MANAGEMENT REPORT 2013

2013 Management report Contents

↗ 1 Financial and legal information

1.1 Key figures

Pursuant to European regulation 1606/2002 of 19 July 2002 on the adoption of international accounting standards, the EDF group's consolidated financial statements at 31 December 2013 are prepared under the international accounting standards published by the IASB and approved by the European Union for application at 31 December 2013. These international standards are IAS (International Accounting Standards), IFRS (International Financial Reporting Standards), and interpretations issued by the SIC and IFRIC.

The Group's accounting policies are presented in note 1 to the consolidated financial statements at 31 December 2013.

The figures presented in this document are taken from the EDF group's consolidated financial statements at 31 December 2013.

The comparative figures for 2012 have been restated to reflect the impact of the change in accounting method resulting from application since 1 January 2013 of IAS 19 revised on the measurement and recognition of employee benefit provisions, and the change in presentation of disposals of generation assets by EDF Énergies Nouvelles as part of its Development and Sale of Structured Assets business. In the tables in this management report, these figures are reported as "2012 restated" and correspond to the comparative figures for 2012 shown in the 31 December 2013 consolidated financial statement.

The Group's key figures for 2013 are shown in the following tables. Variations in value and percentage are calculated with reference to the restated 2012 figures.

Extract from the consolidated income statements

(in millions of Euros)	**2013**	2012 restated	Variation	Variation in %	Organic growth (%)
Sales	75,594	72,178	3,416	+4.7	+2.9
Operating profit before depreciation and amortisation (EBITDA)	16,765	15,998	767	+4.8	+5.5
Operating profit (EBIT)	8,411	8,159	252	+3.1	
Income before taxes of consolidated companies	5,322	4,825	497	+10.3	
EDF net income	3,517	3,275	242	+7.4	
Net income excluding non-recurring items (1)	4,117	4,175	(58)	-1.4	

(1) Net income excluding non-recurring items is not defined by IFRS, and is not directly visible in the consolidated income statements. It corresponds to the Group's share of 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 1.3.9).

Extract from the consolidated balance sheets

(in millions of Euros)	**31 December 2013**	31 December 2012 restated
Non-current assets	142,509	140,279
Inventories and trade receivables	36,687	36,710
Other assets	54,974	55,294
Cash and cash equivalents, other liquid assets, loans to RTE and joint ventures	19,012	17,560
Assets held for sale	3,619	241
TOTAL ASSETS	**256,801**	**250,084**
Equity (EDF share)	34,207	26,257
Non-controlling interests	4,663	4,854
Special concession assets	43,454	42,551
Provisions	67,323	65,149
Loans and other financial liabilities	53,489	59,135
Other liabilities	51,376	52,089
Liabilities related to assets classified as held for sale	2,289	49
TOTAL EQUITY AND LIABILITIES	**256,801**	**250,084**

Cash flow before dividends

(in millions of Euros)	**2013**	2012 restated	Variation	Variation (%)
Cash flow before dividends[1]	2,199	(5,607)	7,806	n.a.

(1) 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 equivalent to the operating cash flow defined in section 1.4 after the changes in working capital and net investments as defined in section 1.4, and allocations and withdrawals from dedicated assets.

Details of net indebtedness

(in millions of Euros)	**31 December 2013**	31 December 2012	Variation	Variation (%)
Loans and financial liabilities	53,313	59,932	(6,619)	-11.0
Derivatives used to hedge liabilities	176	(797)	973	
Cash and cash equivalents	(5,459)	(5,874)	415	-7.1
Liquid assets	(12,548)	(10,289)	(2,259)	+22.0
Loans to RTE and joint ventures	(1,005)	(1,397)	392	-28.1
Net indebtedness of discontinued operations	985	-	985	
NET INDEBTEDNESS [1]	**35,462**	**41,575**	**(6,113)**	**-14.7**

(1) Net indebtedness is not defined in the accounting standards and is not directly visible in the 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 regardless of their maturity and are managed according to a liquidity-oriented policy. Since 2012, it has also included the Group's loans to RTE and to joint ventures.

1.2 Economic environment and significant events of 2013

1.2.1 Economic environment

1.2.1.1 Trends in market prices for electricity and the principal energy sources

In an increasingly interconnected European market, analysis of market prices in France and also in Italy, the United Kingdom and Germany is among the vital context information that the Group takes into consideration in its operating, distribution, optimisation and trading activities, given its strong positions in Europe.

Electricity prices in France, Germany and Italy declined during 2013 compared to the prior year, principally due to the marked downturn in coal and CO_2 prices.

In France, this electricity price downturn was limited by higher consumption during the winter periods. The first and last quarters of 2013 were marked by low temperatures that were often below normal monthly levels and colder than the previous year.

In the United Kingdom, however, prices rose as a result of their strong correlation with gas prices, which were up from 2012 levels.

1.2.1.1.1 Spot electricity prices in France, the United Kingdom, Italy and Germany[1]

	France	United Kingdom	Italy	Germany
Average baseload price for 2013 (€/MWh)	43.2	59.1	63.0	37.8
Variation in average baseload prices, 2013/2012	-7.8%	+7.1%	-16.6%	-11.3%
Average peakload price for 2013 (€/MWh)	55.1	67.6	70.3	48.7
Variation in average baseload prices 2013/2012	-7.2%	+6.8%	-17.5%	-8.9%

1. ***France and Germany:*** *Average previous day EPEXSPOT 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 €43.2/MWh in 2013, €3.7/MWh lower than in 2012, largely as a result of the significant fall in the price of CO_2 emission rights and coal, although the seasonal effect on prices was more pronounced than in 2012. In the first and final quarters of the year, temperatures remained below seasonal norms and led to high consumption throughout those periods. This affected spot electricity prices, which remained close to their 2012 levels at those times. Over the rest of the year and in June especially, prices were noticeably lower than in 2012 due to the greater nuclear availability and hydropower output.

In the **United Kingdom**, spot electricity prices rose by more than 7% year on year, in line with the upward trend in spot gas prices. A carbon tax on electricity generation introduced on 1 April 2013 also contributed to the rise in prices.

In **Italy**, prices were down by almost 17%, principally as a result of significantly higher hydropower and wind power output and lower consumption levels.

In **Germany**, spot prices retreated by an average €4.8/MWh compared to 2012, also as a result of fuel price movements. This price decrease was more pronounced than in France: since demand for electricity is not highly temperature-sensitive in Germany, prices were not driven up by colder-than-normal temperatures. As the German electricity system is more dependent on coal-fired plants than the French system, the decline in coal and CO_2 emission rights prices had a greater impact in Germany.

1.2.1.1.2 Forward electricity prices in France, the United Kingdom and Germany

	France	United Kingdom	Italy	Germany
Average baseload price for 2013 (€/MWh)	43.3	61.3	62.7	39.1
Variation in average baseload prices, 2013/2012	-14.4%	-0.5%	-14.5%	-20.7%
Forward baseload price at 23 December 2013	44.2	63.5	62.8	37.3
Average peakload price for 2013 (€/MWh)	56.6	70.5	69.9	49.7
Variation in average peakload prices, 2013/2012	-11.5%	+0.9%	-13.5%	-18.4%
Forward peakload price at 23 December 2013	56.2	72.3	70.2	48.6

The comments below concern baseload prices.

European annual contract baseload prices[1] were on average lower than in 2012, except in the United Kingdom, where the contract remained stable.

In **France**, the annual contract baseload price was 14.4% lower on average than in 2012. This decline is mainly explained by the lower prices for coal and CO_2 emission rights. However, market actors' anticipation that risks of supply/demand tension were likely in the first quarter of 2014 kept prices stable over that horizon and thus limited the impact of the downturn.

In the **United Kingdom**, the April Ahead baseload contract price for 1 April Y+1 to 31 March Y+2 remained relatively stable, registering a -0.5% change compared to the previous year. This is explained by the rise in forward prices for gas, which is more widely used for generation in the United Kingdom than in other countries. Also, the carbon tax introduced in the United Kingdom on electricity generation will be raised by £4.9/t on 1 April 2014, which will drive the contract price up. These upward movements are counterbalanced by the falling price of coal and the prospect of imports from France.

In **Italy,** the annual baseload contract price was lower than in 2012 due to developments in fuel and CO_2 prices, and the more relaxed spot markets.

In **Germany,** the annual contract baseload price also fell below its 2012 level, due to developments in fuel prices.

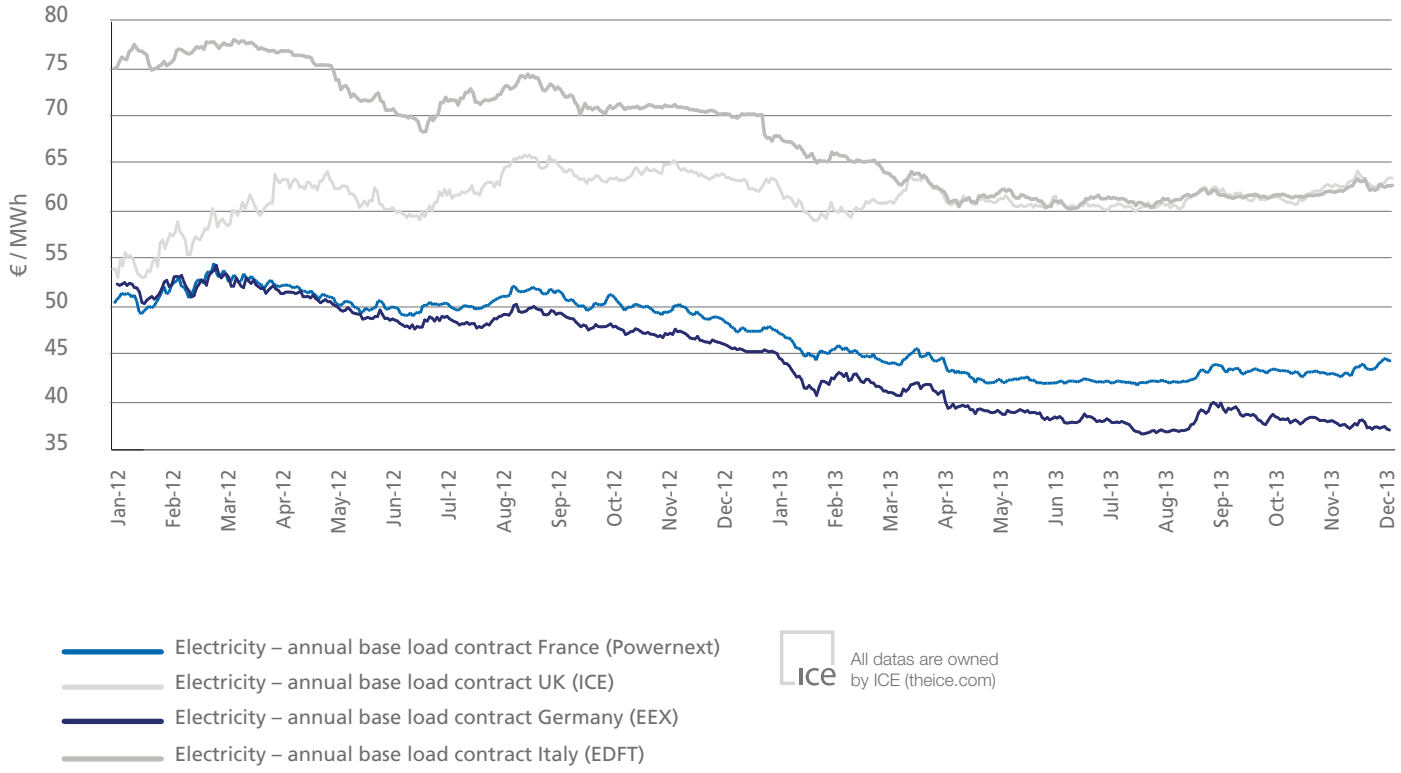
1.2.1.1.3 CO_2 emission rights prices[2]

The price of CO_2 emission rights for delivery in December 2013 stood at €4.5/t on average over 2013. Prices fell by more than 40% compared to 2012, when CO_2 traded at €7.5/t on average.

At European level, supply continued to outstrip demand overall on the market for CO_2 emission rights, mainly because of the economic crisis and the development of renewable energies. Discussions took place at European Commission level to bring in a "backloading" law that would temporarily limit supply, the principle being to reduce the volume of CO_2 emission rights sold to market actors by the various governments during the first part of Phase III, but to put the full volumes back on the market for later periods. Over 2013, the price of emission rights varied in response to announcements concerning the possible adoption of this law by the European authorities, and it was finally adopted on 16 December 2013. This had an upward but only moderate impact on prices that was not enough to take them back to 2012 levels.

1. ***France and Germany**: Average year-ahead EPD price i.e. average listed price of the product for 2014 delivery; the final day of listing in 2013 was 23 December*
   ***Italy:** average year-ahead EDF Trading price i.e. average listed price of the product for 2014 delivery*
   ***United Kingdom:** Average ICE annual contract prices, April 2013 then April 2014 (in the UK, annual contract deliveries take place from1 April to 31 March).*
2. *Average ICE prices for the annual contract, Phase III (2013-2020).*

Forward electricity prices in France, the United Kingdom, Italy and Germany



CO_2 emission rights prices (phase III 2013-2020)

1.2.1.1.4 Fossil fuel prices[1]

	Coal ($/t)	Oil ($/bl)	Natural gas (p/th)
Average price for 2013	88.9	108.3	67.5
Average price variation, 2013/2012	-13.8%	-3.0%	+4.4%
Highest price in 2013	102.2	118.9	69.7
Lowest price in 2013	80.8	97.7	64.5
Closing price, 2012	94.1	111.1	65.8
Closing price, 2013	82.3	110.8	66.9

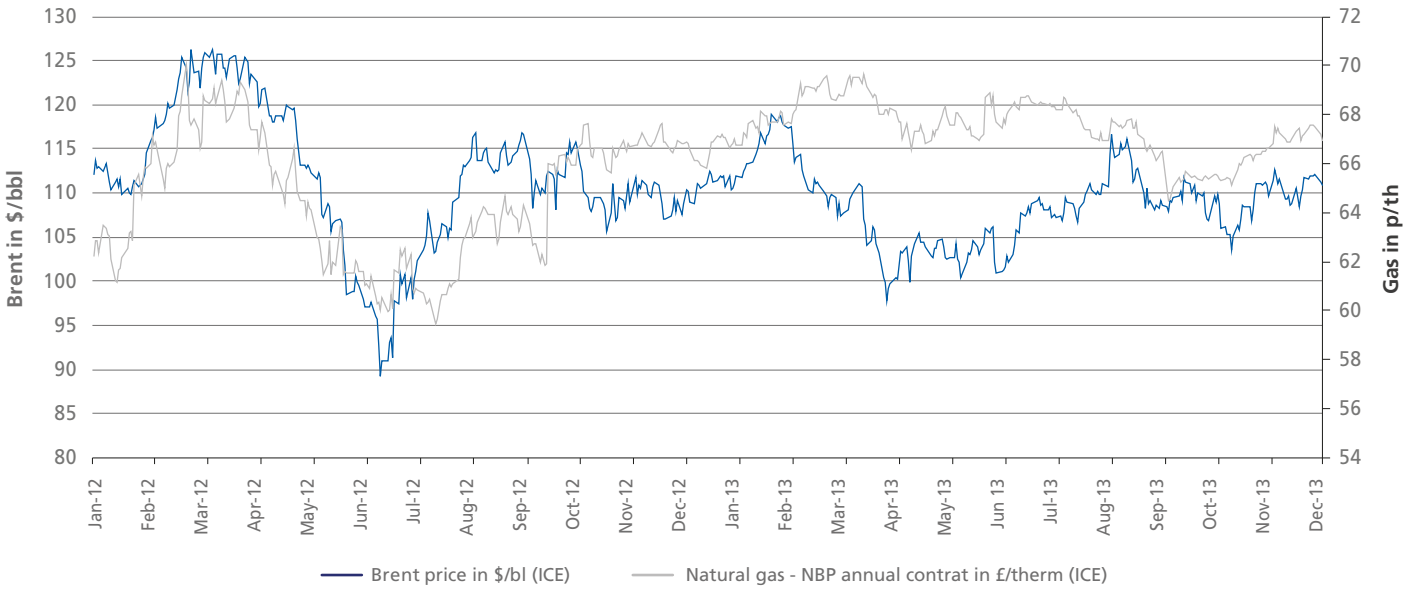
Forward prices for **coal** saw an average decline from 2012 levels attributable to the plentiful supply. In the short term, the supply-demand balance remained very relaxed, largely because of cheap coal imports from Russia, the US and Colombia and low demand from electricity operators. This led to high stocks, which kept up downward pressure on forward prices, and the price per tonne of coal for delivery in 2014 ended the year at around USD 82.

Oil prices were lower than in 2012 as the still-sluggish macro-economic environment encouraged actors to regularly adjust their forecast consumption downwards. However, this decrease was limited by fears over supplies given the political tensions in Libya and Syria, and uncertainties over the development of diplomatic relations with Iran.

Natural gas prices under the United Kingdom's annual contract were higher than in 2012.

The low temperatures recorded in the United Kingdom between January and April caused extensive use of long-term stocks to ensure good supply-demand balance and by mid-April, storage capacities were empty. Traditionally, stocks are largely replenished in the summer months, but in 2013, given the exceptionally low early summer stock levels and the time needed to build them up, storage capacities only returned to nearly-full levels at the end of October. Furthermore, it was announced that Norway's export capacity would be reduced for one year. These factors caused a marked rise in prices for the winter of 2013-2014, and to a lesser extent for summer 2014. Since 1 October, the contract concerns the gas year running from 1 October 2014 to 30 September 2015. As the supply tension is expected to be lower for those dates, the price is lower than for the 2013 gas year, helping to limit the rise in gas prices from one calendar year to the next.

Natural gas and oil prices



1. *Coal: Average ICE prices for delivery in Europe (CIF ARA) for the next calendar year ($/t);*
Oil: Brent first reference crude oil barrel, ICE index (front month) ($/barrel);
Natural gas: Average ICE OTC prices, for delivery starting from October of the following year for the UK (NBP) (pence/therm).

1.2.1.2 Electricity[1] and gas[2] consumption

Overall electricity consumption in **France** in 2013 was 1.12% higher than in 2012. This slight rise mostly concerned the first half-year, when temperatures were below normal (-2°C on average) across every month of the period; in the second half-year, consumption was down very slightly (-0.1%) compared to the second half-year of 2012.

After correction for weather effects and the fact that 2012 was a leap year, consumption in France was stable overall between 2012 and 2013 (-0.5 TWh). The downturn in consumption by large industrial customers is slowing, and is being offset by a rise in consumption by residential and small business customers, which is tending to stabilise (+0.3%).

In the **United Kingdom,** estimated electricity consumption in 2013 by final customers, which is not highly sensitive to temperatures, was down slightly (-0.7%) compared to 2012.

In **Italy,** where there was an economic slowdown, domestic electricity consumption contracted by 3.4% compared to 2012 (-3.1% based on constant number of days).

Natural gas consumption in **France** rose by approximately 1.7% in 2013 compared to 2012. Much of this moderate rise is attributable to weather effects: compared to 2012, the first half-year of 2013 was colder and the second half-year was milder.

Estimated domestic natural gas consumption by end-users showed a slight increase (+1.2%) in the **United Kingdom**, but with contrasting differences from 2012: in the first-half-year, consumption was higher than normal due to anormally low temperatures, but in the second half-year consumption decreased sharply as a result of particularly high temperatures.

Domestic natural gas consumption in **Italy** was down by 6.4%; gas was used less for fossil-fired generation given the decline in demand for electricity and the growing contribution of renewable energies.

1.2.1.3 Electricity and natural gas tariffs

In **France**, the French Minister for Ecology, Sustainable Development and Energy published a decision on 31 July 2013 raising the regulated sales tariffs for electricity as follows:

- 5% on average for the "blue" tariffs for households and small business customers, in line with the Government announcement of 9 July 2013;
- 2.7% on average for the" yellow" tariffs (for larger businesses and local authorities).

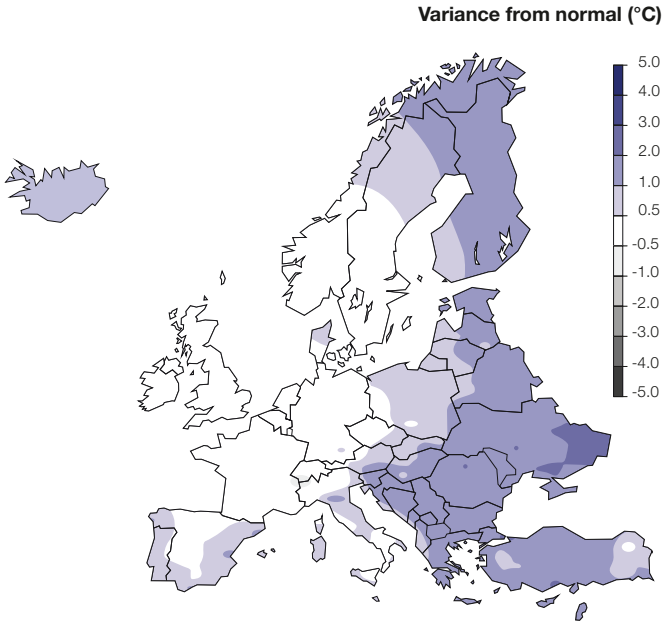
The average change for industrial customers' tariffs and tariff options is nil.

These increases took effect on 1 August 2013 and provided an opportunity to reform the structure and improve the coherence between the different options, as observed by the French energy regulator CRE[3] in its decision of 25 July 2013.

In the **United Kingdom**, EDF Energy kept its gas and electricity tariffs stable over 2013.

1.2.1.4 Weather conditions: temperatures and rainfall

Average temperatures: variance from normal levels, January to December 2013[4]

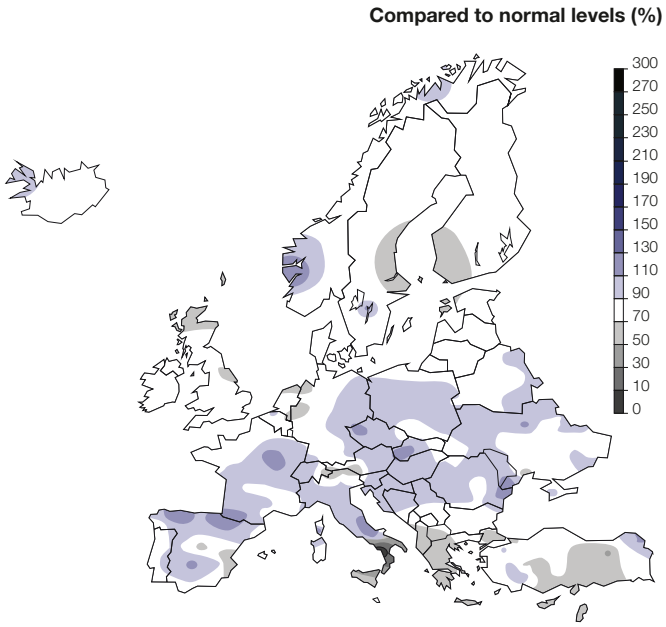


In France, the combination of surplus rainfall and abnormally cold weather in the first half-year led to unusually high snow coverage, which persisted late into the season in the Alps and the Pyrénées.

