088)
Actuarial gains and losses on fund assets	(490)	2,477
Actuarial gains and losses	1,000	(4,611)
Translation adjustments	(18)	(22)
GAINS AND LOSSES ON EMPLOYEE BENEFITS RECORDED DIRECTLY IN EQUITY	982	(4,633)

The past service cost in 2015 includes:

- income of €287 million resulting from the signature on 30 June 2015 by EDF and Engie of an agreement concerning the compensation system for employee benefits in kind in the form of energy. This agreement led to a contractual change in the number of beneficiaries covered by the Group;
- income of €154 million recognised by EDF Energy following a change of benefit plan. EDF Energy's defined-benefit pension plans now have a ceiling on pensionable pay over a threshold;
- a €67 million decrease in the Group's obligations related to a cap on the death benefit for retired employees. The Law (no. 2014-1544) of 22 December 2014 on social security financing for 2015 and Decree no. 2015-209 of 24 February 2015 introduced a fixed scale for death benefits in the normal French system. This was extended to the IEG sector by Decree no. 2015-1536 of 25 November 2015.

31.1.3 Net employee benefit liability by operating segment

		United		Other	Other	
(in millions of Euros)	France	Kingdom	Italy	international	activities	Total
Obligations at 31/12/2014	33,792	8,253	53	130	388	42,616
Net expense for 2015	1,088	458	5	4	14	1,569
Actuarial gains and losses	(1,134)	(332)	(3)	(7)	(14)	(1,490)
Employees' contributions to funds	-	4	_	_	_	4
Benefits paid	(1,323)	(276)	(3)	(11)	(18)	(1,631)
Translation adjustment	_	507	_	_	_	507
Changes in scope of consolidation	_	_	_	-	8	8
Other movements	_	_	(8)	-	(8)	(16)
OBLIGATIONS AT 31/12/2015	32,423	8,614	44	116	370	41,567
Fair value of fund assets	(10,484)	(8,505)	_	(62)	(24)	(19,075)
NET EMPLOYEE BENEFIT LIABILITY AT 31/12/2015	21,939	109	44	54	346	22,492
Including:						
Provision for employee benefits	21,939	161	44	54	346	22,544
Non-current financial assets	_	(52)	_	-	-	(52)

(in millions of Euros)	France	United Kingdom	Italy	Other international	Other activities	Total
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



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**

			Provision in the
(in millions of Euros)	Obligations	Fund assets	balance sheet
Balances at 31/12/2014	33,792	(10,421)	23,371
Net expense for 2015	1,088	(229)	859
Actuarial gains and losses	(1,134)	158	(976)
Contributions to funds	-	(376)	(376)
Benefits paid	(1,323)	384	(939)
BALANCES AT 31/12/2015	32,423	(10,484)	21,939

31.2.2 Post-employment and long-term employee benefit expenses

(in millions of Euros)	2015	2014
Current service cost	(726)	(546)
Past service cost (1)	355	55
Actuarial gains and losses – long-term benefits	21	(244)
Net expenses recorded as operating expenses	(350)	(735)
Interest expense (discount effect)	(738)	(943)
Return on fund assets	229	296
Net interest expense included in financial result	(509)	(647)
EMPLOYEE BENEFIT EXPENSES RECORDED IN THE INCOME STATEMENT	(859)	(1,382)
Actuarial gains and losses – post-employment benefits	1,134	(6,304)
Actuarial gains and losses on fund assets	(158)	1,671
Actuarial gains and losses	976	(4,633)
GAINS AND LOSSES ON EMPLOYEE BENEFITS RECORDED DIRECTLY IN EQUITY	976	(4,633)

(1) Including €287 million relating to the EDF/Engie agreement of 30 June 2015 and €67 million relating to introduction of a fixed scale for death benefits (see note 31.1.2).

Actuarial gains and losses on post-employment benefits break down as follows:

(in millions of Euros)	2015	2014
Experience adjustments	358	244
Changes in demographic assumptions	35	-
Changes in financial assumptions ⁽¹⁾	762	(6,792)
ACTUARIAL GAINS AND LOSSES ON OBLIGATIONS	1,155	(6,548)
Including:		
Actuarial gains and losses on post-employment benefits	1,134	(6,304)
Actuarial gains and losses on long-term benefits	21	(244)

(1) Financial assumptions are mainly the discount rate, inflation rate and wage increase rate.

The actuarial gains and losses on obligations generated over 2015 amount to \in 1,155 million, and are mainly attributable to:

- revisions of financial assumptions (particularly the change in discount and inflation rates);
- signature of the AGIRC-ARRCO agreement on 30 October 2015, which led to a rise of €1 billion in the Group's employee benefit obligations at 31 December 2015 (see note 4.6).

31.2.3 **Provisions for employee benefits by nature**

At 31 December 2015

In 2014, actuarial gains and losses on obligations amounted to €(6,548) million, mainly related 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 millions of Euros)	Obligations	Fund assets	Provision in the balance sheet
Provisions for post-employment benefits at 31/12/2015	31,037	(10,484)	20,553
Comprising:			
Pensions	22,926	(9,740)	13,186
Benefits in kind (electricity/gas)	6,078	-	6,078
Retirement gratuities	880	(729)	151
Other	1,153	(15)	1,138
Provisions for other long-term employee benefits at 31/12/2015	1,386	-	1,386
Comprising:			
Annuities following work-related accident and illness, and invalidity	1,191	-	1,191
Long service awards	165	_	165
Other	30	-	30
PROVISIONS FOR EMPLOYEE BENEFITS AT 31/12/2015	32,423	(10,484)	21,939

At 31 December 2014

(in millions of Euros)	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

31.2.4 Breakdown of obligations by type of beneficiary

(in millions of Euros)	31/12/2015	31/12/2014
Current employees	19,313	20,452
Retirees	13,110	13,340
OBLIGATIONS	32,423	33,792

31.2.5 Fund assets

For France, these assets amount to €10,484 million at 31 December 2015 (€10,421 million at 31 December 2014) and concern retirement gratuities (with target coverage of 100%) and the specific benefits of the special pension system.

These assets break down as follows:

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.

(in millions of Euros)	31/12/2015	31/12/2014
FUND ASSETS	10,484	10,421
Assets funding special pension benefits	9,740	9,683
Comprising (%)		
Listed equity instruments (shares)	30%	29%
Listed debt instruments (bonds)	70%	71%
Assets funding retirement gratuities	729	724
Comprising (%)		
Listed equity instruments (shares)	31%	31%
Listed debt instruments (bonds)	69%	69%
Other fund assets	15	14

At 31 December 2015, 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 2014.

At 31 December 2015, 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 2014.

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	1,483	1,468
One to five years	5,964	5,539
Five to ten years	6,329	5,252
More than ten years	43,145	20,164
CASH FLOWS RELATED TO EMPLOYEE BENEFITS	56,921	32,423

At 31 December 2015, the average duration of employee benefit commitments in France is 17.8 years.

31.2.7 Actuarial assumptions

(in %)	31/12/2015	31/12/2014
Discount rate/rate of return on assets	2.40%	2.20%
Inflation rate	1.60%	1.70%
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 have led the Group to set the discount rate at 2.40% at 31 December 2015.

31.2.8 Sensitivity analysis

Sensitivity analyses on the amount of the obligation are as follows:

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 2015 is an average 1.60%.

(in %)	31/12/2015
Impact of a 25bp increase or decrease in the discount rate	-4.3%/+4.7%
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	+4.7%/-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 net liability

(in millions of Euros)	Obligations	Fund assets	Net liability
Balances at 31/12/2014	8,253	(7,990)	263
Net expense for 2015	458	(307)	151
Actuarial gains and losses	(332)	336	4
Employer's contributions to funds	-	(326)	(326)
Employees' contributions to funds	4	(4)	-
Benefits paid	(276)	276	-
Translation adjustment	507	(490)	17
BALANCES AT 31/12/2015	8,614	(8,505)	109
Including:			
Provision for employee benefits			161
Non-current financial assets			(52)

31.3.2 Post-employment benefit and long-term employee benefit expenses

(in millions of Euros)	2015	2014
Current service cost	(290)	(227)
Past service cost (1)	154	(6)
Actuarial gains and losses – long-term benefits	-	-
Net expenses recorded as operating expenses	(136)	(233)
Interest expense (discount effect)	(322)	(316)
Return on fund assets	307	294
Net interest expense included in financial result	(15)	(22)
EMPLOYEE BENEFIT EXPENSES RECORDED IN THE INCOME STATEMENT	(151)	(255)
Actuarial gains and losses – post-employment benefits	332	(716)
Actuarial gains and losses on fund assets	(336)	808
Actuarial gains and losses	(4)	92
Translation adjustments	(17)	(23)
GAINS AND LOSSES ON EMPLOYEE BENEFITS RECORDED DIRECTLY IN EQUITY	(21)	69

(1) Including \in 154 million relating to the ceiling on pensionable pay introduced at EDF Energy (see note 31.1.2).

31.3.3 Breakdown of obligations by type of beneficiary

(in millions of Euros)	31/12/2015	31/12/2014
Current employees	5,443	5,013
Retirees	3,171	3,240
OBLIGATIONS	8,614	8,253

31.3.4 Fund assets

Pension obligations in the United Kingdom are partly covered by external funds with a present value of \in 8,505 million at 31 December 2015 (\in 7,990 million at 31 December 2014).

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:

(in millions of Euros)	31/12/2015	31/12/2014
BEGG pension fund	6,853	6,560
EEGSG pension fund	982	892
EEPS pension fund	670	538
FUND ASSETS	8,505	7,990
Comprising (%)		
Listed equity instruments (shares)	34%	35%
Listed debt instruments (bonds)	42%	47%
Real estate properties	7%	6%
Cash and cash equivalents	2%	1%
Other	15%	11%

At 31 December 2015, 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 2014.

31.3.5 Future cash flows

Cash flows related to future employee benefits are as follows:

At 31 December 2015, the bonds held as part of fund assets are distributed as follows:

- approximately 55% of the total are AAA and AA-rated bonds;
- approximately 45% of the total are bonds with A, BBB and other ratings.

Around 55% of all these bonds are sovereign bonds, mainly issued by the United Kingdom. The balance mainly consists of bonds issued by financial and non-financial firms.

(in millions of Euros)	Cash flow under year-end economic conditions	Amount covered by provision (present value)
Less than one year	304	298
One to five years	1,478	1,314
Five to ten years	2,598	1,947
More than ten years	13,968	5,055
CASH FLOWS RELATED TO EMPLOYEE BENEFITS	18,348	8,614

The contribution to funds for 2016 is estimated at approximately \in 300 million.

The average weighted duration of funds in the United Kingdom is 19.4 years at 31 December 2015.

31.3.6 Actuarial assumptions

(in %)	31/12/2015	31/12/2014
Discount rate/rate of return on assets	3.85%	3.60%
Inflation rate	3.10%	3.10%
Wage increase rate	3.10%	3.10%

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 %)	31/12/2015
Impact of a 25bp increase or decrease in the discount rate	-4.6% / +4.8%
Impact of a 25bp increase or decrease in the wage increase rate	+0.6% / -0.7%
Impact of a 25bp increase or decrease in the inflation rate	+4.4% / -4.4%



Note 32 Other provisions

Details of changes in other provisions are as follows:

			Decreases		Changes	Other	
(in millions of Euros)	31/12/2014	Increases	Utilisations	Reversals	in scope	changes	31/12/2015
Provisions for contingencies related to investments	360	99	(44)	_	_	16	431
Provisions for tax liabilities	584	142	(179)	(58)	_	(5)	484
Provisions for litigation	533	103	(44)	(42)	1	-	551
Provisions for onerous contracts	159	157	(29)	(4)	1	-	284
Provisions related to environmental schemes ⁽¹⁾	952	910	(987)	(1)	_	43	917
Other provisions	1,490	599	(318)	(61)	37	38	1,785
TOTAL	4,078	2,010	(1,601)	(166)	39	92	4,452

(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)	31/12/2015	31/12/2014
Value in kind of assets	45,346	44,183
Unamortised financing by the operator	(22,287)	(21,599)
Rights in existing assets - net value	23,059	22,584
Amortisation of financing by the grantor	12,047	11,586
Provisions for renewal	9,976	10,176
Rights in assets to be replaced	22,023	21,762
SPECIAL FRENCH PUBLIC ELECTRICITY DISTRIBUTION CONCESSION LIABILITIES	45,082	44,346

Note 34 Trade payables

(in millions of Euros)	31/12/2015	31/12/2014
Trade payables – excluding EDF Trading	10,428	11,151
Trade payables – EDF Trading	2,856	3,713
TRADE PAYABLES	13,284	14,864

The Group has a reverse factoring programme allowing suppliers to transfer their receivables on EDF to a factoring company, at their own initiative.

For the Group, this programme does not cause any change in the substance and features of the receivables held by suppliers on EDF. In particular it does not affect the sequences of operating cash flows. The associated liabilities are therefore included in "trade payables" in the Group's financial statements.

Note 35 Other liabilities

Details of other liabilities are as follows:

(in millions of Euros)	31/12/2015	31/12/2014
Advances and progress payments received	7,618	7,283
Liabilities related to property, plant and equipment	3,331	3,647
Tax liabilities	6,316	5,910
Social charges	3,795	3,574
Deferred income on long-term contracts	3,586	3,762
Other deferred income	735	763
Other	3,367	3,069
OTHER LIABILITIES	28,748	28,008
Non-current portion	5,126	4,956
Current portion	23,622	23,052

35.1 ADVANCES AND PROGRESS PAYMENTS RECEIVED

At 31 December 2015 advances and progress payments received include monthly standing order payments by EDF's residential and business customers amounting to €6,682 million (€6,340 million at 31 December 2014). The increase over 2015 is mainly explained by customers opting to pay their bills this way.

35.2 TAX LIABILITIES

At 31 December 2015 tax liabilities mainly include an amount of \notin 1,258 million for the CSPE income to be collected by EDF on energy supplied but not yet billed (\notin 1,122 million at 31 December 2014).

35.3 DEFERRED INCOME ON LONG-TERM CONTRACTS

EDF's deferred income on long-term contracts at 31 December 2015 comprises $\leq 1,874$ million ($\leq 1,989$ million at 31 December 2014) of partner advances made to EDF under the nuclear plant financing plans.

Deferred income on long-term contracts also includes an advance paid to the EDF group in 2010 under the agreement with the Exeltium consortium. This advance is transferred to the income statement progressively over the term of the contract.



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:

		31/12/2015			31/12/2014	
(in millions of Euros)	Current	Non-current	Total	Current	Non-current	Total
Financial assets at fair value through profit or loss	4,973	-	4,973	4,194	_	4,194
Available-for-sale financial assets	18,374	15,959	34,333	13,474	15,953	29,427
Positive fair value of hedging derivatives	1,716	4,322	6,038	1,519	3,349	4,868
Loans and financial receivables	1,956	14,957	16,913	1,565	14,183	15,748
CURRENT AND NON-CURRENT FINANCIAL ASSETS ⁽¹⁾	27,019	35,238	62,257	20,752	33,485	54,237

(1) Including impairment of \in (558) million at 31 December 2015 (\in (373) million at 31 December 2014).

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)	31/12/2015	31/12/2014
Positive fair value of trading derivatives	4,973	4,194
Fair value of financial assets held for trading	-	-
FINANCIAL ASSETS CARRIED AT FAIR VALUE WITH CHANGES IN FAIR VALUE INCLUDED IN INCOME	4,973	4,194

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

		31/12/2015			31/12/2014	
		Debt			Debt	
(in millions of Euros)	Equities ⁽¹⁾	securities	Total	Equities ⁽¹⁾	securities	Total
EDF dedicated assets	8,227	6,976	15,203	8,301	7,064	15,365
Liquid assets	3,942	14,199	18,141	1,774	11,216	12,990
Other securities	941	48	989	987	85	1,072
AVAILABLE-FOR-SALE FINANCIAL ASSETS	13,110	21,223	34,333	11,062	18,365	29,427

(1) Equities or investment funds.

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	2015 2014			
(in millions of Euros)	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⁾
EDF dedicated assets	530	1,118	1,439	976
Liquid assets	(108)	44	223	68
Other securities	(40)	(77)	(83)	-
AVAILABLE-FOR-SALE FINANCIAL ASSETS ⁽³⁾	382	1,085	1,579	1,044

(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 2015 and 2014 principally concern EDF.

No significant impairment was recorded in 2015.

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.

36.3 LOANS AND FINANCIAL RECEIVABLES

Loans and financial receivables are recorded at amortised cost.

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 €3,490 million at 31 December 2015 (€1,595 million at 31 December 2014).

(in millions of Euros)	31/12/2015	31/12/2014
Loans and financial receivables – amounts receivable from the NLF	9,061	8,617
Loans and financial receivables – CSPE	5,875	5,144
Loans and financial receivables – other	1,977	1,987
LOANS AND FINANCIAL RECEIVABLES	16,913	15,748

Loans and financial receivables include:

- amounts representing reimbursements receivable from the NLF and the British government for coverage of long-term nuclear obligations, totalling €9,061 million at 31 December 2015 (€8,617 million at 31 December 2014), discounted at the same rate as the provisions they finance;
- the receivable corresponding to the CSPE shortfall at 31 December 2012 and the costs of bearing that shortfall, plus the further shortfall arising between 2013 to 2015 (€644 million) in compliance with the ministerial letter received on 26 January 2016 (see note 4.3);
- EDF's loan to RTE, amounting to €670 million at 31 December 2015 (unchanged from 31 December 2014).



36.4 CHANGE IN FINANCIAL ASSETS OTHER THAN DERIVATIVES

The variation in financial assets is as follows:

36.4.1 At 31 December 2015

(in millions of Euros)	31/12/2014	Net increases	Changes in fair value	Discount effect	Changes in scope	Translation adjustments	Other	31/12/2015
Available-for-sale financial assets	29,427	4,436	475	-	(4)	8	(9)	34,333
Loans and financial receivables	15,748	(364)	_	252	64	563	650	16,913

"Other" changes in loans and financial receivables include the €644 million effect of reclassification of the CSPE receivable (see note 36.3).

36.4.2 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

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)	31/12/2015	31/12/2014
Cash	3,263	3,037
Cash equivalents (1)	904	1,649
Financial current accounts	15	15
CASH AND CASH EQUIVALENTS	4,182	4,701

(1) Items stated at fair value amount to €896 million at 31 December 2015 (€1,635 million at 31 December 2014).

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:

		31/12/2015			31/12/2014	
(in millions of Euros)	Non-current	Current	Total	Non-current	Current	Total
Loans and other financial liabilities	52,684	11,499	64,183	46,537	9,115	55,652
Negative fair value of derivatives held for trading	-	4,001	4,001	_	2,855	2,855
Negative fair value of hedging derivatives	1,475	1,973	3,448	737	2,214	2,951
FINANCIAL LIABILITIES	54,159	17,473	71,632	47,274	14,184	61,458

38.2 LOANS AND OTHER FINANCIAL LIABILITIES

38.2.1 Changes in loans and other financial liabilities

		Loans from financial	Other financial	Loans related to finance-	Accrued	
(in millions of Euros)	Bonds	institutions	liabilities	leased assets	interest	Total
Balances at 31/12/2014	43,584	3,768	6,561	491	1,248	55,652
Increases	5,460	206	3,767	_	100	9,533
Decreases	(1,982)	(527)	(428)	(43)	(67)	(3,047)
Translation adjustments	750	76	88	_	1	915
Changes in scope of consolidation	-	61	(71)	5	1	(4)
Changes in fair value	722	_	419	3	-	1,144
Other changes	4	2	(22)	(11)	17	(10)
BALANCES AT 31/12/2015	48,538	3,586	10,314	445	1,300	64,183

Loans and other financial liabilities of the Group's main entities are as follows:

(in millions of Euros)	31/12/2015	31/12/2014
EDF and other affiliated subsidiaries (1)	52,351	42,526
EDF Energy ⁽²⁾	4,983	4,898
EDF Énergies Nouvelles	4,396	4,060
Edison ⁽³⁾	1,568	2,349
Other	885	1,819
LOANS AND OTHER FINANCIAL LIABILITIES	64,183	55,652

(1) ERDF, EDF PEI, EDF International, EDF Holding SAS, C3 and EDF Investissements Groupe.

(2) Including holding companies.

(3) Edison excluding TdE.

At 31 December 2015, none of these entities was in default on any borrowing.

The Group's principal borrowings at 31 December 2015 are as follows:

Euro MTN EDF 10/2001 10/2016 1,100 EUR 5.50% Bond EDF 01/2014 01/2017 1,000 USD 1.15% Euro MTN EDF 02/2008 02/2018 1,500 EUR 5.00% Bond EDF 01/2019 01/2019 2,000 USD 6.50% Bond EDF 01/2014 01/2019 1.250 USD 2.15%
Bond EDF 01/2014 01/2017 1,000 USD 1.15% Euro MTN EDF 02/2008 02/2018 1,500 EUR 5.00% Bond EDF 01/2019 01/2019 2,000 USD 6.50% Bond EDF 01/2014 01/2019 1.250 USD 2.15%
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 01/2014 01/2019 1.250 USD 2.15%
Bond EDF 01/2009 01/2019 2,000 USD 6.50% Bond EDF 01/2014 01/2019 1.250 USD 2.15%
Bond EDF 01/2014 01/2019 1.250 USD 2.15%
Bond EDF 01/2010 01/2020 1,400 USD 4.60%
Bond EDF 10/2015 10/2020 1,500 USD 2.35%
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%
Bond (green bond) EDF 10/2015 10/2025 1,250 USD 3.63%
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%
Bond EDF 01/2014 01/2044 1,000 USD 4.88%
Bond EDF 10/2015 10/2045 1,500 USD 4.75%
Bond EDF 10/2015 10/2045 1,150 USD 4.95%
Euro MTN EDF 09/2010 09/2050 1,000 GBP 5.13%
Bond EDF 01/2014 01/2114 1,350 GBP 6.00%

(1) Date funds were received.

On 8 October 2015, EDF issued a US dollar senior bond in several tranches, following its senior "Formosa bond" issued on the Taiwanese market on 25 September 2015 (see note 3.4).

At 31 December 2015, the total ceiling on EDF's EMTN (Euro Medium Term Notes) programme, allowing issuance of borrowings under the programme, is \in 45 billion.

38.2.2 Maturity of loans and other financial liabilities

At 31 December 2015

(in millions of Euros)	Bonds	Loans from financial institutions	Other financial liabilities	Loans related to finance- leased assets	Accrued interest	Total
Less than one year	1,455	1,546	7,329	53	1,116	11,499
From one to five years	11,577	679	1,904	180	42	14,382
More than five years	35,506	1,361	1,081	212	142	38,302
LOANS AND OTHER FINANCIAL LIABILITIES AT 31/12/2015	48,538	3,586	10,314	445	1,300	64,183

At 31 December 2014

(in millions of Euros)	Bonds	Loans from financial institutions	Other financial liabilities	Loans related to finance- leased assets	Accrued interest	Total
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

38.2.3 Breakdown of loans and other financial liabilities by currency

		31/12/2015		31/12/2014			
(in millions of Euros)	Initial debt structure	Impact of hedging instruments ⁽¹⁾	Debt structure after hedging	Initial debt structure	Impact of hedging instruments ⁽¹⁾	Debt structure after hedging	
Euro (EUR)	31,731	16,731	48,462	30,110	7,647	37,757	
American dollar (USD)	19,137	(17,250)	1,887	12,948	(10,073)	2,875	
Pound sterling (GBP)	11,677	382	12,059	11,095	1,939	13,034	
Other	1,638	137	1,775	1,499	487	1,986	
LOANS AND OTHER FINANCIAL LIABILITIES	64,183	-	64,183	55,652	-	55,652	

(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

		31/12/2015 31/12/2014				
(in millions of Euros)	Initial debt structure	Impact of derivatives	Final debt structure	Initial debt structure	Impact of derivatives	Final debt structure
Fixed rates	56,840	(22,261)	34,579	48,795	(15,377)	33,418
Floating rates	7,343	22,261	29,604	6,857	15,377	22,234
LOANS AND OTHER FINANCIAL LIABILITIES	64,183		64,183	55,652		55,652

The breakdown of loans and financial liabilities by interest rate includes the impact of all derivatives classified as hedges in accordance with IAS 39. A large portion of the EDF group's fixed-rate loans is swapped to variable rates.

38.2.5 Credit lines

At 31 December 2015, the Group has unused credit lines with various banks totalling €11,380 million (€10,756 million at 31 December 2014).

	31/12/2015				31/12/2014
		Maturity			
(in millions of Euros)	Total	< 1 year	1-5 years	> 5 years	Total
CONFIRMED CREDIT LINES	11,380	837	10,543		10,756

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 2015 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	31/12/2015	31/12/2014
Loans and other financial liabilities	38.2.1	64,183	55,652
Derivatives used to hedge liabilities	41	(3,795)	(3,083)
Cash and cash equivalents	37	(4,182)	(4,701)
Available-for-sale financial assets – liquid assets	36.2.2	(18,141)	(12,990)
Loan to RTE	36.3	(670)	(670)
NET INDEBTEDNESS		37,395	34,208

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 2015

(in millions of Furos)	Balance sheet value	Fair value	Level 1 Unadjusted guoted prices	Level 2 Observable data	Level 3 Non-observable data
	bildet balae		quoten prices		uu tu
included in income ⁽¹⁾	4,973	4,973	427	4,439	107
Available-for-sale financial assets	34,333	34,333	1,676	32,032	625
Positive fair value of hedging derivatives	6,038	6,038	31	6,007	-
Cash equivalents carried at fair value	896	896	113	783	-
Financial assets carried at fair value in the balance sheet	46,240	46,240	2,247	43,261	732
Loans and financial receivables – assets receivable from the NLF	9,061	9,061	_	9,061	-
Loans and financial receivables – CSPE	5,875	5,875	_	5,875	-
Other loans and financial receivables	1,977	2,008	_	2,008	-
Financial assets recorded at amortised cost	16,913	16,944	-	16,944	-
Negative fair value of hedging derivatives	3,448	3,448	161	3,285	2
Negative fair value of trading derivatives	4,001	4,001	390	3,516	95
Financial liabilities carried at fair value in the balance sheet	7,449	7,449	551	6,801	97
Loans and other financial liabilities (2)	64,183	69,815	_	69,815	-
Financial liabilities recorded at amortised cost	64,183	69,815	-	69,815	-

(1) Including \in 4,973 million for the positive fair value of trading derivatives.

(2) Loans and other financial liabilities are carried in the balance sheet at amortised cost, adjusted for changes in the fair value of risks covered by a fair value hedge.

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 2014

	Balance		Level 1 Unadjusted	Level 2 Observable	Level 3 Non-observable
(in millions of Euros)	sheet value	Fair value	quoted prices	data	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 receivables – assets receivable from the NLF	8,617	8,617	_	8,617	_
Loans and financial receivables – CSPE	5,144	5,144	_	5,144	-
Other loans and financial receivables	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 (2)	55,652	63,460	_	63,460	_
Financial liabilities recorded at amortised cost	55,652	63,460	-	63,460	-

(1) Including \in 4,194 million for the positive fair value of trading derivatives.

(2) Loans and other financial liabilities are carried in the balance sheet at amortised cost, adjusted for changes in the fair value of risks covered by a fair value hedge.