In the Pyrénées, 40-year-old records for snow levels were broken. The second fortnight of June brought a significant conjunction between this unusual late snow coverage and heavy rainfall that caused devastating floods in the Garonne sources, and the Gaves and Nestes valleys in south-west France.

1. *Sources: France: RTE, raw and adjusted for weather effects.*
   United Kingdom: Department of Energy and Climate Change for the first 3 quarters, local subsidiary estimate for the final quarter.
   Italy: raw and adjusted data provided by the national Italian electricity grid Terna.
2. *Sources: France: Pégase database, source SOeS (Service de l'Observation et des Statistiques), January to November 2013.*
   United Kingdom: Department of Energy and Climate Change for the first 3 quarters, local subsidiary estimate for the final quarter.
   Italy: local subsidiary estimate.
3. *French Energy Regulatory Authority.*
4. *Map comparing average temperatures with normal levels measured over 30 years (1971-2000 for Western Europe and 1961-1990 for Eastern Europe).*
   Source: Base de Données Climatologiques, Météo France.

Rainfall: variance from normal annual levels, January to December 2013[1]



2013 was marked by heavy rainfall that exceeded normal levels for a large part of Europe, especially the Iberian peninsula, central Europe and France. Only the northern end (United Kingdom and Scandinavia) and the south-east end (Greece and Turkey) of Europe experienced close to normal or even slightly below-normal precipitation.

Air temperatures varied widely during the first half-year, between:

- unusually cold weather in the west (particularly France, Switzerland and Germany);
- and unusually warm weather in the countries around the Black Sea and the easternmost third of Europe.

In the second half-year, there was a spell of unusually hot weather across all of Europe, which was again more pronounced in the east.

As a result of these weather phenomena, hydropower capacity levels in France were above normal throughout the year (apart from the months of September and December) particularly in April, May and June. The cumulative effect over the year 2013 was a surplus capacity not seen since 2001.

1.2.2 Significant events[2,3]

1.2.2.1 Strategic developments

1.2.2.1.1 Hinkley Point C nuclear plant project

On 4 February 2013, Centrica announced its decision to end its partnership with EDF for the construction of EPRs in the United Kingdom, by exercising its option to sell EDF Energy its 20% investment in the company formed as a vehicle for 'Nuclear New Build' projects in the UK. EDF thus became the company's sole shareholder.

On 19 March 2013, the British Minister for Energy and Climate change announced that had consented to construction of a new nuclear power plant at Hinkley Point, in Somerset in south-west England.

On 21 October 2013, the EDF group and the British government reached an agreement on the main commercial terms of the Hinkley Point C (HPC) investment contract, notably setting a strike price of £92.5/MWh[4] for the Contract for Difference (CfD) and a duration of 35 years from the plant's date of commissioning. This would give an internal rate of return (IRR) on the project of approximately 10%, in line with the Group's investment criteria.

The project is eligible for the British government's Infrastructure UK (IUK) guarantee scheme; the debt to finance 65% of the total pre-operating construction costs will be underwritten by the UK treasury on terms and conditions that are currently being negotiated.

The EDF group has set up a consortium of industrial partners for the project, which is expected to be structured as follows: 45-50% for EDF, 10% for AREVA, 30 to 40% for China General Nuclear Corporation (CGN) and China National Nuclear Corporation (CNNC). Discussions are also taking place with a shortlist of other interested investors, who could take up to 15%.

These agreements and construction of the power plant still require a final investment decision, which is conditional on completion of certain key stages including agreement of the full investment contract, finalisation of agreements with industrial partners and a decision from the European Commission concerning state aid. On 18 December 2013, the European Commission announced that it had begun an in-depth investigation into the matter and on 31 January 2014 it released an initial assessment, which should soon be published in the Official Journal then followed by a one-month consultation period involving all actors.

1.2.2.1.2 Provisional agreement between EDF and Veolia Environnement over Dalkia

As part of the Group's strategy to clarify its industrial partnerships, EDF and Veolia Environnement entered into advanced discussions for the conclusion of an agreement on their joint subsidiary Dalkia, a worldwide provider of energy services. The two groups' Boards of Directors met on 28 October 2013 and approved the continuation of negotiations. Once the ongoing discussions are completed, the EDF group would acquire all the Dalkia group's activities in France, while Veolia Environnement would acquire the assets and activities of Dalkia International. Under this arrangement, Veolia Environnement would make a cash payment of €550 million to EDF to compensate for the difference in value between the stakes owned by the two shareholders in the various entities of the Dalkia group.

Meanwhile, on 30 September 2013 the EDF group, through its wholly-owned subsidiary EDEV (EDF Développement Environnement), entered into exclusive negotiations with Dalkia France with a view to acquiring Citelum, one of the major players in the international public lighting and urban electrical equipment industry. On 25 November 2013, Dalkia France and EDEV agreed to extend the exclusive negotiation period to 31 March 2014 due to the ongoing discussions between the EDF groups and Veolia Environnement described above.

These joint operations should enable the EDF group to significantly develop its presence in energy services, particularly to local authorities. They should offer potential for major synergies due to the complementary nature of the EDF group's and Dalkia's businesses.

1. *Map comparing average rainfall with normal levels between January and December 2013.*
   Normal rainfall is measured over 30 years (1971-2000 for Western Europe and 1961-1990 for Eastern Europe).
   Source: Base de Données Climatologiques, Météo France.
2. *Significant events related to litigation are described in section 1.9.*
3. *The reference document and a full list of press releases are available from the EDF website: www.edf.com.*
4. *£89.5/MWh if an investment decision is made for the Sizewell C project. If so, Sizewell C will repay the Hinkley Point C project the equivalent of £3/MWh due to the "series benefit" of not being the first reactor of its kind.*

1.2.2.2 New investments and partnerships

1.2.2.2.1 Financial investments

1.2.2.2.1.1 Formation of EDF Invest

In mid 2013 EDF set up EDF Invest, which is in charge of managing the portfolio of unlisted investments included in EDF's dedicated assets. These unlisted investments comprise three classes of asset: mainly infrastructures, but also real estate and private equity assets.

The EDF group's 20% investment in TIGF described below is EDF Invest's first investment in infrastructures, along with the 50% of RTE shares already included in the dedicated asset portfolio. TIGF and the RTE shares account for some 13% of dedicated assets.

EDF Invest's objective is ultimately to have €5 billion of unlisted investments under management, representing 25% of the total dedicated assets.

1.2.2.2.1.2 Acquisition of TIGF

On 4 April 2013, the consortium made up of Snam, the Italian gas transmission and storage operator (45%), GIC, the Singaporean sovereign fund (35%), and EDF (20%) signed a final agreement with the Total group for the acquisition of its gas transmission and storage subsidiary TIGF (Transport et Infrastructures Gaz France).

The transaction was completed on 30 July 2013. EDF's 20% investment is carried by EDF Invest via a holding company in which the Group's stake at the date of acquisition of TIGF and the finalisation and structuring of its financing was valued at €0.3 billion.

On 28 January 2014, the rating agency Moody's confirmed TIGF's Baa2 rating and its stable outlook. The rating had been under review for potential downgrading since 6 August 2013.

1.2.2.2.2 Investments and disposals by EDF Énergies Nouvelles

On 11 February 2013, EDF Énergies Nouvelles announced its acquisition of the French wind power business of Séchilienne Sidec, which has installed capacity of 56.5 MW and five projects in development totalling 60 MW.

In 2013 and in January 2014, EDF Énergies Nouvelles made investments in wind farms under construction in Canada (the 300 MW Blackspring Ridge facility) and the United States (Spinning Spur II and III, Longhorn in Texas, Roosevelt in New Mexico).

On 27 May 2013, EDF Énergies Nouvelles acquired 20% of the 30 wind farms in operation in France from Iberdrola. This investment represents gross capacity of 305 MW.

On 29 November 2013, the European consortium EDF Énergies Nouvelles and wpd offshore announced that it had submitted two bids for the Tréport and Ile d'Yeu / Ile de Noirmoutier projects in France, together with Alstom, its partner for the supply of turbines. These offers are part of the second call for tenders for French offshore wind energy projects, representing total new capacity of 1,000 MW to be installed by 2023.

On 5 December 2013, EDF Énergies Nouvelles and the Indian company ACME Cleantech Solutions Ltd formed a joint venture based in India and positioned in the photovoltaic market: ACME Solar Energy Private Ltd. There are three investors in the joint venture:

- ACME Cleantech Solutions Ltd (50%);
- EDF Énergies Nouvelles (25%);
- EREN, a group specialised in savings in natural resources (25%).

Disposals in 2013: The principal sales undertaken in 2013 by EDF Énergies Nouvelles as part of its Development and Sales of Structured Assets (DSSA) activities concerned the remaining 50% of the Lakefield wind farm (102.75 MW), 50% of the Eoliatec Del Istmo facility (82 MW) in Mexico, and 50% of the Saint-Robert-Bellarmin wind farm (40 MW) in Canada. EDF Énergies Nouvelles and EDF Energy also jointly sold 80% of the Fallago Rig wind farm in Scotland.

EDF Énergies Nouvelles sold a further 50% of the French solar power facilities Crucey 1 (36 MWp au total) and Massangis 2 (20 MWp) in France.

1.2.2.2.3 Contracts and agreements

1.2.2.2.3.1 Renegotiations of Edison's gas supply contracts

On 23 April 2013, the Court of Arbitration of the International Chamber of Commerce found in favour of Edison in the litigation with Sonatrach (Algeria) initiated in August 2011, concerning the long-term gas price in the Algerian contract.

Edison and Rasgas (Qatar) also signed an agreement in July 2013 amending certain aspects of the long-term gas supply contract (particularly the pricing terms) between the two companies.

The total impact of these operations on the EDF group's EBITDA for 2013 was a positive €813 million, including compensation for previous years.

The second cycle of renegotiations concerning gas supply contracts with Russia and Libya is in process. Arbitration proceedings were still in process at 31 December 2013 regarding the supply contracts with Promgas (Russia) and ENI (Libya).

1.2.2.2.3.2 Agreement with Exelon on CENG

The EDF and Exelon groups signed an agreement on 29 July 2013 concerning CENG, an entity held 49.99% by the EDF group and 50.01% by the Exelon group. CENG operates 5 nuclear reactors in the United States with total power of 3.9 GW. Under the terms of this agreement, EDF will delegate operational management of these reactors to Exelon. The agreement also stipulates that the Group will receive an exceptional dividend of USD 400 million (approximately €300 million) from CENG and will benefit from an option to sell its holding in CENG at fair value to Exelon, which can be exercised between January 2016 and June 2022.

This agreement requires the approval of the Nuclear Regulatory Commission and the relevant competition authorities. It should be finalised in April 2014.

1.2.2.2.4 Disposals of investments

1.2.2.2.4.1 Sale of the Group's investment in SSE

On 24 May 2013, EDF and Energetický a průmyslový Holding, a.s. (EPH), a Czech energy company that is a leading player in central and eastern Europe, signed a final agreement for the sale to EPH of a 49% stake in Stredoslovenska Energetika a.s. (SSE), Slovakia's number two electricity distributor and supplier.

On 27 November 2013, this transaction was finalised after it was approved at SSE's General Shareholders' Meeting and SSE had received authorisation from the competition authorities.

The transaction valued EDF's investment in SSE at approximately €400 million.

1.2.2.2.4.2 Sale of the Group's investment in Veolia Environnement

On 26 November 2013, the Group announced that it has sold its entire non-strategic investment of 4.01% in Veolia Environnement, which is listed on Euronext and NYSE. The sale took place for the price of €11.90 per share, representing a 2.3% discount on the closing price at 26 November 2013 or a total of €262 million.

1.2.2.3 Investment projects

1.2.2.3.1 France

1.2.2.3.1.1 Flamanville 3

Significant construction milestones were reached during 2013:

- placing the dome on the reactor building in July, once the polar crane had been installed;
- installation of the equipment access hatch in the reactor building;
- completion of concreting on the reactor shell for the auxiliary nuclear and fuel buildings;
- filling the drainage basin and the backup reservoir for watertightness tests;
- finalisation of tanking of the cooling pool in the fuel building;
- steam tubing assembly inside the machine room;
- connection of the stepdown transformer via a temporary 400kV supply;
- ramp-up of mechanical and electric assemblies, with installation and progressive commissioning of electricity supply and the control command cabinets for the nuclear island.

Civil engineering work on the Flamanville EPR project was practically complete at 31 December 2013, and more than 50% of the electro-mechanical equipment is in place.

The first power output is expected in 2016.

1.2.2.3.1.2 Construction of the new power plant at Bouchain

In late 2011, EDF and GE Energy entered into a partnership arrangement for joint development of the new generation combined cycle gas (CCG) plant located in Bouchain in north France. Its CCGT will be equipped with new technology that makes it possible to reach maximum capacity in a very short time, while offering augmented output. Construction work began in April 2013. The prototype will be tested for 2 years from 2016 before being transferred to EDF if the test results are satisfactory.

1.2.2.3.1.3 Commissioning of the second Martigues Combined Cycle Gas (CCG) plant

The second CCG facility on the Martigues site began industrial operation on 7 June 2013. Martigues is now the largest CCG plant in France, with capacity of 930 MW and an output more than 50% higher than traditional fossil-fired units, which reduces its environmental impact.

1.2.2.3.1.4 Inauguration of the Rizzanese dam in Corsica

On 17 June 2013, EDF inaugurated Corsica's 4th major dam on the Rizzanese in South Corsica. This new facility with installed capacity of 55 MW raises the share of renewable energies in the island's energy consumption to 30%. It has supplied the Corsican electricity network since February 2013, with the connection of one of the two turbines at the Sainte-Lucie de Tallano plant located downstream. The dam started operations in late 2013.

This hydroelectric facility will reduce Corsica's hydrocarbon consumption and thus prevent the discharge of 60,000 tonnes of CO_2 every year. It is intended to be used in peak periods when electricity consumption is at its highest.

1.2.2.3.1.5 Launch of the rollout of smart meters

The rollout of smart meters complies with European and French regulations on electricity metering systems (EU directive 2009-072; French decree of 31 August 2010; the decision on metering of 4 January 2012). It follows a trial conducted by ERDF in 2009-2011 with 300,000 meters: after assessing the results, the CRE recommended generalising the smart meter system in its decision of 7 July 2011.

At the initiative of France's Minister for Ecology, Sustainable Development and Energy, a working party with representatives of all the stakeholders was formed in late 2012. The work done during 2013 led the Prime Minister to announce on 9 July 2013 that ERDF would install 3 million smart meters by 2016.

ERDF thus launched a call for tenders in October 2013 for supply of the first meters.

1.2.2.3.1.6 Inauguration of the Port Est fossil-fired plant (Reunion island)

On 11 October 2013, EDF group inaugurated the 210 MW-capacity Port Est fossil-fired plant. This plant runs on fuel oil and was built to replace the Port Ouest facility, which was closed in April 2013. The investment amounted to more than €500 million. The plant is equipped with innovative technologies and offers excellent industrial and environmental efficiency: its new-generation diesel motors, with catalytic devices that reduce gas discharge by 85%, cut fuel consumption by 15%.

1.2.2.3.2 United Kingdom: commissioning of 3 Combined Cycle Gas Turbines (CCGTs) at West Burton B

The West Burton B CCG power plant in Nottinghamshire consists of three units: the first two were commissioned in the first half-year and the third in the second half-year of 2013. Each unit has a capacity of 437 MW or a combined total of some 1,300 MW. This plant can serve 1.5 million households.

1.2.2.3.3 Other activities

1.2.2.3.3.1 Construction of the Dunkirk methane terminal

Construction work on the Dunkirk terminal headed by Dunkerque LNG, a subsidiary owned 65% by the EDF group, is continuing and the date for start of operations is scheduled for November 2015. The terminal was more than 50% complete at the end of 2013, with the following achieved:

- completion of work on the harbour by Grand Port Maritime de Dunkerque, and delivery of the land platform to Dunkerque LNG;
- lifting and concreting the domes for the three reservoirs that will store the liquefied natural gas (LNG);
- start of excavation for the tunnel between the terminal and the Gravelines nuclear power plant, as warm water discharge from Gravelines will be used in regasification of the LNG;
- finalisation of installation and connection of gas transmission networks;
- rollout of employment and subcontracting measures to support local development;
- delivery of a 20 hectare wet zone as part of the environmental offset measures.

These last two points are discussed in more detail in sections 2.3.3.2 and 2.3.2.1 respectively.

The two natural gas network managers, Belgian company Fluxys and French company GRTgaz, are continuing to build a new interconnection between France and Belgium, in addition to the work on connection to the French network.

1.2.2.3.3.2 Commissioning of wind and photovolatic power facilities

Throughout 2013, EDF Énergies Nouvelles proceeded to total and partial commissioning of wind farms in Canada (Massif du Sud and Lac Alfred), Mexico (Bii Stinu and EDP) and Turkey (Geycek).

In the United States, EDF Énergies Nouvelles commissioned the Catalina photovoltaic plant (143 MWp) and the Pinelands Biomass project (35.6 MW). In offshore wind power, first 13 turbines of the Teesside wind power facility in the United Kingdom began operations in June 2013.

1.2.2.4 Research and Development

1.2.2.4.1 First stone laid at the Saclay centre

On 10 October 2013, EDF's Chairman and CEO Henri Proglio, alongside French Prime Minister Jean-Marc Ayrault and the Minister for Ecology, Sustainable development and Energy Philippe Martin, laid the first stone for the EDF Lab on the Paris-Saclay campus at Palaiseau close to Paris. This 12-hectare site will combine a global R&D centre and the new EDF Campus, scheduled to open in 2015. The research centre teams will strive to prepare the ground for the technologies of tomorrow, while the teams at the training centre will prime the skills of the company's employees. This centre will foster ties with the academic world of training and research, and the associated universities and top specialist higher education establishments.

1.2.2.4.2 Opening of the first European laboratory dedicated to smart grids

On 13 September 2013, EDF inaugurated the experimental platform Concept Grid, the only one of its kind in the world, established to prepare for and support the transition from traditional electricity grids to «smart grids». Located at the Renardières R&D centre, Concept Grid can conduct complex, full-scale stress tests that would be impossible to carry out on the real grid.

The Group also launched the Smart Electric Lyon project, which aims to conduct full-scale tests of a wide array of solutions based on the latest information and communication technologies. The aims of these solutions are to control electricity consumption, improve the household comfort and increase efficiency for companies and local authorities. Testing has begun in 25,000 households in Lyon and roughly 100 companies and local authorities, at home, work or in their public areas and facilities.

1.2.2.5 Regulatory environment

1.2.2.5.1 France

1.2.2.5.1.1 The NOME law and the ARENH system

Supplies of electricity to EDF's competitors under the ARENH scheme for regulated access to nuclear power supplies concern a volume of 64.4 TWh for 2013, up by 3.4 TWh from 2012. The annual volume cannot exceed 100 TWh, and will be progressively increased from 1 January 2014 by the amounts sold to network operators to compensate for their technical losses, according to a timetable set by government decision. The estimated volume for 2014 is approximately 74.2 TWh.

The ARENH price was set at €42/MWh from 1 January 2012, and will subsequently reflect the economic conditions of generation by the existing nuclear fleet. On 22 October 2013, the government announced that the decree stipulating the valuation method for costs making up the ARENH price should be published by the end of the first quarter of 2014.

1.2.2.5.1.2 CSPE

The Contribution to the Public Electricity Service (*Contribution au Service Public de l'Électricité* or CSPE) is intended to compensate for certain public service charges assigned to EDF in particular[1]. The CSPE is based on electricity consumption and collected directly from the end-user. It amounted to €13.5/MWh in 2013 and has since been raised by €3/MWh as of 1 January 2014 to €16.5/MWh.

Under the agreement signed by EDF and the French authorities in early 2013, EDF is to receive reimbursement by 31 December 2018 of the receivable consisting of the CSPE shortfall at 31 December 2012 plus the costs of bearing this shortfall for the Group (giving a total of approximately €4.9 billion).

In early 2013 certain purchase tariffs for photovoltaic power were increased: a 10% premium was applied for panels assembled in Europe, and some tariffs will decrease more slowly for a given volume. This new system is bringing down purchase tariffs for new projects according to the cumulative power of applications for connection. The national objective of connecting 500 MW per year has been doubled to 1,000 MW.

During the first quarter of 2013 the French energy regulator CRE put out several tender offers for new offshore wind farms (1,000 MW) and photovoltaic installations with capacity above 100 kW. These facilities will be eligible for the purchase tariff, and the surplus cost in excess of market prices will be offset by the CSPE.

The law intended to prepare for the transition towards a low-consumption energy system (known as the 'Brottes law') published in France's Official Journal on 15 April 2013 allowed for extension of the number of beneficiaries of the Basic Necessity Tariff, which concerned 1.5 million households at 31 December 2013 compared to 1 million one year earlier. The corresponding decree (2013-1031) was published on 16 November 2013. The law also stipulates that a premium paid to load management operators will be covered by the CSPE.

France's amended finance law for 2013 recognises the costs of bearing the shortfall in the CSPE mechanism as a public service expense entitling EDF to compensation through the contribution.

Over 2013, EDF recorded a total €5,103 million in public-service expenses, 8.9% more than in 2012, as the growth in renewable energies and the low market prices had pushed up the cost of renewable energy prices. CSPE-related receipts amounted to €4,652 million, a 40% increase from 2012. The difference for 2013 between the expenses recorded and the income received by EDF under the CSPE system was €451 million.

On 9 October 2013, the CRE published its annual decision on the estimated level of the CSPE for 2014. It estimates the forecasts costs for the mechanism at €6,186 million compared to €5,128 million for 2013. Since the CSPE has been set at €16.5/MWh for 2014, the contributions collected are estimated at €6,187 million, which stabilises the shortfall in 2014 (excluding the costs of bearing that shortfall).

1.2.2.5.1.3 TURPE 3 and TURPE 4 network access tariffs

In a decision of 28 November 2012, the French Council of State cancelled the distribution component of the third generation network access tariffs called TURPE 3 (*Tarifs d'Utilisation des Réseaux Publics d'Électricité*), which had been approved on 5 May 2009 by the Ministers for Energy and the Economy after a proposal from the CRE, and was supposed to apply for the period 1 August 2009 to 31 July 2013. This cancellation has no direct impact on the regulated tariffs for sales to customers. The new version of the TURPE 3 ('TURPE 3 bis') based on the CRE proposal of 29 March 2013 was published in France's Official Journal on 26 May 2013. It applies retroactively to the period 2009-2013, replacing the cancelled tariff, and reduces the tariffs for the period 1 June to 31 July 2013 by 2.5%.