39.2 OFFSETTING OF FINANCIAL ASSETS AND LIABILITIES

39.2.1 At 31 December 2015

			Balance	with offsetting un	der IAS 32	Amounts offsetting ag	covered by a g greement but under IAS 32	general not offset
(in millions of Euros)	As reported in balance sheet	Balance without offsetting	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	11,011	2,925	13,290	(5,204)	8,086	(1,695)	(2,142)	4,249
Fair value of derivatives – liabilities	(7,449)	(2,391)	(10,262)	5,204	(5,058)	1,695	58	(3,305)

39.2.2 At 31 December 2014

		Balance	with offsetting un	der IAS 32	Amounts covered by a general offsetting agreement but not offset under IAS 32			
(in millions of Euros)	As reported in balance sheet	Balance without offsetting	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)

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 section 5.1.7.1 of the Reference Document, "Financial Information" – "Management and control of financial risks".

Energy market risks

With the opening of the final customer market, development of the wholesale markets and international business expansion, the EDF group operates on deregulated energy markets, mainly in Europe, through its generation and supply activities. This exposes the Group to price variations on the wholesale markets for energy (electricity, gas, coal, oil products) and the CO₂ emissions quota market, with a potentially significant impact on the financial statements.

A more detailed description of these risks can be found in section 5.1.7.2 of the Reference Document, "Financial Information" – "Management and control of energy market risks".

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 section 5.1.7.1.7 of the Reference Document, "Financial Information" – "Management and control of counterparty/credit risks".

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 section 5.1.7.1 of the Reference Document, "Financial Information" – "Management and control of financial risks":

- foreign exchange risks: section 5.1.7.1.3;
- interest rate risks: section 5.1.7.1.4;
- equity risk on financial assets: sections 5.1.7.1.5 and 5.1.7.1.6.

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 (sections 5.1.7.1.5 and 5.1.7.1.6 of the Reference Document, "Financial Information" – "Management of equity risks"/"Management of financial risk on EDF's dedicated asset portfolio"):
 - 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	31/12/2015	31/12/2014
Positive fair value of hedging derivatives	36.1	6,038	4,868
Negative fair value of hedging derivatives	38.1	(3,448)	(2,951)
FAIR VALUE OF HEDGING DERIVATIVES		2,590	1,917
Interest rate hedging derivatives	41.4.1	2,033	2,339
Exchange rate hedging derivatives	41.4.2	1,472	959
Commodity-related cash flow hedges	41.4.3	(913)	(1,374)
Commodity-related fair value hedges	41.5	(2)	(7)

An alternative breakdown of hedging derivatives is shown below:

(in millions of Euros)	Notes	31/12/2015	31/12/2014
Fair value of derivatives hedging liabilities	38.3	3,795	3,083
Fair value of derivatives hedging net foreign investments		(420)	(60)
Fair value of other hedging derivatives (commodities)		(785)	(1,106)
FAIR VALUE OF HEDGING DERIVATIVES		2,590	1,917

41.1 FAIR VALUE HEDGES

The EDF group hedges the exposure to changes in the fair value of fixedrate 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 2015, the ineffective portion of fair value hedges represents a loss of \in (9) million (loss of \in (8) million in 2014), 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 is nil (loss of \in (2) million in 2014).

41.3 HEDGES OF NET INVESTMENTS IN FOREIGN ENTITIES

Hedging of net foreign investments is used for protection against exposure to the exchange rate risk related to net investments in the Group's foreign entities.

This risk is hedged at Group level either by contracting debts for investments in the same currency, or through the markets, in which case the Group uses currency swaps and forward exchange contracts.

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:

		2015		2014				
(in millions of Euros)	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		
Interest rate hedging	(19)	-	-	(36)	_	(2)		
Exchange rate hedging	702	656	(19)	1,004	628	40		
Net foreign investment hedging	(1,038)	-	-	(1,076)	_	-		
Commodity hedging	(59)	(470)	(10)	(1,946)	(698)	(29)		
HEDGING DERIVATIVES (3)	(414)	186	(29)	(2,054)	(70)	9		

(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 31/12/2015			Notional at 31/12/2014	Fair v	value	
(in millions of Euros)	< 1 year	1-5 years	> 5 years	Total	Total	31/12/2015	31/12/2014
Fixed rate payer/floating rate receiver	511	673	499	1,683	1,810	(121)	(172)
Floating rate payer/fixed rate receiver	107	2,566	20,850	23,523	16,708	2,178	2,609
Floating rate/floating rate	_	1,471	1,296	2,767	2,761	(3)	7
Fixed rate/fixed rate	230	6,344	1,674	8,248	8,343	(21)	(105)
Interest rate swaps	848	11,054	24,319	36,221	29,622	2,033	2,339
INTEREST RATE HEDGING DERIVATIVES	848	11,054	24,319	36,221	29,622	2,033	2,339

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). A large portion of the EDF group's fixed-rate loans is swapped to variable rates.

41.4.2 Exchange rate hedging derivatives

Exchange rate hedging derivatives break down as follows:

At 31 December 2015

	Notional a	mount to be	received at	31/12/2015	Notional amount to be given at 31/12/2015				Fair value
(in millions of Euros)	< 1 year	1-5 years	> 5 years	Total	< 1 year	1-5 years	> 5 years	Total	31/12/2015
Forward exchange transactions	4,477	843	_	5,320	4,434	847	_	5,281	39
Swaps	13,101	13,858	10,335	37,294	12,820	13,090	9,826	35,736	1,433
EXCHANGE RATE HEDGING DERIVATIVES	17,578	14,701	10,335	42,614	17,254	13,937	9,826	41,017	1,472

At 31 December 2014

	Notional an	nount to be	received at 3	81/12/2014	Notional amount to be given at 31/12/2014				Fair value
(in millions of Euros)	< 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

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)	31/12/2015	31/12/2014
Electricity hedging contracts	182	42
Gas hedging contracts	35	(290)
Coal hedging contracts	(142)	(462)
Oil product hedging contracts	(86)	(1,243)
CO ₂ emission rights hedging contracts	(48)	7
CHANGES IN FAIR VALUE BEFORE TAXES	(59)	(1,946)

The main components of the amount transferred to income in respect of commodity hedges terminated during the year are:

(in millions of Euros)	31/12/2015	31/12/2014
Electricity hedging contracts	(113)	(274)
Gas hedging contracts	(200)	42
Coal hedging contracts	(353)	(423)
Oil product hedging contracts	161	33
CO ₂ emission rights hedging contracts	35	(76)
CHANGES IN FAIR VALUE BEFORE TAXES	(470)	(698)

Details of commodity-related cash flow hedges are as follows:

				31/12/2014				
			Net no	otional		Fair	Net	Fair
(in millions of Euros)	Units of measure	< 1 year	1-5 years	> 5 years	Total	value	notional	value
Swaps		2	_	_	2	-	_	-
Forwards/futures		(83)	(36)	-	(119)	784	(19)	193
Electricity	TWh	(81)	(36)	-	(117)	784	(19)	193
Swaps		(676)	(276)	_	(952)	181	(301)	42
Forwards/futures		917	704	-	1,621	(364)	2,381	(402)
Gas	Millions of therms	241	428	-	669	(183)	2,080	(360)
Swaps		48,891	20,153	-	69,044	(1,605)	49,151	(1,153)
Oil products	Thousands of barrels	48,891	20,153	-	69,044	(1,605)	49,151	(1,153)
Swaps		(1)	_	_	(1)	69	6	(104)
Coal	Millions of tonnes	(1)	-	-	(1)	69	6	(104)
Swaps		_	_	_	_	-	26,001	40
Forwards/futures		14,844	5,762	_	20,606	22	7,602	10
CO ₂	Thousands of tonnes	14,844	5,762	-	20,606	22	33,603	50
COMMODITY-RELATED CASH FLOW HEDGES						(913)		(1,374)

41.5 COMMODITY-RELATED FAIR VALUE HEDGES

Details of commodity-related fair value hedges are as follows:

		31/12/2015		31/12/20	014
(in millions of Euros)	Units of measure	Net notional	Fair value	Net notional	Fair value
Coal and freight	Millions of tonnes	8	(2)	27	(7)
COMMODITY-RELATED FAIR VALUE HEDGES			(2)		(7)


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	31/12/2015	31/12/2014
Positive fair value of trading derivatives	36.2.1	4,973	4,194
Negative fair value of trading derivatives	38.1	(4,001)	(2,855)
FAIR VALUE OF TRADING DERIVATIVES		972	1,339
Interest rate derivatives held for trading	42.1	(52)	(42)
Currency derivatives held for trading	42.2	98	(12)
Non-hedging commodity derivatives	42.3	926	1,393

42.1 INTEREST RATE DERIVATIVES HELD FOR TRADING

Interest rate derivatives held for trading break down as follows:

		Notional at	31/12/2015		Notional at 31/12/2014	Fair v	alue
(in millions of Euros)	< 1 year	1-5 years	> 5 years	Total	Total	31/12/2015	31/12/2014
Purchases of options	_	_	525	525	515	26	21
Interest rate operations	-	-	525	525	515	26	21
Fixed rate payer/floating rate receiver	1,941	137	602	2,680	11,680	(123)	(145)
Floating rate payer/fixed rate receiver	1,258	21	214	1,493	5,869	43	84
Floating rate/floating rate	-	-	-	-	225	1	(2)
Fixed rate/fixed rate	_	301	_	301	-	1	-
Interest rate swaps	3,199	459	816	4,474	17,774	(78)	(63)
INTEREST RATE DERIVATIVES HELD FOR TRADING	3,199	459	1,341	4,999	18,289	(52)	(42)

42.2 CURRENCY DERIVATIVES HELD FOR TRADING

Currency derivatives held for trading break down as follows:

At 31 December 2015

	Noti	onal amoun at 31/1	t to be rece 2/2015	ived	Notional amount to be given at 31/12/2015			Fair value	
(in millions of Euros)	< 1 year	1-5 years	> 5 years	Total	< 1 year	1-5 years	> 5 years	Total	31/12/2015
Forward transactions	849	242	15	1,106	851	247	20	1,118	(9)
Swaps	8,738	802	_	9,540	8,651	793	_	9,444	107
CURRENCY DERIVATIVES HELD FOR TRADING	9,587	1,044	15	10,646	9,502	1,040	20	10,562	98

At 31 December 2014

	Noti	onal amoun at 31/1	it to be recei 2/2014	ved	Notional amount to be given at 31/12/2014			Fair value	
(in millions of Euros)	< 1 year	1-5 years	> 5 years	Total	< 1 year	1-5 years	> 5 years	Total	31/12/2015
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)

42.3 NON-HEDGING COMMODITY DERIVATIVES

Details of commodity derivatives not classified as hedges are as follows:

		31/12/2015		31/12/20	14
(in millions of Euros)	Unit of measure	Net notional	Fair value	Net notional	Fair value
Swaps		(19)	70	(26)	(29)
Options		83	(30)	93	11
Forwards/futures		(6)	589	(65)	173
Electricity	TWh	58	629	2	155
Swaps		4,174	287	2,722	248
Options		4,076	54	6,359	17
Forwards/futures		(2,463)	21	(2,051)	487
Gas	Millions of therms	5,787	362	7,030	752
Swaps		4,278	(27)	260	(79)
Options		207	-	1,039	67
Forwards/futures		(29)	1	10,879	16
Oil products	Thousands of barrels	4,456	(26)	12,178	4
Swaps		(1)	(203)	(15)	394
Options		(16)	(3)	(21)	(1)
Forwards/futures		66	252	87	(41)
Freight		(8)	90	(27)	108
Coal and freight	Millions of tonnes	41	136	24	460
Swaps		-	-	(156)	11
Options		600	-	-	-
Forwards/futures		12,673	(20)	10,663	(4)
CO ₂	Thousands of tonnes	13,273	(20)	10,507	7
Swaps/options			194		-
Forwards/futures			(352)		11
Other commodities			(158)		11
Embedded commodity derivatives			3		4
NON-HEDGING COMMODITY DERIVATIVES			926		1,393

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

(in millions of Euros)	2015	2014
Change in inventories	129	(111)
Change in the CSPE receivable	(230)	(699)
Change in trade receivables	896	(504)
Change in trade payables	(967)	147
Change in other receivables and payables (excluding CSPE)	304	126
CHANGE IN WORKING CAPITAL	132	(1,041)

43.2 INVESTMENTS IN INTANGIBLE AND TANGIBLE ASSETS

(in millions of Euros)	2015	2014
Acquisitions of intangible assets	(1,224)	(1,006)
Acquisitions of tangible assets	(13,249)	(13,067)
Change in payables to suppliers of fixed assets	(316)	352
INVESTMENTS IN INTANGIBLE AND TANGIBLE ASSETS	(14,789)	(13,721)

Note 44 Off-balance sheet commitments

This note presents off-balance sheet commitments given and received by the Group 31 December 2015. 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. Other commitments are described separately in the detailed notes.

(in millions of Euros)	Notes	31/12/2015	31/12/2014
Operating commitments given	44.1.1	42,060	40,933
Investment commitments given	44.1.2	13,262	14,437
Financing commitments given	44.1.3	6,390	5,425
TOTAL COMMITMENTS GIVEN		61,712	60,795

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 2015 are as follows:

(in millions of Euros)	31/12/2015	31/12/2014
Fuel and energy purchase commitments (1)	29,909	29,147
Operating contract performance commitments given	8,317	8,207
Operating lease commitments as lessee	3,834	3,579
TOTAL OPERATING COMMITMENTS GIVEN	42,060	40,933

(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 2015, fuel and energy purchase commitments mature as follows:

		31/12/2015				
			Maturity			
(in millions of Euros)	Total	< 1 year	1-5 years	5-10 years	> 10 years	Total
Electricity purchases and related services (1)	9,401	1,595	2,630	2,288	2,888	8,672
Other energy and commodity purchases (2)	740	150	398	192	-	1,362
Nuclear fuel purchases	19,768	1,941	8,390	6,049	3,388	19,113
FUEL AND ENERGY PURCHASE COMMITMENTS	29,909	3,686	11,418	8,529	6,276	29,147

(1) Including commitments given by controlled entities to joint ventures, amounting to ≤ 669 million at 31 December 2015 (≤ 697 million at 31 December 2014). (2) Excluding gas purchases and related services – see note 44.1.1.1.4.

The changes primarily relate to higher electricity purchases at EDF Energy and an increase in commitments to purchase nuclear fuel at EDF, partially offset by a decrease in other energy and commodity purchases, particularly in Poland.

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 41TWh for 2015 (35TWh for 2014), including 5TWh for co-generation (5TWh for 2014), 20TWh for wind power (16TWh for 2014), 7TWh for photovoltaic power (6TWh for 2014) and 3TWh for hydropower (3TWh for 2014).

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 fossil-fired 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 fluoration, enrichment and fuel assembly production services.

The rise in these commitments is mainly attributable to preparation of the contract on production of MOX fuel assemblies for the period 2017-2024.

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 2015 are as follows:

		31/12/2014			
(in billions of m ³)	Total	< 1 year	1-5 years	> 5 years	Total
Edison	180	13	50	117	191
EDF	88	3	16	69	58

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 2015, there is no off-balance sheet commitment for Edison's take-or-pay clauses.

EDF also has gas purchase commitments related to development of its gas supply activity.

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.

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.

44.1.1.2 Operating contract performance commitments given

At 31 December 2015, these commitments mature as follows:

		31/12/2014			
			Maturity		
(in millions of Euros)	Total	<1 year	1-5 years	> 5 years	Total
Operating guarantees given	4,055	1,837	732	1,486	3,751
Operating purchase commitments (1)	4,084	2,381	1,401	302	4,294
Other operating commitments	178	63	71	44	162
OPERATING CONTRACT PERFORMANCE COMMITMENTS GIVEN ⁽²⁾	8,317	4,281	2,204	1,832	8,207

(1) Excluding fuel and energy.

(2) Including commitments given by controlled entities to joint ventures, amounting to \in 126 million at 31 December 2015 (\in 128 million at 31 December 2014).

44.1.1.2.1 Operating guarantees given

Operating guarantees given are as follows:

(in millions of Euros)	31/12/2015	31/12/2014
EDF	1,443	1,382
Edison	1,193	1,179
EDF Energy	428	277
EDF Énergies Nouvelles	340	356
Other entities	651	557
TOTAL	4,055	3,751

44.1.1.2.2 **Operating purchase commitments**

Operating purchase commitments are as follows:

(in millions of Euros)	31/12/2015	31/12/2014
EDF	2,343	2,418
EDF Energy	715	738
ERDF	413	527
Other entities	613	611
TOTAL	4,084	4,294

44.1.1.3 Operating lease commitments as lessee

At 31 December 2015, operating lease commitments as lessee break down as follows:

	31/12/2015			31/12/2014	
	Maturity				
(in millions of Euros)	Total	< 1 year	1-5 years	> 5 years	Total
OPERATING LEASE COMMITMENTS AS LESSEE	3,834	638	1,693	1,503	3,579

The Group is bound as lessee by irrevocable operating lease contracts, principally for premises, equipment, land 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 2015, details of investment commitments are as follows:

	31/12/2015			31/12/2014	
		Maturity			
(in millions of Euros)	Total	< 1 year	1-5 years	> 5 years	Total
Commitments related to acquisition of tangible and intangible assets	12,294	6,111	5,678	505	13,628
Commitments related to acquisition of financial assets	270	168	99	3	248
Other commitments related to investments	698	57	504	137	561
TOTAL INVESTMENT COMMITMENTS GIVEN (1)	13,262	6,336	6,281	645	14,437

(1) Including commitments given by controlled entities to joint ventures, amounting to \in 326 million at 31 December 2015 (\in 317 million at 31 December 2014).

44.1.2.1 Commitments related to acquisition of tangible and intangible fixed assets

The commitments related to acquisition of tangible and intangible fixed assets are as follows:

(in millions of Euros)	31/12/2015	31/12/2014
EDF	8,426	9,391
EDF Énergies Nouvelles	1,066	1,506
ERDF	1,771	1,163
EDF Energy	529	642
Dunkerque LNG (1)	126	261
Other entities	376	665
TOTAL	12,294	13,628

(1) These commitments mainly concern construction of the Dunkirk methane terminal.

The decrease in these commitments is in line with progress on the FLA3 EPR project and changes in the steam generator replacement contracts.

The decrease at EDF Énergies Nouvelles essentially concerns orders for turbines, particularly in Canada.

44.1.2.2 Commitments related to acquisition of financial assets

The Group has no significant commitment related to acquisition of financial assets at 31 December 2015.

The main share purchase commitments that cannot be valued concern EDF Luminus.

The new amendment to the shareholder pact signed on 26 October 2015 defines a liquidity clause for the investments held by minority shareholders in EDF Luminus, which could, in certain conditions under the control of EDF, result in sale of their shares through an IPO, or purchase of their shares by the Group at market value. This liquidity clause is valid at all times from 1 July 2018 to 31 December 2025.

Regarding the investment in EDF Investissements Groupe (EIG), C3 (a fullyowned EDF subsidiary) and NBI (Natixis Belgique Investissement, a subsidiary

44.1.3 **Financing commitments given**

Financing commitments given by the Group at 31 December 2015 comprise the following:

of the Natixis group) amended the agreements for their investment in EIG on 12 February 2014.

C3 now has a call option 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 call option are considered as derivatives and their net value is included in the positive or negative fair value of trading derivatives. At 31 December 2015, 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 2015 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).

The rise in these commitments particularly concerns the organisation of a parent company guarantee as part of a real estate investment project.

	31/12/2015			31/12/2014	
		Maturity			
(in millions of Euros)	Total	< 1 year	1-5 years	> 5 years	Total
Security interests in real property	5,075	92	346	4,637	4,316
Guarantees related to borrowings	1,050	407	497	146	860
Other financing commitments	265	247	13	5	249
TOTAL FINANCING COMMITMENTS GIVEN (1)	6,390	746	856	4,788	5,425

(1) Including commitments given by controlled entities to joint ventures, amounting to €847 million at 31 December 2015 (€900 million at 31 December 2014). 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 increase in these commitments at 31 December 2015 essentially relates to changes in the value of pledged shares, and the provision of new security interests in Canada and South Africa by EDF Énergies Nouvelles.

44.2 COMMITMENTS RECEIVED

The table below shows off-balance sheet commitments received by the Group that have been valued. Other commitments received are described separately in the detailed notes.

(in millions of Euros)	Notes	31/12/2015	31/12/2014
Operating commitments received (1)	44.2.1	2,633	2,964
Investment commitments received	44.2.2	80	102
Financing commitments received	44.2.3	29	124
TOTAL COMMITMENTS RECEIVED (2)		2,742	3,190

(1) Excluding commitments related to supplies of energy and related services (see notes 44.2.1.4 and 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 2015 comprise the following:

	31/12/2015			31/12/2014	
		Maturity			
(in millions of Euros)	Total	< 1 year	1-5 years	> 5 years	Total
Operating lease commitments as lessor	1,021	289	527	205	1,241
Operating sale commitments	520	89	229	202	480
Operating guarantees received	1,030	751	147	132	1,164
Other operating commitments received	62	18	31	13	79
OPERATING COMMITMENTS RECEIVED	2,633	1,147	934	552	2,964

44.2.1.1 Operating lease commitments as lessor

The Group benefits from commitments as lessor in operating leases amounting to ${\in}1,021$ 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.

44.2.1.3 Operating guarantees received

Operating guarantees received primarily concern EDF and relate to guarantees received from suppliers.

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 2015 concerns a volume of 0.9TWh.

44.2.1.5 Sale commitments for regasification capacities and related services

The Total group has subscribed a liquefied natural gas (LNG) regasification capacity from Dunkerque LNG, covering a total fixed volume of 40 billion cubic metres over a 20-year period. 8.5 billion cubic metres of this volume could, subject to certain restrictive conditions, be transferred to EDF. Commissioning is scheduled for 2016, and once in operation the Dunkirk methane terminal will have an annual regasification capacity of some 13 billion cubic metres.

44.2.2 Investment commitments received

	31/12/2015			31/12/2014	
	Maturity				
(in millions of Euros)	Total	< 1 year	1-5 years	> 5 years	Total
INVESTMENT COMMITMENTS RECEIVED	80	1	79		102

Under the terms of the agreement signed with Exelon on 29 July 2013 and finalised on 1 April 2014 (see note 3.6.2), 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 2015. The Group had not received any significant commitment of this type at 31 December 2015.

44.2.3 Financing commitments received

	31/12/2015			31/12/2014	
		Maturity			
(in millions of Euros)	Total	< 1 year	1-5 years	> 5 years	Total
FINANCING COMMITMENTS RECEIVED	29	15	4	10	124

No significant financing commitment received exists at 31 December 2015.

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. In September 2012, Neckarpri confirmed the reduction of its main claim to this amount. As an alternative, Neckarpri is seeking cancellation of the sale of the EDF group's stake in EnBW. EDF made a counterpetition for compensation for the prejudice suffered as a result of the proceedings, which EDF considers unfounded and a misuse of law.

The Court of Arbitration closed the proceedings in June 2015. Its decision should be announced during the first quarter of 2016.

45.2 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 paid by the Company. 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 in July 2015 by the Versailles Administrative Appeal 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 that represent a financial risk of some €660 million in income taxes at 31 December 2015.

The tax authorities have also issued notice of 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 also contesting this reassessment.

In late 2015 the tax authorities issued notice to the Company of the recurring reassessments stated above for the years 2012 and 2013, and challenged the deductibility of certain long-term provisions.

The Company is confident that it has good chances of winning the disputes, and no provision has been recorded in connection with any of these matters.

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 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 2015, an out-of-court discussion between France and the United States initiated by EDF International concerning the valuation of the CEG shares ended in withdrawal of the tax reassessment notified to the Company.

The tax authorities upheld the reassessments concerning valuation of the convertible bond for 2012 and 2013.

45.3 **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.

45.4 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, particularly in August 2010, as the applicable tariff depended on the date at which the full connection application was filed. Three months later, the "moratorium" Decree of 9 December 2010 suspended conclusion of all new contracts for a three-month period and stipulated that connection 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.

A decision issued by the French Council of State on 16 November 2011 rejecting appeals against the moratorium Decree of December 2010 generated a large volume of legal proceedings against ERDF in late 2011,

which continued through 2012, 2013 and 2014. Most of these legal actions were initiated by generators who found themselves forced to abandon their projects because the new electricity purchase tariffs made operating conditions less favourable. These generators consider ERDF responsible for this situation since 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.

During 2015, 49 new appeals were lodged, and two decisions by the Court of Cassation on 9 June 2015 ruled that ERDF was responsible for the situation, and confirmed the insurer's liability.

In December 2015 the Versailles Appeal Court decided to apply to the European Union Court of Justice for a preliminary ruling on the point of whether the tariff decisions of 2006 and 2010 complied with European law on State aid. Since this step, applications for suspension of execution of the Court of Cassation's decisions have been filed by ERDF or the insurer, as relevant.

Note 46 Assets held for sale and related liabilities

(in millions of Euros)	31/12/2015	31/12/2014
ASSETS HELD FOR SALE		18
LIABILITIES RELATED TO ASSETS HELD FOR SALE		-

Note 47 Dedicated assets

47.1 **REGULATIONS**

Article L. 594 of France's Environment Code and its 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. 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 law requires the realisable value of these dedicated assets to be higher than the value of the provisions corresponding to the present value of long-term nuclear obligations.

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. The Decree of 24 March 2015 contains two new measures concerning dedicated assets:

- the annual allocation to dedicated assets, net of any increases to provisions, must be positive or zero as long as their realisable value is below 110% of the amount of the provisions concerned;
- subject to certain conditions, real estate property owned by the operators
 of nuclear facilities may be allocated to coverage of these provisions.

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 the EDF Invest division, 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 recognised by the French state, representing the accumulated shortfall in CSPE financing at 31 December 2012, to its dedicated assets. This financial receivable bears interest at 1.72% and will be repaid under a revised schedule extending to the end of 2020, which is to be set out in a decision as stated in a ministerial letter of 26 January 2016. In that letter the State also acknowledged the shortfall that arose between 2013 and 2015, estimated at €644 million and included in the revised repayment schedule, and authorised its allocation to dedicated assets in 2016. This additional receivable was reclassified from operating receivables to financial receivables at 31 December 2015. In accordance with the ministerial letter, the amount of the additional receivable at December 31, 2015 and the repayment schedule will be adjusted in 2016 based on the CRE's confirmation of the shortfall in compensation for 2015.

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, as disbursements are spread over a period running to 2156.