On 10 July 2013, the CRE also published its deliberations of 28 May 2013 containing the decision for the period from 1 August 2013 to 31 December 2013 ('TURPE 3 ter'), which results in a 2.1% increase from 1 August 2013 compared to the period 1 June to 31 July 2013.

On 9 July 2013, the CRE began its consultation on the distribution tariffs due to take effect from 1 January 2014 for a 4-year period ('TURPE 4 HTA-BT').

1. *Local distribution companies and Electricité de Mayotte also make contribute small contributions to the system.*

The CRE's decision of 12 December 2013 setting the distribution tariffs from 1 January 2014 was published in France's Official Journal on 20 December 2013. These tariffs rose by an average 3.6% at 1 January 2014, and should then increase in line with inflation on 1 August every year from 2014 to 2017.

The government also announced in a letter dated 12 November 2013 to the President of the CRE that it intended to propose a law shortly with the aim of laying down a secure legal framework for setting the TURPE, so that a normative economic regulation method can be implemented.

For transmission tariffs, the CRE deliberations of 3 April 2013 were published in the Official Journal of 30 June 2013. This new tariff ('TURPE 4 HTB') has been applicable since 1 August 2013 for a period of approximately four years. The tariff was raised by 2.4% as of that date, and will subsequently be adjusted annually in accordance with inflation.

1.2.2.5.1.4 CRE report on EDF's generation and supply costs

As part of its mission defined in the French Energy Code to analyse EDF's costs and ensure they are covered through regulated sales tariffs, the CRE published a report on 4 June 2013 on EDF's generation and supply costs.

The CRE's study concerned costs recorded from 2007 to 2012, and estimated costs for 2013 to 2015.

For the period 2007 to 2012, the CRE noted that fixed and variable generation costs rose by 5.1% per year, capital expenses rose by 2.9% per year and sales and marketing costs rose by 6.3% per year.

It also observed that the rising trend in generation and supply costs was confirmed for 2013.

The CRE therefore concluded that the recommended tariff change for summer 2013 to cover the estimated costs should be between 9.6% and 6.8% for the 'blue' tariffs (figures respectively excluding and including an assumption that the accounting useful life of nuclear plants will be extended by 10 years in 2013). The CRE also calculated that the regulated tariffs of 2012 had not covered actual costs of 2012 (a deficit of €1.47 billion).

1.2.2.5.1.5 Pension reforms (law of 20 January 2014)

The French law of 20 January 2014 amended the regulations governing pensions in France. The two principal measures introduced by the law will apply to the special pension system for companies in the electricity and gas sector (IEG). The contribution period required to qualify for a full pension will be progressively extended to 43 years starting with employees born in 1973. This applies to France's standard national pension system and public sector pension system, and should be transposed to the IEG pension system by decree in early 2014. Also, the date for the annual review of pension values is deferred from 1 April to 1 October as of the 2014 financial year.

Since the bill for this law was adopted by Parliament on 18 December 2013, its impact has been taken into account in valuing the Group's pension obligations at 31 December 2013. The effects of the main two measures referred to above, which constitute plan amendments, have a favourable effect of €472 million on the Group's operating profit.

1.2.2.5.2 United Kingdom

On 27 June 2013, as part of the electricity market reforms begun in 2012, the UK's Minister for Energy and Climate change presented details of the British government's long-term strategy for construction, repair and renewal of major electricity infrastructures in the United Kingdom. The UK's finance Minister also announced that the future Hinkley Point C power plant would qualify for a government guarantee from the Infrastructure UK department[1].

After examination by the House of Lords throughout 2013, the proposed law on the reform of the electricity market received royal assent on 18 December 2013.

1.2.2.5.3 Belgium

After substantial changes in 2012, the regulatory environment continued to evolve in 2013.

The nuclear tax levied on operators and owners of nuclear power-generating installations in Belgium was raised from €250 million in 2011 to €550 million in 2012, then reduced to €481 million in 2013. In late June 2013 EDF Luminus and EDF Belgium filed an appeal against this tax before Belgium's Constitutional court.

In late 2011 the national electricity and gas regulator CREG[2] approved the new tariffs for the period 2012-2015 to be applied by Elia, the electricity transmission network operator. These tariffs include a grid injection tariff that is now borne by generators. They were revised downwards in 2013 following legal action against the decision by generators in the Appeal Court.

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 to 2025, particularly the fees due by the owners to the State.

The electricity market conditions were tougher in 2013 in this context, and EDF Luminus notified the Belgian government of a temporary shutdown on the Seraing fossil-fired plant from mid-2014.

The Belgian government is preparing a strategic reserve through a call for tenders from fossil-fired power plants that have announced their temporary or permanent shutdown, to secure the country's energy supply during the winter periods. Industrial operators who agree to reduce consumption during peak consumption periods could also take part in this tender procedure. The most attractive proposals will be selected after approval by the CREG as to the reasonable nature of the prices. The plants included in this reserve will then receive payment to cover their fixed costs.

An agreement to protect consumers was signed by the Belgian government and all electricity and gas suppliers in Belgium, stipulating new contractual obligations or re-emphasising certain legal obligations incumbent on the suppliers.

Also, during the summer of 2012, inspections detected micro-cracks in the core tanks at the Doel 3 and Tihange 2 plants, which were shut down pending additional analyses by the Federal Nuclear Control Agency (AFCN) and Electrabel. On 17 May 2013 the AFCN gave its authorisation for both nuclear reactors to restart operation, and this took effect on 3 June for Doel 3 and 7 June for Tihange 2.

1.2.2.5.4 Hungary

In early 2013 the regulator announced a 10% reduction in regulated tariffs for supplies of gas, electricity and heat to domestic customers for the period 2013-2016. The Hungarian government also introduced a new network tax of HUF 125 per metre of network (approximately €0.45/m).

1. *Infrastructure UK: a department of the British Finance Ministry in charge of infratsructure investment matters.*
2. *CREG: Commission de Régulation de l'Electricité et du Gaz.*

1.3 Analysis of the business and the consolidated income statements for 2012 and 2013

Presentation and analysis of the consolidated income statements for 2012 and 2013 is presented 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 analyzed from a more general standpoint.

The comparative figures for 2012 have been restated to reflect the impact of retrospective application of IAS 19 revised (-€41 million impact on EDF net income) and the change in presentation of EDF Énergies Nouvelles' Development and Sales of Structured Assets (DSSA) activity, which has no impact on Group EBITDA (a €551 million decrease in sales, a €369 million decrease in other external expenses and a €182 million increase in other income and expenses).

(in millions of Euros)	**2013**	2012 restated
Sales	**75,594**	**72,178**
Fuel and energy purchases	(39,683)	(37,098)
Other external expenses	(9,027)	(9,718)
Personnel expenses	(11,879)	(11,710)
Taxes other than income taxes	(3,533)	(3,287)
Other operating income and expenses	5,293	5,633
Operating profit before depreciation and amortisation (EBITDA)	**16,765**	**15,998**
Net changes in fair value on Energy and Commodity derivatives, excluding trading activities	14	(69)
Net depreciation and amortisation	(7,516)	(6,849)
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(228)	(164)
(Impairment) / Reversals	(1,012)	(752)
Other income and expenses	388	(5)
Operating profit (EBIT)	**8,411**	**8,159**
Financial result	**(3,089)**	**(3,334)**
Income before taxes of consolidated companies	**5,322**	**4,825**
Income taxes	(1,942)	(1,573)
Share in income of associates	375	261
GROUP NET INCOME	**3,755**	**3,513**
EDF net income	**3,517**	**3,275**
Net income attributable to non-controlling interests	238	238
EARNINGS PER SHARE (EDF SHARE) (IN EUROS)		
Earnings per share	**1.84**	**1.77**
Diluted earnings per share	**1.84**	**1.77**

1.3.1 Sales

Consolidated sales rose by 4.7%, with organic growth of 2.9%.

1.3.1.1 Change in Group sales

(in millions of Euros)	**2013**	2012 restated	Variation	Variation (%)	Organic growth (%)
Sales	**75,594**	**72,178**	**3,416**	**+4.7**	**+2.9**

Sales amounted to €75,594 million in 2013, an increase of €3,416 million (+4.7%) from 2012. Excluding the effects of exchange rates (-€591 million), principally reflecting the pound sterling's decline against the Euro, and excluding changes in the scope of consolidation (€1,907 million) essentially relating to the takeover of Edison, organic growth stood at +2.9%.

1.3.1.2. Change in sales by segment

(in millions of Euros)	**2013**	2012 restated	Variation	Variation (%)	Organic growth (%)
France	**40,210**	**39,120**	**1,090**	**+2.8**	**+2.8**
United Kingdom	9,782	9,739	43	+0.4	+5.1
Italy	12,875	10,098	2,777	+27.5	+2.6
Other International	7,841	7,976	(135)	-1.7	+0.2
Other activities	4,886	5,245	(359)	-6.8	+4.4
Total excluding France	**35,384**	**33,058**	**2,326**	**+7.0**	**+3.1**
GROUP SALES	**75,594**	**72,178**	**3,416**	**+4.7**	**+2.9**

Sales outside France represented 46.8% of total consolidated sales in 2013, compared to 45.8% in 2012.

1.3.1.2.1 France

Change in sales in the "France" segment

France's contribution to Group sales amounted to €40,210 million, corresponding to an organic rise of 2.8% compared to 2012.

This sales growth mainly results from the higher volumes sold to final customers, boosted by weather effects (+8.0 TWh) with an impact of €602 million and the increase in electricity tariffs in July 2012) and August 2013, which had an impact of €780 million. Sales of gas to final customers rose by €123 million.

At 31 December 2013, EDF's share of the electricity market for all final customers was 79.7%, 0.3 points lower than at 31 December 2012. EDF's share of the natural gas market was 4.4%, up by 0.1 points from 2012.

Breakdown of sales for the "France" segment between Generation and Supply (deregulated activities)[1], network activities[2] and island activities[3]

(in millions of Euros)	**2013**	2012 restated	Variation	Variation (%)
Sales	40,210	39,120	1,090	+2.8
Generation and Supply (deregulated activities)	38,007	37,001	1,006	+2.7
Network activities	13,807	13,309	498	+3.7
Island activities	931	907	24	+2.6
Eliminations	(12,535)	(12,097)	(438)	

The 2.7% increase in sales by the Generation and Supply (deregulated) activities is attributable both to the favourable impact of the increase in volumes, chiefly resulting from weather conditions, and to tariff increases.

Sales by the network activities rose by 3.7% due to the combined effect of the rise in tariffs and the higher volumes sold, since the winter weather was harsher in 2013 than 2012.

1. *Generation, Supply and Optimisation in mainland France, and sales of engineering and consulting services.*
2. *Network activities now only include Distribution, as a result of application of the equity method to the Transmission activity from 31 December 2010. In mainland France, network activities are regulated via the network access tariff TURPE* (Tarifs d'Utilisation des Réseaux Publics d'Électricité). *Sales for the regulated activities include the delivery cost included in integrated tariffs.*
3. *EDF's generation, supply and distribution activities in the island energy systems (IES and IEG).*

Electricity generation

Nuclear generation produced 403.7 TWh in 2013, compared to 404.9 TWh for 2012, down by 1.2 TWh. This slight downturn is explained by a more extensive programme of scheduled outages than in 2012. The availability coefficient was 78.0% in 2013, lower than in 2012 (79.7%).

Hydropower output stood at 42.6 TWh, an improvement from 2012 (+8.0 TWh) due to the favourable conditions (for details of weather conditions see section 1.2.1.4).

Fossil-fired generation produced 15.6 TWh, 0.7 TWh more than in 2012. This rise is mainly attributable to the differential between electricity and fossil fuel prices, which was more favourable for fossil-fired generation.

Sales volumes to final customers (a market segment that includes Eurodif and local distribution companies) were up by +2.7 TWh, including +8.0 TWh attributable to temperature differentials. Due to the end of the VPP[1], auction system initiated in 2012, VPP sales were down by 18 TWh from 2012. A volume of 64.4 TWh of electricity was supplied under the NOME law.

After being a net purchaser of 25.4 TWh on the wholesale markets in 2012, EDF moved to a net seller's position in 2013 to the extent of 2.4 TWh.

1.3.1.2.2 United Kingdom

The **United Kingdom**'s contribution to Group sales amounted to €9,782 million in 2013, stable compared to 2012 with organic growth at 5.1%. Compared to 2012 sales, this includes an unfavourable exchange effect of €437 million.

The increase in sales principally results from positive price effects driven by rising wholesale prices, and higher nuclear power output (up by 0.5 TWh from 2012).

Electricity sales volumes on the wholesale markets increased in application of the commitment made to the European Commission[2]. These effects were partly counterbalanced by a decline in structured sales following expiry of the legacy contracts transferred from British Energy.

1.3.1.2.3 Italy

Italy[3] contributed €12,875 million to consolidated sales, up by 27.5% with organic growth of 2.6%.

Edison's sales stood at €12,451 million, a rise of €2,834 million from 2012 that includes a scope effect due to takeover of exclusive control of Edison. Although demand for electricity and gas contracted on the Italian market, sales on a like-for-like basis (identical group structure and exchange rates) progressed by €320 million.

In the electricity business, sales growth benefited from the higher sales volumes on the wholesale markets.

In the hydrocarbon business, sales were stable in terms of organic growth, reflecting the contraction in average sales prices and fossil fuel consumption for electricity generation, offset by an increase in sales volumes to residential and industrial customers and on the wholesale market.

Fenice registered sales of €424 million, an organic decline of 11.3% or -€54 million from 2012, in line with its business levels in Italy.

1.3.1.2.4 Other International

The **Other international** segment principally covers operations in Europe excluding the United Kingdom and Italy, and operations in the United States, Brazil and Asia (China, Vietnam and Laos).

This segment contributed €7,841 million to Group sales in 2013, €135 million or -1.7% less than in 2012. Excluding scope effects (-€36 million) and foreign exchange effects (-€111 million), sales was stable in terms of organic growth (+0.2% compared to 2012).

This stability is the result of contrasting developments in different countries.

In **Brazil,** sales amounted to €415 million, reflecting organic growth of 16.3% largely resulting from the annual tariff revision. In the **United States,** sales stood at €589 million; the 8.2% organic growth relates to higher generation levels, as there were fewer shutdowns than in 2012.

However, sales in **Poland** showed an organic decline of 5.9% due to lower prices for electricity and green certificates (related to biomass activities). In **Austria**, the 10.2% organic decline in sales is explained by the strong customer portfolio optimisation activity in 2012.

1.3.1.2.5 Other activities

Other activities comprise, among other entities, EDF Énergies Nouvelles, EDF Trading, Électricité de Strasbourg and the investment in Dalkia.

The contribution by the **Other activities** segment to Group sales in 2013 was €4,886 million, down by €359 million or 6.8%, with organic growth of 4.4% compared to 2012. The scope effect was a negative €548 million or 10.4% since in application of IFRS 5, the 2013 sales of Dalkia group subsidiaries due to be sold are included for 10 months.

EDF Énergies Nouvelles' contribution to Group sales showed organic growth of 28.1% from 2012. This growth primarily reflects the impact of full-year consolidation of power plant commissioned in late 2012, particularly in the United States and Canada.

EDF Trading's[4] sales were stable compared to 2012.

There was 4.5% organic growth in sales by **Électricité de Strasbourg** compared to 2012, largely driven by a volume effect on electricity sales.

Dalkia's contribution to sales was stable compared to 2012 on a like-for-like basis.

1. *Virtual Power Plant capacity auction system, generating deliveries for periods ranging from a few months to 3 years.*
2. *In application of commitments made following the European Commission merger regulation: sales of between 5 and 10 TWh of electricity on the wholesale British market over the period 2012 to 2015.*
3. *The Edison and Fenice groups.*
4. *EDF Trading sales consist of trading margins.*

1.3.2 Operating Profit Before Depreciation and Amortisation (EBITDA)

EBITDA rose by 4.8%, with organic growth of 5.5%.

(in millions of Euros)	**2013**	2012 restated	Variation	Variation (%)	Organic growth (%)
Sales	**75,594**	**72,178**	**3,416**	**+4.7**	**+2.9**
Fuel and energy purchases	(39,683)	(37,098)	(2,585)	+7.0	+2.3
Other external expenses	(9,027)	(9,718)	691	-7.1	-5.5
Personnel expenses	(11,879)	(11,710)	(169)	+1.4	+2.6
Taxes other than income taxes	(3,533)	(3,287)	(246)	+7.5	+7.8
Other operating income and expenses	5,293	5,633	(340)	-6.0	-5.9
EBITDA	**16,765**	**15,998**	**767**	**+4.8**	**+5.5**

1.3.2.1 Change in consolidated EBITDA and analysis

Consolidated **EBITDA** for 2013 amounted to €16,765 million, up by 4.8% from 2012. After adjustment for the positive €17 million scope effect and unfavourable foreign exchange effects of -€134 million, mainly resulting from the fall in the pound sterling against the Euro, organic growth was +5.5%.

The Group's **fuel and energy purchases** amounted to €39,683 million in 2013, an increase of €2,585 million (+7.0%) compared to 2012, with organic growth at 2.3%.

In **France**, as the cost of nuclear fuel was slightly higher than in 2012 and the organic increase of €279 million (+1.7%) is essentially explained by:

- a €208 million increase in the provision for long-term radioactive waste management to reflect the Andra's new financing requirements in connection with the studies concerning geological storage plans;
- the end of free allocations of CO_2 emission rights.

In the **United Kingdom**, the organic growth of €334 million (+6.3%) is essentially explained by the end of free allocations of CO_2 emission rights, as well as the higher energy costs and transmission tariffs.

In **Italy,** fuel and energy purchases registered organic growth of €203 million (+2.4%), associated with the rise in sales volumes by Edison.

The Group's **other external expenses** amounted to €9,027 million, down by €691 million (-7.1%) from 2012, corresponding to negative organic growth of €530 million (-5.5%) due to the decrease in France, particularly after introduction of a reinforced management plan for nuclear units improved monitoring of normal maintenance expenditure and scheduled regular checks.

The Group's **personnel expenses** totalled €11,879 million, €169 million higher than in 2012, with organic growth of 2.6%. This change essentially related to **France**, where personnel expenses totalled €9,024 million, corresponding to organic growth of 3.1% since 2012, principally as a result of the increase in the workforce.

Taxes other than income taxes stood at €3,533 million for 2013, up by €246 million from 2012 (+7.5%, or 7.8% in organic growth). This rise includes the effect of higher taxes for the Generation activity in **France**.

Other operating income and expenses generated net income of €5,293 million for 2013, €340 million lower than in 2012, or an organic variation of -5.9%. In **France**, other operating income and expenses showed a slight variation of +1.8%. In the **United Kingdom**, they registered an organic decline of €60 million due mainly to the unfavourable effect of the fair value adjustment of electricity sale contracts when EDF took over British Energy. In 2012, other operating income and expenses for the **Other activities** segment included the favourable effect of real estate operations and insurance contract renegotiations that had no equivalent in 2013.

1.3.2.2 Consolidated EBITDA and analysis by segment

(in millions of Euros)	**2013**	2012 restated	Variation	Variation (%)	Organic growth (%)
France	**10,778**	**9,853**	**925**	**+9.4**	**+9.4**
United Kingdom	1,992	2,047	(55)	-2.7	+2.0
Italy	1,098	1,019	79	+7.8	-5.8
Other International	1,128	1,066	62	+5.8	+9.8
Other activities	1,769	2,013	(244)	-12.1	-6.3
Total excluding France	**5,987**	**6,145**	**(158)**	**-2.6**	**-0.7**
GROUP EBITDA	**16,765**	**15,998**	**767**	**+4.8**	**+5.5**

1.3.2.2.1 France

Change in EBITDA for the "France" segment

France contributed €10,778 million of consolidated EBITDA for 2013, 9.4% higher than in 2012 both at face value and in terms of organic growth. This contribution accounted for 64.3% of Group EBITDA in 2013 against 61.6% in 2012.

Breakdown[1] of EBITDA for the "France" segment between Generation and Supply (deregulated activities), network activities and island activities

(in millions of Euros)	**2013**	2012 restated	Variation	Variation (%)
EBE	**10,778**	**9,853**	**925**	**+9.4**
Generation and Supply (deregulated activites)	6,705	6,155	550	+8.9
Network activities	3,641	3,428	213	+6.2
Island activities	432	270	162	+60.0

EBITDA for Generation and Supply (deregulated activities) rose by +8.9%.

This increase essentially reflects the following favourable factors: improved hydropower output (€367 million), a favourable weather effect (224 million) compared to 2012, essentially due to the cold spell of February 2012 which caused a peak in demand that was met at high cost, and the rise in the non-delivery portion of energy costs in the regulated sales tariffs (+€688 million). These effects were partly offset by a less favourable programme for scheduled shutdowns of nuclear power plants (-€244 million), the end of free allocations of CO_2 emissions rights (-€164 million) and the increase in the workforce (-€125 million).

EBITDA for the network activities registered a 6.2% increase resulting from favourable weather effects and the lower market prices for electricity purchased to compensate for network losses.

EBITDA for the island activities was up by €162 million (+60.0%) due to the rise in gross margin as several power plants were commissioned in 2013, and the stability of operating expenses.

1.3.2.2.2 United Kingdom

The **United Kingdom**'s contribution to Group EBITDA for 2013, including the impact of fair value adjustment of British Energy's initial balance sheet, was €1,992 million, down by 2.7% from 2012 due to an unfavourable foreign exchange effect of -€92 million. Organic growth was 2.0%.

Excluding the unfavourable impact of fair value adjustment of British Energy's initial balance sheet (particularly electricity sale contracts), EBITDA showed organic growth of 4.1%.

EBITDA in the UK benefited from favourable margin effects driven by higher sales prices on the wholesale markets than in 2012, the good operating performance with improved year-on-year nuclear output levels (60.5 TWh compared to 60.0 TWh), and stable coal-fired power output compared to 2012. EBITDA also reflects the unfavourable effect of the end of free allocations of CO_2 emissions rights in 2013.

1.3.2.2.3 Italy

The **Italy** segment contributed €1,098 million to the Group's consolidated EBITDA, 7.8% higher than in 2012 (negative organic growth of 5.8%).

Edison's contribution to Group EBITDA stood at €1,007 million in 2013, against €918 million in 2012, corresponding to an organic decline of €49 million or -5.3%.

EBITDA for the electricity activities increased thanks to favourable water levels and good use of power plants' potential for flexibility in energy management activities.