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 2015, the assets managed by EDF Invest represent a value of \in 3,975 million, mainly including:

- 50% of the Group's investment in RTE, amounting to €2,580 million at 31 December 2015 (€2,555 million at 31 December 2014). This is the net consolidated value of 50% of the Group's shares in RTE, as presented in investments in associates in the consolidated balance sheet;
- the Group's investment in TIGF and Porterbrook, presented in availablefor-sale financial assets in the consolidated balance sheet; and
- the Group's investments in Madrileña Red de Gas (MRG), presented in investments in associates 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:

(in millions of Euros)	Balance sheet presentation	31/12/2015	31/12/2014
Equities		7,298	7,592
Debt instruments		6,674	6,419
Cash portfolio		282	640
Dedicated assets – equities and debt instruments	Available-for-sale financial assets	14,254	14,651
Derivatives	Fair value of derivatives	6	(23)
Other	Available-for-sale financial assets	20	5
Diversified equity and bond investments		14,280	14,633
CSPE receivable (1)	Loans and financial receivables	5,232	5,144
Derivatives	Fair value of derivatives	(7)	(8)
CSPE receivable after derivatives		5,225	5,136
RTE (50% of the investment held by the Group)		2,580	2,555
Other associates	Investments in associates	466	-
Other assets (2)	Available-for-sale financial assets	929	709
Unlisted assets (EDF Invest)		3,975	3,264
TOTAL DEDICATED ASSETS ⁽²⁾		23,480	23,033

(1) The receivable consisting of shortfalls in compensation at 31 December 2012 (see note 47.2).

(2) By limiting the value of certain investments in compliance with Article 16 of Decree 2007-243 on calculation of the regulatory realisable value of dedicated assets, the amount of the regulatory realisable value has been reduced to €23,392 million at 31 December 2015.

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 value of the assets of these investment funds amounts to \leq 1,292 million in 2015 (\leq 897 million in 2014). The funds mainly consist of 7 listed funds with total value of \leq 1,130 million (in 2014, 8 listed funds with total value of \leq 845 million).

47.4 CHANGES IN DEDICATED ASSETS IN 2015

At 31 December 2015, long-term nuclear provisions were 99.3% covered (if the value of certain investments is limited in compliance with Article 16 of Decree no. 2007-243 on calculation of the regulatory realisable value of dedicated assets, the regulatory coverage is 98.9%).

Withdrawals totalled €378 million, equivalent to the payments made in respect of the long-term nuclear obligations to be covered in 2015 (€403 million in 2014). The allocation to dedicated assets for 2015 was €38 million, resulting from allocation of shares already owned by EDF (no allocations were made to dedicated assets in 2014).

As increases to provisions that must be offset by allocations to dedicated assets under the Decree of 24 March 2015 amount to €1,010 million over the year 2015, the allocations to dedicated assets yet to be made amount to €972 million at 31 December 2015. These allocations must be made within a maximum of three years from that date. As stated in note 47.2, the French government has authorised EDF to allocate the CSPE receivable, a financial receivable of €644 million, to dedicated assets in 2016.

For the financial portfolio (equities and bond instruments), 2015 was relatively volatile and the stock markets rose over the year. The portfolio's performance was positive and better than the composite benchmark index. In response to the lack of visibility from the summer onwards, the equities/ bond allocation balance remained close to neutral in the second part of the year. However, the Group continued geographical allocations prioritising Europe and Japan over North America and emerging countries in particular.

For the unlisted asset portfolio, in 2015 EDF Invest and two other long-term investors completed acquisition of a minority shareholding in Madrileña Red de Gas (MRG), a regulated operator for the Madrid region gas distribution network.

EDF Invest, through a consortium with Ardian held in equal shares, also acquired an investment of more than 50% in Géosel, a hydrocarbon storage company based in Manosque in France, from the Total Group.

Both these investments were allocated to EDF Invest's "infrastructures" pocket along with RTE, TIGF and Porterbrook.

Over the year EDF Invest also continued to build up its real estate and investment fund portfolio. The non-exclusive real estate investment fund created in late 2014 at the initiative of Amundi and EDF Invest undertook a real estate investment in Germany during 2015.

EDF Invest also signed a contract with Nexity in September 2015 for the offplan purchase of the Smart Side office and service development in France.

A total of €972 million in net gains on disposals from the financial portfolio was recorded in the financial result in 2015 (€894 million in 2014).

The difference between the fair value and acquisition cost of diversified bond and equity investments included in equity was a positive $\leq 1,711$ million before taxes at 31 December 2015 ($\leq 2,299$ million at 31 December 2014).

The Group's assessment of the value of the dedicated asset portfolio did not lead to recognition of any impairment in 2015.

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:

(in millions of Euros)	31/12/2015	31/12/2014
Provisions for long-term radioactive waste management	8,254	7,676
Provisions for nuclear plant decommissioning	14,930	13,866
Provisions for last cores – portion for future long-term radioactive waste management	462	476
PRESENT COST OF LONG-TERM NUCLEAR OBLIGATIONS	23,646	22,018

Note 48 Related parties

Details of transactions with related parties are as follows:

	Associates vent	Associates and joint ventures		French State or Joint operations State-owned entities ⁽¹⁾		Group	Total	
(in millions of Euros)	31/12/2015	31/12/2014	31/12/2015	31/12/2014	31/12/2015	31/12/2014	31/12/2015	31/12/2014
Sales	618	584	-	_	976	833	1,594	1,417
Energy purchases	3,738	3,572	4	4	2,077	1,738	5,819	5,314
External purchases	27	50	4	4	1,187	1,173	1,218	1,227
Financial assets	670	670	-	_	-	94	670	764
Other assets	603	459	-	_	845	715	1,448	1,174
Financial liabilities	-	-	-	-	-	-	-	-
Other liabilities	1,049	1,139	-	-	1,043	1,134	2,092	2,273

(1) Excluding tax and social liabilities and the CSPE receivable.

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 84.94% of the capital of EDF at 31 December 2015, 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*).

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 France's Energy Code, and the level of the Contribution to the Public Electricity Service.

48.2.2 Relations with Engie

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 Engie, has managed gas distribution since 1 January 2008 - the agreement of 18 April 2005 (amended on 20 December 2007) defining relations between EDF and Engie 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 in the distribution sector mainly cover technical customer services 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.

On 27 January 2016, EDF's Board of Directors was informed that discussions had been finalised between EDF and AREVA concerning the takeover of AREVA NP and the strategic partnership to be established (see note 50).

Front-end of the cycle

In December 2014, EDF and AREVA NP signed a contract for supplies of enriched-uranium fuel assemblies from 2015.

Several important agreements were also negotiated:

- for supplies of natural uranium: an EDF contract covering the period 2021-2030;
- for fluoration: a contract covering the period 2019-2030;
- for enrichment of natural uranium into uranium 235: an AREVA contract for the period 2019-2030.

As part of the plan to construct two EPRs in the United Kingdom at the Hinkley Point site, EDF and AREVA signed a letter of intent on 21 October 2013 defining the terms for supplies of fuel.

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 2013-2015 are covered by an application contract signed in May 2015. The application conditions for the period 2016-2023 were also agreed in December 2015, and presented to the Board of Directors on 27 January 2016. They will give rise to signature of an amendment.

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 owns a very small minority shareholding in AREVA (2.24%).

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 2015 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 \in 12.2 million in 2015 (\in 8.4 million in 2014). 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 2015 is mostly attributable to the changes in membership of the COMEX, which has grown from 7 to 11 members in 2015 (in addition to the Chairman and CEO), and the rise in the number of directors receiving directors' fees, from 5 to 11 in application of the order of 20 August 2014.

Apart from EDF's Chairman and CEO who could benefit from a termination indemnity if his term of office were ended, the directors benefit from no other special pension system, starting bonus or severance payment entitlement except by contractual negotiation.

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, Kogeneracja, Zielona Gora, EDF Polska and EDF Luminus.

In 2015, the Group surrendered 48 million tonnes in respect of emissions generated in 2014. In 2014, the Group surrendered 60 million tonnes in respect of emissions generated in 2013.

The Group's total emission rights allocation for 2015 recorded in the national registers is 7 million tonnes (6 million tonnes for 2014).

The volume of emissions at 31 December 2015 stood at 47 million tonnes. The provision resulting from over-quota emissions amounts to \in 209 million at 31 December 2015 (\in 314 million at 31 December 2014).

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.

In France, the Law of 13 July 2005 introduced a system of energy savings certificates. Suppliers of energy (electricity, gas, heat, cold, domestic fuel oil and fuel for vehicles) 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.

The French system was renewed by Decree no. 2014-1557 of 24 December 2014 for a third period running from 1 January 2015 to 31 December 2017. The energy savings objectives for this period are more ambitious, and the system has been simplified. The volumes of energy savings certificates obtained during the second period will count towards achievement of the objectives for the third period.

Note 50 Subsequent events

50.1 BOARD OF DIRECTORS' DECISION OF 27 JANUARY 2016: FURTHER PROGRESS ON THE STRATEGIC PARTNERSHIP AGREEMENT BETWEEN EDF AND AREVA

At its meeting on 27 January 2016, EDF's Board of Directors was informed that following due diligence work conducted during the second half of 2015, discussions with AREVA regarding EDF's takeover of the activities of AREVA NP (the company in charge of services, and reactor equipment and fuel manufacturing) had been finalised.

The Board approved the final valuation of the activities to be acquired by EDF, amounting to ≤ 2.5 billion for 100% of the capital of AREVA NP¹. This amount may be revised upwards or downwards depending on the financial statements drawn up at the transaction's completion date, with a possible earn-out payment of up to ≤ 350 million based on achievement of certain performance objectives measured after the completion date.

EDF will be in a position to make a binding offer for its intended investment of between 51% and 75% on this basis, after consultation with the Central Works Council and authorisation by the Board of Directors, once the arrangements to completely immunise EDF against the costs and risks of the Olkiluoto 3 (OL3) project and all the final contractual documents are finalised.

This decision follows the memorandum of understanding signed on 30 July 2015, which formally recorded progress on discussions concerning In application of Article 30 of the Law of 17 August 2015 on the energy transition for green growth, a new additional energy savings obligation for 2016-2017 applies from 1 January 2016, for the benefit of energy-poor households. This new obligation is added to the energy savings obligations for the third period. The annual volume of the obligation is proportional to the annual energy savings obligation.

EDF is well-placed to meet its obligations thanks to energy-efficient offers for each market segment: residential customers, business customers, local authorities and organisations funding social projects.

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 1.3.28.2).

At 31 December 2015, a provision of €707 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.

the proposed partnership between EDF and AREVA. This memorandum comprises 3 sections:

- a general strategic and industrial agreement, principally in order to improve and develop the efficiency of cooperation in areas such as research and development, international sales of new reactors, spent fuel storage and dismantling;
- acquisition by EDF of exclusive control over AREVA NP. It provides for majority control (at least 51%) of AREVA NP by EDF, a maximum 25% investment by AREVA as part of a strategic partnership, and potential investments by other minority partners. This plan will enhance security for the most critical activities involved in the "Grand carénage" industrial programme for the existing fleet in France, and improve the efficiency of engineering services, project management, and some manufacturing activities based on EDF's experience;
- formation of a dedicated company, 80% owned by EDF and 20% owned by AREVA NP, to optimise design and project management for new reactors. The purpose of this company will be to improve the preparation and management of projects, and enhance the French industry's export offering through better coordination of strategic marketing to prepare offerings in the upstream project phase, development of more competitive products that are better-suited to customers' needs, and harmonisation and expansion of the range of reactors, all the while continuing partnerships with the major industrial companies in Japan and China. This new company will be part of an integrated generator/ supplier model, which has been tried and tested in several countries.

^{1.} Without transfer of financial debt.

Note 51 Scope of consolidation

51.1 FULLY CONSOLIDATED COMPANIES AT 31 DECEMBER 2015

		Percentage of ownership at 31/12/2015	Percentage of ownership at 31/12/2014	Business sector
France				
Électricité de France – Parent Company		100.00	100.00	G, D, O
Électricité Réseau Distribution France (ERDF)		100.00	100.00	D
EDF Production Électrique Insulaire (EDF PEI)		100.00	100.00	G
Group Support Services (G2S)		100.00	-	G
United Kingdom				
EDF Energy plc. (EDF Energy)		100.00	100.00	G, O
EDF Energy UK Ltd.		100.00	100.00	0
EDF Development Company Ltd.		100.00	100.00	0
Italy				
Edison SpA (Edison)		97.40	97.40	G, D, O
Transalpina di Energia SpA (TdE SpA)		100.00	100.00	0
Fenice Qualita' Per L'Ambiante SpA (Fenice)		100.00	100.00	G, O
Other International				
EDF International SAS	France	100.00	100.00	0
EDF Belgium SA	Belgium	100.00	100.00	G
EDF Luminus SA	Belgium	68.63	63.53	G
EDF Norte Fluminense SA	Brazil	100.00	100.00	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	100.00	0
EDF Inc.	USA	100.00	100.00	0
Unistar Nuclear Energy LLC	USA	100.00	100.00	G
Budapesti Erőmű Zrt (BE Zrt)	Hungary	-	95.62	G
EDF Démász Zrt	Hungary	100.00	100.00	G, D, O
EDF Paliwa Sp. z o. o. (Energokrak)	Poland	97.44	97.26	0
EDF Polska SA	Poland	97.44	97.26	G
Zec Kogeneracja SA (Kogeneracja)	Poland	49.55	49.51	G, D
Elektrocieplownia Zielona Gora SA (Zielona Gora)	Poland	48.75	48.72	G, D
EDF Alpes Investissements SARL	Switzerland	100.00	100.00	0
Mekong Energy Company Ltd. (Meco)	Vietnam	56.25	56.25	G

Business segments: G = Generation, D = Distribution, T = Transmission, O = Other.

		Percentage of ownership at 31/12/2015	Percentage of ownership at 31/12/2014	Business sector
Other Activities				
EDF Développement Environnement SA	France	100.00	100.00	0
Société pour le Conditionnement des Déchets et Effluents Industriels (SOCODEI)	France	100.00	100.00	0
Compagnie Financière de Valorisation pour l'Ingénierie (COFIVA)	France	100.00	100.00	0
Société Française d'Ingénierie Électronucléaire et d'Assistance (SOFINEL)	France	55.00	55.00	0
Électricité de Strasbourg	France	88.64	88.64	D
Tiru SA – Traitement Industriel des Résidus Urbains	France	51.00	51.00	0
Dunkerque LNG	France	65.01	65.00	0
EDF Énergies Nouvelles	France	100.00	100.00	G, O
EDF Immo and real estate subsidiaries	France	100.00	100.00	0
EDF Optimal Solutions SAS	France	100.00	100.00	0
Société C2	France	100.00	100.00	0
Société C3	France	100.00	100.00	0
EDF Holding SAS	France	100.00	100.00	0
CHAM SAS	France	100.00	100.00	0
Dalkia	France	99.94	99.94	0
Citelum	France	100.00	100.00	0
EDF Trading Ltd.	UK	100.00	100.00	0
EDF DIN UK Ltd.	UK	100.00	100.00	0
Wagram Insurance Company Ltd.	Ireland	100.00	100.00	0
EDF Investissements Groupe SA	Belgium	93.89	95.51	0
Océane Re	Luxembourg	99.98	99.98	0
EDF Gas Deutschland GmbH	Germany	100.00	100.00	0

Business segments: G = Generation, D = Distribution, T = Transmission, O = Other.

51.2 COMPANY HELD IN THE FORM OF JOINT OPERATIONS AT 31 DECEMBER 2015

		Percentage of ownership at 31/12/2015	Percentage of ownership at 31/12/2014	Business sector
Other Activites				
Friedeburger Speicherbetriebsgesellschat GmbH (Crystal)	Germany	50.00	50.00	0

Business segments: G = Generation, D = Distribution, T = Transmission, O = Other.

51.3 COMPANIES ACCOUNTED FOR BY THE EQUITY METHOD AT 31 DECEMBER 2015

		Percentage of ownership at 31/12/2015	Percentage of ownership at 31/12/2014	Business sector
France				
RTE Réseau de Transport d'Électricité (RTE)		100.00	100.00	Т
Elisandra IV (Madrileña Red de Gas Holding) (EDF Invest)	Spain	25.00	-	D
Alba Real Estate SCS (EDF Invest)	Luxembourg	46.50	-	0
Immo C47 (EDF Invest)	France	100.00	-	0
Other International				
Energie Steiermark Holding AG (Estag)	Austria	-	25.00	G, O
Compagnie Énergétique de Sinop (CES)	Brazil	51.00	51.00	G
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
Taïshan Nuclear Power Joint Venture Company Ltd. (TNPJVC)	China	30.00	30.00	G
Jiangxi Datang International Fuzhou Power Generation Company Ltd.	China	49.00	49.00	G
Nam Theun 2 Power Company (NTPC)	Laos	40.00	40.00	G
Alpiq	Switzerland	25.04	25.00	G, D, T, O
Other Activities				
Domofinance SA	France	45.00	45.00	0

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 2015

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 31/12/2015	Percentage of voting rights at 31/12/2015
Edison SpA	97.40	99.48
Zec Kogeneracja SA (Kogeneracja)	49.55	50.00
Elektrocieplownia Zielona Gora SA (Zielona Gora)	48.75	98.40
EDF Paliwa Sp. z o. o.	97.44	100.00
Société Française d'Ingénierie Électronucléaire et d'Assistance (SOFINEL)	55.00	54.98
EDF Investissements Groupe SA	93.89	50.00

6.2 **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 2015

To the shareholders,

Following our appointment as Statutory Auditors by your General Meeting, we hereby report to you, for the year ended 31 December 2015 on:

- the audit of the accompanying consolidated financial statements of Electricité de France SA ("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 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 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 to the consolidated financial statements. This valuation is sensitive to the assumptions made concerning technical processes, costs, inflation rates, long-term discount rates, depreciation period of the nuclear power plants which is maintained at 40 years in France in the context described in note 1.3.2, as well as 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 1.3.28.1 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 2015.

Management judgments and estimates

Note 1.3.2 to the consolidated financial statements describes the main sensitive accounting policies for which management exercises judgment and makes estimates, 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 significant market decline, 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 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, 13 and 23);
- the provisions for employee benefits, other provisions and contingent liabilities (notes 31, 32 and 45);
- 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*) in accordance with the agreement announced on 14 January 2013 between EDF SA and the French State, as revised by a ministerial letter on 26 January 2016 (notes 4.3 and 36.3).

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FINANCIAL STATEMENTS STATUTORY AUDITORS' REPORT ON THE CONSOLIDATED FINANCIAL STATEMENTS

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.

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, 15 February 2016 The Statutory Auditors

KPMG Audit Department of KPMG SA

Jacques-Francois Lethu

Deloitte & Associés

Patrick E. Suissa



6.3 EDF SA financial statements at 31 December 2015

NB: Most figures in the tables are reported in millions of Euros. The resulting approximation can lead to slight differences in totals or movements and changes.

INCOME STATEMENTS

(in millions of Euros)	Notes	2015	2014
SALES ⁽¹⁾	4	41,553	41,717
Change in inventories and capitalised production		875	820
Operating subsidies	5	6,338	5,912
Reversals of provisions and depreciation	6	3,124	2,752
Other operating income and transfers of charges	7	938	715
I TOTAL OPERATING INCOME		52,828	51,916
Fuel purchases used		2,823	3,173
Energy purchases		10,933	9,792
Services and other purchases used		19,338	18,965
Purchases and other external expenses	8	33,094	31,930
Taxes other than Income taxes	9	2,682	2,615
Personnel expenses	10	6,812	6,604
Depreciation and amortisation	11	3,447	3,149
Provisions, impairment and write-down	12	3,763	2,840
Depreciation, amortisation and provisions		7,210	5,989
Other operating expenses		1,409	905
II TOTAL OPERATING EXPENSES		51,207	48,043
OPERATING PROFIT (I-II)		1,621	3,873
III Joint operations		16	7
IV Financial result	13	(2,275)	(3,096)
PROFIT OR LOSS BEFORE INCOME TAXES AND EXCEPTIONAL ITEMS (I-II+III+IV)		(638)	784
V EXCEPTIONAL RESULT	14	846	1,442
VI INCOME TAXES	15	(63)	577
PROFIT OR LOSS (I-II+III+IV+V-VI)		271	1,649

(1) Production of goods for export in 2015: €6,895 million; production of services for export in 2015: €481 million.

BALANCE SHEETS

ASSETS

			31/12/2015		31/12/2014
(in millions of Euros)	Notes	Gross values	Depreciation or impairment	Net values	Net values
Intangible assets	16-17	1,586	735	851	777
Property, plant and equipment owned by EDF	16-17	76,755	51,349	25,406	25,071
Property, plant and equipment operated under concession	16-17	13,806	8,140	5,666	5,426
Tangible and intangible assets in progress	16-17	16,147	259	15,888	14,435
Investments and related receivables		57,620	185	57,435	56,456
Investment securities		12,985	219	12,766	12,744
Loans and other financial assets		13,688	3	13,685	8,229
Financial assets	18	84,293	407	83,886	77,429
TOTAL I FIXED ASSETS		192,587	60,890	131,697	123,138
Inventories and work-in-progress	19	10,404	192	10,212	9,753
Advances on orders	20	1,224	1	1,223	1,134
Trade and other receivables	20	19,976	393	19,583	19,005
Marketable securities	21	13,907	7	13,900	8,815
Cash instruments	20	4,759	-	4,759	3,913
Cash and cash equivalents	22	6,199	-	6,199	6,583
Prepaid expenses	20	1,339	-	1,339	1,294
TOTAL II CURRENT ASSETS		57,808	593	57,215	50,497
Deferred charges (III)		289	-	289	286
Bond redemption premiums (IV)		676	164	512	508
Unrealised foreign exchange losses (V)	23	2,070	-	2,070	1,146
TOTAL ASSETS (I+II+III+IV+V)		253,430	61,647	191,783	175,575

FINANCIAL STATEMENTS EDF SA FINANCIAL STATEMENTS AT 31 DECEMBER 2015

EQUITY AND LIABILITIES

(in millions of Euros)	Notes	31/12/2015	31/12/2014
Capital		960	930
Capital-related premiums		8,081	7,205
Revaluation surplus		675	669
Legal reserves		93	93
Other reserves		3,000	3,000
Reserves		3,093	3,093
Retained earnings		5,134	5,598
Profit or loss for the financial year		271	1,649
Interim dividend		(1,059)	(1,059)
Investment subsidies		170	174
Tax-regulated provisions		6,233	6,324
EQUITY	24	23,558	24,583
Additional equity	25	11,281	10,688
Special concession accounts	26	2,093	2,045
TOTAL I EQUITY AND CONCESSION ACCOUNTS		36,932	37,316
Provisions for risks	27	3,056	1,933
Provisions related to nuclear generation – back-end of the nuclear cycle, plant decommissioning and last cores	28	36,130	34,060
Provisions for decommissioning of non-nuclear facilities	29	597	589
Provisions for employee benefits	30	10,759	10,795
Provisions for other expenses	31	969	982
Provisions for expenses		48,455	46,426
TOTAL II PROVISIONS		51,511	48,359
Financial liabilities	33	55,821	47,053
Advances and progress payments received	32	6,819	6,433
Operating, investment and other liabilities	32	32,741	28,821
Cash instruments	32	3,969	3,337
Deferred income	32	3,698	4,065
TOTAL III LIABILITIES	32	103,048	89,709
Unrealised foreign exchange gains (IV)	34	292	191
TOTAL EQUITY AND LIABILITIES (I+II+III+IV)		191,783	175,575

CASH FLOW STATEMENTS

(in millions of Euros) Notes	2015	2014
Operating activities		
Profit/(loss) before income tax	208	2,226
Amortisation, depreciation and provisions	7,023	5,897
Capital (gains)/losses	(505)	(1,092)
Financial income and expenses	(814)	102
Changes in working capital	872	(1,127)
Net cash flow from operations	6,784	6,006
Net financial expenses, including dividends received	1,637	(187)
Income taxes paid	(1,102)	(2,219)
European Commission decision of 22 July 2015 (1)	(789)	-
(A) Net cash flow from operating activities	6,531	3,600
Investing activities		
Investments in property, plant and equipment and intangible assets	(5,957)	(5,832)
Proceeds from sale of property, plant and equipment and intangible assets	21	13
Changes in financial assets	(9,645)	5,249
(B) Net cash flow used in investing activities	(15,582)	(570)
Financing activities		
Issuance of borrowings and underwriting agreements	9,807	7,109
Repayment of borrowings and underwriting agreements	(2,969)	(7,247)
Dividends paid	(1,420)	(2,327)
Issuance of perpetual subordinated bonds 25	-	3,973
Funding contributions received for assets operated under concessions	10	7
Investment subsidies	6	5
(C) Net cash flow from financing activities	5,433	1,520
(A)+(B)+(C) Net increase/(Decrease) in cash and cash equivalents	(3,617)	4,550
CASH AND CASH EQUIVALENTS – OPENING BALANCE ⁽²⁾ 22	1,226	(3,310)
Effect of currency fluctuations	(90)	(57)
Financial income on cash and cash equivalents	54	43
CASH AND CASH EQUIVALENTS - CLOSING BALANCE (2)22	(2,427)	1,226

On 22 July 2015 the European Commission issued a new decision classifying the tax treatment of provisions established between 1987 and 1996 for renewal of French general electricity network facilities as State aid incompatible with European Union rules (see note 2.2).
 "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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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 No. 2014-03 of 5 June 2014 concerning the chart of accounts issued by the *Autorité des Normes Comptables* (ANC).

The accounting and valuation methods applied are identical to those used in the financial statements for the year ended 31 December 2014, except for the change in accounting method for energy savings certificates described below.

The new accounting method for energy savings certificates is defined in Regulation No. 2012-04 of 4 October 2012, ratified by the Order of 28 December 2012. The date of mandatory application, which was deferred for one year by Regulation No. 2013-02 of 7 November 2013, was set at 1 January 2015. These rules were incorporated without adjustment into Regulation No. 2014-03. The first application of this Regulation qualifies as a change of accounting method, and its after-tax effect, calculated retrospectively, is included in retained earnings.

At 1 January 2015, it leads to recognition of an inventory of \in 344 million corresponding to the expenses incurred in past years to obtain certificates that exceed the regulatory obligation for the previous obligation period (1 January 2011 – 31 December 2014). This advance will be used to fulfil the obligation for the new period (1 January 2015 – 31 December 2017).

At the year-end, only the net position is shown in the financial statements: in inventories (if there is a surplus of energy savings certificates: in this case the net position corresponds to certificates obtained or receivable that cover future energy savings obligations) or in the liabilities (if there is a shortfall in energy savings certificates: in this case the net position corresponds to the cost of action yet to be taken to cover the obligations associated with energy sales completed).

At 31 December 2015, the impacts of application of the new accounting method for energy savings certificates are as follows:

	New method		Old method	
(in millions of Euros)	Balance sheet	Income statement	Balance sheet	Income statement
Opening inventory (change of accounting method)	344			
Energy savings expenditure – charges for the period		(384)		(384)
Production of energy savings certificates for the year	384	384		
Energy savings obligations	(369)	(369)		
Inventory of energy savings certificates at 31 December 2015	359			
IMPACT ON OPERATING INCOME FOR 2015		(369)		(384)

The accounting treatment is described in note 1.19.2.

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 operating 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 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 technical processes, costs, inflation rates, long-term discount rates, the useful life of plants currently in operation 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 relating to nuclear provisions 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 2015 are presented in note 30.4. These assumptions are updated annually. EDF considers the actuarial assumptions used at 31 December 2015 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, with associated delivrey services

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. Delivery services through the energy distribution network purchased from the subsidiary ERDF and reinvoiced to end-customers contribute to EDF's energy sales.

Sales are recognised when delivery of goods has taken place or the service has been completed.

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 expenses 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 lives 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 concessions.