Despite the favourable outcome of the arbitration on revision of the Algerian gas contract price in April 2013 and the agreements signed in July 2013 concerning the Qatari and Algerian contracts, the hydrocarbon activities' contribution to EBITDA was lower than in 2012. This decline reflects the ongoing strong depression on European gas prices, and the downturn on exploration and production activity which reached a record peak in 2012. Edison is continuing renegotiations with gas suppliers where agreements have not yet been reached, in order to restore its margin levels.

Fenice contributed €91 million to Group EBITDA in 2013, an organic decline of €10 million in line with the decrease in sales.

1.3.2.2.4 Other International

EBITDA for the **Other International** segment stood at €1,128 million in 2013, up by 5.8% from 2012 corresponding to organic growth of 9.8%.

EBITDA in **Belgium** registered an organic decline of €52 million, reflecting the unfavourable effects of cuts in electricity and gas tariffs in response to aggressive positioning by the competition, which were partly offset by the lower level of operating expenses.

EBITDA in the **United States** showed organic growth of €62 million compared to 2012, essentially due to the higher volumes of nuclear power generated as the number of days of scheduled outages was lower.

This segment's contribution also includes the favourable effect of the gain on sale of SSE.

In **Poland**, EBITDA showed organic growth of €57 million due to costs related to the Rybnik supercritical coal-fired plant project, which had no equivalent in 2013.

1. *Further details of this breakdown can be found in section 1.3.1.2.1.*

1.3.2.2.5 Other activities

Other activities contributed €1,769 million to Group EBITDA for 2013, corresponding to an organic decline of -6.3%.

EDF Énergies Nouvelles' contribution to consolidated EBITDA totalled €773 million. The organic increase of 23.3% from 2012 was driven by the Generation activity, principally due to new plants commissioned in 2013 and the impact of full-year consolidation of plants commissioned in 2012, essentially located in the North America. The DSSA activity was steady in 2013 although lower than the unusually high level of 2012.

EBITDA at **EDF Trading** was stable compared to 2012, due to the stability of the trading margin as explained in section 1.3.1.2.5.

Dalkia's EBITDA was €35 million lower than in 2012; the organic growth was offset by a scope effect following reclassification as "Assets held for sale" from 28 October 2013 (see section 1.2.2.1.2).

The organic decline in EBITDA in the Other activities segment is explained by income on real estate operations and renegotiations of insurance contracts recorded in 2012, for which there was no equivalent in 2013.

1.3.3 Operating profit (EBIT)

EBIT rose by 3.1%.

(in millions of Euros)	**2013**	2012 restated	Variation	Variation (%)
EBITDA	**16,765**	**15,998**	**767**	**+4.8**
Net changes in fair value on Energy and Commodity derivatives, excluding trading activities	14	(69)	83	-120.3
Net depreciation and amortisation	(7,516)	(6,849)	(667)	+9.7
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(228)	(164)	(64)	+39.0
(Impairment) / reversals	(1,012)	(752)	(260)	+34.6
Other income and expenses	388	(5)	393	n.s.
OPERATING PROFIT (EBIT)	**8,411**	**8,159**	**252**	**+3.1**

The Group's consolidated **EBIT** amounted to €8,411 million for 2013, €252 million higher than in 2012. The main factors in this increase were the growth in EBITDA and the lower level of other income and expenses, which were partly counterbalanced by higher net depreciation and amortisation and impairment.

1.3.3.1 Net changes in fair value on energy and commodity derivatives, excluding trading activities

The net changes in fair value on Energy and Commodity derivatives, excluding trading activities, rose from -€69 million in 2012 to +€14 million in 2013. Positive changes were mainly located in the **Other activities** segment.

1.3.3.2 Net depreciation and amortisation

Net depreciation and amortisation was up by 9.7% from 2012.

France recorded higher net depreciation and amortisation (+€512 million) as major nuclear plant components were replaced, new investments were made for plants in operation, and other investments were made in distribution.

In the **United Kingdom**, net depreciation and amortisation was stable.

In **Italy,** the rise in net depreciation and amortisation (+€96 million) is mainly due to a scope effect related to the takeover of Edison in 2012.

At **EDF Énergies Nouvelles**, commissioning of new generation facilities led to a €60 million increase in net depreciation and amortisation.

1.3.3.3 Net increases in provisions for renewal of property, plant and equipment operated under concessions

The €64 million rise in net increases in provisions for renewal of property, plant and equipment operated under concessions between 2012 and 2013 is mainly attributable to ERDF.

1.3.3.4 Impairment / reversals

In 2012, impairment of €752 million was recorded, chiefly concerning CENG in the United States (**Other international** segment: €396 million) due to the less favourable outlook for forward electricity prices, the **United Kingdom** (€234 million) for fossil-fired plants, and Edison in **Italy** (€44 million).

In 2013, impairment amounted to €1,012 million and essentially concerned Belgium (€229 million for an EDF Luminus fossil-fired generation plant), the Sloe power plant in the Netherlands (€174 million in view of the long-term deterioration in the spark spread[1]), CENG (€146 million due largely to a further decline in the outlook for forward electricity prices in the United States) and Poland (€125 million following suspension of the supercritical coal-fired power plant project).

1.3.3.5 Other income and expenses

Other income and expenses generated net income of €388 million in 2013 compared to a net expense of €5 million in 2012.

In 2012, the main components of other income and expenses were:

- a net expense of €(70) million resulting from upward revision of the estimated costs for decommissioning permanently shut-down nuclear power plants in France (UNGG power plants, Creys-Malville, Brennilis and Chooz A), and the revision of certain costs related to interim storage of spent fuel;
- income of €160 million concerning ERDF, resulting from reversal of a provision for renewal following a change in estimate for the useful life of high/low voltage transformers (extended from 30 years to 40 years);
- also, application of IFRS 3 (revised) led to recognition of the following items in Other income and expenses in connection with the takeover of Edison:
  - a loss of €1,090 million on the previously-held investment,
  - negative goodwill of €1,023 million.

In 2013, the main components of other income and expenses were:

- income of €472 million related to the favourable effect of the pension reform in France, presented in section 1.2.2.5.1.5;
- restructuring expenses amounting to €60 million for the Group's activities in Belgium, the United States and certain central European countries.

1.3.4 Financial result

(in millions of Euros)	**2013**	2012 restated	Variation	Variation (%)
Cost of gross financial indebtedness	(2,403)	(2,443)	40	-1.6
Discount effect	(2,982)	(3,261)	279	-8.6
Other financial income and expenses	2,296	2,370	(74)	-3.1
FINANCIAL RESULT	**(3,089)**	**(3,334)**	**245**	**-7.3**

The financial result for 2013 is a financial expense of €3,089 million, up by €245 million from 2012 as a result of the following:

- cost of gross financial indebtedness: the 1.6% decrease is related to the reduction in the Group's average gross debt;
- discount effect: the €279 million decrease in discount expenses is mainly explained by revision in 2012 of the discount rate used for nuclear provisions in France, which had no equivalent in 2013;
- other financial income and expenses: the unfavourable change essentially derives from the 2012 financial income of €629 million in compensation for the cost of bearing the accumulated shortfall in the CSPE system, which had no equivalent in 2013, partly offset by a rise in gains on sales of dedicated assets.

1.3.5 Income taxes

Income taxes amounted to €1,942 million in 2013, corresponding to an effective tax rate of 36.5%, against 32.6% in 2012.

This effective tax rate is driven up by impairment: after adjustment for this factor, it was 33.7% in 2013 and 29.1% for 2012.

The main causes of the rise in the effective tax rate between 2012 and 2013 are the unfavourable impacts of French finance laws in both years, which led to a rise in the tax rate to 38.0%, from 36.1% in 2012.

1. *The difference between the market price of electricity and the cost price of a plant; the Sloe plant runs on natural gas.*

1.3.6 Share in income of associates

The Group's share in income of associates was a positive €375 million in 2013, compared to €261 million for 2012. This increase is mainly explained by the growth in RTE's net income compared to 2012.

1.3.7 Net income attributable to non-controlling interests

Net income attributable to non-controlling interests (formerly called minority interests) amounted to €238 million in 2013, stable since 2012. It mainly concerns Centrica's investment in existing nuclear activities in the United Kingdom.

1.3.8 EDF net income

EDF net income totalled €3,517 million for 2013, an increase of €242 million or 7.4% compared to 2012.

1.3.9 Net income excluding non-recurring items

The Group's net income excluding non-recurring items[1] stood at €4,117 million for 2013, down by 1.4% from 2012.

1. *Group net after-tax income excluding non-recurring items and net changes in fair value on Energy and Commodity derivatives, excluding trading activities, net of tax.*
   Non-recurring items and net changes in fair value on Energy and Commodity derivatives, excluding trading activities, net of tax in 2013 (-€600 million) comprised:
   - *-€615 million for impairment and reversals from provisions;*
   - *+€15 million of net changes in fair value on Energy and Commodity derivatives, excluding trading activities.*

   Non-recurring items and net changes in fair value on Energy and Commodity derivatives, excluding trading activities, net of tax in 2012 amounted to -€900 million.

1.4 Net indebtedness, cash flows and investments

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 regardless of their maturity and are managed according to a liquidity-oriented policy. It also includes the Group's loans to RTE and jointly-controlled companies.

The Group changed its analysis of changes in net indebtedness in 2013. In the course of its business the Group carries out investments and sales concerning tangible assets, intangible assets and securities. All these transactions are managed as a whole and their impact on the Group's business portfolio is identified as "net operating investments". Moreover, operations related to changes in the Group's business portfolio are identified as "net investments in strategic operations". Allocations to and withdrawals from dedicated assets are a key components of the change in net indebtedness, and are therefore analysed separately. The new analysis format this shows an intermediate total named "cash flow before dividends", which includes net operating investments and investments in strategic operations, together with allocations to and withdrawals from dedicated assets.

Changes in the Group's net indebtedness were as follows:

(in millions of Euros)	**2013**	2012 restated[5]	Variation	Variation (%)
Operating profit before depreciation and amortisation (EBITDA)	**16,765**	**15,998**	**767**	**+4.8**
Cancellation of non-monetary items included in EBITDA	(263)	(629)	366	
Net financial expenses disbursed	(1,799)	(1,634)	(165)	
Income taxes paid	(1,979)	(1,586)	(393)	
Other items including dividends received from associates	249	165	84	
Net cash flow from operations[1]	**12,973**	**12,314**	**659**	**+5.4**
Change in working capital	(1,783)	(2,390)	607	
Net operating investments[2]	(12,268)	(11,808)	(460)	
Cash flow after net operating investments and changes in working capital	**(1,078)**	**(1,884)**	**806**	
Net investments in strategic operations[3]	834	(3,040)	3,874	
Dedicated assets	2,443	(683)	3,126	
Cash flow before dividends[4]	**2,199**	**(5,607)**	**7,806**	
Dividends paid in cash	(2,565)	(2,355)	(210)	
Cash flow after dividends	**(366)**	**(7,962)**	**7,596**	
Issuance of perpetual subordinated bonds	6,125	-	6,125	
Other monetary changes	(96)	(119)	23	
(Increase) / decrease in net indebtedness, excluding the impact of changes in exchange rates	**5,663**	**(8,081)**	**13,744**	
Effect of change in exchange rates	406	(137)	543	
Effect of other non-monetary changes	44	(72)	116	
(Increase) / Decrease in net indebtedness	**6,113**	**(8,290)**	**14,403**	
NET INDEBTEDNESS AT BEGINNING OF PERIOD	**41,575**	**33,285**		
NET INDEBTEDNESS AT END OF PERIOD	**35,462**	**41,575**		

(1) Operating cash flow is not an aggregate defined by IFRS as a measure of financial performance, and is not directly comparable with indicators of the same name reported by other companies. This indicator, also known as Funds From Operations (FFO), is equivalent to net cash flow from operating activities excluding changes in working capital after adjustment for the impact of non-recurring items, less net financial expenses disbursed and income taxes paid.

(2) Net operating 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 and non-Group partner investments.

(3) Net investments in strategic operations are operations related to changes in the Group's business portfolio.

(4) Cash flow before dividends is not an aggregate defined by IFRS as a measure of financial performance, and is not comparable with indicators of the same name reported by other companies. It is equal to the operating cash flow defined in note (1) after the changes in working capital, net operating investments (note 2), net investments in strategic operations (note 3) and allocations and withdrawals from dedicated assets.

(5) Figures for 2012 have been restated to incorporate the change in accounting method for actuarial gains and losses on employee benefits under IAS 19 revised: the restatements to « EBITDA » and « Cancellation of non-monetary items included in EBITDA » amount to -€86 million and +€86 million respectively.

1.4.1 Operating cash flow

The operating cash flow amounted to €12,973 million at 31 December 2013 compared to €12,314 million at 31 December 2012, up by €659 million or 5.4%.

This increase principally reflects the rise in EBITDA (+€767 million), partly counterbalanced by the rise in income taxes paid (-€393 million) and net financial expenses (-€165 million). The decrease in interest expenses (+€125 million) was more than offset by the change in accrued interest (-€222 million).

1.4.2. Change in working capital

The change in working capital over 2013 amounted to €1,783 million, chiefly explained by:

- a €690 million increase in inventories, essentially driven by a price effect on nuclear fuels;
- acquisition of CO_2 emission rights in the United Kingdom and France (+€336 million) after changes in the legislation in 2013;
- tariff rises as of 1 August 2013, amounting to €188 million;
- a €148 million decline in supplier payables related to purchase obligations, essentially attributable to a volume effect.

1.4.3 Net operating investments

Net operating investments amounted to €12,268 million for 2013, compared to €11,808 million in 2012:

(in millions of Euros)	**2013**	2012 restated	Variation	Variation (%)
Generation and Supply (deregulated activities)	5,347	4,348	999	+23.0
Network activities	3,074	2,887	187	+6.5
Island activities	424	772	(348)	-45.1
France	**8,845**	**8,007**	**838**	**+10.5**
United Kingdom	1,172	1,364	(192)	-14.1
Italy	312	442	(130)	-29.4
Other International	711	493	218	+44.2
International	**2,195**	**2,299**	**(104)**	**-4.5**
Other activities	**1,228**	**1,502**	**(274)**	**-18.2**
NET OPERATING INVESTMENTS	**12,268[1]**	**11,808**	**460**	**+3.9**

There was a €838 million (+10.5%) increase in net operating investments in **France** in 2013.

- In **Generation and Supply (deregulated activities)**, the increase is concentrated on nuclear maintenance (+€989 million), principally asset maintenance operations. The rise is attributable to expenditure to improve the nuclear plant performance, and an enhanced management plan that resulted in better monitoring of general maintenance expenses and scheduled checks carried out at regular intervals. These checks qualify as major inspections and the related costs are capitalised;
- Investments were up by +€187 million on the **network activities**, principally for user connections and smart grids;
- The lower level of investments in the **island activities** is explained by the fact that several fossil-fired plants were commissioned in 2013 or are due to be commissioned in 2014.

Net operating investments in the **International** segment were down by -€104 million or -4.5%.

- In the **United Kingdom**, the decline of -€192 million (-14.1%) is mainly explained by the decrease in net operating investments related to renewable energies (-€138 million) and the commissioning of the West Burton B fossil-fired plant in 2013 (-€61million);
- In **Italy**, the -€130 million in net operating investments (-29.4%) is chiefly attributable to lower investments in gas exploration and production (-€52 million), and also in electricity generation (-€52 million);
- In the **Other International zone**, net operating investments were up by +€218 million in 2013, principally in the Asia-Pacific region where expenditure rose in connection with construction of the Taishan EPR (+139 million).

Net operating investments in the **Other activities** were down by -€274 million or 18.2%. This change is primarily due to:

- a lower level of operating investments by EDF Énergies Nouvelles;
- a larger volume of sales in 2012 than 2013 by the Group's real estate subsidiaries.

1. *In 2013 this figure includes €163 million of connection subsidies for the distribution activities, which were included in net investments in strategic operations in 2012 (€175 million).*

1.4.4 Net investments in strategic operations

Net investments in strategic operations concern changes in the Group's business portfolio.

In 2012, they concerned the takeover of Edison.

In 2013, these operations covered the sale of the Sutton Bridge plant for €196 million, in line with the commitment made to the European Commission when British Energy was acquired, and disposals of assets unrelated to the Group's core businesses: minority interests in SSE in Slovakia for €376 million and Veolia for €262 million.

1.4.5 Dedicated assets

In compliance with the French Law of 28 June 2006 on the sustainable management of radioactive materials and waste, EDF has built up a portfolio of dedicated assets for secure financing of its long-term nuclear obligations which amounted to €21,737 million at 31 December 2013.

Changes in dedicated assets reflect:

- allocations, to reach full coverage of obligations and investment of the financial income generated by these assets;
- withdrawals of assets corresponding to the costs incurred over the year 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.

In 2012, there was a net inflow of €683 million, mainly corresponding to allocations during the year.

The change in 2013 mainly reflects the exceptional withdrawal of +€2,407 million and the allocation of the total CSPE receivable to the dedicated asset portfolio on 13 February 2013; these two operations brought coverage of EDF's nuclear liabilities concerned by the Law of 28 June 2006 to 100%.

Finally, the acquisition of TIGF, the Total group's gas transport and storage subsidiary in the south-west of France, was entirely allocated to dedicated assets and also financed by them, resulting in a neutral net flow.

1.4.6 Cash flow before dividends

Cash flow before dividends in 2013 was positive at €2,199 million (compared to -€5,607 million in 2012) and is mainly explained by the following factors:

- net cash flow from operations of €12,973 million (see 1.4.1);
- a change in working capital of -€1,783 million over 2013 (see 1.4.2);
- net operating investments of -€12,268 million (see 1.4.3);
- a positive effect of €834 million resulting from strategic operations (see 1.4.4);
- a positive effect of €2,443 million resulting from dedicated assets (see 1.4.5).

The €7,806 million difference from 2012 is essentially due to the exceptional withdrawal from dedicated assets in 2013 (+€2,407 million against an allocation of €737 million in 2012), strategic operations (+€3,874 million, especially due to the takeover of control over Edison in 2012), and the higher cash flow after net operating investments (+€806 million).

1.4.7 Dividends paid in cash

Dividends paid in cash (€2,565 million) comprise:

- the balance of the 2012 dividends (€1,085 million);
- the interim dividend for 2013 (€1,059 million) decided by the Board of Directors on 26 November 2013 and paid on 17 December 2013 at the rate of €0.57 per share;
- dividends paid by Group subsidiaries to their minority shareholders (€318 million);
- the payments made to bearers of perpetual subordinated bonds (€103 million).

1.4.8 Cash flow after dividends

The cash flow after dividends improved by €7,596 million from 2012, reflecting the change in the cash flow before dividends.

1.4.9 "Hybrid" bond issue

In January 2013, the Group issued a "hybrid" bond for an equivalent of €6,125 million (net of transaction costs) in several different tranches and several currencies:

- $3,000 million at 5.25% with a 10-year first call date;
- £1,250 million at 6% with a 13-year first call date;
- €1,250 million in Euros at 4.25% with a 7-year first call date;
- €1,250 million in Euros at 5.375% with a 12-year first call date.

Details of this bond are given in section 1.6.1.1.2 below.

1.4.10 Foreign exchange effects

The foreign exchange effect (the pound sterling's decline against the Euro[1]) had a favourable impact of €406 million on the Group's net indebtedness at 31 December 2013.

1.4.11 Net indebtedness

The Group's net indebtedness stood at €35,462 million at 31 December 2013 compared to €41,575 million at 31 December 2012, down by €6,113 million over 2013. This decrease is principally explained by the hybrid bond issue in January 2013 (€6,125 million) and the withdrawal of €2,407 million from dedicated assets in March 2013 after the CSPE receivable was allocated to dedicated assets.

1. *The pound sterling fell by 2.0% against the Euro, from €1. 2253/£1 at 31 December 2012 to €1.995/£1 at 31 December 2013. The US dollar fell by 4.0% against the Euro, from €0. 7579/$1 at 31 December 2012 to €0.7251/$1 at 31 December 2013.*

1.4.12 Financial ratios

	2013	2012[1] proforma	2012 restated
Net financial debt / EBITDA	2.1	2.4[2]	2.6[2]
Net financial debt / (Financial debt + equity)[3]	48%	56%	57%

(1) The 2012 proforma ratios have been restated to reflect allocation of the CSPE receivable to dedicated assets on 13 February 2013 and withdrawal of €2.4 billion of assets, such that 100% of EDF's eligible nuclear liabilities are covered by the dedicated assets.

(2) The 2012 NFD/EBITDA ratios include 100% of Edison's restated EBITDA in the denominator and the restatement resulting from application of IAS 19 revised.

(3) Equity including non-controlling interests, restated following application of IAS 19 revised.

1.5 Research and Development

1.5.1 Research and Development, patents and licences

The primary objective of the EDF group's Research and Development (R&D) Division is to contribute to performance improvement in the operational units, and identify and prepare medium and long-term growth engines. In 2013, the Group's total R&D expenses amounted to €543 million (compared to €523 million in 2012), around 20% of which were directed into environmental issues. This 20% share of R&D expenses particularly concerned research into energy efficiency, use of electricity as a substitute for fossil energies, renewable energies and their incorporation into the electricity system, sustainable cities, the local impacts of climate change, biodiversity and water quality.

Close to 70% of EDF's R&D activities each year concern projects instigated by the operational divisions and Group subsidiaries, with the rest concentrated on medium and long-term actions for the future - one of the main priority areas for R&D. EDF's Research and Development Division employed more than 2,000 members at 31 December 2013 on seven sites (three in the Paris area, one in Germany, one in the UK, one in Poland and one in China).

R&D is reinforcing its capacity to enhance innovations and put them into production, and developing an approach that is open to external innovation:

- capitalising on internal innovation, and accelerating the "time to business" through joint action with the business lines in order to speed up and/or encourage the industrialisation phase;
- being more open to external innovation, and where relevant, adopting external innovations for demonstration. This is why EDF is the lead investor of Electranova Capital, a venture capital fund launched in May 2012 for start-up firms specialising in clean technologies.

Under the supervision of the CRE in application of the third Paquet Énergie progamme, EDF and RTE have agreed to adjust the contractualisation arrangements for studies and trials conducted by EDF's R&D for RTE. As a result of this adjustment, EDF bought the RTE-owned laboratories on the Renardières site in December 2013.

In November 2010, EDF's Board of Directors validated the plan to establish EDF's principal R&D centre on the Paris-Saclay Campus. Up to 1,500 people will work at this centre, including Group researchers, PhD students and interns. EDF is thus giving its R&D a new ambition, and placing innovation and scientific and industrial research at the heart of its priorities. A new EDF training centre will be established nearby. This same-site research centre and training centre will together form the "EDF Lab Paris-Saclay" facility, for which the first stone was laid in a ceremony held on 10 October 2013 attended by the Prime Minister. This strategy positions EDF as a leading actor on the Paris-Saclay Campus, and will give the Group a closer cooperation dynamic with the public and private higher education and research establishments located nearby.

1.5.2 R&D priorities

EDF's R&D ambitions focus on three priority areas:

- consolidating and developing a carbon-free energy mix;
- fostering flexible, low-carbon energy demand;
- adapting the electricity system in response to the latest issues.

In the first of these areas, the key objectives are to consolidate the Group's nuclear advantage, develop renewable energies, and examine the industrial feasibility of carbon capture and storage. After the Fukushima accident in 2011, research intensified on the themes of safety, the environment (external events) and operating lifetimes, but also turned to new topics such as rehabilitation of a populated area evacuated after a nuclear incident.

To reinforce and secure the Group's nuclear advantage, R&D is working to protect EDF's assets, taking a continuous improvement approach to plant safety in its search for ways to enhance performance and extend operating lifetimes. Action in this area also covers questions related to the fuel cycle, leading to assessment of new plant design, particularly 4th-generation facilities and small modular reactors (SMRs). Finally, R&D action contributes to knowledge and control of the environmental impact of installations, and consideration of environmental risks for industrial equipment. In-depth understanding of the phenomena involved is required to address these issues. To support these programmes, the R&D teams are developing digital simulators and experimental testing resources, as well as tools to respond to the new challenges brought about by growth in the mass of digital data, IT security and new information and communication technologies.

In the field of renewable energies, R&D seeks to identify technological breakthroughs with significant competitive value, and to help bring the most promising technologies into industrial existence, in partnership with the academic and industrial worlds. EDF studies a large range of renewable energies: hydropower, photovoltaic solar power, onshore and offshore wind power, thermodynamic solar power, biomass, marine energies, and geothermal energies.

The R&D teams also work on developing tools and methods to reinforce operating performances and optimise the costs of the EDF group's projects concerning renewable energy-based electricity generation systems, in order to:

- reduce the risks on investments;
- improve operating performance;
- control the technical and economic impact on the electricity system.

For carbon capture and storage, R&D aims to provide a clear view of the technical and economic maturity of different energy sources, for greater awareness in future development of the Group's fossil-fired plants (coal and gas). R&D works alongside EDF's Heat generation and engineering division on pilot schemes, for instance a pilot scheme for amine-based carbon capture in the reactors of Le Havre power plant.

In the second priority area, EDF's R&D is organising its action around several priority themes:

- developing load curve methods and models that will give improve knowledge of demand and **new tariff and pricing approaches** that provide incentives for dynamic demand management, so that the Group can meet new flexibility requirements in the electricity system (upstream-downstream optimisation and intermittence of renewable energies);
- innovating to develop **new uses for electricity** (heat pumps for buildings and industry, electric mobility) to revitalise the future demand for electricity;
- proposing **efficient energy solutions** for all customer segments, compatible with the new regulatory frameworks;
- developing methods and tools for **modernisation of customer relations** thanks to new information technologies and the associated data processing, experimenting with **smart grids upstream of the meters, in liaison with development of the Linky smart meter,** and preparing for development of Linky-ready services and facilities in buildings;
- developing the technical building blocks for a range of services for the **city and sustainable territories.**

The **third priority area** for R&D is adapting the electricity system to a carbon-free economy: this will require skills for managing intermittent supply, incorporating new uses of electricity while optimising generation facilities and network requirements, developing energy management systems on a local scale, and optimising electricity flows on a continental scale.

The shift towards "smart grids" is a cornerstone of these R&D efforts. In anticipation of the arrival of new technologies and their impact on the changing energy landscape, the R&D teams are developing energy system models that offer better control of the supply-demand balance. They supply innovative solutions that facilitate incorporation of decentralised intermittent generation, improving management of network assets (wear and tear of equipment, metering procedures, automation to optimize quality and cost, etc). R&D is contributing to several smart grid demonstrators in Europe. On 13 September 2013 EDF also inaugurated an experimental platform at its Renardières site, to plan for and assist the transition from electricity systems to smart grids. This platform, called Concept Grid, offers the option to carry out complex full-scale stress tests that are impossible with the real network. R&D is also preparing for the emergence of large continuous-current networks or "super grids" in Europe and throughout the world.

1.5.3 An integrated actor in French, European and worldwide research

To carry out its Research and Development programmes, EDF R&D concludes partnerships across the whole world.

Since 2010, three international R&D units have been set up, one in Poland, the second in the United Kingdom and the third in China, in addition to the existing centre in Germany.

These centres have the following objectives:

- to support the Group's activities by providing R&D skills to Group subsidiaries in their own country, either directly or with the support of the Group's R&D teams;
- to take advantage of centre locations to identify local advances and technological initiatives, experiment with innovative solutions by participating in demonstrators, and conclude partnerships with universities, institutes and industrial actors in certain target field.

In France, R&D has 14 shared laboratories set up over the years with academic research partners (including several with Paris-Saclay Campus partners), and technical or industrial centres. Through these laboratories the Group contributes to joint research projects funded by national agencies. Since 2012 four important initiatives have emerged in connection with the Plateau de Saclay campus project, joining the creative dynamic of the University/Industry cluster: a programme of research into optimisation for production management and planning with the Fondation de Mathématiques Hadamard (PGMO programme), a joint laboratory with electrical engineering school Supelec concerning smart grids (RiseGrid), another shared laboratory with telecom engineering school Telecom ParisTech, concerning the Internet of Things and cybersecurity (SEIDO), an earthquake research institute with the CEA, ENS Cachan and École Centrale de Paris (SEISM), the laboratory for the Mechanics of Sustainable Industrial Structures which already involves EDF, the French national research centre CNRS and the Atomic Energy Commission (CEA) research centre at Saclay and will be joined by ENSTA engineering school in 2014 , and finally renewal of the shared laboratory on Finance and Energy Markets with Dauphine university, ENSAE and the École Polytechnique.

In nuclear R&D, the three sided agreement between the CEA, EDF and AREVA set to expire at the end of 2012 was extended in 2013. Discussions regarding what should follow the agreement were finalised in late 2013. A new agreement, founded on implementation of a joint institute for nuclear R&D, should be established in 2014 with the aim of increasing coordination of R&D programmes between the three partners (CEA, EDF and AREVA).

EDF's R&D also supports specific chairs of teaching and research, particularly through its Foundation for Tomorrow's Energies (*Fondation pour les Énergies de Demain*). In Europe, R&D is involved in some thirty projects. Working with the Energy Technology Institute, the Engineering and Physical Sciences Research Council and several UK universities, it is reinforcing its involvement in partnership-based research in the United Kingdom.

The R&D teams also entered projects for France's low-carbon energy excellence awards (part of the French government's project on Investments with a Future *(Investissements d'Avenir)*). EDF is involved in several of the winning projects announced by the government in March 2012: Institut Photovoltaïque Ile-de-France (IPVF) for photovoltaic power, *Paris-Saclay Efficacité Énergétique* (PS2E) concerning the energy efficiency of industrial processes and energy control in industial activity zones, *France Energies Marines* on marine power and offshore wind power, *SuperGrid* on the theme of major transmission networks to connect distant renewable energy generation sites, *Efficacity* on the sustainable city, *Vedecom* for electric mobility and *INEF 4* in the field of buildings rehabilitation and sustainable construction.

In Investments with a Future, EDF is the instigator of the *Connexion* project launched in 2012 for research on future digital nuclear control systems.

EDF's R&D also took part in two "Knowledge and Innovation Communities", European Commission initiatives to encourage knowledge and skill transfer between the worlds of education, research and industry. The priority areas are climate change, intelligent networks and smart cities, storage, and renewable energies. EDF's R&D and other European nuclear actors initiated the international association Nugenia, set up in March 2012 to provide a framework for R&D cooperation in Europe for 2nd and 3rd generation nuclear systems, as part of the European SNETP (Sustainable Nuclear Energy Technology Platform).

1.5.4 Intellectual property policy

At 31 December 2013, EDF had a portfolio of 497 patented inventions protected by 1,608 intellectual property titles in France and other countries.

EDF is also a registered trademark in more than 80 countries.

1.6 Management and control of market risks

1.6.1 Management and control of financial risks

This chapter sets forth the policies and principles for management of the Group's financial risks defined in the Financial Management Framework (liquidity, interest rate, foreign exchange rate and equity risks), and the Group counterparty risk management policy set up by the EDF group. These principles apply only to EDF and operationally controlled subsidiaries or subsidiaries that do not benefit by law from specific guarantees of independent management such as ERDF. In compliance with IFRS 7, the following paragraphs describe the nature of risks resulting from financial instruments, based on analyses of sensitivities and credit (counterparty) risks.

In view of the Group's international development, a dedicated body was formed at the beginning of 2002 – the Financial Risks Control department (*département Contrôle des Risques Financiers et Investissements* – CRFI) – to control financial risks at Group level by ensuring correct application of the principles of the Financial Management Framework. This department, which reports to the Group's Risk Control Division, 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 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.

1.6.1.1 Liquidity position and management of liquidity risks

1.6.1.1.1 Liquidity position

At 31 December 2013, the Group's liquidities, consisting of liquid assets, cash and cash equivalents, totalled €18,007 million and available credit lines amounted to €10,390 million.

For 2014, the Group's scheduled debt repayments (principal and interest) are forecast at €12,262 million at 31 December 2013, including €7,743 million for bonds.

At 31 December 2013, no Group company was in default on any borrowing.

1.6.1.1.2 Management of liquidity risk

As part of its policy to manage liquidity, finance its operating investment and external growth programme and reinforce long-term debt, the Group undertook bond issues during 2013 (for details see note 38.2.1 to the consolidated financial statements at 31 December 2013, "Changes in loans and other financial liabilities"). These bonds were issued either as part of EMTN (Euro Medium Term Note) programmes, or as stand-alone issues, for the total amount of €1,770 million (including €1,400 million of Green bonds), 1,000 million Norwegian kronor and 1,216 million Hong Kong dollars.

EDF also issued hybrid bonds in three currencies, for the equivalent of €6,125 million (net of transaction costs). The Euro and sterling tranches were negotiated on 22 January 2013. The US dollar tranche was negotiated on 23 January 2013. These bonds have perpetual maturity but include a redemption option at face value at the issuer's initiative, exercisable at the coupon payment dates after a certain contractual period. The tranches are as follows:

- £1,250 million with a 6% semi-annual coupon, with a 13-year first call date and subsequently at each coupon date;
- US$3,000 million with a 5.250% semi-annual coupon, with a 10-year first call date and subsequently at each coupon date;
- €1,250 million with a 4.250% annual coupon with a 7-year first call date and subsequently at each coupon date;
- €1,250 million with a 5.375% annual coupon with a 12-year first call date and subsequently at each coupon date.

On 20 November 2013, EDF undertook its first "Green Bond" issue totalling €1,400 million, with 2.25% annual coupon and maturity of 7.5 years.

The average maturity of Group debt was thus 8.9 years at 31 December 2013, compared to 8.5 years at 31 December 2012. For EDF SA, the average maturity of debt was 9.9 years against 9.6 years at 31 December 2012.

At 31 December 2013, the residual maturities of financial liabilities (including interest payments) are as follows under IAS 39 (values based on exchange and interest rates at 31 December 2013):

31 December 2013 *(in millions of Euros)*	Debt	Hedging instruments[1]		Guarantees given on bonds
		Interest rate swaps	Currency swaps	
2014	12,262	(170)	52	48
2015 - 2018	16,708	(333)	160	36
2019 and later	48,253	197	79	181
TOTAL	**77,223**	**(307)**	**292**	**265**
Debt repayment	52,046			
Interest expense	25,177			

(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 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 stand-by credit lines provided for subsidiaries, which may also receive revolving credit from the Group. The investment subsidiary EDF Investissements Groupe (EDF IG), set up in partnership with the bank Natixis Belgique Investissements, also provides medium and long-term financing for EDF group operations outside France, arranged independently by EDF IG. The company sets its own terms, which are the same as the subsidiary would have in an arm's-length market transaction;
- active management and diversification of financing sources used by the Group: the Group has access to short-term resources on various markets through programmes for French commercial paper (*billets de trésorerie*), US commercial paper and Euro market commercial paper. For EDF SA, the ceilings for these programmes are €6 billion for its French commercial paper, $10 billion for its US commercial paper and $1.5 billion for its Euro market commercial paper.

At 31 December 2013 the amount of commercial paper outstanding was €270 million for French commercial paper, and $4,775 million for US commercial paper. No Euro market commercial paper was outstanding. EDF has access to the world's main capital markets: the Euro markets through its EMTN (Euro Medium Term Note) programme, which currently has a ceiling of €30 billion, particularly for Euro and sterling issues; and the domestic markets used for stand-alone issues in US dollars (144A), yen (samurai bonds) and Swiss francs.

The table below sets forth the Group's borrowings of more than €750 million or the equivalent value in other currencies by maturity at 31 December 2013:

Entity	Issue date[1]	Maturity	Nominal amount (in millions of currency units)	Currency	Rate
EDF	01/2009	01/2014	1,250	USD	5.5%
EDF	07/2009	07/2014	3,269	EUR	4.5%
EDF	01/2009	01/2015	2,000	EUR	5.1%
EDF	10/2001	10/2016	1,100	EUR	5.5%
EDF	02/2008	02/2018	1,500	EUR	5.0%
EDF	01/2009	01/2019	2,000	USD	6.5%
EDF	01/2010	01/2020	1,400	USD	4.6%
EDF	05/2008	05/2020	1,200	EUR	5.4%
EDF	01/2009	01/2021	2,000	EUR	6.3%
EDF	11/2013[2]	04/2021	1,400	EUR	2.25%
EDF	01/2012	01/2022	2,000	EUR	3.9%
EDF	09/2012	03/2023	2,000	EUR	2.8%
EDF	09/2009	09/2024	2,500	EUR	4.6%
EDF	11/2010	11/2025	750	EUR	4.0%
EDF	03/2012	03/2027	1,000	EUR	4.1%
EDF	04/2010	04/2030	1,500	EUR	4.6%
EDF	07/2001	07/2031	650	GBP	5.9%
EDF	02/2003	02/2033	850	EUR	5.6%
EDF	06/2009	06/2034	1,500	GBP	6.1%
EDF	01/2009	01/2039	1,750	USD	7.0%
EDF	11/2010	11/2040	750	EUR	4.5%
EDF	10/2011	10/2041	1,250	GBP	5.5%
EDF	09/2010	09/2050	1,000	GBP	5.1%

(1) Date funds were received.
(2) Green Bond.

EDF has an overall amount of €9,568 million in available credit facilities (syndicated credit and bilateral lines). On 16 December 2013, EDF signed an amendment agreement to its € 4 billion 5-year syndicated loan facility of 22 November 2010 with a group of 23 European and international banks, extending the maturity of the facility to November 2018 (with two additional extension options, each for one year) while improving the financial terms (notably reducing the spread from 35 to 20 base points). Credit lines represent an available amount of €5,568 million, with expiry dates between January 2015 and September 2018. The level of credit facilities is regularly reviewed to ensure that the Group has sufficient back-up facilities. No drawings had been made on the syndicated credit at 31 December 2013.

The €500 million credit line with the European Investment Bank was totally drawn at 31 December 2012 (drawings of €100 million in 2010, €350 million in 2011, and €50 million in 2012).

EDF Energy has a credit line from the EDF group that did not change over the year, and the credit lines for EDF Energy UK Ltd were not renewed during the period.

At 31 December 2013 Edison has credit lines with the EDF group that can be used in the event of liquidity difficulties, and in July 2013 it subscribed a new €500 million credit line with a pool of banks (with maturities between 1 and 5 years).

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 2013.

Company	Agency	Long-term rating (LT)	Short-term rating (CT)
EDF	Standard & Poor's Moody's Fitch Ratings	A+, stable outlook Aa3, negative outlook A+, negative outlook(1)	A-1 P-1 F1
EDF Trading	Moody's	A3, negative outlook	n.a.
EDF Energy	Standard & Poor's Moody's	A, negative outlook n.a.(2)	A-1 n.a.
Edison	Standard & Poor's Moody's Fitch Ratings	BBB+, stable outlook Baa3, stable outlook(3) n.a.(4)	A-2 n.a. n.a.

n.a. : non applicable

(1) Fitch Ratings placed EDF on negative outlook on 1 July 2013 (as the electricity tariff rises were considered too low to maintain a level of indebtedness consistent with an A+ rating.
(2) Moody's stopped rating EDF Energy (LT and ST) on 17 April 2013.
(3) Moody's placed Edison on stable outlook on 26 September 2013.
(4) Fitch Ratings stopped rating Edison on 20 February 2013.

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 risks;
- association of assets and liabilities: the net assets of subsidiaries located outside the Euro zone expose the Group to a foreign exchange risk. The foreign exchange risk in the consolidated balance sheet is managed either by matching with liabilities for acquisitions in the same currency, or by market hedging involving use of financial derivatives. Hedging of net assets in foreign currencies complies with risk / return targets, and the hedging rate varies from 54% to 93% depending on the currency. 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 calculation;
- hedging of operating cash flows in foreign currencies: In general, the operating cash flows of EDF and its subsidiaries are in the relevant local currencies, with the exception of flows related to fuel purchases which are primarily in US dollars, and certain flows related to purchases of equipment, which concern lower amounts. Under the principles of the financial management framework, EDF and the main subsidiaries concerned by foreign exchange risks (EDF Energy, EDF Trading, Edison, EDF Énergies Nouvelles) are required to hedge firm or highly probable commitments related to these future operating cash flows.

After taking into account the financing and foreign exchange risk hedging policy, the Group's gross debt at 31 December 2013 breaks down as follows by currency after hedging:

Gross debt structure at 31 December 2013, by currency, before and after hedging

31 December 2013 *(in millions of Euros)*	Initial debt structure	Impact of hedging instruments(1)	Debt structure after hedging	% of debt
EUR	33,035	(472)	32,563	61%
USD	10,258	(4,786)	5,472	10%
GBP	7,959	5,116	13,075	25%
Other currencies	2,061	142	2,203	4%
TOTAL	**53,313**	**-**	**53,313**	**100%**

(1) Hedges of liabilities and net assets of foreign subsidiaries.

The table below presents the impact on equity of an unfavourable variation in exchange rates on the Group's gross debt at 31 December 2013.

Sensitivity of the Group's gross debt to foreign exchange rate risks

31 December 2013 *(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	32,563	-	32,563
USD	5,472	547	6,019
GBP	13,075	1,308	14,383
Other currencies	2,203	220	2,423
TOTAL	**53,313**	**2,075**	**55,388**

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 2013[1] *(In millions of currency units)*	**Net assets**	Bonds	Derivatives	Net assets after management
USD	5,003	4,000	670	333
CHF (Switzerland)	1,408	760		648
HUF (Hungary)	125,622		92,594	33,028
PLN (Poland)	3,615		2,595	1,020
GBP (United Kingdom)	14,624	6,035	4,042	4,547
BRL (Brazil)	717			717
CNY (China)	7,019			7,019

(1) Net assets as at 30 September 2013; Derivatives and bonds as at 31 December 2013.

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 2013, 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 2013[1]			31 December 2012		
In millions	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	333	242	24	430	326	32
CHF (Switzerland)	648	528	53	473	392	39
HUF (Hungary)	33,028	111	11	34,758	119	12
PLN (Poland)	1,020	246	25	869	213	21
GBP (United Kingdom)	4,547	5,454	545	3,189	3,908	391
BRL (Brazil)	717	220	22	626	232	23
CNY (China)	7,019	841	84	5,870	714	71

(1) Net assets as at 30 September 2013.

The foreign exchange risk on available-for-sale securities is mostly concentrated in EDF SA's dedicated asset portfolio, which is discussed in section 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 2013.

1.6.1.4 Management of interest rate risk

The exposure of the Group's cash positions to interest rate fluctuations covers two types of risk: a risk of change in the value of fixed-rate financial assets and liabilities, and a risk of change in the cash flows related to floating-rate financial assets and liabilities.

To limit exposure to interest rate risk, the Group (apart from entities it does not control operationally) fixes principles as part of its general risk management policy, designed to limit the risk of change in the value of assets invested or possible increases in financial expenses. Some of the debt is variabilised and the distribution of exposure between fixed and floating rates is monitored with reference to asset / liability management criteria and expected fluctuations in interest rates. This distribution may involve the use of interest rate derivatives for hedging purposes.

The Group's debt after hedging instruments at 31 December 2013 comprised 75.8% at fixed rates and 24.2% at floating rates.

A 1% uniform annual rise in interest rates would generate an approximate €129 million increase in financial expenses at 31 December 2013, based on gross floating-rate debt after hedging.

The average cost of Group debt (weighted interest rate on outstanding amounts) was 3.8% in 2013.

The table below sets forth the structure of Group debt and the impact of a 1% variation in interest rates at 31 December 2013. The impact of interest rate fluctuations remains stable compared to 2012.

Group debt structure and sensitivity to interest rate

31 December 2013 *(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	47,826	(7,375)	40,451	-
Floating rate	5,487	7,375	12,862	129
TOTAL	**53,313**	**-**	**53,313**	**129**

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 at EDF SA, and their sensitivity to interest rate risks (impact on net income).

Sensitivity to interest rates of floating-rate instruments

31 December 2013 *(in millions of Euros)*	Value	Impact on income of a 1% variation in interest rates	Value after a 1% variation in interest rates
FLOATING-RATE SECURITIES	**2,774**	**(28)**	**2,746**

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 1.6.1.6, "Management of financial risk on EDF's dedicated asset portfolio".

Coverage of employee benefit commitments 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.

31.2% of the assets covering EDF's employee benefit liabilities were invested in equities at 31 December 2013, amounting to €2.6 billion.

At 31 December 2013, 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 44.5% in equities and equity funds, representing an amount of £421 million of equities.

At 31 December 2013, the British Energy pension funds were invested to the extent of 32.7% in equities, and equity funds, representing an amount of £1,413 million of equities.

CENG fund

CENG is exposed to equity risks in the management of its funds established to cover nuclear 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 2013.

Direct investments

At 31 December 2013, EDF no longer held a position in Veolia Environnement. EDF sold its entire investment in Veolia Environnement on 26 November 2013 for €262.1 million.

At 31 December 2013, EDF's investment in AREVA amounted to €162.8 million, with estimated volatility of 42.01% (annualised volatility of monthly returns observed over three years).

1.6.1.6 Management of financial risk on EDF's dedicated asset portfolio

The 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 48 to the consolidated financial statements at 31 December 2013.

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 association of assets and liabilities and asset management. The members of this Committee are independent of EDF. They are selected for their skills and diversity of experience, particularly in the fields of asset / liability management, economic and financial research, and asset management.

Governance and management principles

The governance principles setting forth the structure, decision-making process and management of dedicated assets are validated by EDF's Board of Directors. These principles also lay down rules for the asset portfolio's structure, selection of financial managers, and the legal, accounting and tax structure of the fund.