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 installations, 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 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
fossil-fired power plants: 25 to 45 years
nuclear generation facilities: 40 years
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 concessions", 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 the balance sheet liabilities for assets operated under concessions (see note 1.14.2).

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 plans 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 No. 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 included in 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, 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 No. 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 covered by a provision 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 generally valued under the weighted average unit cost method. Consumption of greenhouse gas emission rights and energy savings certificates is valued under the FIFO (first in first out) method.

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. fluoration, enrichment, production, etc).

In accordance with the notion of "loaded fuel" as defined in the Order 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, fluoration, 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 fossil-fired 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 and energy savings certificates acquired for the generation cycle (see notes 1.19.1 and 1.19.2);
- gas stocks, valued at weighted average cost, including direct and indirect purchase costs, especially transport costs.

In application of Decree No. 2012-1405 of 14 December 2012 concerning the suppliers' contribution to secure electricity supplies, which set up a capacity obligation mechanism for the electricity sector that operates under rules approved in the Order of 22 January 2015, EDF undertook the first operations for certification of its generation capacities. The capacity guarantees received in return will be used to meet the obligation for the first obligation period of 2017. The capacity guarantees are recorded in inventories at production cost; their amounts are non-significant at 31 December 2015.

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. 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:

- ordinary 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 No. 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 LIABILITIES

These liabilities relate to public electricity distribution concessions for the Island Energy Systems (IES), and hydropower concessions.

1.14.1 Special public electricity 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;
- additional depreciation to the industrial depreciation 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.

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 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 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 No. 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 for spent fuel management and longterm radioactive waste management;
- 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 cover:

- losses relating 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;
- unrealised foreign exchange losses;
- costs of decommissioning of thermal and hydropower plants;
- costs of renewal of facilities operated under public electricity 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 No. 2000-A issued on 6 July 2000, incorporated into Article 324-1 of ANC Regulation No. 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 longterm 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 No. 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 pension provisions 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 (island public electricity 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 Engie 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 Engie;

- 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, subject to a ceiling) 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 workrelated 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

EDF applies the accounting methods for greenhouse gas emission rights in accordance with France's Accounting Standards Authority (ANC) Regulation No. 2012-03 of 4 October 2012, incorporated into Articles 615-1 to 615-22 of ANC Regulation No. 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 writedown 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; or a liability (provision) is recorded 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

EDF applies the accounting method for energy savings certificates in accordance with ANC Regulation No. 2012-04 of 4 October 2012, incorporated into Articles 616-1 to 616-25 of ANC Regulation No. 2014-03.

Energy Savings Certificates are held by EDF in order to comply with the regulatory requirements on energy savings. Consequently, EDF applies the "Energy Savings" model defined by the ANC Regulation.

Certificates obtained or receivable are recorded in inventories at production or acquisition cost, and are valued under the FIFO method.

At the year-end, a net position is presented in the financial statements as follows:

- an asset is recognised (in inventories) if the energy savings achieved are greater than the energy savings obligations. This inventory corresponds to the certificates purchased, obtained or receivable that cover future energy savings obligations. It is consumed as and when energy sales are completed that generate energy savings obligations; or
- a liability (provision) is recognised if the energy savings achieved are lower than the energy savings obligations. The liability corresponds to the the cost of action yet to be taken to cover the obligations associated with energy sales completed. It is subsequently extinguished by making energy savings expenditures that enable the company to obtain certificates, or by purchasing certificates.

Note 2 Significant events and transactions

2.1 MINISTERIAL ORDER CONCERNING THE COST OF THE CIGÉO STORAGE PROJECT

On 15 January 2016 the Ministry of Ecology, Sustainable Development and Energy issued an order setting the cost associated with implementation of long-term management solutions for long-lived medium and high-level radioactive waste under the Cigéo storage project at €25 billion under 2011 economic conditions. This cost valuation was required by Article L. 542-12 of France's Energy Code.

The cost stated in the Order constitutes an objective to be met by the French Agency for Radioactive Waste Management (ANDRA), in compliance with safety standards set by the Nuclear Safety Authority (ASN), in close cooperation with operators of nuclear installations. In application of this Order, the cost of the Cigéo project will be regularly updated, at least at each key milestone of the project's development (authorisation to create the facility, commissioning, end of the "pilot industrial phase", safety reviews) in accordance with the opinion of the ASN.

The cost of the Cigéo project set by the Ministerial Order is €25 billion under the economic conditions of 2011. This figure replaces the estimated benchmark cost of €20.8 billion used by EDF for its financial statements at 31 December 2014 and 30 June 2015.

At 31 December 2015, the new cost figure has resulted in an increase of \in 820 million in the provisions for long-term radioactive waste management established to cover future expenses relating to the Cigéo deep storage project.

2.2 EUROPEAN COMMISSION DECISION ON THE TAX TREATMENT OF PROVISIONS ESTABLISHED BETWEEN 1987 AND 1996 FOR RENEWAL OF THE GENERAL NETWORK

On 22 July 2015 the European Commission adopted a new decision classifying the tax treatment of provisions established between 1987 and 1996 for renewal of the General Network facilities as state aid that is incompatible with European Union rules.

This decision followed the European Union General Court's cancellation, through a decision of December 2009 upheld by the Court of Justice of the European Union in June 2012, of the Commission's initial decision of 16 December 2003 on the grounds that when making its decision the Commission should have applied the private investor principle to determine whether or not the action constituted state aid.

Following this cancellation the French state repaid €1,224 million to EDF on 30 December 2009 (€889 million in principal and €335 million in interest), corresponding to the sum paid by EDF to the French state in February 2004 (the respective shares of ERDF and RTE had already been transferred). The European Commission then decided in May 2013 to reopen the proceedings.

In its decision of 22 July 2015 the Commission concluded that State aid incompatible with the common market had indeed been given. As a result of this decision the French state ordered EDF to reimburse the amount corresponding to the alleged aid, plus interest calculated as determined by the Commission.

In response to this decision EDF reimbursed the sums demanded. However, EDF contests the existence of unlawful State aid and filed an action for annulment before the European Union General Court on 22 December 2015.

EDF has recognised the consequences of this decision as follows in its financial statements at 31 December 2015:

- in a symmetrical approach to the impacts recorded in the financial statements at 31 December 2009:
 - EDF's share of the principal amount of tax (€507 million) is recorded in income taxes,
 - EDF's share of the associated financial interest, amounting to €282 million, is included in the financial result;
- on 13 October 2015, EDF made a corresponding payment of €1,383 million to the French state, which was partly offset by reimbursements of €219 million received from ERDF and €375 million received from RTE.

2.3 **ISSUANCE OF SENIOR BONDS**

On 8 October 2015 EDF issued several tranches of a senior bond in US dollars:

- US\$1,500 million with 5-year maturity and a 2.35% fixed coupon;
- US\$500 million with 20-year maturity and a 4.75% fixed coupon;
- US\$1,150 million with 30-year maturity and a 4.95% fixed coupon;
- US\$350 million, with 40-year maturity and a 5.25% fixed coupon.

On the same date, EDF launched a US\$1,250 million green bond with 10-year maturity and a fixed coupon of 3.625%.

These issues follow a US\$1,500 million senior "Formosa Bond" issue on the Taiwanese market on 25 September 2015 (30-year maturity and a 4.75% fixed coupon).

These transactions enable EDF to further strengthen its balance sheet.

Note 3 Regulatory events in 2015

3.1 **REGULATED ELECTRICITY SALES TARIFFS IN FRANCE**

On 15 July 2015 the French Energy Regulator (*Commission de Régulation de l'Énergie* – CRE) published its 2015 report on France's regulated sales tariffs for electricity, in which it reported a tariff shortfall of €922 million for 2014 in addition to previous shortfalls that had not been compensated.

A decision of 30 July 2015 set the regulated sales tariffs that took effect from 1 August 2015. The average increases were 2.5% for the "blue" residential customers' tariffs, 0.9% for the "yellow" tariffs and 4% for the "green" tariffs, while the "blue" tariffs for non-residential customers remained unchanged.

31 December 2015 saw the end of the "yellow" and "green" regulated tariffs. By 1 January 2016 around three quarters of the sites concerned had signed a market-rate contract with their chosen supplier. The remaining quarter who had not yet signed up with a supplier continued to receive electricity from their former supplier, under a transitional contract valid for a maximum period of six months.

3.2 **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 particular¹. The CSPE is collected directly from the end-user.

The CSPE system was reformed by the amended finance Law for 2015, published in the Journal officiel on 30 December 2015. The charges for the public energy service (electricity and gas) will be incorporated into the French national budget in 2016. The finance Law introduces a special "Energy Transition" budget item of €4.4 billion, which will be funded in 2016 by the TICFE Tax on Consumption of Electricity (Taxe intérieure sur la consommation finale d'électricité), less €2 billion, plus 2.16% of the TICGN tax on gas consumption (Taxe intérieure de consommation sur le gaz naturel). This budget will cover expenses borne by obligated suppliers, such as the additional cost associated with contracts obliging them to purchase renewable energies and biogas, the difference between forecast and actual expenses, the annual contribution to repayment of the accumulated shortfall due to EDF, for which the schedule will be set by an official decision, and reimbursement of CSPE advances for industrial operators who were exempt prior to 2016. Solidarity charges, purchase obligations excluding renewable energies, and the cost of applying the standard national tariffs to areas not connected to France's mainland network are covered by the national budget through the €2 billion "Public Energy Service" budget item.

The Law also introduces changes to energy taxes, increasing the TICGN and coal tax in 2016 and 2017 and replacing the TICFE by the new CSPE. CSPE rates are set at ≤ 22.5 /MWh for 2016, ≤ 2 /MWh, ≤ 5 /MWh or ≤ 7.5 /MWh for electro-intensive users based on a criterion of kilowatthours per Euro of value added, and ≤ 0.5 /MWh for hyperelectro-intensive users.

The draft CSPE Decree was presented to France's Higher Energy Board (*Conseil supérieur de l'énergie*, or CSE) on 21 December 2015. Under this proposed decree, the public financial organisation *Caisse des Dépôts et Consignations* (CDC) would be required to make the payments to obligated suppliers, one of which is EDF, and keep the "Public Energy Service" and "Energy Transition" accounts. The CRE would be required to determine the

amount of the charges for the public energy service (actual and forecast). The procedures for compensating obligated suppliers for these charges are also laid down in the proposed decree.

The estimated amount of expenses to be covered by compensation for EDF for 2015 is $\in 6.3$ billion, 7% more than in 2014. The main explanation for this rise is the lower level of market prices, which increases the surplus costs of energy covered by purchase obligations to be compensated by the CSPE, and a rise in the volume output by photovoltaic and wind power facilities. The amounts received during 2015 total $\in 6.1$ billion, 17.6% more than in 2014. This rise principally results from the CSPE increase applicable since 1 January 2015 (an increase of $\in 3/MWh$ compared to 2014, taking the CSPE to $\in 19.5/MWh$ for the year 2015).

The agreement signed in early 2013 by EDF and the French authorities, providing for progressive reimbursement to EDF by 31 December 2018 of the receivable consisting of the CSPE shortfall at 31 December 2012 and the costs of bearing this shortfall for EDF, was updated in late 2015 by a ministerial letter received on 26 January 2016. The State has acknowledged the further shortfalls that arose between 2013 and 2015 and the associated interest, estimated at a total €644 million, and authorises EDF to allocate this receivable to dedicated assets in 2016. The amount of the receivable due to EDF is thus €5.9 billion at 31 December 2015 (see note 18.1). The repayment schedule has been adjusted such that this receivable will be fully reimbursed by 2020. It will be set out in a Ministerial Order.

3.3 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 12.3TWh for the first half of 2015. This volume decreased substantially in the second half of 2015 to 3.8TWh, principally because of the steady decline in prices on the wholesale market, which is becoming a more attractive source of energy supplies, and also due to the termination of framework contracts with several suppliers. No ARENH applications were made at the end of 2015 for supplies in the first half of 2016.

The ARENH price has been set at €42/MWh since 1 January 2012, and is 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 French Energy Regulator CRE. It is still under examination by the European Commission, which must approve the price formula. The French government has deferred the application date of the new decree until the conclusions of discussions with the European Commission are available.

3.4 ENERGY TRANSITION LAW FOR GREEN GROWTH

After a final reading, on 22 July 2015 the French National Assembly adopted the energy transition Law for green growth, marking the end of a long legislative process. The resulting Law No. 2015-992 of 17 August 2015 on the energy transition for green growth was promulgated in the *Journal officiel* of 18 August 2015 after a decision by the Constitutional Council of 13 August 2015.

1. Local distribution companies and Électricité de Mayotte also make small contributions to the system.

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3.5. AGIRC-ARRCO AGREEMENT OF 30 OCTOBER 2015

On 30 October 2015 the social partners reached an agreement intended to balance the accounts of the AGIRC-ARRCO public pension body.

This agreement contains several sets of measures, some of which apply from 1 January 2016: smaller adjustments to pensions from 2016 to 2018, moving the pension value adjustment date from 1 April to 1 November, a

lower return on plan assets, extending the basis for AGFF's contribution to tranche C of the AGIRC scheme, and other measures aiming to improve management of pension and related systems.

The special pension system for France's electricity and gas (IEG) sector has been affiliated to the AGIRC-ARRCO standard national system since 2005. Since the new agreement does not change IEG beneficiaries' pension rights, the increase in obligations resulting from this affiliation, amounting to €807 million, is recorded in actuarial adjustments (see note 30).

INCOME STATEMENTS

Note 4 Sales

Sales are comprised of:

(in millions of Euros)	2015	2014
Sales of energy ⁽¹⁾	39,504	39,616
Sales of goods and services	2,049	2,101
SALES	41,553	41,717

(1) Including a share of delivery costs for sales of electricity and gas.

Sales of energy for 2014 included the €908 million effect of regularisation of regulated sales tariffs for the period 23 July 2012 to 31 July 2013, following the Council of State's decision of 11 April 2014.

After eliminating this effect, sales for 2015 were up by €744 million, mainly as a result of higher volumes sold due to a slightly more favourable weather effect than in 2014, and the tariff rises of November 2014 and August 2015 which more than made up for unfavourable market conditions.

Note 5 Operating subsidies

(in millions of Euros)	2015	2014
OPERATING SUBSIDIES	6,338	5,912

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 \in 6,320 million for 2015 (\in 5,888 million for 2014). The increase is mainly

explained by lower market prices for electricity and the rise in purchase volumes of wind power and photovoltaic energy, which led to an increase in the subsidy receivable for purchase obligations.

Note 6 Reversals of provisions and impairment

(in millions of Euros)	2015	2014
Reversals of provisions for risks	158	100
Pensions and similar obligations	1,272	1,127
Spent fuel management	826	648
Long-term radioactive waste management	215	240
Decommissioning of nuclear power plants	165	164
Decommissioning of thermal and hydropower plants	32	36
Other provisions for expenses	121	170
Reversals of provisions for expenses	2,631	2,385
Reversals of depreciation	335	267
TOTAL REVERSALS OF PROVISIONS AND IMPAIRMENT	3,124	2,752

Note 7 Other operating income and transfers of charges

(in millions of Euros)	2015	2014
Other operating income	824	585
Transfers of charges	114	130
TOTAL	938	715

Note 8 Purchases and other external expenses

(in millions of Euros)	2015	2014
Fuel purchases used (1)	2,823	3,173
Energy purchases (2)	10,933	9,792
Services and other purchases used (3)	19,338	18,965
PURCHASES AND OTHER EXTERNAL EXPENSES	33,094	31,930

(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)	2015	2014
Taxes on salaries and wages	171	162
Energy-related taxes	1,226	1,231
Local Economic Contribution	561	516
Property taxes	393	382
Other taxes	331	324
TOTAL TAXES OTHER THAN INCOME TAXES	2,682	2,615

Note 10 Personnel expenses

(in millions of Euros)	2015	2014
Salaries and wages	3,964	3,905
Social contributions	2,848	2,699
PERSONNEL EXPENSES	6,812	6,604

The increase in personnel expenses results primarily from changes in the workforce and the Basic National Salary.

	2015			2014
	Executives	Non executives	Total	Total
IEG status	28,907	37,430	66,337	65,700
Other	1,931	2,501	4,432	4,453
AVERAGE WORKFORCE	30,838	39,931	70,769	70,153

Average workforce numbers are reported on a full-time equivalent basis.

Note 11 Depreciation and amortisation

2015	2014
158	153
3,032	2,747
233	218
3,423	3,118
24	31
3,447	3,149
	2015 158 3,032 233 3,423 24 3,447

(1) This depreciation concerns the Island Energy System's public electricity distribution concessions and hydropower concessions.

Note 12 Provisions and impairment

(in millions of Euros)	2015	2014
Provisions for risks (1)	353	608
Pensions and similar obligations	885	733
Management of spent nuclear fuel	726	457
Long-term management of radioactive waste (2)	516	29
Decommissioning of nuclear power plants and last cores (3)	590	423
Other provisions for expenses	143	166
Provisions for expenses	2,860	1,808
Impairment ⁽⁴⁾	550	424
TOTAL PROVISIONS AND IMPAIRMENT	3,763	2,840

(1) Most of the increase concerns supply and sales contracts.

(2) Including a €820 million increase to provisions following the decision of 15 January 2016 concerning the cost of implementing long-term management solutions for long-lived medium and high-level radioactive waste under the Cigéo storage project (see notes 2.1 and 28.2) and a reversal of €332 million reflecting the impact on the provision for long-term radioactive waste management of updating of the industrial scenario for decommissioning nuclear power plants that are permanently shut down (see notes 28.2 and 28.3).

(3) A €590 million increase to provisions, booked in 2015, following the update of the industrial scenario and contractor quotes for decommissioning permanently shut-down nuclear power plants (see note 28.3). In 2014 an increase to provisions of €388 million was recorded for decommissioning of these plants.

(4) Including a €70 million increase to provisions booked in 2015 following the decision to close the Aramon thermal power plant in early 2016.

Note 13 Financial result

(in millions of Euros)	2015		20	14
Income from investments (1)		2,081		1,295
Income from other securities and receivables related to fixed assets $\ensuremath{^{(2)}}$		458		370
Interest and similar income and expenses (3)		(2,662)		(1,639)
Reversal of provisions and impairment and transfers of charges		339		415
Foreign exchange result		936		(129)
Gains	5,489		2,160	
Losses	(4,553)		(2,289)	
Result on sales of marketable securities		(12)		51
Net income	25		51	
Net charges	(37)		-	
Financial amortisation, provisions and impairment ⁽⁴⁾		(3,415)		(3,459)
FINANCIAL RESULT		(2,275)		(3,096)

(1) The change in dividends received principally concerns:

ERDF (€454 million in 2015 and €427 million in 2014);
 RTE (€176 million in 2015 and €250 million in 2014);

RTE (€176 finition in 2015 and €250 finition in 2014);
 C3 (the holding company which carries EDF Investissements Groupe) (€646 million in 2015 and €129 million in 2014);
 EDF International (€400 million in 2015 and €202 million in 2014);

EDEV (€100 million in 2015 and €58 million in 2014).

(2) In 2015, this item includes income of €88 million (€87 million in 2014) for the cost of bearing the CSPE financial receivable.

(3) The change essentially results from:

changes in the unrealised foreign exchange gain or loss on currency instruments;

the interest expense of \in 282 million recorded in 2015 following the European Commission's decision of 22 July 2015 concerning the French General Network (see note 2.2). (4) These charges chiefly include 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;

- increases in impairment of investment securities and investments.

Note 14 Exceptional result

At 31 December 2015, exceptional items resulted in net income of €846 million, the main items of which are the following:

- net gains of €707 million on sales of investment securities included in dedicated assets, undertaken as part of operational portfolio management;
- net reversals of €117 million from excess tax depreciation.
- 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.

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 224 subsidiaries in 2015, including RTE Réseau de Transport d'Électricité, ERDF, EDF International and the EDF Energies Nouvelles and Dalkia subgroups.

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.

The company at the head of the tax group, EDF, recorded an income tax receivable of €63 million for 2015. The breakdown is as follows:

income of €851 million for the taxable loss of 2015;

- a net exceptional expense of €325 million;
- an expense of €507 million resulting from the European Commission's decision of 22 July 2015 concerning the French General Network (see note 2.2);
- a positive €44 million for adjustments resulting from the tax consolidation.

15.3 TAX CREDIT FOR COMPETITIVITY AND EMPLOYMENT (CICE)

The amounts received in 2015 under the French CICE tax credit scheme for 2014 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.

Changes in deferred taxes are as follows:

(in millions of Euros)	31/12/2015	31/12/2014	Change
1. Timing differences generating a deferred tax asset			
Non-deductible provisions ⁽¹⁾	(13,560)	(12,403)	(1,157)
 Financial instruments and unrealised exchange gains 	(1,528)	(5,151)	3,623
Other	(287)	(324)	37
Total deferred tax assets subject to the standard rate	(15,375)	(17,878)	2,503
2. Timing differences generating a deferred tax liability			
 Financial instruments and unrealised exchange losses 	2,457	4,657	(2,200)
Other	1,435	1,014	421
Total deferred tax liabilities subject to the standard rate	3,892	5,671	(1,779)
 Capital gains not yet taxed, net of capital losses 	79	79	-
 Provisions for losses taxable at 15% 	(4)	_	(4)
Total deferred tax liabilities subject to reduced rate	75	79	(4)
BASIS FOR DEFERRED TAXES	(11,408)	(12,128)	720
Net future tax asset at standard rate	(3,954)	(4,203)	249
Net future tax liability at reduced rate	3	3	-

(1) Mainly concerning post-employment benefits for personnel.

BALANCE SHEETS

Note 16 Gross values of intangible and tangible fixed assets

	Gross value			Gross value
(in millions of Euros)	at 31/12/2014	Increases	Decreases	at 31/12/2015
Software	1,136	230	12	1,354
Other	251	5	24	232
Intangible assets	1,387	235	36	1,586
Land	122	_	3	119
Buildings	9,671	335	22	9,984
Nuclear power plants	51,239	2,416	1,521	52,134
Machinery and plant other than networks	11,554	685	153	12,086
EDF-owned networks	919	20	_	939
Other	1,365	183	55	1,493
Property, plant and equipment owned by EDF	74,870	3,639	1,754	76,755
Land	39	-	-	39
Buildings	9,508	249	17	9,740
Machinery and plant other than networks	1,410	73	19	1,464
Concession networks	2,418	147	12	2,553
Other	10	-	_	10
Property, plant and equipment operated under concessions ⁽¹⁾	13,385	469	48	13,806
Tangible assets (2)	10,471	5,527	4,058	11,940
Intangible assets	1,312	290	239	1,363
Advances and progress payments on orders	2,752	92	_	2,844
Assets in progress	14,535	5,909	4,297	16,147
TOTAL OF INTANGIBLE AND TANGIBLE FIXED ASSETS	104,177	10,252	6,135	108,294

(1) Assets operated under concession concern the Island Energy Systems public electricity distribution concessions and hydropower concessions.

(2) Investments during the year 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

(in millions of Euros)	31/12/2014	Increases	Decreases	31/12/2015
Software	506	146	9	643
Other	104	12	24	92
Intangible assets	610	158	33	735
Land and buildings	6,484	308	19	6,773
Nuclear power plants	34,617	2,292	1,462	35,447
Machinery and plant other than networks	7,498	506	171	7,833
EDF-owned networks	391	27	-	418
Other	809	115	46	878
Property, plant and equipment owned by EDF	49,799	3,248	1,698	51,349
Land and buildings	5,985	125	23	6,087
Machinery and plant other than networks	997	36	16	1,017
Concession networks	967	69	10	1,026
Other	10	-	-	10
Property, plant and equipment operated under concessions	7,959	230	49	8,140
Tangible assets in progress	100	190	31	259
TOTAL DEPRECIATION, AMORTISATION AND IMPAIRMENT	58,468	3,826	1,811	60,483

Note 18 Financial assets

18.1 **CHANGE IN FINANCIAL ASSETS**

(in millions of Euros)	Gross value at 31/12/2014	Gross value at 31/12/2015
Investments ⁽¹⁾	56,577	57,169
Receivables related to investments	50	451
Investment securities (2)	12,591	12,823
Other investments	208	162
CSPE receivable (3)	5,140	5,872
Loans to subsidiaries and other financial assets (4)	3,089	7,816
Total financial assets, gross	77,655	84,293
Impairment of investments and related receivables (1)	(171)	(185)
Impairment of investment securities	(55)	(222)
Total impairment	(226)	(407)
TOTAL FINANCIAL ASSETS, NET	77,429	83,886

(1) The change in investments essentially corresponds to:

subscription to the capital increase of C41 (a minority interest in Madrileña Red de Gas (MRG));
 subscription to the capital increase of C47 (execution of the Smart Side real estate development, construction of an office building in Clichy - Saint-Ouen);
 subscription to the capital increase of C48 (acquisition of Géosel Manosque SAS, which owns an underground hydrocarbon storage facility in France).

(2) Changes in investment securities correspond to acquisitions and sales of dedicated assets over the period, generating net capital gains for 2015 (see note 14). (3) This receivable consists of the CSPE shortfall at 31 December 2012 and the associated financing costs borne by EDF, plus the shortfall in compensation for the period 2013

to 2015 (€644 million) in compliance with the ministerial letter received on 26 January 2016 (see note 3.2). (4) Loans to subsidiaries at 31 December 2015 total €7,720 million, including €3,357 million for EDF International, €1,100 million for EDF Energy, €993 million for PEI, €905 million for Dalkia, €670 million for RTE and €460 million for EDF Energies Nouvelles.

18.2 SUBSIDIARIES AND INVESTMENTS OF AT LEAST 50% OF CAPITAL

(in millions of Euros)	Gross book value of shares owned	Impairment recorded at 31/12/2015	% capital owned	Equity at 31/12/2014	Net income 2014	Dividends received 2015	Sales 2014
I. Subsidiaries							
Holding companies							
EDEV	6,891	-	100	6,402	106	100	817
EDF International	25,930	-	100	23,312	(445)	400	2
EDF Production Electrique Insulaire (EDF PEI)	711	-	100	787	78	17	588
EDF Holding SAS	1,950	-	100	2,288	247	235	-
Société C3	11,196	-	100	11,922	680	646	_
EDF Immo	1,361	-	100	1,428	45	38	_
Other companies	978	8	100	389	(1)	nm	_
Real estate companies							
Industrial and commercial companies							
France							
Centrale Electrique Rhénane de Gambsheim	3	-	50	10	-	-	7
Dalkia Investissement	200	62	100	136	11	-	nm
Dalkia France	967	-	100	497	(66)	-	2,157
RTE Réseau de Transport d'Électricité (1)	4,030	-	100	6,035	294	176	4,428
Electricité Réseau Distribution France (ERDF)	2,700	-	100	4,536	600	454	13,280
Other countries							
Emosson	14	14	50	116	-	-	32
Rheinkraftwerk Iffezheim (RKI)	3	-	50	117	4	-	16
Forces Motrices du Châtelot	nm	-	50	7	nm	nm	4
Other entities (GIE EIFER)	103	101	-	-	-	-	-
TOTALI	57,037	185				2,066	

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 Furge)	Gross book value of shares	Impairment recorded at	% capital	Equity at	Net income	Dividends received
	owned	31/12/2013	owneu	51/12/2014	2014	2015
Tatal Convisid formation	F7 027	405				2.000
lotal I Carried forward	57,037	185				2,066
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	242	(2)	-
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	132	-				_
Total investments, gross	57,169	185				2,066
TOTAL INVESTMENTS, NET	56,984					

nm: not material (less than €500,000).