Strategic asset allocation is based on asset / liability reviews carried out to define the most appropriate target portfolio for financing long-term nuclear expenses. Strategic allocation is reviewed every three years unless circumstances require otherwise.

In 2013, to continue the diversification into real assets begun on 2010 with the shares of RTE, the Board of Directors approved a new strategic allocation for dedicated assets. Under this new allocation, a real assets portfolio has been set up alongside the diversified equity and bond investments. This portfolio is managed by EDF Invest which was formed in July 2013 following the decree of 24 July 2013 on secure funding for nuclear expenses (see section 1.2.2.2.1.1).

EDF Invest's objective is ultimately to have €5 billion of unlisted investments under management, representing approximately a quarter of the total dedicated assets, including 50% of shares in RTE which represent €2,567 million at 31 December 2013.

The financial portfolio contains principally 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% to international equities and 51% to bonds. A benchmark index is set for monitoring performance and controlling the risk on the financial 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.

Finally, the CSPE receivable was allocated to dedicated assets on 13 February 2013.

Tactical asset management is organised around several themes:

- monitoring of exposure between the "equities" and "bonds" sub-portfolios;
- within each sub-portfolio, allocation by "class of secondary assets";
- selection of investment funds, aiming for diversification:
  - by style (growth securities, unlisted securities, high-return securities),
  - by capitalisation (major stocks, medium and small 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 aim 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.

Changes in the portfolio during 2013

In September 2013 EDF Invest's real assets portfolio incorporated the 20% investment in TIGF, a gas transport and storage subsidiary located in south-west France acquired from Total through a consortium formed with Snam, the Italian gas transport and storage operator (45%) and GIC, the Singaporean sovereign fund (35%).

In application of the decree of 23 February 2007, on 8 February 2013 the French government authorised allocation of the CSPE receivable held by EDF to the dedicated assets for secure financing of long-term nuclear expenses. In view of this authorisation, the positive opinion of the Nuclear Commitments Monitoring Committee and the deliberations of the Board of Directors at its meeting of 13 February 2013, EDF decided to allocate the total receivable, which represents the accumulated shortfall in CSPE compensation at 31 December 2012, to dedicated assets. As a result, the objective of 100% coverage of long-term nuclear provisions was reached in advance of the legal deadline of June 2016 set by the "NOME" law on the new electricity market organisation.

The **total net allocation** to dedicated assets for 2013 amounts to €2,591 million, resulting from allocation of the CSPE receivable (€4,978 million at 13 February 2013 including accrued interest after revaluation by the CRE), net of withdrawals during the year (€2,407 million) and a €20 million cash allocation.

Disbursements relating to decommissioning expenses incurred in 2013 were financed by the dedicated asset portfolio to the extent of €326 million, compared to €350 million in 2012.

1. *A permanent internal committee for evaluation, consultation and operational decision-making for management of dedicated assets.*

Content and performance of EDF's dedicated asset portfolio

Breakdown of the portfolio

	31 December 2013	31 December 2012
Equities sub-portfolio	36.4%	41.6%
Bonds sub-portfolio	23.7%	39.3%
Cash sub-portfolio	3.7%	5.4%
CSPE after funding	23.2%	-
Real assets (EDF Invest)	13.0%	13.7%
TOTAL	**100%**	**100%**

At 31 December 2013, the total value of the portfolio was €21,737 million compared to €17,642 million in 2012 (pro forma figures for RTE share valuations following application of IAS 19 revised).

The distribution of the financial portfolio is also presented in note 48 to the consolidated financial statements at 31 December 2013.

Portfolio content under the classification from Article 4, decree 2007-243 of 23 February 2007

	31 December 2013		31 December 2012	
Categories (in millions of Euros)	Book value[1]	Realisable value	Book value	Realisable value
OECD government bonds and similar	2,643	2,828	4,205	4,564
OECD corporate (non-government) bonds	808	841	550	642
Funds investing in the above two categories	2,144	2,308	2,499	2,758
Equities traded on a recognised market	-	-	60	60
Funds not exclusively invested in OCED bonds	6,398	7,873	6,550	7,194
Loans, deposits and similar	5	5	-	15
TOTAL FINANCIAL PRODUCT PORTFOLIO	**11,998**	**13,855**	**13,864**	**15,233**
CSPE after funding	5,049	5,049	-	-
RTE (50% of the Group's investment)	2,015	2,567	2,015	2,409
Other unlisted securities and real estate assets	266	266	-	-
Adjustments on unlisted securities	8	-	-	-
TOTAL DEDICATED ASSETS	**19,336**	**21,737**	**15,879**	**17,642**

(1) See note 38 to EDF SA's corporate financial statements at 31 December 2013.

Performance of EDF's dedicated asset portfolio

The table below presents the performance by portfolio at 31 December 2013 and 31 December 2012:

(in millions of Euros)	**31/12/2013 Stock market or realisable value**	Performance for 2013		31/12/2012 Stock market or realisable value	Performance for 2012	
		Portfolio	Benchmark index[1]		Portfolio	Benchmark index[2]
Equities sub-portfolio	7,918	21.1%	20.5%	7,343	13.8%	14.4%
Bonds sub-portfolio	5,147	1.0%	2.2%	6,937	10.3%	10.6%
TOTAL FINANCIAL PORTFOLIO	**13,065**	**11.6%**	**10.9%**	**14,280**	**12.0%**	**12.6%**
Cash sub-portfolio	790	0.7%	0.1%	953	1.1%	0.2%
TOTAL FINANCIAL PORTFOLIO AND CASH	**13,855**	**11.1%**	**10.9%**	**15,233**	**11.1%**	**12.6%**
CSPE after funding	5,049	1.4%				
Real assets (EDF Invest)	2,833	11.1%		2,409	6.7%	
TOTAL DEDICATED ASSETS	**21,737**	**9.4%**		**17,642**	**10.4%**	

(1) Benchmark index in 2013: MSCI World AC DN hedged in Euros 50% (excluding emerging country currencies) for the equities sub-portfolio, Citigroup EGBI for the bonds sub-portfolio, Eonia Capitalisé for the cash sub-portfolio, 49% equities index + 51% bonds index for the total financial portfolio.

(2) Benchmark index in 2012: 50% MSCI World DN EUR hedged in Euros for the equities sub-portfolio, Citigroup EGBI for the bonds sub-portfolio, Eonia Capitalisé for the cash sub-portfolio, 50% equities index + 50% bonds index for the total financial portfolio.

2013 saw a continuation of the trends begun at the end of the first half of 2012.The equity markets progressed well as investors gradually gained confidence in the American and European economies. The Euro zone came out of the recession cause by the crisis in the Euro. In the United States, the sequesters of the early part of the year and the federal government shutdown in the autumn had few consequences apart from reorienting the Fed's monetary policy as announced in June and initiated in December, which was to gradually cut back its asset purchase programme. This reorientation drove American 10-year rates up by 1.76% to 3.03% in line with movements in French rates (from 2% to 2.56%) and German rates (1.32% to 1.93%). In contrast, Spanish and Italian rates fell, continuing the normalisation trend begun in 2012. Against this background, the investment policy consisted of keeping a fairly short bond portfolio which was being repositioned in Italy and Spain. In the financial portfolio, the equities sub-portfolio grew in proportion, principally because of a very pronounced market effect, as the equity markets rose sharply while the increase in risk-free rates made matters difficult on the bond markets.

In 2013, dedicated assets achieved a performance of +9.4%, with the financial portfolio registering +11.6%. The difference compared to the benchmark index performance (+10.9%) is explained by the large proportion of equities throughout the year, and favourable fund selection. The volatility of the equities and bonds sub-portfolios was below the benchmark index volatility. RTE shares registered a very sound performance.

Against this background, the overall after-tax performance of dedicated assets (impact on reserves and net income) was +€1,240 million: +€926 million on the financial portfolio and cash (+1,493 million before tax), and +€56 million for the CSPE receivable after funding (+€83 million before tax) and +€262 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 €7,918 million at 31 December 2013. The volatility of the "equities" sub-portfolio can be estimated on the basis of the volatility of its benchmark index, the MSCI World AC index, which at 31 December 2013 was 10.1% based on 52 weekly performances, compared to 10.2% at 31 December 2012. 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 €800 million. This volatility is likely to affect the Group's equity.

At 31 December 2013, the sensitivity of the bond sub-portfolio (€5,147 million) was 4.70, i.e. a uniform 100 base point rise in interest rates would result in a €242 million decline in market value which would be recorded in consolidated equity. While this sensitivity was lower than in 2012 (5.06), it remained well below the sensitivity of the benchmark index (6.44).

1.6.1.7 Management of counterparty / credit risk

Counterparty risk is defined as the total loss that the EDF group would sustain on its business and market transactions if a counterparty defaulted and failed to perform its contractual obligations.

The Group has a counterparty risk management policy which applies to the parent company and all operationally controlled subsidiaries. This policy defines the organisation of counterparty risk management and monitoring, and reporting procedures and circuits. It involves monthly consolidation of the exposures on financial and energy markets and half-yearly consolidation for all activities. The policy also includes close supervision of Group counterparties (daily review of alerts, special cautionary measures for certain counterparties).

These supervision procedures proved their robustness during the 2008 financial crisis, when the Group moved to a more frequent (quarterly) consolidation of all counterparty risks. Risk calculation methodologies were revised in June 2013[1] to better reflect the losses the Group could bear, and this led to a substantial decline in exposure related to insurance activities. The figures for 31 March and 30 September 2013 shown in the following tables are proforma figures that incorporate the new rules.

1. Regarding the insurance activity, the exposition integrates existing debts and the contract annual premium (and not anymore the value of property insured), because the premium reflects the estimate of the claims expectation made by the insurer.

The table below gives details, by rating, of the EDF group's consolidated exposure to counterparty risk. At 30 September 2013, 86% of Group exposure concerned "investment grade" counterparties:

	AAA	AA	A	BBB	BB	B	CCC/C	Unrated	Total
30/09/2013	6%	20%	39%	21%	3%	0%	1%	10%	100%
31/03/2013	7%	21%	36%	23%	3%	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 purchase and energy trading	Total
30/09/2013	4%	0%(1)	10%	72%	14%	100%
31/03/2013	4%	0%(1)	9%	70%	17%	100%

(1) 0.47% and 0.61% respectively at 31 March and 30 September 2013.

Exposure in the energy trading activities is concentrated at EDF Trading. Each counterparty of this subsidiary is assigned a limit, depending on its financial robustness. A range of means 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 has drawn up a framework specifying counterparty authorisation procedures and the methodology for calculation of allocated limits (which must correspond to requirements). The level of exposure can be consulted in real time and is systematically monitored on a daily basis. The suitability of limits is reviewed without delay in the event of an alert or unfavourable development concerning a counterparty.

In the context of the Euro zone's financial crisis, EDF continued to apply a prudent management policy for its cash investments in countries neighbouring France. Excluding dedicated assets, purchases of sovereign debt are restricted to Italy (no exposure in Portugal, Greece, Cyprus, Spain, etc) for maturities of less than one year. Only "investment grade" banking counterparts are authorised, for limited amounts and maturities.

1.6.2 Management and control of energy market risk

1.6.2.1 Framework for management and control of energy market risk

In conjunction 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.

This policy aims to:

- define the general framework for management of risks on the energy markets where the various Group entities carry out their asset portfolio management (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 controlled by EDF on the structured energy-related markets.

At Edison, which has been operationally controlled by EDF since 2012, application of the energy market risk policy began in 2012 with consolidation of Edison's positions in the Group's risk profile, and continues as Edison is integrated into the EDF group's risk policy.

At entities not operationally controlled by EDF, the risk management framework is reviewed by the governance bodies.

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 Group's Executive Committee (Comex) to set an annual Group risk profile consistent with the financial objectives, and thus direct operational management of energy market risks within the Group, generally over a 3-year market horizon.

Given its close interaction with the decisions made within the generation and supply businesses, this process involves Group management and is based on a risk indicator and measurement system incorporating escalation procedures in the event risk limits are exceeded.

The Group's exposure to energy market risks through operationally controlled entities is reported to the Comex on a quarterly basis. The control processes are regularly evaluated and audited.

1.6.2.3 Principles for operational management and control of energy market risk

The principles for operational management and control of energy market risks for 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 minimizes 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 2013 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 company's 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 interval[1]. 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 2013, EDF Trading's commitment on the markets was subject to a daily VaR limit of €45 million (with a daily confidence interval of 97.5%), and a stop-loss limit of €225 million[2].

The VaR and stop-loss limits were not exceeded in 2013, 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 its entire portfolio of assets and contracts (industrial portfolio), and on assets and contracts related to its trading business for the company's own purposes (trading portfolio). The level of economic capital engaged in the markets, expressed in terms of Profit at Risk (PaR)[4] is then determined using this net exposure. Edison also complies with the accounting obligations laid down in IFRS 7.

For an analysis of the fair value of the Group's commodity hedging derivatives, see notes 41.4.3 and 41.5 to the 2013 consolidated financial statements. For details of commodity contracts not classified as hedges by the Group, see note 42.3 to the same consolidated financial statements.

1.6.3 Management of insurable risk

The EDF group has an extensive insurance programme that covers EDF SA and controlled subsidiaries as they are integrated, including ERDF and Edison, which was integrated into the Group's main programmes in 2012 and 2013. The coverage, exclusions, excesses and limits are appropriate to each business and the subsidiaries' specificities.

The main insurance programmes cover:

- **conventional damage to Group property:** EDF is a member of the international mutual insurance company OIL[5]. Additional insurance coverage is provided by EDF's captive insurance subsidiary Wagram Insurance Company Ltd[6], 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) and the European Mutual Association for Nuclear Insurance (EMANI). In connection with CENG's operations in the United States, EDF Inc is a member of NEIL (Nuclear Electric Insurance Limited);
- **damage to merchandise transported;**
- **nuclear operator's civil liability:** EDF's current insurance policies comply with French law n° 68-943 of 31 October 1968, as amended by law n° 90-488 of 16 June 1990, which codified the civil liability obligations imposed on nuclear facility operators by the Paris Convention. To guarantee availability of the funds required to meet such obligations, EDF opted to use insurance policies. The cover provided by EDF's policies with Allianz and the European Liability Insurance for the Nuclear Industry (ELINI) is equal to the limits of liability set by law in the event of an accident, whether at a nuclear facility or during transport.

  For onsite accidents, total cover is €91.5 million per nuclear accident, for a maximum of two occasions per site within a three-year period. In accordance with the law, these insurance policies purchased do not include an excess amount. However, Oceane Re, a Group reinsurance company, shares this risk through reinsurance agreements entered into with Allianz and ELINI.

  In the United Kingdom, where EDF Energy operates nuclear plants, the liability scheme applicable to operators of nuclear facilities is similar to that in France. EDF Energy is insured to the extent of £140 million, the current limit for civil liability applicable to nuclear plant operators in the United Kingdom. Since 1 January 2014, this insurance has been provided by ELINI and Wagram Insurance Company Ltd. Oceane Re is associated with this risk via th reinsurance contract issued to the benefit of Wagram Insurance Company Ltd.

1. *EDF Trading assesses VaR by the Monte Carlo method, which refers to historical volatilities and correlations estimated on the basis of market prices observed over the 40 previous trading days. The VaR limit applies to EDF Trading's overall portfolio.*
2. *Five times the VaR, i.e. €225 million.*
3. *Net exposure is the residual exposure after using all natural hedging options provided by vertical and horizontal integration of the various techniques.*
4. *Profit at Risk or PaR is a statistical measure of the maximum potential decline, related to unfavourable market movements, in the margin compared to budget for a given time horizon and confidence interval.*
5. *Oil Insurance Limited.*
6. *An Irish insurance company fully-owned by EDF.*

In the United States, the specific Price-Anderson Act regime would apply in the event of a significant nuclear accident (above $300 million);

- **general civil liability:** this programme covers the Group against the possible financial consequences for third parties of the (non-nuclear) risks inherent to the EDF group's businesses;
- **civil liability of directors and senior executives:** EDF's insurance programme covers the Group's directors and chief executive officers;
- **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 for these assets worth €2.2 billion, both onshore and offshore. Through optimised use of EDF's membership of OIL, Edison was able to construct a new specific "Exploration and Production" programme from 1 January 2013;
- on 11 August 2011, ERDF took out a policy with Natixis/Swiss-Re for **coverage of ERDF's overhead distribution network** against the consequences of exceptional events such as storms and gales. This "cat-bond" provides maximum cover of €150 million, with payouts based on a parametric index dependent on wind speed. On 27 December 2011, additional €40 million coverage was subscribed for a four-year period, to reduce the excess.

The total value of premiums for all types of coverage provided by EDF's insurance programmes and Group programmes managed by EDF Assurances was €125 million in 2013, including integration of Edison (impact of €11.3 million), of which €62 million was borne by EDF (excluding investments) and €18 million was for coverage of ERDF's overhead networks.

1.7 Transactions with related parties

Details of transactions with related parties can be found in note 49 to the consolidated financial statements at 31 December 2013.

1.8 Principal risks and uncertainties

The principal risks and uncertainties to which the EDF group considers itself exposed are described in section 4.1 of the 2013 reference document.

The EDF group policies for risk management and control are described in section 4.2 of the 2013 reference document.

This presentation of the major risks describes the principal risks and uncertainties affecting the Group. The Group remains subject to the usual risks specific to its business.

1.9 Significant events related to litigation in process

Litigations concerning the EDF group are described in section 20.5 of the 2013 reference document. This chapter reports on litigations which have seen significant developments since the release of the 2012 reference document and the half-year financial report of 2013.

1.9.1 Proceedings concerning EDF

Solaire Direct

On 19 May 2008, Solaire Direct filed a complaint and an application for protective measures with France's Competition Council (*Conseil de la Concurrence*), alleging that the EDF group had abused its dominant position in the various electricity markets to penetrate the emerging comprehensive services market for shared photovoltaic electricity generation through its subsidiary EDF Énergies Nouvelles Réparties ('EDF ENR'), thereby hindering the entry of new competitors on that market.

The Council met on 26 November 2008 to consider the admissibility of the case on the merits and the request for protective measures. EDF proposed certain commitments to address concerns over competition expressed by the Council. These commitments were posted on the Council's website as part of a market test procedure, in order to allow interested companies to state their opinion.

In early 2009, the Competition Council, now renamed the Competition Authority (*Autorité de la Concurrence*) decided not to pursue the commitment proposal made by EDF, and to order protective measures relating to the methods used by EDF ENR to market global photovoltaic energy services, as well as investigating the substance of the complaint by Solaire Direct, without prejudice to the outcome of the proceedings. At that stage, the Competition Authority considered that the communication methods used by EDF maintained a confusion between EDF's role as electricity supplier subject to regulated tariffs, and the deregulated activities of its subsidiary. In a ruling of 8 April 2009, the Competition Authority ordered EDF (i) to delete every reference to EDF ENR's activity in the photovoltaic market from all communication materials for the Bleu Ciel® brand, (ii) to forbid agents answering calls on the 3929 hotline (a dedicated number for individuals and EDF clients) to make any reference to the services offered by EDF ENR, (iii) to cease all communication of information obtained through the 3929 hotline to EDF ENR, not only fixing appointments for EDF ENR but also passing on information about people interested in photovoltaic energy generation, and finally (iv) to refrain from providing EDF ENR with information EDF possesses as a result of its business as an electricity services provider subject to regulated tariffs. EDF complied with these orders within the deadlines set by the Competition Authority.

In a decision of 17 December 2013 issued once its investigation was over, the Competition Authority imposed a €13.5 million fine on EDF or having provided its subsidiaries operating in the photovoltaic sector tangible and intangible resources that were non-reproducible by competitors, which would have enabled those subsidiaries to benefit from its brand image and reputation and maintained a confusion between its business as electricity supplier subject to regulated sales tariffs and the business of its subsidiaries (communication documents, logos and brands, customer files). The Competition Authority also required EDF to publish a summary of the decision in two national daily newspapers to inform consumers. EDF intends to appeal against this decision.

Vent de colère

Following an appeal by the association "Vent de Colère" against the decision of 17 November 2008 setting the purchase tariffs for wind power, the French Council of State suspended judgment and submitted a preliminary question to the Court of Justice of the European Union, on the point of whether the purchase obligation financing system based on the CSPE should be considered as intervention by the State or through State resources as defined in the EU Treaty provisions concerning State aid, for the purposes of application of the treaty.

On 11 July 2013, the Advocate General at the Court of Justice issued his Opinion in response to the Council of State question, stating that the mechanism of financing wind power purchase tariffs by the CSPE does indeed qualify as "intervention by the State or through State resources".

On 19 December 2013, the Court concurred with the opinion of its Advocate General and confirmed this classification as "intervention by the State or through State resources" for the financing system for wind power purchase tariffs.

Following the Court's decision, the case should resume before the French Council of State, which will have to make a final ruling on the appeal lodged by "Vent de Colère" against the decision of 17 November 2008 setting the purchase tariffs for wind power.

Tax disputes

EDF has been subject to inspections of its accounts covering the years 2004 to 2010, and the Company has received proposed tax reassessments for those years. EDF is contesting most of these proposals. One of the main grounds for reassessment concerns the tax-deductibility of the provision for annuities following work-related accidents and illness; as this is an issue that relates to the special gas and electricity (IEG) statutes, it also concerns RTE, ERDF and Électricité de Strasbourg. The Group is contesting the tax authorities' position on this question. In late 2013 the National Commission of direct taxes and sales taxes issued several opinions that were favourable to RTE. RTE also received a favourable ruling by Montreuil Administrative Court. If the outcome of this dispute is unfavourable, the financial risk for the Group (payment of back income taxes) could amount to some €250 million.

EDF was notified in late 2011 of a proposed rectification for 2008, particularly concerning deductibility of certain long-term liabilities. During 2013, EDF received a letter from the tax administration accepting some of its arguments, which reduces the risk to €600 million. The Company considers it is likely to win this dispute, and no provision has been recorded in connection with this matter.

The tax administration has also proposed a reassessment concerning an interest-free advance made by EDF to its indirect subsidiary Lake Acquisitions Ltd in connection with the acquisition of British Energy. EDF is contesting this reassessment.

Greenpeace

A preliminary investigation was initiated in February 2009 before the Nanterre Criminal Court for "complicity and concealment of invasion of an automated data processing system" after a computer expert from a non-Group company claimed that in 2006 he had hacked into the computer used by former Greenpeace spokesman, Yannick Jadot, at the request of an EDF employee. The said employee and his supervisor were formally placed under investigation on 24 March and 10 June 2009 respectively, and were subject to disciplinary transfers. EDF was placed under investigation on 26 August 2009. EDF and the two employees were found guilty by Nanterre Court on 10 November 2011.