18.4 INVESTMENT SECURITIES PORTFOLIO

	At start of year			At year-end		
(in millions of Euros)	Gross book value	Net book value	Fair value	Gross book value	Net book value	Fair value
VALUE OF INVESTMENT SECURITIES	12,591	12,536	14,769	12,823	12,609	14,463

At 31 December 2015, the investment securities portfolio gross value comprises dedicated assets (€12,563 million) (see note 38) and €123 millions of shares in AREVA, against which impairment of €77 million was booked.

18.5 VARIATION IN 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 limits 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 market regulator AMF.

(in millions of Euros)	Gross value at 31/12/2014	Increases	Decreases	Gross value at 31/12/2015
TREASURY SHARES	38	256	(259)	35

At 31 December 2015, treasury shares included in the investment securities portfolio represent 2,260,159 shares with total value of €35 million.

18.6 FINANCIAL LOANS AND RECEIVABLES RELATED TO INVESTMENTS

	Liquidity			Gross value at	Gross value at	
(in millions of Euros)	< 1 year	1 - 5 years	> 5 years	31/12/2015	31/12/2014	
Receivables related to investments	402	_	49	451	50	
CSPE receivable	293	5,579	-	5,872	5,140	
Loans and other financial assets	5,637	800	1,379	7,816	3,089	
FINANCIAL LOANS AND RECEIVABLES RELATED TO INVESTMENTS	6,332	6,379	1,428	14,139	8,279	

Note 19 Inventories and work-in-progress

	31/12/2015			31/12/2014		
(in millions of Euros)	Gross value	Provisions	Net value	Gross value	Provisions	Net value
Nuclear fuel	8,598	(17)	8,581	8,457	(14)	8,443
Other raw materials	236	-	236	334	_	334
Other supplies	1,205	(175)	1,030	1,144	(186)	958
Work-in-progress and other inventories	365	-	365	18	_	18
TOTAL INVENTORIES	10,404	(192)	10,212	9,953	(200)	9,753

Note 20 Other current assets

	Liquidity			Gross value at	Gross value at
(in millions of Euros)	< 1 year	1 - 5 years	> 5 years	31/12/2015	31/12/2014
Advances on orders	621	249	354	1,224	1,136
Trade receivables					
– Amounts billed	2,094	-	-	2,094	2,039
– Unbilled receivables ⁽¹⁾	12,156	1	-	12,157	12,303
 Other operating receivables ⁽²⁾ 	5,636	5	84	5,725	5,060
Operating receivables	19,886	6	84	19,976	19,402
Cash instruments ⁽³⁾	988	1,799	1,972	4,759	3,913
Prepaid expenses	502	225	612	1,339	1,294
TOTAL CURRENT ASSETS	21,997	2,279	3,022	27,298	25,745

(1) Mainly receivables for energy supplied and not billed.

(2) Including €2,540 million of receivables on the State related to taxes other than income taxes, and €1,640 million for the Contribution to the Public Electricity Service (CSPE) (€2,056 million in 2014). 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

(in millions of Euros)	31/12/2015	31/12/2014	Change
Treasury shares	3	3	-
Investment funds	3,518	1,637	1,881
Negotiable debt instruments (Euros or other currencies) maturing after 3 months	4,098	1,914	2,184
Bonds	5,686	5,211	475
Accrued interest and other marketable securities	602	54	548
Total gross value	13,907	8,819	5,088
Provisions	(7)	(4)	(3)
TOTAL NET VALUE	13,900	8,815	5,085

Note 22 Variation in cash and cash equivalents reported in the cash flow statement

(in millions of Euros)	31/12/2015	31/12/2014	Change
Marketable securities	13,907	8,819	5,088
Cash and cash equivalents	6,199	6,583	(384)
Sub-total in balance sheet assets	20,106	15,402	4,704
Euro investment funds	(3,518)	(1,637)	(1,881)
Negotiable debt instruments (Euro) maturing after 3 months	(3,951)	(1,914)	(2,037)
Negotiable debt instruments (non Euro) maturing after 3 months	(147)	-	(147)
Bonds	(5,686)	(5,211)	(475)
Treasury shares	(3)	(3)	0
Accrued interest and other marketable securities	(602)	(54)	(548)
Marketable securities included in financial assets in the cash flow statement	(13,907)	(8,819)	(5,088)
Cash advances to subsidiaries (cash pooling agreements) included in "Other operating receivables" in the balance sheet	56	12	44
Cash advances from subsidiaries (cash pooling agreements) included in "Operating, investment and other liabilities" in the balance sheet	(8,682)	(5,369)	(3,313)
CASH AND CASH EQUIVALENTS, CLOSING BALANCE IN THE CASH FLOW STATEMENT ⁽¹⁾	(2,427)	1,226	(3,653)
Elimination of the effect of currency fluctuations			90
Elimination of net financial income on cash and cash equivalents			(54)
NET VARIATION IN CASH AND CASH EQUIVALENTS IN THE CASH FLOW STATEMENT ⁽¹⁾			(3,617)

(1) See the Cash flow statement.

Note 23 Unrealised foreign exchange losses

The net unrealised exchange loss amounts to €2,070 million at 31 December 2015, reflecting the unfavourable effects related to the pound sterling and the US dollar.

Note 24 Changes in equity

		Reserves and	Retained earnings and interim	Profit or loss for the financial	Investment	Tax-regulated	Total
(in millions of Euros)	Capital	premiums	dividends	year	subsidies	provisions	equity
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
Allocation of 2014 net income	_	_	380	(380)	-	_	_
2015 profit	-	-	-	271	-	_	271
Capital increase of 18 December 2015	30	876	-	-	-	_	906
Dividend distribution	-	-	1	(1,269)	-	_	(1,268)
Interim dividend	-	-	(1,059)	-	-	_	(1,059)
Other changes	-	6	214	-	(4)	(91)	125
AT 31 DECEMBER 2015	960	11,849	4,075	271	170	6,233	23,558

24.1 SHARE CAPITAL

EDF's share capital amounted to €960,069,513.50 at 31 December 2015, comprising 1,920,139,027 fully subscribed and paid-up shares with nominal value of €0.50 each, owned 84.94% by the French State, 13.30% by the public (institutional and private investors), 1.64% by current and retired Group employees, and 0.12% held by EDF as treasury shares.

In December 2015, payment of part of the interim dividend for 2015 in the form of a scrip dividend led to a \leq 30 million increase in the share capital and an issue premium of \leq 876 million following issuance of 60,130,559 new shares. The legal formalities for this operation were finalised in early January 2016.

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 19 May 2015 decided to distribute a dividend of $\notin 1.25$ per share in respect of 2014.

In application of Article 24 of the Company's articles of association, 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 for a single shareholder. The bonus dividend amounts to \leq 1.375 per share.

As interim dividends of €0.57 per share had been paid out on 17 December 2014, the balance payable for 2014 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 5 June 2015, amounting to a total €1,268 million.

On 4 November 2015, EDF's Board of Directors decided to distribute an interim dividend of €0.57 per share in respect of 2015. This interim dividend amounting to a total of €1,059 million was paid out in the form of new shares (scrip option) or cash on 18 December 2015. The French government opted for the scrip interim dividend. Application of the scrip option for part of the interim dividend led to a €30 million increase in the share capital corresponding to issuance of 60,130,559 shares, with an issue premium of €876 million.

The amount of the cash dividend paid to shareholders who did not opt for the scrip interim dividend for 2015 amounted to €152 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 \leq 6,135 million and \leq 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 \notin 11,281 million at 31 December 2015.

Note 26 Special concession accounts

(in millions of Euros)	31/12/2015	31/12/2014
Value in kind of assets	106	103
Revaluation difference	913	945
Additional depreciation	137	108
Rights in hydropower assets	1,156	1,156
Value in kind of assets	1,597	1,517
Unamortised financing by the operator	(960)	(915)
Amortisation of grantor financing	293	279
Contributions received for concessionary plant assets under construction	7	8
Rights in public distribution concession assets ⁽¹⁾	937	889
TOTAL SPECIAL CONCESSION ACCOUNTS	2,093	2,045

(1) Rights in public distribution concession assets concern the Island Energy Systems (IES) public electricity distribution concession.

Note 27 Provisions for risks

		Increas	Increases Decreases				
(in millions of Euros)	31/12/2014	Operating ⁽¹⁾	Financial	Utilisations	Reversals	Financial	31/12/2015
Provisions for unrealised exchange losses	1,147	_	938	-	_	(14)	2,071
Provisions for losses on contracts	489	239	4	(100)	-	_	632
Provisions for other risks	297	114	-	(42)	(16)	-	353
PROVISIONS FOR RISKS	1,933	353	942	(142)	(16)	(14)	3,056

(1) Mainly concerning supply and sales 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:

		Increases		Increases Decreases Othe		Other	
(in millions of Euros)	31/12/2014	Operating	Financial ⁽¹⁾	Utilisation	changes ⁽²⁾	31/12/2015	
Provisions for spent fuel management	10,105	726	456	(826)	(70)	10,391	
Provisions for long-term radioactive waste management	7,676	516 (3)	339	(215)	(62)	8,254	
Provisions for the back-end of the nuclear cycle	17,781	1,242	795	(1,041)	(132)	18,645	
Provisions for nuclear plant decommissioning	13,866	590 (4)	637	(165)	2	14,930	
Provisions for last cores	2,413	_	113	_	29	2,555	
Provisions for decommissioning and last cores	16,279	590	750	(165)	31	17,485	
TOTAL PROVISIONS RELATED TO NUCLEAR GENERATION	34,060	1,832	1,545	(1,206)	(101)	36,130	

(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).

(3) Including an increase of €820 million following the Ministerial Order of 15 January 2016 concerning the cost of implementing long-term management solutions for long-lived medium and high-level radioactive waste under the Cigéo storage project (see notes 2.1 and 28.2) and a reversal of €332 million from the provision for long-term radioactive waste management due to the updating of the industrial scenario for decommissioning permanently shut down nuclear power plants (see notes 28.2 and 28.3).
 (4) A €590 million increase to provisions was recorded in 2015 following the update of the industrial scenario and contractor quotes for decommissioning permanently shut-down nuclear power plants (see note 28.3). In 2014 an increase to provisions of €388 million was recorded for decommissioning of these plants.

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 1,100 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 services associated with the following:

 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 first of these contracts was an implementation contract signed in July 2010, setting the prices and quantities of services for the period 2008-2012. The conditions for processing and recycling services over the period 2013-2015 are covered by a contract signed in May 2015. The implementation conditions for the period 2016-2023 were also agreed in December 2015, and presented to the Board of Directors on 27 January 2016. They will give rise to signature of an amendment.



28.2 PROVISIONS FOR LONG-TERM RADIOACTIVE WASTE MANAGEMENT

These provisions concern 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;

The provision for long-term radioactive waste management breaks down as follows:

 EDF's share of the costs of studies, construction, maintenance and operation, 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.

(in millions of Euros)	31/12/2015	31/12/2014
Very low-level and low and medium-level waste	988	997
Long-lived low-level waste	252	521
Long-lived medium and high-level waste	7,014	6,158
PROVISIONS FOR LONG-TERM RADIOACTIVE WASTE MANAGEMENT	8.254	7.676

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 Soulaines 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 currently continuing feasibility studies in liaison with the authorities. Other alternative management scenarios are also being examined, including sorting and processing solutions for graphite.

The new benchmark scenario for dismantling the UNGG plants (see note 28.3) involves a different sequence for dismantling operations. In particular, the aim is to consolidate experience acquired from dismantling the first caisson (UNGG reactor building) before beginning work on the other five. The new schedule also defers the dates for removal of waste (graphite and long-lived medium-level waste). This change has led to a reversal of €292 million from the provision for long-lived low-level waste,

and a smaller \leq 40 million reversal from the provision for very low-level and low and medium-level waste resulting from decommissioning of the UNGG plants, giving a total reversal of \leq 332 million from the provision for long-term waste management.

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 for this type of waste.

The provision established for long-lived medium and high-level waste is the largest component of provisions for long-term radioactive waste management.

From 2005, the gross value and disbursement schedules for forecast expenses were 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 applied a reasonable approach to information supplied by this working group, leading to a benchmark cost, for storage of waste from all producers, of \notin 14.1 billion under the economic conditions of 2003 (\notin 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 (the Cigéo project), ANDRA carried out preliminary conceptional studies from 2012, and analysed the technical optimisations proposed by the producers. The cooperation between ANDRA and producers provided a forum for formal technical discussions that resulted in optimisation of the waste storage design (for example new sizing for the above-ground installations, a significant reduction in the length of underground structures, thinner coatings, etc) and operating conditions (such as new timetables for package transfer, leading to a substantial reduction in 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 28 June 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 focused mainly 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 sent their comments on ANDRA's report to the DGEC in February 2015 and a joint estimation of the target Cigéo storage cost in April 2015. All this information was included in the report submitted to the Minister for Ecology, Sustainable Development and Energy, who will set the new benchmark cost for storage of long-lived medium and high-level waste after consulting the Nuclear Safety Authority (ASN).

On 15 January 2016 the Ministry of Ecology, Sustainable Development and Energy issued a Ministerial Order setting the cost associated with the implementation of long-term management solutions for long-lived medium and high-level radioactive waste under the Cigéo storage project at €25 billion under 2011 economic conditions. This cost valuation is required by Article L. 542-12 of France's Energy Code.

The cost as defined constitutes an objective to be met by ANDRA, in compliance with safety standards set by the ASN, working in close liaison with the operators of nuclear installations.

In accordance with the information stated in note 28.2 to the financial statements at 31 December 2014, publication of this decision entails adjustment of the provision shown in EDF's financial statements. The cost of the Cigéo project as set by this decision, \notin 25 billion under 2011 economic conditions, replaces the estimated benchmark cost of \notin 20.8 billion used by EDF for its financial statements at 31 December 2014 and 30 June 2015.

In the financial statements at 31 December 2015, the new cost figure results in an increase of \in 820 million in the provisions for long-term radioactive waste management established to cover future expenses relating to the Cigéo deep storage project (see note 2.1). In application of this Ministerial Order, the cost of the Cigéo project will be regularly updated, at least at each key milestone in the course of the project's development (authorisation to create the facility, commissioning, end of the "pilot industrial phase", safety reviews) in accordance with the opinion of the ASN.

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 complies with France's Environmental Code, which requires as short a period as possible to elapse between final shutdown and dismantling in economically acceptable conditions and in compliance with the principles laid down in Article L. 1333-1 of the Public Health Code (radioprotection) and section II of Article L. 110-1 of the Environmental Code (protection of the environment). The intended end-state is industrial use: the sites will be restored to their original condition and will be reusable 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.

The decommissioning provisions cover the future decommissioning expenses as described above (excluding the cost of removing and storing 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:

		Incre	ases	Decreases	Other	
(in millions of Euros)	31/12/2014	Operating	Financial ⁽¹⁾	Utilisation	changes ⁽²⁾	31/12/2015
Provisions for decommissioning of nuclear plants in operation	11,422	_	525	(5)	2	11,944
Provisions for decommissioning of premanently shut-down nuclear plants	2,444	590	112	(160)	_	2,986
TOTAL PROVISIONS FOR DECOMMISSIONING OF NUCLEAR PLANTS	13,866	590	637	(165)	2	14,930

(1) Financial discounting expenses.

(2) With an associated asset recognised in property, plant and equipment (see note 1.15).

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For nuclear power plants currently in operation (PWR pressurized water reactor 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 ϵ_{2013} 309 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 had no significant impact on the level of provisions at 31 December 2014.

On 15 January 2016 the DGEC published a summary of the audit report it had commissioned concerning decommissioning costs for EDF's nuclear plants currently in operation.

The audit, conducted by specialised consulting firms, took place over approximately one year between 2014 and 2015. The DGEC states that although estimating the cost of decommissioning nuclear reactors is a demanding exercise due to relatively limited past experience, the prospects of changes in techniques, and the distant timing of the expenditure, overall, the audit confirms EDF's estimate of decommissioning costs for its nuclear fleet currently in operation.

The DGEC also made a number of recommendations to EDF following this audit. EDF will incorporate these recommendations in future studies and estimates when they are likely to contribute to control of future decommissioning costs for the PWR fleet.

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: a PWR reactor at Chooz A, UNGG (natural uranium graphite gas-cooled) reactors at Bugey, Saint-Laurent and Chinon, a heavy water reactor at Brennilis, and a sodiumcooled fast neutron reactor at Creys-Malville. Decommissioning costs are therefore estimated individually for each site.

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.

As a result of preparatory work done in 2014 before full revision of these quotes due to take place in 2015, the provision was increased by \leq 388 million at 31 December 2014 to reflect delays in physical progress at the sites, and cost reassessments for certain contracts.

In 2015 the industrial strategy for UNGG plants was totally revised. The previously selected strategy was based on a scenario involving "underwater" dismantling of caissons (UNGG reactor buildings) for four of the reactors, with direct graphite storage in a centre currently under examination by ANDRA (see above). This scenario was re-examined in view of several new technical factors (new technical information indicating industrial difficulties in underwater dismantling in this specific case, lower visibility on the availability of graphite storage, etc). The new information also brought out an alternative "in-air" dismantling solution for the caissons, which facilitates industrial control of operations and would be more favourable in terms of safety, radioprotection and environmental impact. The company has therefore selected a new "in-air" dismantling scenario as the benchmark strategy for all six caissons. This scenario is currently under discussion with the ASN and should lead to new decrees. For both scenarios, the studies to update contractor guotes have led to a significant increase in forecast decommissioning costs for these caissons. The selected scenario includes a consolidation phase, building on experience acquired from dismantling the first caisson before beginning work on the other five. Under this scenario, the decommissioning phase will ultimately be longer than previously planned, leading to higher contractor quotes due to the induced operating costs.

Updating the industrial decommissioning scenario for first-generation power plants, particularly UNGGs, led to a €590 million increase in the provision at 31 December 2015.

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, 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.

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 inflationlinked bonds.

The discount rate determined in this way is 4.5% at 31 December 2015, assuming inflation of 1.6% (4.6% and 1.7% respectively at 31 December 2014).

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 comply with two regulatory limits. The decision of 24 March 2015 modified the rules set out by the Decree of 23 February 2007 and the decision of 21 March 2007, and the discount rate must now be lower than:

- a regulatory maximum "equal to the arithmetic average over the 120 most recent months of the constant 30-year rate (TEC 30 years), observed on the last date of the period concerned, plus one point";
- the expected rate of return on assets covering the liability (dedicated assets).

The ceiling rate based on the TEC 30-year rate is 4.6% at 31 December 2015.

28.5.2 Analyses of sensitivity to macroeconomic 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.

	201	15	201	14
(in millions of Euros)	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
Spent fuel management	16,470	10,391	16,463	10,105
Long-term radioactive waste management (1)	28,890	8,254	26,159	7,676
BACK-END NUCLEAR CYCLE EXPENSES	45,360	18,645	42,622	17,781
Decommissioning provisions for nuclear power plants in operation	19,639	11,944	19,298	11,422
Decommissioning provisions for permanently shut-down nuclear power plants (2)	6,431	2,986	3,310	2,444
Provisions for last cores	4,123	2,555	4,050	2,413
DECOMMISSIONING AND LAST CORE EXPENSES	30,193	17,485	26,658	16,279

(1) The significant increase between 2014 and 2015 in the cost of long-term radioactive waste management based on year-end economic conditions is due to the consequences of the Ministerial Order of 15 January 2016 (see note 28.2).

(2) The significant increase between 2014 and 2015 in the cost of nuclear plant decommissioning based on year-end economic conditions reflects the revision of the benchmark industrial scenario for permanently shut-down plants (see note 28.3). As the new scenario notably defers the plant decommissioning phase to a later date, its impact is less sensitive to measurement of the provision at present value.

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 backend of the nuclear cycle, decommissioning of nuclear plants and last cores for EDF:

	Amounts in Sensitivity to c			discount rate	
	provisions at present value	Balance sheet provision		Pre-tax ne	et income
(in millions of Euros)	31/12/2015	0.20%	-0.20%	0.20%	-0.20%
Back-end nuclear cycle expenses					
spent fuel management	10,391	(168)	177	140	(149)
 long-term radioactive waste management 	8,254	(400)	448	337	(376)
Decommissioning and last core expenses					
 decommissioning of nuclear power plants in operation 	11,944	(382)	398	8	(7)
• decommissioning of permanently shut down nuclear power plants	2,986	(114)	124	114	(124)
 last cores 	2,555	(62)	65	-	-
TOTAL	36,130	(1,126)	1,212	599	(656)

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:

		Increases		Decreases		
(in millions of Euros)	31/12/2014	Operating ⁽¹⁾	Financial	Operating ⁽²⁾	Financial ⁽³⁾	31/12/2015
Provisions for post-employment benefits	9,785	839	626	(1,140)	(296)	9,814
Provisions for long-term benefits	1,010	46	21	(132)	-	945
PROVISIONS FOR EMPLOYEE BENEFITS	10,795	885	647	(1,272)	(296)	10,759

(1) Including past service cost of €506 million, amortisation of actuarial losses amounting to €368 million, and unvested benefits of €11 million.

(2) Including \in 1,113 million for employers' contributions, \in 75 million for actuarial gains, \in 31 million for vested benefits and \in 50 million for a change of benefit plan. (3) For the expected return on fund assets.

DETAILS OF CHANGES IN PROVISIONS

(in millions of Euros)	Obligations	Fund assets	Obligations net of fund assets	Unrecognised past service cost	Unrecognised actuarial gains and losses	Provision in the balance sheet
Balance at 31/12/2014	29,669	(10,188)	19,481	(95)	(8,591)	10,795
Net expense for 2015	921	(296)	625	11	441	1,077
Unrecognised actuarial gains and losses	(1,112)	230	(882)	16	866	-
Contributions to funds	_	(362)	(362)	_	_	(362)
Benefits paid	(1,116)	365	(751)	_	_	(751)
BALANCE AT 31/12/2015	28,362	(10,251)	18,111	(68)	(7,284)	10,759

The actuarial gains and losses on obligations generated over 2015 amount to \in (1,112) million, including an unfavourable effect of \in 807 million resulting from signature of the AGIRC-ARRCO agreement on 30 October 2015 (see note 3.5), and a favourable effect of revisions of assumptions (particularly the change in assumptions concerning the discount rate and inflation), and gains from experience adjustments.

POST-EMPLOYMENT AND LONG-TERM EMPLOYEE BENEFIT EXPENSES

(in millions of Euros)	31/12/2015	31/12/2014
Current service cost	506	382
Interest expenses (discount effect)	647	834
Expected return on fund assets	(296)	(336)
Amortisation of unrecognised actuarial gains and losses – post-employment benefits	305	151
Change in actuarial gains and losses – long-term benefits	(15)	164
Effect of plan curtailment or settlement ⁽¹⁾	(50)	-
Past service cost – vested benefits (2)	(31)	-
Past service cost – unvested benefits	11	(30)
NET CHARGES RELATED TO POST-EMPLOYMENT BENEFITS AND LONG-TERM BENEFITS	1,077	1,165
including:		
Operating expenses (3)	726	667
Financial expenses	351	498

(1) The net amount of €50 million corresponds to the difference between a gross income of €185 million and €135 million of additional amortisation of actuarial gains and losses.

(2) The Law of 22 December 2014 (2014-1544) on social security financing for 2015 and Decree No. 2015-209 of 24 February 2015 introduced a fixed scale for death benefits in the normal French system, which was extended to the IEG sector by Decree No. 2015-1536 of 25 November 2015.

(3) In 2015 this amount corresponds to operating increases (€885 million) net of reversals for actuarial gains and losses (€75 million), a change in pension plan (€50 million) and the cost of vested benefits (€31 million).

30.1 **PROVISIONS FOR POST-EMPLOYMENT BENEFITS**

Details of these provisions are shown below:

		Increases		Decreases		
(in millions of Euros)	31/12/2014	Operating	Financial	Operating	Financial	31/12/2015
Provisions for post-employment benefits						
Pensions	7,699	526	491	(893)	(284)	7,539
CNIEG expenses	429	11	11	(14)	-	437
Benefits in kind (energy)	1,182	222	92	(134)	-	1,362
Retirement gratuities	(14)	40	14	(43)	(12)	(15)
Other benefits	489	40	18	(56)	-	491
TOTAL	9,785	839	626	(1,140)	(296)	9,814



(in millions of Euros)	Obligations	Fund assets	Unrecognised past service cost	Unrecognised actuarial gains and losses	Provision in the balance sheet
Provisions for post-employment benefits at 31/12/2015					
Pensions	21,629	(9,740)	_	(4,350)	7,539
CNIEG expenses	476	-	-	(39)	437
Benefits in kind (energy)	3,916	-	-	(2,554)	1,362
Retirement gratuities	597	(496)	(43)	(73)	(15)
Other benefits	799	(15)	(25)	(268)	491
TOTAL	27,417	(10,251)	(68)	(7,284)	9,814

(in millions of Euros)	Obligations	Fund assets	Unrecognised past service cost	Unrecognised actuarial gains and losses	Provision in the balance sheet
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

The increase in obligations between 2014 and 2015 is principally related to the change in discount rate (2.2% at 31 December 2014, and 2.4% at 31 December 2015), the change in the inflation rate (1.7% at 31 December 2014, and 1.6% at 31 December 2015) and the effect of the AGIRC-ARRCO agreement of 30 October 2015 (see note 3.5).

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:

		Increases		Decreases	
(in millions of Euros)	31/12/2014	Operating	Financial	Operating	31/12/2015
Provisions for other long-term benefits for current employees					
Annuities following work-related accident and illness	879	39	18	(116)	820
Long service awards	105	7	2	(12)	102
Other	26	_	1	(4)	23
TOTAL	1,010	46	21	(132)	945

30.3 FUND ASSETS

Fund assets amount to $\leq 10,251$ million at 31 December 2015 ($\leq 10,188$ million at 31 December 2014) and are principally allocated to coverage of the past specific benefits earned under the special pension system ($\leq 9,740$ million) and retirement gratuities (with target coverage of 100%) (≤ 496 million). Investments under these contracts break down as follows:

(in millions of Euros)	31/12/2015	31/12/2014
Assets funding special pension benefits	9,740	9,683
Comprising (%)		
Equities	29%	29%
Bonds and monetary instruments	71%	71%
Assets funding retirement gratuities	496	491
Comprising (%)		
Equities	32%	31%
Bonds and monetary instruments	68%	69%
Assets funding other benefits	15	14
TOTAL FUND ASSETS	10,251	10,188

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 2.4% at 31 December 2015 (2.2% at 31 December 2014);
- the inflation rate is estimated at 1.6% at 31 December 2015 (1.7% at 31 December 2014);
- the average residual period of employment is 18.5 years;
- the staff turnover rate is considered non-significant;
- the "tarif agent" (special energy price for EDF employees) 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% for 2015;
- the expected return on fund assets covering retirement gratuities is 2.43% for 2015.

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 (3.3% including inflation).

Note 31 Provisions for other expenses

		Operating	Decreases			
(in millions of Euros)	31/12/2014	increases	Utilisations	Reversals	Other	31/12/2015
Provisions for:						
 Personnel expenses 	109	93	(88)	(1)	-	113
 Renewal of facilities operated under concession 	261	11	_	(1)	(6)	265
 Other expenses 	612	215	(221)	(15)	-	591
PROVISIONS FOR OTHER EXPENSES	982	319	(309)	(17)	(6)	969

Note 32 Liabilities

		Maturity	Gross value	Gross value	
(in millions of Euros)	< 1 year	1 - 5 years	> 5 years	at 31/12/2015	at 31/12/2014
Liabilities					
Bonds	1,437	11,083	34,438	46,958	40,993
Borrowings from financial institutions	-	_	561	561	500
Other borrowings	4,854	1,865	8	6,727	4,014
Other financial liabilities:					
 Advances on consumption 	2	10	19	31	35
Other	1,543	_	1	1,544	1,511
Financial liabilities (see note 33)	7,836	12,958	35,027	55,821	47,053
Advances and progress payments received (1)	6,819	-	-	6,819	6,433
Trade payables and related accounts	6,623	_	-	6,623	6,374
Tax and social security liabilities (2)	6,994	_	-	6,994	6,760
Liabilities related to fixed assets and related accounts	2,082	_	-	2,082	2,133
Other liabilities (3)	17,042	_	-	17,042	13,554
Operating, investment and other liabilities	32,741	-	-	32,741	28,821
Cash instruments (4)	2,240	961	768	3,969	3,337
Deferred income ⁽⁵⁾	607	1,164	1,927	3,698	4,065
TOTAL LIABILITIES	50,243	15,083	37,722	103,048	89,709

Advances and progress payments received principally include monthly standing order payments by EDF's residential and business customers, amounting to €6,682 million (€6,340 million at 31 December 2014). The increase over 2015 is mainly explained by customers opting to pay their bills this way.

(2) In 2015 this item includes an amount of \in 1,258 million for the CSPE income to be collected by EDF on energy supplied but not yet billed (\in 1,122 million in 2014).

(3) Mainly the amount of cash pooling and cash management agreements with subsidiaries (€14,478 million in 2015 and €11,293 million in 2014).

(4) Essentially unrealised losses on foreign exchange instruments.

(5) Deferred income at 31 December 2015 comprises the partner advances made to EDF under nuclear plant financing plans and the associated long-term contracts, amounting to €1,874 million (€1,989 million in 2014). Deferred income on long-term contracts also includes the advance paid to EDF in 2010 under the agreement with the Exeltium consortium. This advance is transferred to the income statement progressively over the term of the contract.

Note 33 Financial liabilities

	Balance	New		Translation		Balance
(in millions of Euros)	at 31/12/2014	borrowings	Repayments	adjustments	Other	at 31/12/2015
Bonds in Euros	1,013	-	-	_	-	1,013
Bonds in other currencies	9,698	4,181	-	1,295	-	15,174
Euro-Medium Term notes (EMTN) in Euros	20,467	-	(1,384)	-	-	19,083
Euro-Medium Term notes (EMTN) in other currencies	9,815	1,344	(103)	632	_	11,688
Bonds	40,993	5,525	(1,487)	1,927	-	46,958
Long-term loans in Euros	500	70	(9)	_	_	561
Borrowings from financial institutions	500	70	(9)	-	-	561
Negotiable debt instruments (Euro) ⁽¹⁾	650	3,094	-	_	-	3,744
Negotiable debt instruments (non-Euro) ⁽¹⁾	3,357	_	(802)	414	-	2,969
Contractual financial borrowings	7	7	-	_	-	14
Other borrowings	4,014	3,101	(802)	414	-	6,727
Total borrowings	45,507	8,696	(2,297)	2,340	-	54,246
Advances on consumption	35	-	-	-	(4)	31
Miscellaneous advances	77	16	(11)	_	-	82
Bank overdrafts	121	-	-	_	79	200
Deferred bank debits	39	_	-	_	(25)	14
Interest payable	1,274	_	-	_	(26)	1,248
Total other financial liabilities	1,511	16	(11)	-	28	1,544
TOTAL FINANCIAL LIABILITIES	47,053	8,712	(2,308)	2,340	24	55,821

(1) Issues net of repayments.

On 8 October 2015, EDF issued a US dollar senior bond in several tranches, following its senior "Formosa bond" issued on the Taiwanese market on 25 September 2015 (see note 2.3).

Redemption of bonds totalled €1,487 million and concerned bonds in Euros and other currencies that reached maturity.

	Structure	Structure of liability in balance sheet			Impact of hedging instruments		Structure of liability after hedging			
(in millions of Euros)	Non-Euro	In Euros	% Non-Euro	% of debt	Non-Euro	In Euros	Non-Euro	In Euros	% Non-Euro	% of debt
Total I – Euros		24,415		45		23,856		48,271		89
CHF	700	646	2.2	1	(700)	(646)	-	_	_	-
GBP	7,385	10,062	33.7	19	(3,000)	(4,087)	-	5,975	100	11
HKD	1,216	144	0.5	-	(1,216)	(144)	-	-	_	-
JPY	44,100	337	1.1	1	(44,100)	(337)	-	-	_	-
NOK	1,000	104	0.4	-	(1,000)	(104)	-	-	_	-
USD	20,182	18,538	62.1	34	(20,182)	(18,538)	-	-	_	-
Total II – Non-Euro currencies		29,831		55		(23,856)		5,975	100	11
TOTAL I+II		54,246		100		_		54,246		100

33.1 BREAKDOWN OF LOANS BY CURRENCY, BEFORE AND AFTER HEDGING INSTRUMENTS

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

	Structure of liability in balance sheet		Impact of hedging instruments Structure of liability after			er hedging	
(in millions of Furos)	Total	% 31/12/2015	% 31/12/2014	Total	Total	% 31/12/2015	% 31/12/2014
Long-term borrowings and EMTN	46,273		01/12/2014	(24,559)	21,714		01112/2011
Short-term borrowings	6,713			_	6,713		
Borrowings at fixed rate	52,986	98	97	(24,559)	28,427	52	59
Long-term borrowings and EMTN	1,260			24,559	25,819		
Short-term borrowings	-			_	-		
Borrowings at floating rate	1,260	2	3	24,559	25,819	48	41
TOTAL	54,246	100	100	-	54,246	100	100

Note 34 Unrealised foreign exchange gains

Unrealised foreign exchange gains in 2015 include an unrealised gain of \in 292 million, of which \in 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.

	31/12/2015		31/12/2014		
(in millions of Euros)	To be received (notional)	To be given (notional)	To be received (notional)	To be given (notional)	
1 – Interest rate transactions					
Short-term interest rate swaps					
EUR	1,550	1,550	14,348	14,348	
Long-term interest rate swaps					
EUR	7,855	7,855	7,916	7,916	
USD	3,399	3,399	1,112	1,112	
GBP	4,530	4,530	4,276	4,276	
JPY	107	107	96	96	
Sub-total	17,441	17,441	27,748	27,748	
2 – Exchange rate transactions					
Forward transactions					
EUR	18,697	20,528	16,736	18,774	
CAD	965	965	1,354	1,354	
USD	15,841	12,015	11,704	9,065	
GBP	3,887	4,902	8,005	8,363	
CHF	145	276	36	36	
HUF	226	362	350	385	
PLN	1,116	1,473	865	864	
JPY	107	247	25	32	
CNY	136	136	-	-	
MXN	71	71	79	79	
Other	149	149	117	117	
Long-term currency swaps					
EUR	8,871	34,470	8,572	28,807	
JPY	336	106	372	-	
USD	19,565	4,637	12,149	3,336	
GBP	16,910	4,930	17,107	5,370	
CHF	738	92	607	-	
HUF	-	-	5	5	
CAD	42	42	47	47	
ILS	136	136	126	126	
PLN	323	323	337	337	
NOK	104	-	111	-	
HKD	144	-	129	-	
Sub-total	88,509	85,860	78,833	77,097	
3 – Securitisation swaps	462	462	591	591	
TOTAL FINANCIAL OFF-BALANCE SHEET COMMITMENTS	106,412	103,763	107,172	105,436	
4 – Commodity swaps					
Coal (in millions of tonnes)	2	2	2	2	
Oil products (in thousands of barrels)	5,890	5,890	5,475	5,475	

The amounts shown in the above table are the nominal value of contracts, translated where necessary using 2015 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)	2015	2014
Instruments not classified as hedges		
Realised gains and losses	857	(55)
Unrealised gains and losses	(619)	320
Interest rate instruments (swap, cap and floor, FRA, option) ⁽¹⁾	(3)	(3)
Instruments classified as hedges		
Interest rate instruments (swap, cap and floor, FRA)	306	253
Exchange rate instruments (currency swap)	526	276

(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 2015 as calculated by EDF is as follows:

(in millions of Euros)	Book value	Fair value
Interest rate hedges		
Long-term swaps	133	1,754
Short-term swaps	3	-
Exchange rate hedges		
Forward exchange transactions	201	155
Long-term currency swaps	2,537	2,133
Commodity hedges		
Coal	-	(33)
Oil products	_	(131)
TOTAL	2,874	3,878

Note 36 Other off-balance sheet commitments and operations

At 31 December 2015, off-balance sheet commitments related to operations, financing and investments (other than electricity supply commitments and partnership agreements) comprise the following:

	Maturity					
(in millions of Euros)	< 1 year	1 - 5 years	5 - 10 years	> 10 years	31/12/2015	31/12/2014
Off-balance sheet commitments given	10,359	19,805	12,123	9,917	52,204	53,727
Operating commitments	5,075	13,152	11,464	9,855	39,546	40,710
 Commitments related to fuel and energy purchases 	2,553	11,070	9,672	9,630	32,925	33,783
 Other operating commitments 	2,522	2,082	1,792	225	6,621	6,927
Investment commitments	3,240	5,172	359	58	8,829	9,652
Financing commitments	2,044	1,481	300	4	3,829	3,365
Off-balance sheet commitments received	933	10,321	268	160	11,682	11,891
Operating commitments	928	415	268	160	1,771	2,141
Investment commitments	5	-	-	-	5	5
Financing commitments	-	9,906	-	-	9,906	9,745

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, investing and financing transactions.

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, other energies and commodities and nuclear fuels, for periods of up to 20 years.

At 31 December 2015, these commitments mature as follows:

	Maturity					
(in millions of Euros)	< 1 year	1 - 5 years	5 - 10 years	> 10 years	31/12/2015	31/12/2014
Electricity purchases and related services	781	3,194	3,962	6,242	14,179	15,822
Nuclear fuel purchases	1,772	7,876	5,710	3,388	18,746	17,961
FUEL AND ENERGY PURCHASE COMMITMENTS	2,553	11,070	9,672	9,630	32,925	33,783

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 subsidiarie;
- 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 41TWh for 2015 (35TWh for 2014), including 5TWh for co-generation (5TWh for 2014), 20TWh for wind power (16TWh for 2014),

7TWh for photovoltaic power (6TWh for 2014) and 3TWh for hydropower (3TWh for 2014).

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 fluoration, enrichment and fuel assembly production services. The rise in these commitments is mainly attributable to preparation of the contract on production of MOX fuel assemblies for the period 2017-2024.

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.

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36.1.3 Investment commitments

Investment commitments are mostly commitments for acquisition of property, plant and equipment. The decrease in EDF's commitments for acquisition of intangible assets and property, plant and equipment largely relates to progress on the Flamanville 3 EPR project and changes in contracts for replacement of steam generators.

36.1.4 Financing commitments

These are commitments by EDF to its subsidiaries, primarily \leq 1,269 million to EDF Énergies Nouvelles and \leq 872 million to Edison.

36.2 COMMITMENTS RECEIVED

36.2.1 Operating commitments

These commitments mainly comprise:

- operating lease commitments received as lessor;
- operating guarantees received;
- operating sale commitments.

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.

36.3.2 Gas purchases and related services

Gas purchase commitments are given by EDF in connection with its expanding gas supply business.

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 2016.

Note 37 Contingent liabilities

PERSONAL TRAINING ACCOUNT (COMPTE PERSONNEL DE FORMATION OR CPF)

French Law No. 2014-288 of 5 March 2014, which took effect from 1 January 2015, reformed the system for in-service training, replacing the former Individual Training Entitlement (*Droit Individuel à la Formation* or DIF) by the Personal Training Account (*Compte Personnel de Formation* or CPF). The CPF is a "universal" system that relates to the person, not the work contract. It concerns all EDF's employees, whether full or part-time, on permanent or fixed-term contracts, and there is no requirement concerning the length of service. It represents a progressive "capital" of training time entitlement, capped at 150 hours.

The outstanding training entitlements earned under the DIF system can be used until January 2021. At 31 December 2014, a total of 6,753,661 hours of training had been earned, including 6,682,138 for which no application had been made.

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 paid by the Company. 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 which were upheld in July 2015 by the Versailles administrative Appeal 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 that represent a financial risk of some €660 million in income taxes at 31 December 2015.

The tax authorities have also issued notice of 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 also contesting this reassessment.

In late 2015 the tax authorities issued notice to the Company of the recurring reassessments stated above for the years 2012 and 2013, and challenged the deductibility of certain long-term provisions.

The Company is confident that it has good chances of winning the disputes, and no provision has been recorded in connection with any of these matters.

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**

Article L. 594 of France's Environment Code and its 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. 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 law requires the realisable value of these dedicated assets to be higher than the value of the provisions corresponding to the present value of long-term nuclear obligations.

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.

The Decree of 24 March 2015 contains two new measures concerning dedicated assets:

- the annual allocation to dedicated assets, net of any increases to provisions, must be positive or zero as long as their realisable value is below 110% of the amount of the provisions concerned;
- subject to certain conditions, real estate property owned by the operators
 of nuclear facilities may be allocated to coverage of these provisions.

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 the EDF Invest division, 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 recognised by the French state, representing the accumulated shortfall in CSPE financing at 31 December 2012, to its dedicated assets. This financial receivable bears interest at 1.72% and will be repaid under a revised schedule extending to the end of 2020, which is to be set out in a decision as stated in a ministerial letter of 26 January 2016. In that letter the State also acknowledged the shortfall that arose between 2013 and 2015, estimated at €644 million and included in the revised repayment schedule, and authorised its allocation to dedicated assets in 2016. This additional receivable was reclassified from operating receivables to financial receivables at 31 December 2015. In accordance with the ministerial letter, the amount of the additional receivable at 31 December 2015 and the repayment schedule will be adjusted in 2016 based on the CRE's confirmation of the shortfall in compensation for 2015.

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 guarantees 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 2015, the assets managed by EDF Invest represent a value of \in 3,975 million, mainly including:

- 50% of EDF's investment in RTE, amounting to €2,580 million at 31 December 2015 (€2,555 million at 31 December 2014). This is the net consolidated value of 50% of EDF's shares in RTE, as presented in investments in associates in the EDF Group's consolidated balance sheet;
- EDF's investment in TIGF, Porterbrook, and Madrileña Red de Gas (MRG).

38.2.3 Valuation of dedicated assets

Dedicated assets are classified in the balance sheet according to their accounting nature: investments, investment securities, and marketable securities. They are valued under the accounting principles presented in note 1.

Details of the portfolio at 31 December 2015 are as follows:

	31/12/2015		31/12/2014		
(in millions of Euros)	Net book value	Fair value or realisable value	Net book value	Fair value or realisable value	
RTE shares (1)	2,015	2,580	2,015	2,555	
Investment Securities (2)	12,563	14,418	12,458	14,691	
Other financial investments	1,090	1,233	553	657	
Dedicated assets – Investments	15,668	18,231	15,026	17,903	
CSPE receivable	5,228	5,232	5,140	5,144	
Total dedicated assets before hedging	20,896	23,463	20,166	23,047	
Hedging instruments and other	24	17	(10)	(14)	
TOTAL DEDICATED ASSETS AFTER HEDGING ⁽²⁾	20,920	23,480	20,156	23,033	

(1) 50% of the equity value of the shares in the Group's consolidated financial statements.

(2) By limiting the value of certain investments in compliance with Article 16 of Decree No. 2007-243 on calculation of the regulatory realisable value of dedicated assets, the amount of the regulatory realisable value has been reduced to €23,392 million at 31 December 2015.

Net book value and fair value include unmatured accrued interest.

38.2.4 Changes in dedicated assets in 2015

At 31 December 2015, long-term nuclear provisions were 99.3% covered (if the value of certain investments is limited in compliance with Article 16 of Decree No. 2007-243 on calculation of the regulatory realisable value of dedicated assets, the regulatory coverage is 98.9%).

Withdrawals totalled €378 million, equivalent to the payments made in respect of the long-term nuclear obligations to be covered in 2015 (€403 million in 2014). The allocation to dedicated assets for 2015 was €38 million, resulting from allocation of shares already owned by EDF (no allocations were made to dedicated assets in 2014).

As increases to provisions that must be offset by allocations to dedicated assets under the Decree of 24 March 2015 amount to €1,010 million over the year 2015, the allocations to dedicated assets yet to be made amount to €972 million at 31 December 2015. These allocations must be made within a maximum of three years from that date. As stated in note 38.2, the French government has authorised EDF to allocate the CSPE receivable, a financial receivable of €644 million, to dedicated assets in 2016.

For the financial portfolio, 2015 was relatively volatile and the stock markets rose over the year. The portfolio's performance was positive and better than the composite benchmark index. In response to the lack of visibility

from the summer onwards, the equities/bond allocation balance remained close to neutral in the second part of the year. However, EDF continued geographical allocations prioritising Europe and Japan over North America and emerging countries in particular.

For the unlisted asset portfolio, in 2015 EDF Invest and two other long-term investors completed acquisition of a minority shareholding in Madrileña Red de Gas (MRG), a regulated operator for the Madrid region gas distribution network.

EDF Invest, through a consortium with Ardian held in equal shares, also acquired an investment of more than 50% in Géosel, a hydrocarbon storage company based in Manosque in France, from the Total Group. Both these investments were allocated to EDF Invest's "infrastructures" pocket along with RTE, TIGF and Porterbrook.

Over the year EDF Invest also continued to build up its real estate and investment fund portfolio. The non-exclusive real estate investment fund created in late 2014 at the initiative of Amundi and EDF Invest undertook a real estate investment in Germany during 2015.

In September 2015, EDF Invest also signed a contract with Nexity for the off-plan purchase of the Smart Side office and service development in France.

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:

(in millions of Euros)	31/12/2015	31/12/2014
Provision for long-term radioactive waste management	8,254	7,676
Provisions for nuclear power plant decommissioning	14,930	13,866
Provisions for last cores - portion for future long-term radioactive waste management	462	476
PRESENT COST OF LONG-TERM NUCLEAR OBLIGATIONS	23,646	22,018

Note 39 Related parties

39.1 **RELATIONS WITH SUBSIDIARIES**

	EDF's receivables ⁽¹⁾		EDF's liabili	ties (1)		Financial
(in millions of Euros)	Loans	Trade receivables	Net liabilities included in current account	Trade liabilities	Financial expenses	income (excluding dividends)
Companies						
C31	_	-	-	-	-	(17)
EDF Energy	-	169	-	112	-	
EDF Energies nouvelles	460	-	-	-	-	28
EDF Energy UK Ltd EU	1,100	_	-	-	-	4
EDF International	3,357	-	-	-	-	14
EDF Trading	_	822	-	495	-	-
Edison Nouveau	70	-	-	-	-	4
ERDF	_	113	_	1,720	-	1
SOFILO	65	_	_	_	-	-
Dalkia France	905	50	-	82	-	19
EDF PEI	993	_	-	66	-	2
RTE	670	211	-	155	-	36
Current account with ERDF				165	-	
Group cash management agreement with subsidiaries			8,682		(7)	
Tax consolidation agreement (2)		141		1,211		
Agreement for invetsment of subsidiaries' cash surpluses			5,796		(18)	

(1) Receivables and payables of more than €50 million.

(2) Including €883 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 84.94% of the capital of EDF at 31 December 2015, 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*).

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 France's Energy Code, and the level of the Contribution to the Public Electricity Service.

39.2.2 Relations with public sector entities

EDF'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.

On 27 January 2016, EDF's Board of Directors was informed that discussions had been finalised between EDF and AREVA concerning the takeover of AREVA NP and the strategic partnership to be established (see note 42.1).

Front-end of the cycle

In December 2014 EDF and AREVA NP signed a contract for supplies of enriched-uranium fuel assemblies from 2015.

Several important agreements were also negotiated:

- for supplies of natural uranium: an EDF contract covering the period 2021-2030;
- for fluoration: a contract covering the period 2019-2030;
- for enrichment of natural uranium into uranium 235: an AREVA contract covering the period 2019-2030.

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.

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

Note 40 Environment

40.1 GREENHOUSE GAS EMISSION RIGHTS

In ratifying the Kyoto protocol Europe made a commitment to reduce its greenhouse gas emissions. EU Directive No. 2003/87/EC set up a greenhouse emission quota system for the European Union which has operated since 2005.

This system is adapted into national laws. Among other things it requires obligated actors, of which EDF is one, to surrender to the State each year a number of greenhouse gas emission credits corresponding to their emissions for the year.

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. EDF thus purchases emission credits on the market, or makes investments in developing countries (through the clean development mechanism) to cover all the emission credits that must be surrendered annually.

In 2015, EDF surrendered 9 million tonnes in respect of emissions generated in 2014. In 2014, EDF surrendered 17 million tonnes in respect of emissions generated in 2013.

The volume of emissions at 31 December 2015 stood at 7 million tonnes (8 million tonnes at 31 December 2014).

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 2013-2015 are covered by an application contract for the same period signed in May 2015. The application conditions for the period 2016-2023 were also agreed in December 2015, and presented to the Board of Directors on 27 January 2016. They will give rise to signature of an amendment.

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.

EDF owns a very small minority shareholding in AREVA (2.24%).

40.2 ENERGY SAVINGS CERTIFICATES

In France, the Law of 13 July 2005 introduced a system of energy savings certificates. Suppliers of energy (electricity, gas, heat, cold, domestic fuel oil and fuel for vehicles) 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.

The French system was renewed by Decree No. 2014-1557 of 24 December 2014 for a third period running from 1 January 2015 to 31 December 2017. The energy savings objectives for this period are more ambitious, and the system has been simplified. The volumes of energy savings certificates obtained during the second period will count towards achievement of the objectives for the third period.

In application of Article 30 of the Law of 17 August 2015 on the energy transition for green growth, a new additional energy savings obligation for 2016-2017 applies from 1 January 2016, for the benefit of energy-poor households. This new obligation is added to the energy savings obligations for the third period. The annual volume of the obligation is proportional to the annual energy savings obligation.

EDF is well-placed to meet its obligations thanks to energy-efficient offers for each market segment: residential customers, business customers, local authorities and organisations funding social projects.

At 31 December 2015, the volume of energy savings certificates held in the portfolio to cover energy savings obligations for future years, recorded in inventories, amounted to €359 million corresponding to 65TWhc (see note 1.1).

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:

(in Euros)	2015	2014
Chairman and CEO ⁽¹⁾	500,236	415,818
Directors ⁽²⁾	311,055 ⁽³⁾	174,444

(1) Decree No. 2012-915 of 26 July 2012 sets a ceiling of €450,000 as total annual compensation (gross amount) paid to the Chairman and CEO. In accordance with the decision by the Board of Directors of 8 April 2015, €47,368 were paid to the Chairman and CEO as fixed annual salary for 2014 fiscal year, following the appointment of Mr Jean-Bernard Lévy as interim Chairman and CEO from 23 November 2014.

(2) The amounts paid during a year correspond to directors' fees allocated for the fixed portion (50% for the first half of this fiscal year concerned and 50% for the second half of the previous year), and 100% of the variable portion for the previous year. The number of directors receiving directors' fees increased from 5 to 11 directors on 23 November 2014 in application of the Order of 20 August 2014. The General Shareholders' meeting of 21 November 2014 approved the proposal by the Board of Directors to increase the budget for directors' fees, raising it from €200,000 to €226,000 for 2014 and €440,000 for 2015.

(3) Including €88,888 paid to the State budget in application of the Order of 20 August 2014.

Note 42 Subsequent events

42.1 BOARD OF DIRECTORS' DECISION OF 27 JANUARY 2016: FURTHER PROGRESS ON THE STRATEGIC PARTNERSHIP AGREEMENT BETWEEN EDF AND AREVA

At its meeting on 27 January 2016, EDF's Board of Directors was informed that following due diligence work conducted during the second half of 2015, discussions with AREVA regarding EDF's takeover of the activities of AREVA NP (the company in charge of services, and reactor equipment and fuel manufacturing) had been finalised.

The Board approved the final valuation of the activities to be acquired by EDF, amounting to ≤ 2.5 billion for 100% of the capital of AREVA NP¹. This amount may be revised upwards or downwards depending on the financial statements drawn up at the transaction's completion date, with a possible earn-out payment of up to ≤ 350 million based on achievement of certain performance objectives measured after the completion date.

EDF will be in a position to make a binding offer for its intended investment of between 51% and 75% on this basis, after consultation with the Central Works Council and authorisation by the Board of Directors, once the arrangements to completely immunise EDF against the costs and risks of the Olkiluoto 3 (OL3) project and all the final contractual documents are finalised.

This decision follows the memorandum of understanding signed on 30 July 2015, which formally recorded progress on discussions concerning the proposed partnership between EDF and AREVA. This memorandum comprises 3 sections:

- a general strategic and industrial agreement, principally in order to improve and develop the efficiency of cooperation in areas such as research and development, international sales of new reactors, spent fuel storage and dismantling;
- acquisition by EDF of exclusive control over AREVA NP. It provides for majority control (at least 51%) of AREVA NP by EDF, a maximum 25% investment by AREVA as part of a strategic partnership, and potential investments by other minority partners. This plan will enhance security for the most critical activities involved in the "Grand carénage" industrial programme for the existing fleet in France, and improve the efficiency of engineering services, project management, and some manufacturing activities based on EDF's experience;
- formation of a dedicated company, 80% owned by EDF and 20% owned by AREVA NP, to optimise design and project management for new reactors. The purpose of this company will be to improve the preparation and management of projects, and enhance the French industry's export offering through better coordination of strategic marketing to prepare offerings in the upstream project phase, development of more competitive products that are better-suited to customers' needs, and harmonisation and expansion of the range of reactors, all the while continuing partnerships with the major industrial companies in Japan and China. This new company will be part of an integrated generator/ supplier model, which has been tried and tested in several countries.

^{1.} Without transfer of financial debt.
6.4 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 2015

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 2015, 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 2015 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, depreciation period of the nuclear power plants which is maintained at 40 years in France in the context described in note 1.2, 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, 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.

Management judgments and estimates

Note 1.2 to the consolidated financial statements describes the main sensitive accounting policies for which management exercises judgment and makes estimates, 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 significant market decline, 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 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);
- 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'Electricité) in accordance with the agreement announced on 14 January 2013 between EDF SA and the French State, as revised by a ministerial letter on 26 January 2016 (notes 3.2 and 18.6).

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.