In a ruling of 6 February 2013, the Versailles Court of Appeal acquitted EDF and the supervisor. The guilty verdict was upheld for the other employee, who received a 6 month prison sentence. The employee concerned, Greenpeace and Yannick Jadot all lodged an appeal. On 29 November 2013 the *Cour de Cassation* noted that Greenpeace was withdrawing from the proceedings.

Packaging and interim storage installation for radioactive waste (ICEDA)

A decree of 23 April 2010 authorised EDF to open a regulated nuclear installation, a conditioning and interim storage installation for radioactive waste (ICEDA), in the town of Saint-Vulbas in the Ain *département* of France. Two petitions for cancellation of the decree were filed with the French Council of State in June 2010, one by Roozen, a horticultural company operating near the site, and the other by a group of environmental protection associations. Both were rejected by the Council of State in a decision of 1 March 2013.

A third petition for cancellation of the decree was filed in April 2012 before the Council of State by the city of Geneva, and the decision is still pending.

Roozen also filed a petition with the Lyon Administrative Court on 21 April 2010 seeking cancellation of the building permit. In a judgment of 13 December 2011, the Administrative Court cancelled the building permit due to violation of the local zoning plan. EDF lodged an appeal with the Lyon Administrative Court of Appeal. After this court confirmed cancellation of the building permit in a ruling of 19 June 2012, EDF filed a further appeal before the Council of State in August 2012.

Meanwhile, the town of Saint-Vulbas initiated a review of its local zoning plan together with the stakeholders, and EDF filed a new building permit application which is still being processed.

Roozen applied for an emergency injunction to suspend the zoning plan. The Judge at the Lyon Administrative Court dismissed this application on 16 January 2013 on the grounds that there was no urgency. On 17 December 2012 Roozen filed an appeal against the revised zoning plan, and the association SDN and the Republic and Canton of Geneva did the same on 3 and 5 April 2013. The investigation phase for these three proceedings was due to close on 10 January 2014.

On 21 August 2013, after the public inquiry was closed and an unreservedly favourable opinion had been issued by the investigating commission, the Prefect of the Ain issued a new building permit.

On 22 October 2013, Roozen lodged an appeal against this second building permit. The Republic and Canton of Geneva, and a private individual, also filed an appeal against this building permit before the Lyon Administrative Court on 20 December 2013.

EVASOL

On 26 July 2013 the liquidator of Evasol, a company that had operated in the energy-saving sector, brought action before the Lyon Commercial Court against EDF SA, EDF EN, EDF ENR and EDF ENR Solaire.

The case concerns various alleged breaches of competition law by these companies in the photovoltaic sector of France, which are claimed to be the direct cause of Evasol's liquidation.

Damages of €33,010,200 are being claimed, corresponding to the company's outstanding receivables (€13,010,200) and the value of its intangible business assets (€20,000,000).

Bugey 2 and 4

Following the third safety inspection of reactors no. 2 and no. 4 on the Bugey site with a view to extending operation for ten years, the French Nuclear Safety Authority (ASN) adopted decisions setting additional technical requirements in 2012 (for reactor no. 2) and 2013 (for reactor no. 4). These requirements are in addition to other technical requirements also applicable to reactors no. 2 and no. 4 adopted by the ASN on 26 June 2012 following supplementary safety assessments conducted after the Fukushima accident.

In December 2013, the Republic and Canton of Geneva filed two petitions before the Council of State for cancellation of these decisions.

1.9.2 Proceedings concerning EDF subsidiaries and investments

1.9.2.1 ERDF

Appeal against the TURPE 3 tariff decision

In a decision of 28 November 2012, the Council of State cancelled the decisions of 5 May and 5 June 2009 setting the TURPE 3 distribution network access tariff for the period 2010-2013.

The grounds for cancellation concerned the method used to calculate "weighted average cost of capital" (WACC): the Council of State judged this method "an error in law" because it does not take account of "the special concession accounts, which correspond to the grantor's rights to recover concession assets for no consideration at the end of the contract (…) and the provisions for renewal of assets".

This cancellation took effect from 1 June 2013.

In the meantime, in response to the Council of State decision, a "TURPE 3bis" tariff was set by the State based on the CRE proposal, to cover retroactively the period from 1 August 2009 to 31 July 2013. As the effective date of the TURPE 4 tariff was then deferred to 1 January 2014, a TURPE «3ter» tariff was introduced for the period 31 July – 31 December 2013. Finally, in deliberations of 13 November 2013, the CRE made a provisional decision regarding the TURPE 4, which was approved by the *Conseil Supérieur de l'Énergie* on 10 December 2013 and published in France's Official Journal on 20 December 2013.

1.9.2.2 EDF International

Tax disputes

The tax inspection of EDF International for the years 2008 to 2011 led to proposed rectifications received in late 2011 and late 2013. Two main reassessments amounting to some €265 million concerned the amount of the loss on the contribution of CEG shares to the American subsidiary EDF Inc, which arose in late 2009 and was deducted from EDF International's income, and the valuation of the bond convertible into shares issued to refinance the acquisition of British Energy. In 2012 EDF International contested these reassessments, and considers it has good chances of winning the dispute. In late 2012 EDF International began amicable proceedings, involving France and the USA and based on the US-France tax treaty, concerning the valuation of CEG shares at the time of the contribution.

ICC arbitration - Soroof vs EDFI

EDF set up a joint venture with Soroof International ("Soroof") in 2010, in order to penetrate the Saudi market and develop its activity in fossil-fired energy. EDF Saudi Arabia ("EDF KSA"), a Saudi Arabian company owned 85% by EDF International ("EDFI") and Soroof was formed on 8 March 2011 for a three-year duration.

EDF has not yet succeeded in developing projects that enable the company to position itself on the Saudi market. Soroof was expecting to receive income from this partnership and is claiming a loss of revenue.

Soroof filed a request for arbitration with the International Chamber of Commerce of Paris (ICC) against EDFI on 30 September 2013. Soroof bases its request on alleged breaches of contractual obligations by EDFI and is applying for (i) compensation for the financial prejudice suffered, (ii) compensation for the moral prejudice (damage to the image and reputation of Prince Bander, for an undetermined sum) and (iii) payment of the costs of the arbitration by EDFI.

EDFI responded to the request for arbitration on 5 November 2013. In its reply, EDFI contests Soroof's allegations and refers to Soroof's failures to execute contractual obligations as the basis for a counterclaim asking the Arbitral Tribunal to order Soroof to pay $15 million to cover (i) the amounts put into the partnership by EDFI and (ii)the damage to EDF's image.

1.9.2.3 EDF Énergies Nouvelles

Silpro

Silpro (Silicium de Provence) entered court-ordered liquidation on 4 August 2009. The EDF Énergies Nouvelles Réparties (EDF ENR) group held a 30% minority interest in Silpro alongside the principal shareholder, the German company Sol Holding. On 30 May 2011, the liquidator ordered the shareholders and managers of Silpro to jointly repay the shortfall in assets resulting from Silpro's liquidation, which amounts to €101 million.

In a ruling of 17 December 2013, the Commercial court of Manosque ordered the EDF ENR group to contribute €120,000 to repayment of the shortfall in Silpro's assets. The principal shareholder (Sol Holding) and the former managers were ordered to contribute €200,000 and €110,000 respectively. The court-appointed liquidator has appealed against this ruling.

1.9.2.4 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 the Italian regulatory (AEEG) and competition (AGCM) authorities, alleging that the joint takeover of Edison by EDF and A2A S.A. (formerly AEM S.p.A) 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 S.A., 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 S.A, and force EDF and A2A S.A. 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, which it was unable to precisely evaluate at the time and was to be assessed at a separate hearing.

ACEA also indicated that it would request the court to take interim measures to protect its interests until the court ruled on the merits of the case.

In January 2007, Endesa Italia joined ACEA in its legal action.

Endesa Italia, now named E.ON Italia, and EDF signed a settlement agreement in December 2010, in which E.ON Italia undertook to drop the case and all other claims against EDF in connection with EDF's indirect investment in Edipower. The judge formally acknowledged this agreement in an order dated 19 May 2011.

On 19 September 2013, the Rome Civil Court found in favour of EDF, rejecting all ACEA's claims. The court concluded that EDF had no liability in terms of competition or other offences, since all EDF's actions were authorised in advance by the competent supervisory bodies and that no standard had been breached. ACEA has 1 year and 45 days in which it may appeal.

Proceeding 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.

The proceedings for fraud against MontEdison (now Edison) were abandoned on 15 December 2009. The proceedings on the matters of environmental disaster and poisoning of water or food substances continued and on 18 April 2013 the competent judge referred the case against the former managers of MontEdison to the Chieti Assizes Court. On 2 May 2013, an appeal against the judge's decision was lodged before the Court of Cassation. This appeal was dismissed in a decision of 5 January 2014.

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 a deputy special commissioner on 4 October 2007 empowered to undertake urgent measures: identification, safety and rehabilitation measures for the land. The commissioner ordered Edison to prepare a survey of the zone, take emergency action 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 has challenged this judgment before the Italian Council of State.

1.9.3 Proceedings after the year-end

No other significant litigation has arisen since 31 December 2013.

1.10 Subsequent events

Details of post balance sheet events can be found in note 51 to the consolidated financial statements at 31 December 2013.

1.11 Financial outlook

The Group has set itself the following financial objectives for 2014:

- Group EBITDA excluding Edison: organic growth[1] of at least 3%;
- Edison EBITDA: expectation for recurring EBITDA of €1 billion and at least €600 million in 2014 before effects of gas contract renegotiations;
- Net indebtedness/EBITDA ratio of between 2x and 2.5x;
- A dividend distribution rate for the period of between 55% to 65% of net income excluding non-recurring items post hybrid[2].

The Group aims to make net investments[3] of between €13 billion and €13.5 billion in 2014.

In July 2011, when the Group announced its 2011-2015 outlook, it declared its goal of diversifying its energy mix and its geographic presence. It estimated its upper-end net investment target of €15 billion in 2015 on the basis of existing and identified projects.

Over the 2014-2018 period, the Group will deliver major industrial projects, some of which are in the advanced stages, like the LNG terminal in Dunkirk or the Flamanville 3 EPR with commissioning expected in 2015 and 2016, respectively. The Group also intends to continue its investments in the French distribution networks and in renewable energies, in line with its strategy of an integrated electricity company.

At the same time, the Group continues to improve and bolster the monitoring of cost controls. EDF launched, in 2011, the Group Synergies and Transformation (STG) programme focusing on ways to improve performance such as purchasing and synergy development, with the goal of generating gains of €2.5 billion by 2015 compared with 2010. These efforts have been pursued through the Spark programme, which was launched in 2013. Savings had already reached €1.3 billion at end-2013, well above the target. Going forward, the Group intends to consolidate the efficiency and the best practices that have been developed in the past three years. In particular, it plans to implement a new Operational Cost Control programme that will enable the Group to strengthen methods and processes for monitoring and optimising costs.

Therefore, the Group now anticipates that net investments[3] will peak in 2015 at €14 billion, and should decline as new assets become operational.

Taking into account this action plan over 2014-2018, the Group plans for its cash flow after dividends, excluding Linky, to be positive in 2018.

1.12 Information on EDF's capital and governance bodies

1.12.1 Capital

1.12.1.1 Changes in the capital

At the date of this document, EDF's share capital totals €930,004,234 divided into 1,860,008,468 fully subscribed and paid-up shares with nominal value of €0.50 each.

The Company has not issued or authorised any preference shares.

1. *Growth based on constant scope of consolidation and exchange rates.*
2. *Net income excluding non-recurring items adjusted for interest payments on hybrid bonds booked as equity.*
3. *Investments excluding Linky and strategic operations.*

1.12.1.2 Capital structure and voting rights

At the date of this document, EDF's share capital consists of registered or bearer shares which must at all times be held at least 70% by the French State, pursuant to article L. 111-67 of the French Energy Code.

These shares are freely negotiable subject to the laws and regulations in force and the statements below, and their sale or transfer is not restricted by any statutory provision.

To the best of the Company's knowledge, no restriction approved by a member of the Board of Directors exists concerning transfer of his shares within a certain time period, except for restrictions resulting from the Company's code of trading ethics.

Shares held through investment funds under the EDF group's corporate savings plan invested in EDF shares, or shares acquired from the State in application of privatisation laws, are subject to the unavailability or non-transfer rules resulting from the special provisions applicable to such operations.

Each share entitles the holder to one vote, and at the date of this document, there is no statutory restriction on the exercise of voting rights by shareholders.

At the date of this document, to the Company's knowledge no shareholder agreement concerning EDF shares has been concluded.

1.12.1.3 Shareholding structure and thresholds

At 31 December 2013, EDF's shareholding structure was as follows:

- French State: 84.49%;
- Institutional and private investors: 13.62%;
- Employees: 1.80%;
  - included: employee investment fund [1]: 1.53%,
- Treasury shares: approximately 0.09%;
- Total number of shares: 1,860,008,468.

1.12.1.4 Treasury shares

No EDF share is to be attributed to employees under the employee profit-share plan.

Liquidity contract

A liquidity contract that complies with the Charter of Ethics of the *Association Française des Marchés Financiers* (AMAFI) as approved by the French market authority AMF was entered into on 25 July 2012 with Oddo Corporate Finance.

The commission paid by EDF on its liquidity contract amounted to €80,000 for 2013.

Information on transactions undertaken by the Company on its own shares in 2013 under a share repurchase programme (repurchase programmes authorised by the shareholders at the General Meeting of 30 May 2013):

- Number of shares purchased and sold in 2013:

During the year 2013, EDF purchased 18,344,449 of its own shares and sold 18,761,766 shares under its liquidity contract. The average purchase price was €19.9427 per share, and the average sale price was €19.7274 per share.

- Value of the portfolio of treasury shares at 31 December 2013:

1,744,016 shares were registered in the Company's name at 31 December 2013. These shares represented approximately 0.09% of the share capital at 31 December 2013.

The book value of these shares at 31 December 2013 (based on purchase price) was €46,666,083.53 and their nominal value was €872,008.

The market value of the portfolio at that date (based on the closing market price of €25.685 at 31 December 2013) was €44,795,050.96.

- Allocation of the portfolio at 31 December 2013:

At 31 December 2013, the portfolio consists of 1,693,422 shares held for the purposes of the liquidity contract (0.0910% of the share capital) and the balance of 50,594 shares (0.0027% of the share capital) acquired on the market for attribution to employees under the "ACT 2007" free share plan, but not attributed to employees.

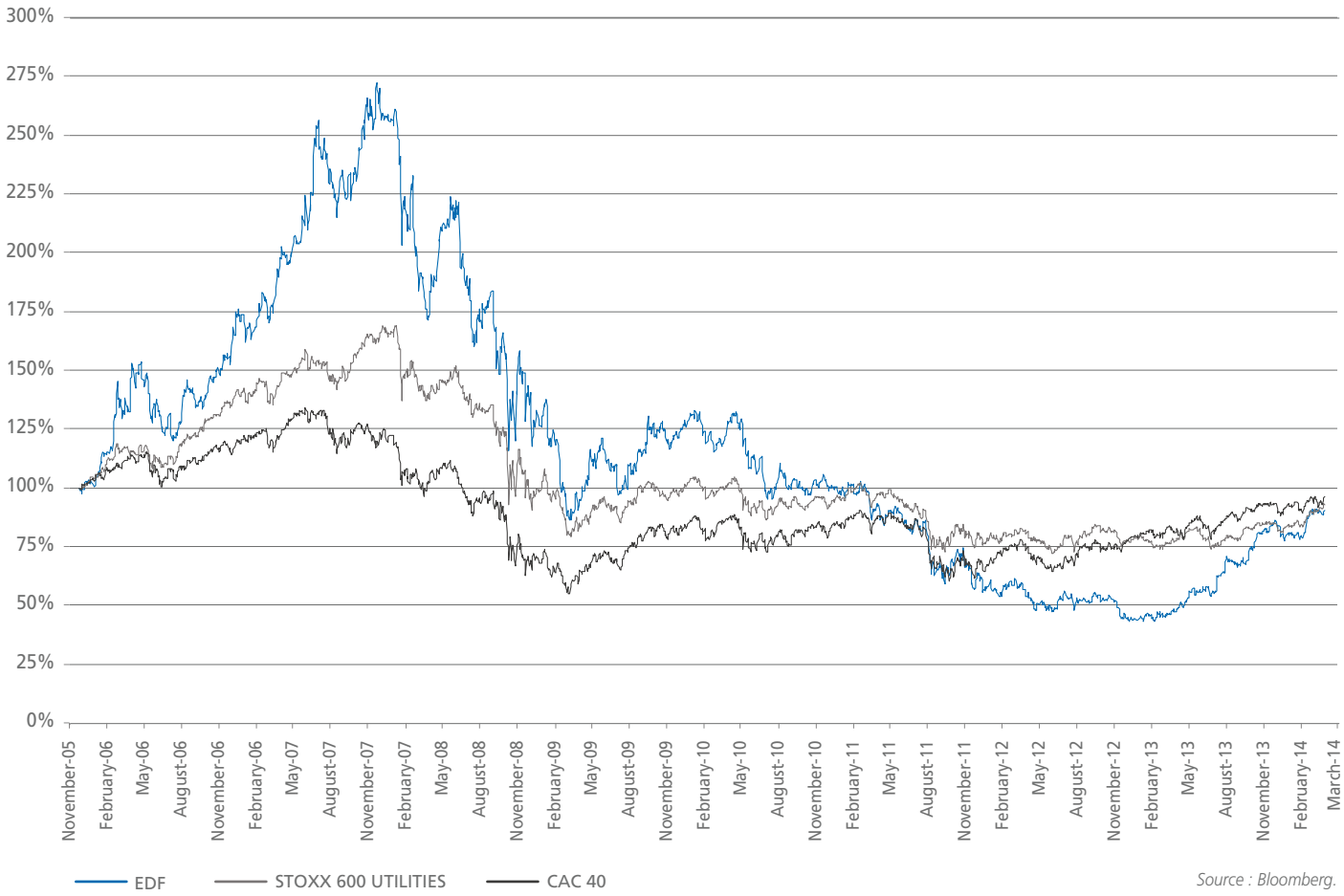
No shares were reallocated to other repurchase programme purposes in 2013.

1. *Company investment fund invested in EDF shares.*

1.12.1.5 Share price[1]

Movements in the EDF share price, which is part of the CAC 40 index, were as follows from its initial listing on 21 November 2005 up to 31 January 2014:

EDF share price from the IPO to 31 January 2014:



Source : Bloomberg.

From 31 December 2012 to 31 January 2014, the EDF share price rose by 80.40%, the Euro Stoxx Utility index rose by 7.35%, and the CAC 40 index rose by 14.41%.

At 31 January 2014, the EDF share price at close of business was €25.22 (€13.98 at 31 December 2012). Its lowest closing price during the period was €13.66 on 11 January 2013, and the highest closing price was €27.40 on 29 November 2013.

EDF's market capitalisation at 31 January 2014 was €46.91 billion.

1. *Source : Bloomberg.*

1.12.1.6 Authorisations to issue shares

The following table summarizes the authorisations to increase or reduce the capital in force at 31 December 2013 granted to the Board of Directors by EDF's shareholders at their General meetings of 24 May 2012 and details of their utilisation at the same date.

Securities concerned / type of emission	Duration[1] of the authorisation and expiry date	Maximum total nominal of the capital increase *(in millions of Euros)*	Utilisation of authorisation *(in millions of Euros)*
Delegation of authority to the Board to increase the capital, maintaining the shareholders' preferential subscription right			
Capital increase comprising all types of securities	26 months 24 July 2014	45[2]	none
Delegation of authority to the Board to increase the capital, with no preferential subscription rights for shareholders			
Capital increase comprising all types of securities	26 months 24 July 2014	45[2]	none
Delegation of authority to the Board to make private placement offering[3] with no preferential subscription rights for shareholders			
Capital increase comprising all types of securities	26 months 24 July 2014	45[2]	none
Authorisation to the Board to increase the number of shares to be issued in the event of a capital increase with or without preferential subscription rights			
Capital increase comprising all types of securities	26 months 24 July 2014	15% of the initial issue[2]	none
Delegation of authority to the Board to increase the capital by capitalisation of reserves, profits, premiums or other amounts eligible for capitalisation	26 months 24 July 2014	1,000	none
Delegation of authority to the Board to increase the capital as a result of an exchange offer instigated by EDF	26 months 24 July 2014	45[2]	none
Authorisation to the Board to increase the capital in return for contributions in kind[4]	26 months 24 July 2014	10% of the Company's share capital up to a maximum of 45[2]	none
Delegation of authority to the Board to increase the capital to the benefit of members of an EDF group savings plan Offerings reserved for employees	26 months 24 July 2014	10	none
Authorisation to the Board to reduce the capital by cancelling treasury shares	26 months 24 July 2014	10 % of the capital per 24-month period	none

(1) From 24 May 2012, date of the shareholders' meeting.

(2) The nominal €45 million overall limit for the capital increases applies to all capital increases except for capital increases by capitalisation of reserves, premiums, profits, or other amounts eligible for capitalisation, and capital increases reserved for members of a savings plan.

(3) Offerings covered by article L.411-2 II of the Monetary and Financial Code intended solely for people supplying portfolio management and investment services to third parties or for qualified investors, or for a small circle of investors acting on their own behalf.

(4) Article L. 225-147 of the Commercial Code.

1.12.1.7 Scope of consolidation

A list of all consolidated companies is included in note 52 to the 2013 consolidated financial statement.

1.12.2 Rules applicable to changes of bylaws

Under the French Commercial Code and article 20-4 of the bylaws, only an extraordinary General Shareholders' Meeting has the power to change the bylaws.

However, it is not entitled to increase shareholder commitments, except for operations resulting from reverse share splits carried out under the proper procedures.

Subject to the laws applicable to capital increases by capitalisation of reserves, profits or issue premiums, the meeting can only validly take decisions if the shareholders present, represented or voting by correspondence own at least one quarter on the first call, and at least one fifth on the second call, of shares carrying voting rights. If this quorum is not met, the second meeting may be postponed to a date no later than two months after the date the meeting was initially called for.

Subject to the same requirement, decisions at the extraordinary meeting require a two thirds majority of shareholders present, represented or voting by correspondence.

1.13 Corporate governance

Corporate governance is described in detail in chapter 16 of the 2013 reference document.

1.13.1 Board of Directors

During 2013 the Board of Directors met eleven times, and the Committees held twenty-five preparatory meetings.

The attendance rate at meetings of the Board of Directors was 87.8% on average in 2013.

1.13.1.1 Members of the Board of Directors

In compliance with article 6 of the Law of 26 July 1983 on the democratisation of the public sector, the Board of Directors has eighteen members: one third of members are elected by employees and two thirds are appointed by the shareholders after nomination by the Board of Directors, apart from members representing the French government who are appointed by decree.