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 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, 15 February 2016

The Statutory Auditors

KPMG Audit Department of KPMG SA

Jacques-Francois Lethu

Deloitte & Associés

Patrick E. Suissa

6.5 Fees paid by the Group to Statutory Auditors

The following table sets forth the fees related to the 2015 financial year for EDF and its fully consolidated subsidiaries for services by its Statutory Auditors and their respective affiliates:

	Network Deloitte		Networ	k KPMG
(In thousands of Euros)	Amount (taxes excluded)	%	Amount (taxes excluded)	%
Audit:				
Statutory audit, certification, review of company and consolidated accounts				
EDF	3,681	22.5	3,623	25.9
Fully consolidated subsidiaries	7,574	46.2	8,309	59.4
Other tasks and services directly connected to the Statutory Auditor's mission				
EDF	1,771	10.8	713	5.1
Fully consolidated subsidiaries	294	1.8	950	6.8
Sub-total	13,320	81.3	13,595	97.2
Other services provided by the auditors' networks to fully integrated subsidiaries:				
Legal, tax, social	905	5.5	186	1.3
Other	2,154	13.2	205	1.5
Sub-total	3,059	18.7	391	2.8
TOTAL	16,379	100	13,986	100

Information given for the 2014 financial year:

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:

	Network Deloi	tte	Network KPMG	
(In thousands of Euros)	Amount (taxes excluded)	%	Amount (taxes excluded)	%
Audit:				
Statutory audit, certification, review of company and consolidated accounts				
EDF	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				
EDF	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	11,884	100

6.6 Five-year summary of EDF results

(Taken from EDF's corporate financial statements):

	2015	2014	2013	2012	2011
Capital at year-end					
Capital (in millions of euros)	960	930	930	924	924
Capital contributions (in millions of euros)					
Number of ordinary shares in existence	1,920,139,027	1,860,008,468	1,860,008,468	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	41,553	41,717	43,423	44,106	41,950
Earnings before taxes, employee profit sharing, depreciation and provisions	7,224	8,252	6,782	7,978	5,417
Income taxes	(63)	577	748	460	356
Employee profit share for the year					
Earnings after taxes, employee profit sharing, depreciation and provisions	271	1,649	2,938	3,566	1,118
Earnings distributed		2,327 (1)	2,327 (1)	2,309 (1)	2,125 (1)
Interim dividend distributed	1,059	1,059	1,059	1,053	1,053
Earnings per share (€/action)					
Earnings after taxes and employee profit sharing, before depreciation and provisions	3.79	4.13	3.24	4.07	2.74
Earnings after taxes, employee profit sharing, depreciation and provisions	0.14	0.89	1.58	1.93	0.60
Dividend per share		1.25 (1) (3)	1.25 (1) (3)	1.25 (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	70,769	70,153 (2)	68,643 (2)	64,303	62,479
Total payroll expense for the year (in millions of euros)	3,964	3,905	3,843	3,687	3,600
Amounts paid for employee benefits and similar (social security, company benefit schemes, etc) <i>(in millions of euros)</i>	2,848	2,699	2,614	2,551	2,161

(1) Including the interim dividend paid out.

(2) 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.

6.7 Dividend policy

6.7.1 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
2012	1,848,866,662	1.25	2,308,912,900.34 (2)	8 July 2013
2013	1,860,008,468	1.25 (3)	2, 327,462,364.03 (4)	6 June 2014
2014	1,860,008,468	1.25 (3)	2, 327,233,892.26 ⁽⁵⁾	5 June 2015

(1) After deduction of treasury shares.

(2) €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.

(3) I.e. €1.375 for shares benefiting from the loyalty dividend.

(4) €1,059,290,112.42 of which paid on 17 December 2013 as an interim dividend 2013.

(5) €1,059,262,163.04 of which paid on 17 December 2014 as an interim dividend 2014.

On 4 November 2015, the Board of Directors decided to pay an interim dividend in cash or shares of €0.57 per share relating to fiscal year 2015. The total amount of the interim dividend (excluding treasury shares) is €1,058,682,286.08, and was paid on 18 December 2015.

At its meeting of 12 February 2016, the Board of Directors decided to propose to the Shareholders' Meeting of 12 May 2016 the distribution of a dividend of €1.10 per share under the year 2015. Given the interim dividend of €0.57 per share paid on 18 December 2015, the balance of the dividend to be distributed for the 2015 fiscal year amounts to €0.53 per share for the shares with ordinary dividend and to €0.64 per share for the shares which benefit from loyalty dividend.

Regarding the balance, it will be proposed to the shareholders an option of payment in new shares of the company. They may exercise their option between 6 June and 20 June inclusive. For the shareholders who have not exercised their option no later than 20 June 2016, the final dividend will be paid entirely in cash. The Government has committed to exercise its option to receive the dividend in new shares.

Dividend will be paid on 30 June 2016 (ex-date being 6 June 2016), subject to the Shareholders' Meeting approval.

6.7.2 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.

6.7.3 **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.

6.8 **Significant change in the Company's financial or trading position**

The significant events that took place between the end of the 2015 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 2015 as to events that took place before the financial statements were drawn up by the Board of Directors on 15 February 2016, and, for events occurring after 15 February 2016, in section 5.2 "Subsequent events" of this Reference Document.

6.9 Information relating to the allocation of funds raised through the Green Bonds issued by EDF in November 2013 and October 2015

On 8 October 2015, EDF issued a second Green Bond, with a maturity of 10 years, for a total amount of US\$1.25 billion. This operation is part of the Group's policy to finance the development of its renewable activities and follows the issuance on 25 November 2013 of a first Green Bond for a total amount of €1.4 billion. The commitments made by EDF as part of these two issuances follow the four principles established by the Green Bond Principles ¹ namely (i) use of proceeds (ii) existing processes to assess and select eligible projects (iii) management of the proceeds and (iv) reporting.

USE OF PROCEEDS

As part of these two bond issues, EDF has committed to allocate the proceeds to finance the construction of renewable power generation projects developed by EDF Energies Nouvelles (EDF EN). Projects eligible to Green Bond financing (hereinafter the "Eligible Projects") are:

- new projects meeting the eligibility criteria defined by EDF and validated by Vigeo Eiris (see below "Project Eligibility Criteria validated by Vigeo"); and/or
- existing projects meeting the eligibility criteria which have not yet started or been externally financed at the issue date that EDF EN may develop or invest in after the issue date.

Proceeds are not meant to be used to refinance existing projects or to acquire already operating businesses or projects.

PROCESS FOR EVALUATION AND SELECTION OF GREEN BOND-FINANCED ELIGIBLE PROJECTS

Each Eligible Project to may be financed is assessed against the eligibility criteria by the Finance Division of EDF EN, based on elements provided by the teams of EDF EN in charge of project development, procurement and sustainable development.

Only projects meeting the criteria may benefit from Green Bond financing. Those projects over which EDF EN has direct control are financed in priority. The Finance Department of EDF EN documents the entire project assessment process in order to demonstrate to an independent auditor that funded projects meet the eligibility criteria.

MANAGEMENT OF PROCEEDS

Management of the proceeds follow a strict ring-fencing principle which aims to ensure that their use is exclusively and effectively dedicated to financing of Eligible Projects.

Upon receipt by the Financing and Investments Division of EDF SA, proceeds from each issuance are invested and tracked in a dedicated sub-portfolio of treasury assets until allocation to Eligible Projects. Proceeds are invested in priority in treasury assets identified as "Socially Responsible Investments".

The allocation of Green Bond proceeds is governed by an inter-company loan agreement between EDF and a subsidiary of EDF EN exclusively dedicated to funding Eligible Projects. This scheme is intended to ensure traceability and strict ring-fencing of the funds from EDF SA's treasury until allocation to selected Eligible Projects.

REPORTING

Effective use of funds

Full allocation of the proceeds from EDF's first Green Bond issuance in November 2013 (\in 1.4 billion) was completed in June 2015.

On 31 December 2015, US \$500 million – out of \$1.25 billion raised through the second Green Bond issued by EDF in October 2015 – had been allocated to Eligible Projects, The balance of the proceeds, i.e. US \$725 million, has been invested in a dedicated treasury portfolio, as indicated above, pending allocation to Eligible Projects.

1. The Green bond principles updated as of March 2015, are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the Green Bond market. For more information: http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/green-bonds/green-bond-principles/

FINANCIAL STATEMENTS

INFORMATION RELATING TO THE ALLOCATION OF FUNDS RAISED THROUGH THE GREEN BONDS ISSUED BY EDF IN NOVEMBER 2013 AND OCTOBER 2015



PROCEEDS ALLOCATION STATUS AS AT 31 DECEMBER 2015

	Funds raised	Funds allocated to Eligible Projects	Number of projects which received Green Bond funding	Share of total investments financed by the Green Bond
Green Bond no. 1 – November 2013	€1.4bn	€1.4bn	13 (1)	59 %
Green Bond no. 2 – October 2015	\$1.25bn	\$500m	3 (1)	60 %

(1) Including the Roosevelt project financed by both green bonds.

These funds were allocated to the selected Eligible Project entities and are exclusively intended to the financing of construction and/or development costs of these projects.

The Eligible Projects selected for Green Bond financing as of 31 December 2015 under the November 2013 (GB1) and October 2015 (GB2) Green Bond issues are:

Project	Technology and capacity	Location	Projected year of commissioning	GB1/GB2
CID Solar	Solar PV, 27MWp	USA (California)	Commissioned	GB1
Cottonwood	Solar PV, 33MWp	USA (California)	Commissioned	GB1
Ensemble éolien catalan phase 1/phase 2	Onshore wind, 44MW/52MW	France (Pyrénées-Orientales)	Commissioned/2016	GB1
Heartland	Biomethane, 20MW	USA (Colorado)	2016	GB1
Hereford	Onshore wind, 200MW	USA (Texas)	Commissioned	GB1
La Mitis	Onshore wind, 25MW	Canada (Quebec)	Commissioned	GB1
Le Granit	Onshore wind, 25MW	Canada (Quebec)	Commissioned	GB1
Longhorn North	Onshore wind, 200MW	USA (Texas)	Commissioned	GB1
Pilot Hill	Onshore wind, 175MW	USA (Illinois)	Commissioned	GB1
Rivière du Moulin	Onshore wind, 350MW	Canada (Quebec)	Commissioned	GB1
Roosevelt	Onshore wind, 250MW	USA (New Mexico)	Commissioned	GB1 and GB2
Salt Fork	Onshore wind, 174MW	USA (Texas)	2016	GB2
Slate Creek	Onshore wind, 150MW	USA (Texas)	Commissioned	GB2
Spinning Spur 2	Onshore wind, 161MW	USA (Texas)	Commissioned	GB1
Spinning Spur 3	Onshore wind, 194MW	USA (Texas)	Commissioned	GB1

As part of the management of its renewable assets portfolio, the Group may sell interests in the assets it develops. The percentage held by the Group of capacities which received a Green Bond funding as at 31 December 2015 stood at 64% for the GB1 (November 2013) and 100% for the GB2 (October 2015).

Impact of financed Eligible Projects

The table below shows three main impacts associated with the construction of renewable energy projects which received a Green Bond funding:

- the electricity generation capacity from renewable energy sources built under each project;
- the expected electricity output of each project; and
- the expected avoided CO₂ emissions from injecting this electricity output into power grids.

FINANCIAL STATEMENTS INFORMATION RELATING TO THE ALLOCATION OF FUNDS RAISED THROUGH THE GREEN BONDS ISSUED BY EDF IN NOVEMBER 2013 AND OCTOBER 2015

These impacts are presented in aggregate for both Green Bond issues: gross data correspond to the aggregate impact of projects that received funding from the Green Bond considered; net data are the sum of the weighted impacts of Eligible Projects, where weighting corresponds to the share of project investment amounts financed by the Green Bond considered.

	Total generation capacity of financed projects as at 31 December 2015 (in MW)		Expected ou (in TWh/yea	i tput ar)	Expected avoi emissions (in	ded CO₂ <i>Mtlyear</i>)
	Gross ⁽¹⁾	Net ⁽²⁾	Gross ⁽¹⁾	Net ⁽²⁾	Gross ⁽¹⁾	Net ⁽²⁾
Green Bond no. 1 – November 2013	1,755	976	7.0	4.1	3.3	1.8
Green Bond no. 2 – October 2015	574	346	2.4	1.5	1.7	1.1

(1) Sum of gross impacts of each project that received Green Bond funding.

(2) Sum of net impacts of each project, weighted by the project investment amount financed by the Green Bond considered.

The above impacts are established using the methodological principles below:

- generation capacity of financed projects: installed capacity at the end of the construction of each Eligible Project as defined in the project's investment memorandum and updated as appropriate during the construction phase or at project commissioning;
- expected output: generation forecast (the "P50") taken into account when the investment decision of each Eligible Project is made;
- expected avoided CO₂ emissions: the average emission factor per kWh of the electric system is estimated on the basis of the energy mix of the electric system and LCA emission factors of each generation technology. The emission factor of the project corresponds to the LCA emission

factor of the project's technology. Energy mix are those published by the Environmental Protection Agency (2012) for large power networks in the United States, Statistics Canada (2013) for networks and provinces of Canada, and the International Energy Agency (2013) for other countries. LCA emission factors of each technology correspond to the median values established by the IPCC and published in its fifth assessment report (2014). The detailed methodology is available on request at the office of the EDF group. It is important to note that (i) there is no single reference defining a methodology for calculating avoided CO₂ emissions are estimated forecast data and not actual data.

PROJECT ELIGIBILITY CRITERIA VALIDATED BY VIGEO

1. Assessment of the countries in which the project is located based on human rights and governance

Countries eligible to host Green Bond-financed projects must reach a minimum scoring, set by EDF Energies Nouvelles (EDF EN), based on the Vigeo Country Rating evaluation ¹. 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; Freedom of press; Independence of the judicial system; Legal certainty

2. Monitoring the environmental impact of the project

Criteria	Indicators/Supporting evidence
An environmental impact study has been undertaken (= effects on the environment and identified measures)	Existence of a study on the project's environmental impacts
Environmental specifications of the project are monitored during the construction phase	Existence of an internal reporting or signature of a contract with a third party to monitor environmental aspects
An Environment Referent has been designated for every project	Name & Function of the Environment Referent for each project
Contracts are established in compliance with the project's environmental specifications	Environmental specifications adequately reflected in the contracts

^{1.} This Country Rating is updated every six months. EDF EN considers that the United States meets the minimum requirements on both indicators and are an eligible host country.

3. Protect the health and safety of all those involved in the project

Criteria	Indicators/Supporting evidence
A Health/Protection/Safety coordinator or equivalent is planned on the site of the construction project	Name & Function of the coordinator for each of the sites of the project
Risk prevention plans are systematically provided for with each person on the project site	Risk prevention plan for each firm working on the project site

4. Promote responsible relationships with suppliers

Criteria	Indicators/Supporting evidence
The Sustainable Development Charter for EDF EN's suppliers and subcontractors is signed by each supplier/subcontractor to ensure their knowledge of it	Inclusion in the contract with suppliers and/or signature of the Sustainable Development Charter by suppliers/subcontractors
The project management by EDF EN is compatible with the principles of the EDF Group's Ethical Charter	Certification of compliance with the EDF Ethical Charter signed by the project manager Existence of ethical alerts on the project
A verification of good practices and of any reputational risk and controversial issues related to financial partner (s) has 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)
Use of proceeds in favour of the beneficiaries is tracked	€ figures on use of funding/beneficiary
There is a policy in terms of advantages and gifts received by EDF EN employees	Applicable policy relative to gifts and invitations
A binding confidentiality clause between the supplier or sub-contractor and EDF EN has been included in the applicable contracts	Confidentiality clause commitment
The consultation of suppliers is systematic for the main supply contracts, except for justified cases of one to one negotiations (including when a framework agreement exists)	Traceability of the project's purchasing process for the main supply contracts, i.e. representing at least two thirds of the project total suppliers' contracts value
The decisions on the awarding of contracts are formalized on the basis of objective criteria, identical for every supplier, in order to ensure a fair selection (cf. EDF EN Group Purchase Policy)	Traceability of the decision process for awarding contracts for the main supply contracts, i.e. representing at least two thirds of the project total suppliers' contracts value

5. Ensure the consultation with the territory's stakeholders

Criteria	Indicators/Supporting evidence
A consultation process with external stakeholders is put in place from the design stage of the project	List of discussions/consultations effected Examples: number of public meetings, information reports, etc.
Stakeholders are provided with information, at least for stakeholders surrounding the work area and site users, for the duration of the construction project	List of actions undertaken

ATTESTATION FROM ONE OF THE STATUTORY AUDITORS OF EDF SA ON THE INFORMATION RELATED TO THE ALLOCATION, AS OF 31 DECEMBER, 2015, OF FUNDS RAISED FOR THE "GREEN BONDS" ISSUED BY EDF ON 25 NOVEMBER, 2013 AND 8 OCTOBER, 2015

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, 2015, of funds raised for the "Green Bonds" issued by EDF on 25 November, 2013 and 8 October, 2015 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 standards applicable in France.

To the Chairman and Chief Executive Officer,

In our capacity as statutory auditor of Electricité de France SA (the "Company") and in accordance with your request, we have prepared this attestation on the information related to the allocation, as of 31 December, 2015, of funds raised for the "Green Bonds" issued by EDF on 25 November, 2013 (the "GB 2013 Offering") and 8 October, 2015 (the "GB 2015 Offering" and together with the GB 2013 Offering, the "Green Bond Offerings"), which amounts to \in 1,400,000,000 and \$1,250,000,000, contained in the attached document "Information relating to the allocation of funds raised for the Green Bonds issued by EDF in November 2013 and October 2015", and prepared pursuant to the terms and conditions of the final terms of the Green Bond Offerings dated 25 November, 2013 and 8 October, 2015 (the "Final Terms").

This document, prepared under your responsibility for the purposes of the information of the "Green Bond" debt securities holders, presents an allocation of the funds raised from the Green Bond Offerings to eligible projects (the "Eligible Projects") for the period beginning as of the receipt of the funds raised from the Green Bond Offerings on 27 November, 2013 to 31 December, 2015 (the "Allocation of Proceeds"):

- for an amount of €1.400 million in relation to the GB 2013 Offering, from 27 November, 2013 to 31 December, 2015;
- for an amount of \$500 million in relation to the GB 2015 Offering, from 13 October, 2015 to 31 December, 2015.

This information was prepared based on the accounting records used for the preparation of the consolidated financial statements for the year ended 31 December, 2015.

Our role is to report on:

- the compliance with the four components of the Green Bond Principles defined by the International Capital Market Association¹ being (i) Use of proceeds, (ii) Process for project evaluation and selection, (iii) Management of proceeds and (iv) Reporting;
- 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 tracking of the funds raised from the Green Bond Offerings, 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, 2015 as part of the Green Bond Offerings, with the accounting records and data underlying the accounting records;
- the compliance, in all material respects, of the methods used by the Company to estimate the CO2 emissions avoided by the Eligible Projects financed as at 31 December, 2015 with the methodology described in the section "Impact of financed Eligible Projects" of the attached document.

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;
- for concluding on whether the methodology used by the Company to estimate the avoided CO₂ emissions is appropriate.

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, 2015. 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 15 February, 2016.

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 15 February, 2016.

FINANCIAL STATEMENTS

INFORMATION RELATING TO THE ALLOCATION OF FUNDS RAISED THROUGH THE GREEN BONDS ISSUED BY EDF IN NOVEMBER 2013 AND OCTOBER 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:

- for the information related to the Allocation of Proceeds and the compliance with the four components of the Green Bond Principles:
 - verifying the appropriate consideration of the four components of the Green Bond Principles of the Capital Market Association ¹ being (i) the use of proceeds, (ii) the existing processes for evaluation and selection of the Eligible Projects, (iii) the management of proceeds and (iv) the reporting,
 - 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 eligibility criteria, as defined in the Final Terms,
 - verifying the appropriate segregation of the funds raised from the Green Bond Offerings and their exclusive allocation to Eligible Projects,
 - verifying the global allocation of the capital expenditures incurred in relation to the Eligible Projects financed by each of the Green Bond Offerings,
 - 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, 2015;
- for the estimation of the avoided CO₂ emissions:
 - understanding and considering the methodology used to estimate the avoided CO₂ emissions,
 - verifying the compliance, in all material respects, of the methods used to estimate the avoided CO₂ emissions by the Eligible Projects financed during the period with the methodology described in the section "Impact of financed Eligible Projects" of the attached document,
 - verifying the consistency of the information related to the estimation of the electricity output as well as the choice of emission factors used (based on the calculation of the emission factors of the applicable electrical grids where the projects are located and the choice of emission factors by technology), should it be noted that there is no single framework defining a methodology for the calculation of avoided CO₂ emissions.

On the basis of our work, we have no matters to report on:

- the compliance with the four components of the Green Bond Principles of the Capital Market Association 1;
- the compliance, in all material respects, of the Eligible Projects referred to in the attached document, with the eligibility criteria, as defined in the Final Terms;
- the tracking of the funds raised from the Green Bond Offerings, 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, 2015 in the context of the Green Bond Offerings, with the accounting records and data underlying the accounting records;
- the compliance, in all material respects, of the methods used by the Company to estimate the avoided CO₂ emissions by the Eligible Projects financed as at 31 December, 2015 with the methodology described in the section "Impact of financed Eligible Projects" of the attached document.

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, 28 April, 2016 One of the statutory auditors

Deloitte & Associés

Patrick E. Suissa Partner



EDF Lab Paris Saclay site's follow-up ©EDF - Philippe Eranian

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7.1 General information about the Company

7.1.1 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 $8^{\rm th}$ arrondissement of Paris.

7.1.2 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.

7.1.3 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* (public 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.

7.1.4 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 and by its bylaws.

7.2 Incorporation documents and bylaws

In this reference document, a reference to the bylaws means the Company's bylaws as approved by French Decree no. 2004-1224 of 17 November 2004 adopted under French Act no. 2004-803 of 9 August 2004 relating to the public electricity and gas service and electricity and gas companies (the "9 August 2004 law"), which have subsequently been amended on various occasions.

7.2.1 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, intended 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.

7.2.2 FINANCIAL YEAR

Each financial year lasts for 12 months, starting on 1 January and ending on 31 December of each year.

7.2.3 APPROPRIATION OF PROFITS UNDER THE BYLAWS

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 bylaws, plus any retained earnings carried forward.

The General Meeting may decide to distribute amounts 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 remittal of the Company's assets, 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 6.7.2 "Distribution policy, increased dividend").

The terms governing the payment of distributions decided by the General Meeting, and the ex-dividend date of the distributed shares are 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.

7.2.4 **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 General Meetings in accordance with legislative, regulatory and bylaw restrictions.

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 bylaws 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 registered for at least two years in the name of the same shareholder will automatically entitle their holder to voting rights that are double that of the other shares. These provisions took effect on 3 April 2016. EDF's Board of Directors had decided not to submit an amendment to the bylaws to the General Meeting, preventing the application of the double voting right set out in 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 by the laws and regulations. These provisions are also applicable to the other securities issued by the Company.

Under the conditions provided for by the laws 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 General 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.

7.2.5 ASSIGNMENT AND TRANSFER OF SHARES

Shares can be traded without restriction, subject to compliance with the provisions of the laws and regulations. They are registered in an account and are transmitted by transfer from one account to another.

7.2.6 CHANGES TO THE BYLAWS, THE CAPITAL AND VOTING RIGHTS

All changes to the bylaws, the capital or the voting rights attached to the securities that make up the capital are subject to the requirements of law, as the bylaws contain no specific provisions regarding such matters.

7.2.7 **GENERAL MEETINGS**

7.2.7.1 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.

7.2.7.2 Participation in meetings and exercise of voting rights

General Meetings may be held by video conference or telecommunication means that allow 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 7.2.4 "Rights attached to shares").

7.2.7.3 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 such 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.

7.2.7.4 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 General Meeting concerned and for all General 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.

7.2.8 BYLAW OR STATUTORY PROVISIONS THAT DELAY ACQUISITION OF CONTROL OVER THE COMPANY

Pursuant to Article L. 111-67 of the French Energy Code and the EDF bylaws, 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 7.2.4 "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.

7.2.9 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 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 beneficiate.

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 General Meetings that are held during a two-year period following the date on which the effective disclosure is made.

Moreover, the Company bylaws 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 bylaws 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 bylaws for bylaw thresholds.

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 General 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.

7.3 Information regarding capital and share ownership

7.3.1 AMOUNT OF CAPITAL AND CHANGES IN CAPITAL

On the filing date of this reference document, the details of the Company's share capital are as follows:

Number of shares issued	1,920,139,027
Par value	€0.50 per share
Type of shares issued	common shares
Share capital amount	€960,069,513.50

The share capital issued by the Company has been paid up in full. The Company has not issued or authorised any preference shares.

Pursuant to the Law of 9 August 2004, EDF was converted into a *société anonyme* (public limited company) on 20 November 2004 and its capital set at \in 8,129,000,000, divided into 1,625,800,000 shares with a par value of \in 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 General 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 \leq 13,347,786 following the issue of 26,695,572 shares. On 21 January 2010, the share capital was thus increased to \leq 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 1.4.1.4.3 "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 \notin 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.

The payment of interim dividends in shares on 18 December 2015 resulted in an increase in the share capital of \leq 30,065,279.50 following the issue of 60,130,559 shares. The share capital was thus increased from \leq 930,004,234 to \leq 960,069,513.50 divided into 1,920,139,027 common shares.

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.

7.3.2 TREASURY SHARES AND SHARE BUYBACK PROGRAMME

7.3.2.1 Share buyback programme in force as of the filing date of the Reference Document (programme authorised by the General Meeting of 19 May 2015)

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 ninth resolution adopted by the General Meeting held on 19 May 2015 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 15 May 2014.

The aims of the share buyback programme are as follows: to deliver shares when rights are exercised that are attached to options or securities which grant immediate or deferred access to the Company's 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 options or 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 be used during public takeover bids, within the limits permitted by the applicable regulations.

The General Meeting has set at \leq 45 the maximum purchase price per share ¹ and at \leq 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 19 May 2015, and will therefore end on 19 November 2016, unless the General Meeting of 12 May 2016 adopts the new programme described in paragraph 7.3.2.3 below.

7.3.2.2 Summary of the Company's trading in its own shares during the 2015 financial year

Number of treasury shares held at 31 December 2015	2,310,753
Percentage of capital held through treasury shares at 31 December 2015	0.1203%
Carrying value of the portfolio at 31 December 2015 ⁽¹⁾ <i>(in euros)</i>	38,131,116.15
Market value of the portfolio at 31 December 2015 ⁽²⁾ <i>(in euros)</i>	31,368,471.98
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 2015, i.e. €13.575.

Liquidity contract

From 25 July 2012, EDF has engaged Oddo Corporate Finance to implement a new liquidity agreement that complies with the Charter of Ethics of the *Association française des marchés financiers* (AMAFI) as approved by the French market authority (AMF). 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 2015, EDF paid the following commissions on its liquidity contracts: €80,000 to Oddo Corporate Finance.

Number of shares bought and sold during the 2015 financial year

During the 2015 financial year, EDF purchased, within the framework of its liquidity contracts, a total of 12,408,150 treasury shares and sold 11,779,578 shares. The average share purchase price was \in 20.6233 and the average share sale price was \in 20.5004.

Portfolio breakdown at 31 December 2015

At 31 December 2015, the Company held a total of 2,310,753 treasury shares. 2,260,159 of these shares (or 0.1177% of its share capital) are held under the liquidity contract, and the remaining 50,594 shares (0.0026% 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 2016 and 31 March 2016, the Company acquired 3,105,875 treasury shares for an average unit value of ≤ 10.74878 , and sold 2,643,991 shares for an average unit value of ≤ 10.8408 .

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^{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.

7.3.2.3 Description of the programme submitted to the General Meeting of 12 May 2016 for authorisation

As stated above, the authorisation described in section 7.3.2.1 will end on 19 November 2016, unless the General Meeting of 12 May 2016 adopts the resolution described below.

In accordance with the draft resolution prepared by the Board of Directors' meeting of 15 February 2016, the Combined General Meeting of 12 May 2016 will be asked to authorise a share buyback programme, the characteristics of which are similar to the programme authorised by the General Meeting of 19 May 2015, 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 purchase price (set at \in 30) and the maximum amount that may be allocated to the share buyback programme (\notin 2 billion).

7.3.3 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 General Meeting of 15 May 2014, and the extent to which they have been used at 31 December 2015:

STATUS OF THE AUTHORISATIONS ADOPTED BY THE COMBINED GENERAL MEETING OF 15 MAY 2014

Securities concerned/type of issue	Term ⁽¹⁾ of the authorisation	Maximum nominal increase or reduction in capital	Use made of the authorisations
Securities concerneurtype of issue	and expiration	(IIT THINIONS OF EUROS)	(III IIIIIIOIIS OI EUIOS)
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's 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 personnel	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 General 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.

AUTHORISATIONS TO BE SUBMITTED TO THE COMBINED GENERAL MEETING OF 12 MAY 2016 FOR APPROVAL

The following table presents the authorisations to be submitted to the Combined General Meeting of 12 May 2016 for approval in accordance with the draft resolutions drawn up by the Board of Directors at its meeting held on 8 March 2016.

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 12 July 2018	240 (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 12 July 2018	95 ⁽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 12 July 2018	95 ⁽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 12 July 2018	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 12 July 2018	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 12 July 2018	95 (2)	none
Authorisation for the Board to increase the capital to compensate in-kind contributions ⁽⁴⁾	26 months 12 July 2018	10% of the Company's capital up to a maximum of 95 ⁽²⁾	none
Authorisation for the Board to increase the capital for the benefit of savings plan members Issues reserved for the personnel	26 months 12 July 2018	10	none
Authorisation for the Board to reduce the capital by cancelling treasury shares	26 months 12 July 2018	10% of the capital by 24-month periods	none

(1) As from 12 May 2016, the date of the Combined General Meeting.

(2) The nominal aggregate limit on the share capital increase of €240 million provided for in the tenth resolution submitted to the General Meeting of 12 May 2016 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.

7.3.4 **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.

7.3.5 NON-EQUITY SECURITIES

On 18 April 1996, EDF implemented a programme to issue debt securities in the form of Euro Medium Term Notes (called the "EMTN" programme). Since this date, this programme has been regularly renewed. On 25 September 2015, EDF launched a "senior" bond issue (called "Formosa") in an amount of 1,500 million as a 30-year bond with a fixed coupon of 4.75% on the Taiwanese market.

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On 8 October 2015, EDF also launched a "senior" bond issue in an amount of 4,750 million dollars in five tranches in US dollars:

- \$1,500 million, with a coupon of 2.35%, 5-year bond;
- \$1,250 million, with a coupon of 3.625%, 10-year green bond;
- \$500 million, with a coupon of 4.75%, 20-year bond;
- \$1,150 million, with a coupon of 4.95%, 30-year bond;
- \$350 million, with a coupon of 5.25%, 40-year bond.

The tranche of the green bond issue totalling \$1.25 billion issued as a 10-year bond with a fixed coupon of 3.625% will be used by EDF to continue its investments in the development of renewable energy. This transaction is based on the structure of the EDF bond issue carried out in November 2013, a market benchmark, and shows EDF's continued commitment to developing the market for green bonds and its support for best practice, in line with the Green Bond Principles 1:

- The funds raised during this issue are to be used to fund new renewable energy projects only, developed by EDF Energies Nouvelles.
- The projects funded will be selected at the end of a diligent and documented procedure based on ESG criteria validated by Vigeo², an extra-financial rating agency.
- The funds raised will be managed and monitored in accordance with a strict principle of segregation, from their receipt by EDF and until they are allocated to eligible green projects.

EDF will publish regular information on the amounts allocated under the Green Bond and on the portfolio of projects funded and the corresponding environmental benefits. Deloitte & Associés will publish a statement confirming EDF's compliance with its commitments, the latest version of which is included in section 6.9 of this Reference Document.

These operations will contribute to the financing of the Group's investment strategy and falls 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 2015.

7.3.6 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 2015.

With the exception of these commitments to acquire and dispose of securities and any other commitments that are described in section 1 ("Presentation of EDF Group") 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.

7.3.7 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.

7.3.8 OWNERSHIP OF THE COMPANY'S CAPITAL AND VOTING RIGHTS

For the past three financial years, EDF's share capital has been owned as follows as at 31 December of each year:

	Position as at 31/12/2015		Position a	Position as at 31/12/2014		Position as at 31/12/2013			
	Number of shares	% of capital	% of voting rights	Number of shares	% of capital	% of voting rights	Number of shares	% of capital	% of voting rights
State	1,630,870,545	84.94	85.04	1,571,433,448	84.49	84.56	1,571,433,448	84.49	84.56
Institutional and private investors	255,445,264	13.30	13.32	254,927,584	13.70	13.72	253,337,995	13.62	13.64
Employee shareholdings	31,512,465 (1)	1.64	1.64	31,965,255 (2)	1.72	1.72	33,493,009 ⁽³⁾	1.80	1.80
Treasury shares	2,310,753	0.12	-	1,682,181	0.09	_	1,744,016	0.09	_
TOTAL	1,920,139,027	100.00	100.00	1,860,008,468	100.00	100.00	1,860,008,468	100.00	100.00

(1) This number includes 27,122,068 shares (representing 1.41% of the capital) based on the definition of employee shareholdings under Article L. 225-102 of the French Commercial Code (shares held by EDF's employees and former employees through the "Actions EDF" FCPE of the EDF Group's savings plan and the EDF International Group's savings plan). This number also includes almost 4.4 million shares, representing 0.23% of the capital, held as directly or administered registered shares, with no lock-in periods or whose lock-in periods have expired, by employees or former employees.

(2) This number includes 27,443,950 shares (representing 1.48% of the capital) based on the definition of employee shareholdings under Article L. 225-102 of the French Commercial Code (shares held by EDF's employees and former employees through the "Actions EDF" FCPE of the EDF Group's savings plan and the EDF International Group's savings plan). This number also includes almost 4.5 million shares, representing 0.24% of the capital, held as directly or administered registered shares, with no lock-in periods or whose lock-in periods have expired, by employees or former employees.

(3) This number includes 28,430,375 shares (representing 1.53% of the capital) based on the definition of employee shareholdings under Article L. 225-102 of the French Commercial Code (shares held by EDF's employees and former employees through the "Actions EDF" FCPE of the EDF Group's savings plan and the EDF International Group's savings plan). This number also includes almost 5.1 million shares, representing 0.27% of the capital, held as directly or administered registered shares, with no lock-in periods or whose lock-in periods have expired, by employees or former employees.

^{1.} The Green Bond Principles, updated in March 2015, are voluntary process guidelines for Green Bond issues recommending transparency and disclosure in order to promote integrity in the development of the Green Bond market. Further information can be found at: http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/green-bonds/green-bond-principles/

The "ESG" criterias cover five areas: respect of human rights and governance in the host country of the project; management of environmental impacts; protection of the health and safety of employees; promotion of a responsible relationship with suppliers and dialogue with local stakeholders.

To the Company's knowledge, no shareholder other than the French State directly or indirectly holds more than 5% of the capital and voting rights. The Company conducted a study on identifiable bearer shares as at 31 December 2015, which allowed it to examine the ownership of its capital and the geographical location of its shareholders on this date. The table set out below summarises this information as at 31 December 2015 and 31 December 2014:

	As at 31 December 2015		As at 31 Decer	nber 2014
	Number of shares held	% of capital	Number of shares held	% of capital
State	1,630,870,545	84.94	1,571,433,448	84.49
Institutional investors in Europe (other than France)	70,200,663	3.66	70,207,583	3.77
Institutional investors in the rest of the world	94,897,592	4.94	75,741,836	4.07
Institutional investors in France	46,657,296	2.43	56,328,678	3.03
Private shareholders	43,689,713	2.28	52,649,487	2.83
Employee shareholders	31,512,465	1.64	31,965,255	1.72
Treasury shares	2,310,753	0.12	1,682,181	0.09
TOTAL	1,920,139,027	100.00	1,860,008,468	100.00

As a result of the allocation of double voting rights attached to the 1,571,433,448 bearer shares having been held by the state for at least two years since the entry into force of the Law no. 2014-384 of 29 March 2014 aiming to reconquer the real economy, the State indicated to hold 1,630,870,545 shares and 3,202,303,993 voting rights in EDF the 3 April 2016 (i.e. 84,94% of the share capital and 90,68% ¹ of EDF voting rights).

15 February 2016, the Agence des participations de l'État (APE) announced that the State committed to vote in favor of the resolution proposed by the Board of Directors concerning the payment of the 2015 dividend balance for an amount of €0,53 per share during the General Meeting and to opt for the payment in shares of the 2015 dividend balance. Should this resolution be approved by the General Meeting of 12 May 2016, the repartition of the voting rights and shares could evolve.

In addition, on 22 April 2016, the State announced it would collect its dividend as equity for the 2016 and 2017 years.

7.3.9 AGREEMENTS WHOSE IMPLEMENTATION COULD LEAD TO A CHANGE IN CONTROL

To EDF's knowledge, there are no agreements whose implementation could subsequently lead to a change in the Company's control.

Moreover, pursuant to Article L. 111-67 of the French Energy Code, the State may not hold less than 70% of EDF's capital.

^{1.} This percentage was calculated from the number of theoretical voting rights, based on all shares canrrying voting rights, including shares without voting rights.

7.4 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 2016:



The following table shows the share price and volume of EDF shares traded between 1 January 2015 and 31 March 2016 on the Euronext Paris stock market:

	Transa	ctions	Closing price	(in euros)
	(in millions of shares)	(in millions of euros ⁽¹⁾)	High	Low
2016				
March 2016	76.73	776.19	10.85	9.697
February 2016	72.63	769.90	12.01	9.19
January 2016	53.51	642.18	12.82	11.015
2015				
December 2015	69.69	922.36	14.065	12.6
November 2015	60.30	922.18	17.42	13.965
October 2015	39.48	676.48	17.795	15.45
September 2015	45.03	768.22	18.77	15.33
August 2015	33.79	689.58	22.075	18.74
July 2015	41.11	859.20	21.845	19.53
June 2015	37.05	775.35	22.455	20
May 2015	31.82	716.46	23.21	21.87
April 2015	29.72	681.89	23.445	22.455
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

(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).

2015

In 2015, EDF's share price closed down 40.5%. The French CAC 40 index went up by 8.5%, while the Euro Stoxx Utility sector index (SX6P) went down by 3.7%.

At 31 December 2015, the closing price of the EDF share was €13.575 (€22.825 on 31 December 2014). Its lowest closing price in 2015 was €12.60 on 14 December 2015 and its highest closing price was €24.7 on 27 February 2015.

At 31 December 2015, EDF's market capitalisation totalled €26.07 billion (compared to €42.45 billion at 31 December 2014).

2016

Between the start of 2016 and 31 March inclusive, EDF's share price has gone down by -27.3%, the CAC 40 index has gone down by -5.4%% and the Euro Stoxx Utility (SX6P) sector index has gone down by -5.3%.

At 31 March 2016, the closing price of the EDF share was €9.864. Its lowest closing price in 2016, through 31 March 2016 inclusive, was €9.19 on 24 February 2016 and its highest closing price was €12.82 on 6 January 2016.

At 31 March 2016, EDF's market capitalisation totalled €18.94 billion.

7.5 **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 2015 financial year, are contained in notes 23 and 48 to the consolidated financial statements for the financial year ended 31 December 2015.

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 section 7.5.4 to this Reference Document.

7.5.1 **RELATIONS WITH THE FRENCH STATE**

As of 31 December 2015, the French State held 84.94% of the share capital and 85.04% 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 1.5 "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 2015.

7.5.2 **RELATIONS WITH ENGLE (EX-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 organizational and functional rules are described in section 1.4.4.2.3 ("Service shared by ERDF and GRDF").

7.5.3 **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 2.3 ("Dependency factors"), 1.4.1.1.4 ("The nuclear fuel cycle and related issues"), 1.4.1.1.5 ("Preparing for the future of the nuclear fleet in France" – "Operating life of the EDF's PWR fleet"), 1.4.1.2.2 ("Update on the Flamanville EPR project") and 1.4.1.1.6 ("Decommissioning of nuclear power plants") and in note 48 to the consolidated financial statements for the financial year ended 31 December 2015.

In addition to the agreements described here above EDF and AREVA signed 30 July 2015 a memorandum of understanding formalizing the progress made during the discussions concerning their partnership project (see section 1.4.1.2.3.2 "Memorandum of understanding with AREVA").

7.5.4 STATUTORY AUDITORS' REPORT 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.

Year ended 31 December 2015

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, the principal terms and conditions, the purpose, and the benefits to the Company 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:

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 2015.

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 €256 million recorded in 2015), €122 million (of which €4 million recorded in 2015) and €212 million (no amount recorded in 2015).

Paris – La Défense and Neuilly-sur-Seine, 15 February 2016 The Statutory Auditors

KPMG Audit Département de KPMG SA

Jacques-François Lethu

Deloitte & Associés

Patrick E. Suissa

7.6 Material contracts

Except for the contracts which may be described in chapters 1 and 5 of this Reference Document or in the notes to the consolidated accounts of the financial year ended 31 December 2015 including those presented hereunder, EDF has signed, over the last two years preceding the filling of this reference document, no important contracts other than those concluded in the normal course of business:

- an agreement signed 30 June 2015 with EP Energy concerning the sale of 95,6% of the Hungarian company Budapesti Erőmű Zrt (BE Zrt) (see section 1.4.5.3.2 "Central and Eastern Europe", section 5.1.3.4.2.7 "Finalisation of the sales of Budapesti Erőmű Zrt (BE Zrt) and Energie Steiermark Holding AG (Estag)" and note 5.1 to the consolidated financial statements of the financial year ended December 31, 2015);
- an agreement in date of July 10, 2015 signed with Macquarie Infrastructure and Real Assets concerning the sale by the Group of 25% of its shares in the Austrian company Energie Steiermark Holding AG (Estag) (see section 1.4.5.3.1 "Northern Europe", section 5.1.3.4.2.7 "Finalisation of the sales of Budapesti Erőmű Zrt (BE Zrt) and Energie Steiermark Holding AG (Estag)" and note 5.2 to the appendix to the consolidated financial statements ended December 31, 2015);
- a non-binding memorandum of understanding was signed July 30, 2015 formalizing the state of advancement of the discussions related to the partnership project between AREVA and EDF (see section 1.4.1.2.3.2 "Memorandum of Understanding with AREVA");
- a strategic investment October 21, 2015 with China General Nuclear Power Corporation (CGN) for the construction and operation of two EPR reactors on the Hinkley Point C site (see section 1.4.1.2.3.1 "Hinkley Point C EPR" and 1.4.5.1.2.5 "Nuclear New Build business" – "Hinkley Point C (HCP)").



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497 497 497 The smartflower, climatic solution of EDF Group, is presented in Paris during the COP 21 conference in December 2015 ©EDF - Julien Knaub

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8.2 Auditors

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8.1 **Person responsible for the Reference Document and the Certification**

8.1.1 PERSON RESPONSIBLE FOR THE REFERENCE DOCUMENT

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

8.1.2 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 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 financial year ended 31 December 2015 presented in the Reference Document have been reviewed by the Statutory Auditors; their report set forth on the pages 413 and 414 of this document, which contains an observation concerning the valuation of the long-term provisions concerning the nuclear production, which results from the management's best estimates from the and which modalities of determination are described in notes 1.3.2.1 and 29 to the consolidated financial statements; this valuation is sensitive to the assumptions retained concerning the technical processes, costs, inflation rates and the long term discount rates, the depreciation period of the operating plants, maintained at 40 years in France in the context mentioned in the note 1.3.2 to the consolidated financial statements and the cash outflows. Changes in these parameters may result in a material revision of the provisions recorded.

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 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 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.

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

8.2 Auditors

8.2.1 STATUTORY AUDITORS

Deloitte et Associés

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

KPMG SA

Tour EQHO, 2, avenue Gambetta, CS 60055, 92066 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.

8.2.2 **DEPUTY AUDITORS**

BEAS

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

KPMG Audit IS

Tour EQHO, 2, avenue Gambetta, CS 60055, 92066 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.

8.3 **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, and a copy 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.

8.4 Concordance tables

8.4.1 CONCORDANCE TABLE WITH THE ANNEX I OF REGULATION (CE) NO. 809/2004

Concordance table with the information required by the appendix I of regulation (CE) no. 809/2004 of 29 April 2004

		Reference Document sections
1.	Persons responsible	Section 8.1
1.1.	Name and positions of the persons responsible	Section 8.1.1
1.2.	Declaration by the persons responsible	Section 8.1.2
2. 2.1. 2.2	Statutory Auditors Names and addresses of the issuer's auditors Change in auditors, where applicable	Section 8.2 Section 8.2
3.	Selected financial information	Introduction : Key figures
3.1.	Historical financial information	Section 6.6
3.2.	Interim financial information	n. a.
4.	Risk factors	Chapter 2
 5.1. 5.1.1. 5.1.2. 5.1.3. 5.1.4. 5.1.5. 5.2. 5.2.1. 5.2.2. 5.2.3. 6.1. 6.2. 	Information about the issuerSelected history and development of the issuerLegal and commercial name of the issuerPlace of registration of the issuer and its registration numberDate of incorporation and the length of life of the issueDomicile and legal form of the issuer, legislation under which the issuer operates, its country of incorporation, and the address and telephone number of its registered officeImportant events in the development of the issuer's businessInvestmentsPast principal investmentsPrincipal investments for which commitments have been taken by governing bodiesBusiness overviewPrincipal activitiesPrincipal markets	Chapter 1 and 7 Section 1.1 Section 7.1.1 Section 7.1.2 Section 7.1.3 Section 7.1.4 Sections 5.1.2 / 5.1.3 Section 1.3.3 Section 1.3.3.1 Sections 1.3.3.2 Sections 1.3.3.2 / 5.1.3.5 Section 1.4 Section 1.4 Section 1.4
6.3.	Exceptional factors	n. a.
6.4.	Extent to which the issuer is dependent	Section 2.3
6.5.	Competitive position	Sections 1.4.2.1.2 / 1.4.5.1.2.4
7.	Organizational structure	Section 1.2.1
7.1.	Brief description of the Group	Section 1.2.2
7.2.	List of significant subsidiaries	Section 1.2.2
8.	Property, plant and equipment	Section 1.7
8.1.	Material property, plant and equipment	Section 1.7
8.2.	Environmental issues	Sections 1.7 / 3.5.2
9.	Operating and financial review	Chapter 6
9.1.	Financial position	Chapter 6.
9.2.	Operating results	Chapter 6.1
9.2.1.	Significant factors materially affecting the issuer's income from operations	Section 5.1.2 / 5.1.3
9.2.2.	Explanation of material changes in net sales or revenue	Section 6.8
9.2.3.	Policies or factors that have materially affected, directly or indirectly, the issuer's operations	Sections 1.3.1 / 1.3.2
10.	Capital resources	Chapters 6 and 7
10.1.	Issuer's capital resources	Sections 7.2 / 7.3
10.2.	Source and amounts of cash flows	Chapter 6.1 – Note 43
10.3.	Borrowing requirements and the funding structure of the issuer	Chapter 6.1 – Note 38
10.4.	Restrictions on the use of capital resources	n. a.
10.5.	Information regarding the anticipated sources of funds	n. a.



		Reference Document sections
11.	Research and development, patents and licenses	Section 1.6
12. 2.1. 12.2.	Trend information Most significant recent since the end of the last fiscal year Information on events that are reasonably likely to have a material effect on the issuer's prospects	Sections 5.2 / 5.3 Section 5.2 Section 5.4
13.	Profit forecasts or estimates	Section 5.4
14. 14.1.	Administrative, management, and supervisory bodies and Executive Management Members of the administrative and management bodies Name, professional address and functions Nature of any family relationship Expertise and experience Absence of conviction	Chapter 4 Sections 4.2 / 4.3 Sections 4.2 / 4.3 Section 4.4 Sections 4.2 / 4.3 Section 4.4.2
14.2.	Conflicts of interest	Section 4.4.3
15. 15.1. 15.2. 16.	Compensation and benefits Compensation paid and benefits in kind Amounts set aside or accrued to provide pension, retirement or similar benefits Board practices	Section 4.6 Sections 4.6.1 / 4.6.2 Section 4.6.1.1.3 Section 4.2.2
16.1. 16.2. 16.3. 16.4.	Date of expiration of the current terms of office Members of the administrative or management bodies' service contracts Information about Board committees Statement of compliance with the corporate governance regime in force	Section 4.2.2.1 Section 4.2.2.5 Sections 1.4.1 and 1.4.5 Section 4.1
17. 17.1. 17.2. 17.3.	Employee Number and breakdown of employees Shareholdings and stock options Arrangements for involving the employees in the capital of the issuer	Section 3.3 Sections 3.3.1 and 3.5.3 n. a. n. a.
18. 18.1. 18.2. 18.3. 18.4.	Major shareholders Major shareholders Breakdown of voting rights Controlling shareholder Change in control	Section 7.3 Section 7.3.8 Section 7.2.4 Section 7.3 Section 7.3.9
19.	Related-party transactions	Section 7.5
20.	Financial information concerning the issuer's assets and liabilities, financial position and profits and losses	Chapters 2 and 6
 20.1. 20.2. 20.3. 20.4. 20.5. 20.6. 20.7. 20.8. 20.9. 	Historical financial information Pro forma financial information Financial statements Auditing of historical annual financial information Date of the latest financial information Interim and other financial information Dividend policy Disputes and litigation Significant change in the issuer's financial or trading position	Section 6.1 n. a. Chapter 6 Chapter 6 n. a. Chapter 6 Section 6.7 Section 2.4 Section 6.8
21. 21.1. 21.2	Additional information Share capital Bylaws	Chapters 6 and 7 Chapter 6.1 – Note 27 Section 7 2
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8.4.2 CONCORDANCE TABLE WITH THE MANAGEMENT REPORT

This Reference Document includes the elements of the Board of Directors' management report related to the 2015 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	Chapter 1 and
business activity and development / Comments on the results	Section 5.1
Description of the main risks and uncertainties	Chapter 2, sections 5.1 and 2.4
Research and development activity	Section 1.6
Subsequent events / Forward-looking information	Section 5.2
Amount of dividends paid within the last three fiscal years	Section 5.3
Terms of payment of trade payables	Section 5.1
Company shareholding and employee shareholding	Sections 7.3.8 and 7.3.9
Report on the share repurchase programme	Section 7.3.2
Provisions having an impact in case of takeover	Section 7.2.8
Environmental and societal information	Chapter 3
Offices and positions of corporate officers	Chapter 4
Compensation of corporate officers	Section 4.6
Board of Directors and corporate governance	Chapter 4
Trading in the Company's shares by executives	Section 4.5
Table of the delegations and authorisations to increase the share capital	Section 7.3.3
Five-year summary table of the Company's results	Section 6.6

8.4.3 CONCORDANCE TABLE WITH THE ANNUAL FINANCIAL REPORT

This Reference Document includes the 2015 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 8.1.2
EDF annual financial statements	Section 6.3
Statutory Auditors' Report on the EDF annual financial statements	Section 6.4
EDF group consolidated financial statements	Section 6.1
Statutory Auditors' Report on the EDF group's consolidated financial statements	Section 6.2
Management report	Section 8.4.2
Fees paid to Statutory Auditors	Section 6.5



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)	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).
	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.
Cogeneration	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%.



Combined-Cycle Gas	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.
Congestion	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.
CRE (Commission de Régulation de l'Énergie)	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 1.5.3.2 ("French legislation: Energy Code").
Disruption	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.
Distribution network	Downstream of the transmission network, medium- and low-voltage distribution networks serve end-users (residential, local authorities, SMEs, SMIs, etc.).
DNN	Non-Nationalised Distributor.
Downstream	See "Fuel Cycle" and "Downstream Asset Portfolio".
Downstream Asset Portfolio	All contractual energy disposal commitments involving operators or end users.
EaR (Earning at Risk)	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.
EBITDA	Earnings before interest, taxes, depreciation and amortisation, corresponding to gross operating profit.
Effects of changes in the scope of consolidation	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.
Effects of exchange rate variations	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.
Electric and Gas Industries (IEG) status	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:
	 retirement benefits; collective acrossments (calary scale, working hours and organization);
	 collective agreements (salary scale, working hours and organisation), employee representative institutions;
	social activities.
Electricity supply	 Electricity demand can be broken down into four types of consumption: 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 (Fédération nationale des collectivités concédantes et régies).
Fuel	See Assembly/Fuel.
Fuel Cycle	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:
	 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 (ex-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.
Man-sievert	Unit expressing the collective equivalent dose. A man-sievert is the collective dose from exposure of 1,000 men to 1mSv (milliesievert).
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	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.
	1MW = 1,000 kilowatts = 1 million watts
	1MWh = 1MW generated in one hour = 1 megawatthour
	1GW = 1,000MW = 1 billion watts
	1TW = 1,000GW
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, NAP 3:2013-2020) 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.
РСВ	Polychlorobiphenyls.
РСТ	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 \times 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 \times 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	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:
	 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.
	These specific benefits are not covered by ordinary law arrangements but through an asset fund (insurance policies) and provisions recognised by EDF.
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.

The Profit at Risk (PaR) is, for a given confidence interval, the maximum decline of the expected value of a portfolio

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 (4 tranches). An energy transfer pumping station (STEP) is a plant with two reservoirs, one higher and one lower, connected via STEP pumps to push the water up and turbines to produce energy. Storage consists in placing packages of radioactive waste in a facility, ensuring their long-term management, i.e., Storage 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 1,000,000m³, 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 reinvoicing 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** Contribution applied to consumer bills that covers specific benefits constituted before 2005 concerning employees (CTA) 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 (,H) Hydrogen isotope, which emits beta rays, present in pressurised water reactor effluents.

Profit at Risk ("PaR")

(Dosimetry – Dose)

Radiation protection

(MtM) on a yearly time horizon.



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 U) aggregate at the periphery while the lighter ones (²³⁵ 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)	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):
	 uranium 238, 99.3% fertile;
	 uranium 235, 0.7% fissile;
	uranium 234.
	Uranium 235 is the only natural fissile isotope, a quality which justifies its use as an energy source.
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	The nuclear generation of 1MWh of electricity (equivalent to the monthly consumption of two households) produces around 11g of total waste across all categories.
	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.
	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%).

Created and published by RR DONNELLEY

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