There are 5 women on the Board of Directors, or 27.8% of the whole Board and 16.6% of the number of directors taken into account to establish the proportion under the AFEP-MEDEF governance code (see section 16.2.1.1 of the 2013 reference document).

At 1 February 2014, the Board of Directors consisted of the following Directors [1], presented by category:

Directors appointed by the General Shareholders' Meeting:

Henri Proglio

Date of birth: 29 June 1949

Chairman and CEO of EDF since November 2009

Chairman of the Board of Directors of Edison, EDF Energy Holdings and Fondation EDF

Director of EDF Énergies Nouvelles and EDF International (SAS)

Director of South Stream Transport BV, Fomento di Construcciones y Contratas, Natixis, and Dassault Aviation

Vice-President of the Board of Directors of Eurelectric

Vice-President of France's Strategic Nuclear Energy Committee

Member of the Atomic Energy Committee, the High Committee for transparency and information on nuclear safety and the National Committee for Business Sectors of vital importance

Director of EDF since September 2004

Philippe Crouzet

Date of birth: 18 October 1956

Chairman of the Supervisory Board of Vallourec

Chairman of Vallourec Tubes (formerly Vallourec & Mannesmann Tubes) and Vallourec Tubos do Brasil S.A. (formerly V & M do Brasil

Director of *Théâtre national de l'Opéra-Comique* and *Théâtre de la Ville* (Paris)

Director of EDF since November 2009

Mireille Faugère

Date of birth: 12 August 1956

Professional company director

Director of Essilor International and Fondation L'Oréal

President of the *Association HEC* committee

Vice-president of Fondation HEC

Director of EDF since November 2009

Michael Jay

Date of birth: 19 June 1946

Crossbench member of the British House of Lords

Director of Thomson Reuters Founders Share Company, Candover Investments, Valeo and Associated British Foods,

Director of EDF since November 2009

Bruno Lafont

Date of birth: 8 June 1956

Chairman and CEO of Lafarge

Director of ArcelorMittal

Chairman of the Medef Sustainable Development Commission

Chairman of the European Round Table's "Energy" group

Member of the Executive Committee of the World Business Council of Sustainable Development (WBCSD)

Director of EDF since May 2008

Pierre Mariani

Date of birth: 6 April1956

Managing Director and Chief Executive Officer of Pierre Mariani Consulting

Director of *Fonds hellénique de stabilité financière* (FHSF) and *Établissement public de la Réunion des Musées Nationaux et du Grand Palais*

Director of EDF since November 2009

Directors representing the French government, appointed by decree:

Olivier Appert

Date of birth: 19 April 1949

Chairman and CEO of IFPEnergies Nouvelles

President of the *Conseil Français de l'Énergie*

Member of the *Académie des technologies*

Director of Technip and CGG

Director of EDF since June 2013

David Azéma

Date of birth: 22 November 1960

Equity investments Commissioner at the French Ministry of the Economy and Finance and the Ministry of productive recovery

Director of Thalès, Bpifrance, Bpifrance Participations (formerly *Fonds Stratégique d'Investissement*), Bpifrance Investissement and Renault

Member of the Scientific committee of *La Fabrique de la Cité*

Director of EDF since November 2012

1. *Section 14.1 of the 2013 reference document.*

Bruno Léchevin

Date of birth: 27 January 1952

Chairman and CEO of the ADEME (Agency for the environment and energy control)

Vice-President of *Électriciens sans frontières*

Director of EDF since May 2013

Marie-Christine Lepetit

Date of birth: 27 August 1961

Head of the General Finance Inspectorate at the Ministry of the Economy and Finance

Director of EDF since May 2012

Denis Morin

Date of birth: 15 December 1955

Head of the budget reporting to the delegate Minister for the Economy and Finance, in charge of the budget

Director of SNCF

Member of the Atomic Energy Committee

Director of EDF since December 2013

Pierre Sellall

Date of birth: 13 February 1952

Secretary General of the Ministry of Foreign Affairs

Member of the Supervisory Board of AREVA

Member of the Atomic Energy Committee and the High Council of the *Institut du monde arabe*

Director of *École Nationale d'Administration*, France Médias Monde (formerly *Audiovisuel extérieur de France*), *Institut Français, Agence nationale des titres sécurisés, Commission de récolement des dépôts d'œuvres d'art* and *Établissement de préparation et de réponse aux urgences sanitaires*

Director of EDF since April 2009

Directors elected by the employees:

Christine Chabauty

Date of birth: 19 July 1971

Commercial attachée for Major Accounts at EDF's Sales Division

Member of an industrial tribunal

Director of EDF since November 2009, sponsored by the CGT union

Sidonie Delalande

Date of birth: 26 September 1977

Head of communication at the CCAS (central social activity fund) for the Electricity and Gas industries personnel for the Dauphiné Drôme Ardèche region

Director of EDF since 1 February 2014, sponsored by the CGT union

Alexandre Grillat

Date of birth: 8 December 1971

Director of Studies for ERDF's General Manager in Alsace-Franche Comté

Director of EDF since September 2004, sponsored by the CFE-CGC union

Marie-Hélène Meyling

Date of birth: 30 October 1960

Senior Engineer at EDF's Upstream / Downstream Optimisation and Trading division

Deputy member of the *Conseil Supérieur de l'Énergie* (CSE) as representative of employees in the Electricity and Gas industries, for the CFDT union

Director of EDF since September 2011, sponsored by the CFDT union

Jean-Paul Rignac

Date of birth: 13 May 1962

Research engineer at EDF's Research and Development division

Director of EDF since November 2007, sponsored by the CGT union

Maxime Villota

Date of birth: 25 November 1959

Purchase policy coordinator at EDF's Finance and Industrial relations mission, Tricastin nuclear electricity generation centre

Director of EDF since December 2006, sponsored by the CGT union

Between 1 January 2013 and the date of this report, the following changes took place in the membership of the Board of Directors:

Name	Group	Appointed	Replaces
Bruno Léchevin	Director representing the French state	Decree of 6 May 2013	François Loos
Olivier Appert	Director representing the French state	Decree of 17 June 2013	Yannick d'Escatha
Denis Morin	Director representing the French state	Decree of 14 December 2013	Julien Dubertret
Sidonie Delalande	Director elected by the employees	1 February 2014	Philippe Maïssa

The terms of office of the four new directors will end at midnight on 22 November 2014, the day when the whole Board of Directors will be renewed.

1.13.1.2 The Board of Directors' committees

To carry out its duties, the Board of Directors has set up five committees whose members are directors selected by the Board. These committees are:

The Audit Committee

The Audit Committee is chaired by Pierre Mariani, an independent director appointed by the shareholders who is external to the EDF group. The committee's other members are David Azéma and Olivier Appert, directors representing the state, and the employee-elected directors Marie-Hélène Meyling, Alexandre Grillat and Maxime Villota.

The Nuclear Commitments Monitoring Committee

The Nuclear Commitments Monitoring Committee is chaired by Philippe Crouzet, an independent director appointed by the shareholders who is external to the EDF group. The committee's other members are Marie-Christine Lepetit and Olivier Appert, directors representing the state, and the employee-elected directors Marie-Hélène Meyling and Maxime Villota

The Strategy Committee

The Strategy Committee is chaired by Henri Proglio, Chairman and CEO of EDF. The committee's other members are Michael Jay, an independent director appointed by the shareholders who is external to the EDF group, Marie-Christine Lepetit, David Azéma and Pierre Sellal, directors representing the state, and the employee-elected directors Marie-Hélène Meyling, Alexandre Grillat and Jean-Paul Rignac.

Since 2010, the Chairman has invited directors who are not members of the Strategy Committee to attend the committee's meetings, so that the Board of Directors is even more involved in strategic discussion.

The Ethics Committee

The Ethics Committee is chaired by Mireille Faugère, an independent director appointed by the shareholders who is external to the EDF group. The committee's other members are Marie-Christine Lepetit, a director representing the state, and the employee-elected directors Christine Chabauty and Marie-Hélène Meyling.

The Appointments and Remuneration Committee

The Appointments and Remuneration Committee is chaired by Bruno Lafont, an independent director appointed by the shareholders who is external to the EDF group. The committee's other members are Michael Jay, an independent director appointed by the shareholders who is also external to the EDF group, and David Azéma, a director representing the State and the employee-elected director Maxime Villota.

The Board of Directors appointed Maxime Villota to the Appointments and Remuneration Committee on 25 June 2013 (see section 16.2.3.5 of the 2013 reference document). This appointment results from the modification of article 16 of the company's bylaws adopted at the General shareholders' meeting on 30 May 2013, stating that the Board of Directors' Committees must have at least one salaried director among their membership.

1.13.2 Chairman and CEO and directors' remuneration

The tables below show the remuneration and various benefits paid during 2013 to EDF's directors and the Chairman and CEO by EDF and its controlled companies at 31 December 2013.

1.13.2.1 Remuneration of the Chairman and Chief Executive Officer

Pursuant to Article 3 of Decree No. 53-707 of August 9, 1953 and Article L. 225-47 of the French Commercial Code, the elements of the remuneration paid to Henri Proglio are set by the Company's Board of Directors on the recommendation of the Appointments and Remunerations Committee, as approved by the France's Minister for the Economy and Minister for Energy.

Decree 2012-915 of 26 July 2012 amended the above decree and set an annual limit of €450,000 for the remuneration paid to the Chairman and CEO and directors of the public sector companies to which the decree is applicable.

Details of components of remuneration

Henri Proglio is not paid directors' fees for his duties as Chairman of the Board and director of EDF, and receives no directors' fees for his directorships in companies controlled by EDF, nor any remuneration of any kind from controlled companies.

No stock subscription or purchase options were awarded to the Chairman and CEO in 2013, and no options were exercised by him during the year. Similarly, no performance shares were attributed to the Chairman and CEO in 2013, and no performance share became available.

Henri Proglio benefits from no special pension scheme from EDF, received no starting bonus and will receive no termination indemnity for leaving his functions in the Company. He does not have an employment contract with the Company.

Summary of remuneration of the Chairman and Chief Executive Officer

The following table summarises the remuneration paid to the Chairman and CEO during 2013.

2013	Paid during 2013 *(in Euros)*
Henri Proglio, Chairman and CEO	
Fixed salary	450,000
Variable salary	286,250[1]
Exceptional salary	-
Directors' fees	-
Benefits in kind [2]	7,696
TOTAL	**743,946**

(1) Variable salary for 2012, paid in 2013, after taking into account amounts already paid during 2012.
(2) Company car and benefits in kind in the form of energy.

1.13.2.2 Remuneration of Board members

In compliance with the law, the Chairman of the Board of Directors receives no director's fees, and directors representing the state and employee representative directors also receive no fees for their services as directors. The Board of Directors submits the amount of directors' fees, to be allocated as the Board decides, to the General Shareholders' Meeting for approval.

The General Shareholders' meeting of 24 May 2011 approved the amount of €200,000 as the annual budget for directors' fees, for 2011 and subsequent years until a new decision is made by the Shareholders. No exceptional remuneration was paid during 2013 to the directors for their duties.

The allocation of the annual directors' fees budget applicable since 2011 was adopted by the Board of Directors on 22 June 2011 following the proposal by the Appointments and Remuneration Committee. The total budget is divided into a fixed portion and a variable portion of €100,000 each:

- the fixed portion of €100,000 is shared equally between all the directors concerned, giving an amount of €20,000 each;
- the variable portion of €100,000 is allocated between directors using a coefficient that varies according to the type of meeting (Board or Committee) and the specific functions of each director (chairman or ordinary member):
  - coefficient 2 for attendance at a Board meeting,
  - coefficient 2 for attendance at a Committee meeting as Chairman,
  - coefficient 1 for attendance at a Committee meeting as a committee member.

To determine the unit value of the coefficient, the variable portion is divided by the total coefficients for the year.

The amounts paid during the year are directors' fees for the first half of the current year (50% of the fixed portion) and the second half of the previous year (50% of the fixed portion and 100% of the variable portion).

Summary of directors' fees paid to directors

Directors	**2013[1]**	2012[2]
Philippe Crouzet	**36,783**	39,355
Mireille Faugère	**47,972**	46,452
Michael Jay	**38,182**	36,129
Bruno Lafont	**34,685**	41,290
Pierre Mariani	**42,378**	36,774
Henri Proglio	**-**	-
TOTAL (IN EUROS)	**200,000**	**200,000**

(1) For the second half of 2012 and the first half of 2013.
(2) For the second half of 2011 and the first half of 2012.

1.13.2.3 EDF share ownership by directors

At 31 December 2013, the members of the Board of Directors hold a total of 887 shares. The table below shows the number of EDF shares held by individual directors:

	Number of EDF shares
Henri Proglio[1]	51
Christine Chabauty[2]	23
Philippe Crouzet[1]	200
Mireille Faugère[1]	106
Alexandre Grillat[2]	59
Michael Jay[1]	200
Bruno Lafont[1]	150
Philippe Maïssa*[1]	39
Pierre Mariani[1]	1
Marie-Hélène Meyling[1]	28
Maxime Villota[2]	30

(1) Shares held directly.
(2) Shares held through an employee investment fund - FCPE.
** Director until 31 January 2014.*

Ms Lepetit, and Messrs Appert, Azéma, Léchevin, Morin, Rignac and Sellal held no shares in EDF at 31 December 2013.

1.13.3 Governance bodies

1.13.3.1 Executive Committee

The members of the Group's Executive Committee (Comex) at 31 December 2013 headed by Henri Proglio, Chairman and Chief Executive Officer, are: Henri Lafontaine, Group Senior Executive Vice President, Commerce, Optimisation / Trading and Island Energy Systems, Marianne Laigneau, Group Senior Executive Vice President, Human Resources, Pierre Lederer, Special Advisor to the Chairman and CEO, Hervé Machenaud, Group Senior Executive Vice President, Generation and Engineering, Thomas Piquemal, Group Senior Executive Vice President, Finance, Vincent de Rivaz, Chief Executive of EDF Energy, and Alain Tchernonog, General Secretary. Denis Lépée, Advisor to the Chairman, is Secretary to the Executive Committee.

1.13.3.2 Management Committee

Henri Proglio heads the EDF group's Management Committee, whose members at 31 December 2013 are the members of the Comex plus: Michèle Bellon, Chair of ERDF's Management Board, Jean-Paul Bouttes, Director of Strategy and Forecasts, Antoine Cahuzac, General Manager of EDF Énergies Nouvelles, Catherine Gros, Senior Group Executive Vice President, Communications, Philippe Huet, Senior Group Executive Vice President, Risks, Audit and Information Systems, Bruno Lescoeur, Senior Group Executive Vice President, Gas and South Europe, Philippe Méchet, Director of Institutional Relations, Olivier Orsini, Director of Development, South America, Africa, Middle East, Community of Independent States and related partnerships, Bernard Salha, Director of Research and Development, Eric Thomas, Director of Group Legal Affairs. Denis Lépée is Secretary to the Management Committee and Alain Tchernonog chairs the committee in the absence of the Chairman and CEO.

1.13.4 Report of the Chairman of the Board required by article L. 225-37 of the Commercial Code

The Chairman's 2013 report issued in application of article L. 225-37 of the Commercial Code, and the Statutory Auditors' report, are sent to the Board of Directors at the same time as the management report.

1.14 Other information

1.14.1 Summarised financial statements of EDF SA at 31 december 2013

in millions of Euros	2013	2012
Sales excluding taxes	43,423	44,106
Operating profit	4,409	3,843
Profit before exceptional items and tax	3,522	3,830
Net exceptional profit (loss)	164	196
Net income	2,938	3,566

1.14.2 Net income

EDF SA's income statement shows a 15% increase in operating profit. This rise essentially results from the substantial decrease in energy purchases and the higher subsidy receivable for the CSPE, due mainly to the greater energy purchase volumes in non-interconnected zones and the lower market prices for electricity. Also, in 2013 the French pension reform led to a €393 million reversal from operating provisions and the CoRDIS[1] decision on the delivery component of outstanding trade receivables had a positive impact of €212 million, since after that decision these amounts no longer have to be borne by electricity suppliers but by the distributors, particularly ERDF. Incorporation of the ANDRA's new financing requirements for studies concerning geological storage plans led to an additional allocation of €208 million to provisions in 2013.

The €628 million decrease in net profits is mostly attributable to the financial result, which declined by €872 million, largely due to the lower level of dividends received from subsidiaries, and the income of €629 million recorded in 2012 for the costs of bearing the cumulative charges associated with the CSPE system.

1.14.3 Allocation of net income

The dividend distribution policy is defined by the Board of Directors, depending on the Company's results and financial position and taking into consideration the dividend policies of major French and international companies in the same business sector. The following dividends were paid for the previous three years:

Year	Number of shares	Dividend per share *(in Euros)*	Total dividends paid[(1)] *(in Euros)*	Date of dividend payment
2010	1,848,866,662	1.15	2,122,291,972.68[(2)]	6 June 2011
2011	1,848,866,662	1.15	2,124,757,978.20[(3)]	6 June 2012
2012	1,848,866,662	1.25	2,308,912,900.34[(4)(5)]	8 July 2013

(1) After deduction of treasury shares.
(2) including 2010 interim dividend paid on 17 December 2010: €1,053,574,334.82.
(3) including 2011 interim dividend paid on 16 December 2011: €1,053,169, 658.76.
(4) including 2012 interim dividend paid on 17 December 2012: €1,052,601,974.10.
(5) including €170,358,213.74 paid in the form of new shares on 8 July 2013.

100% of the dividend is eligible for the special 40% tax allowance under paragraph 3-2 of article 158 of the French tax code.

1. *The CRE's Committee for the settlement of disputes and sanctions.*

1.14.4 Five-year summary of EDF results

(Taken from EDF's corporate financial statements)

	2013	2012	2011	2010	2009
Capital at year-end					
Capital (M€)	930	924	924	924	924
Capital contributions (M€)					
Number of ordinary shares in existence	1,860,008,468	1,848,866,662	1,848,866,662	1,848,866,662	1,848,866,662
Number of priority dividend shares (with no voting rights) in existence					
Maximum number of future shares to be created					
by conversion of bonds					
by exercise of subscription rights					
Operations and results of the year (M€)					
Sales excluding taxes	43,423	44,106	41,950	40,906	38,895
Earnings before taxes, employee profit sharing, depreciation and provisions	6,782	7,978	5,417	4,906	4,531
Income taxes	748	460	356	660	402
Employee profit share for the year					
Earnings after taxes, employee profit sharing, depreciation and provision	2,938	3,566	1,118	1,492	4,580
Earnings distributed		2,309(1)	2,125(1)	2,122(1)	2,111(1)
Interim dividend distributed	1,059	1,053	1,053	1,054	1,002
Earnings per share (€/share)					
Earnings after taxes and employee profit sharing, before depreciation and provisions	3.24	4.07	2.74	2.30	2.23
Earnings after taxes, employee profit sharing, depreciation and provisions	1.58	1.93	0.60	0.81	2.48
Dividend per share		1.25(1)	1.15(1)	1.15(1)	1.15(1)
Interim dividend per share	0.57	0.57	0.57	0.57	0.55
Personnel					
Average number of employees over the year	65,775	64,303	62,479	60,380	59,837
Total payroll expense for the year (M€)	3,843	3,687	3,600	3,377	3,265
Amounts paid for employee benefits and similar (social security, company benefit schemes, etc) (M€)	2,614	2,551	2,161	2,125	2,025

(1) Including the interim dividend paid out.

1.14.5 Payments to suppliers

Since 1 December 2008, EDF SA has applied 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 €3,161 million, distributed as follows:

- Invoices due: €18 million (less than 1%);
- Invoices payable within 60 days: €3,063 million (97%);
- Invoices payable after 60 days: €80 million (2%).

Most supplier invoices payable after 60 days relate to contracts for nuclear activities that were negotiated before 1 January 2009 and have not been renegotiated. A smaller proportion of these invoices relate to contracts that are not governed by the French law because they concern activities taking place outside France.

Section 2 of this report is EDF's response to the obligations incumbent upon it by virtue of the implementation decree 2012-557 for France's "Grenelle 2" law. This law requires companies to report on the action taken and chosen directions to address the social and environmental consequences of their business activities, and fulfil their social commitments in favour of sustainable development.

- Section 2.2 Environmental information (pages 215-231)
- Section 2.3 Societal information (pages 231-238)
- Section 2.4 Social information (pages 238-250)
- Section 2.5 Environmental and social indicators (pages 250-257).

↗ 2 Corporate responsibility

With its core values of respect, responsibility and solidarity for excellence underpinned by integrity, ever since it was formed the EDF group has applied a strategy that focuses on the public interest and is founded on a corporate responsibility approach.

This is reflected in EDF's constant concern for the safety of people, the security of its industrial facilities, and protection of the environment, while contributing to secure supplies of quality electricity at a competitive price in each country where the Group does business.

The EDF group's policies are part of this corporate responsibility approach:

- the Group strategy to 2020, as presented at the 2011 General Shareholders' Meeting;
- the Group-level sustainable development policy signed by all principal Group companies in 2009;
- the EDF group's corporate social responsibility commitments presented at the 2013 General Shareholders' Meeting;
- a global approach to Human Resources and social matters called «Vision RH 2020», consisting of Group policies on diversity, career equality, disability, etc through a worldwide Corporate Social Responsibility (CSR) agreement signed with the union organisations of 16 Group companies;
- a Group charter of ethics, validated in 2013.

The **Corporate Social Responsibility Commitments** are intended to give EDF group companies a common focus on eleven shared objectives with associated measurement and monitoring indicators, to generate more value and global performance efficiency. These objectives draw together the Group's various corporate responsibility policies and approaches (its sustainable development policy, Vision RH 2020, responsible purchasing policy, etc) and are the outcome of a 2-year preparation process with the Group's business lines and companies, involving extensive consultation with employees and managers through interviews and working parties.

They cover three areas:

Responsible industrial operator

EDF's responsibility primarily concerns the way it does its business as generator and supplier of a highly specific commodity, electricity, which is essential for the human and economic development of the planet. As the world's number one nuclear power operator, it exercises its activity with all due attention to safety, guided by the sense of the public interest. Participating in the fight against climate change is a duty.

This translates as follows into all Group companies: giving priority to low-carbon energies, investing for greater competitivity in renewable energies and emphasising contribution of its skills to reinforce control over energy loss from homes, in viable economic conditions for its customers.

Commitments in this area:

- maintaining top levels of safety in its installations;
- remaining the best of the major energy operators in development on low-carbon energies;
- investing in renewable energies and reinforcing their competitivity;
- contributing significantly to improving household energy efficiency.

Responsible employer

In a fast-changing environment, the human dimension is more central than ever to EDF's strategic plan. It is the cornerstone of Group performance. Health and safety for both employees and subcontractors is an absolute priority.

To deal with its industrial issues, EDF must remain a top-level employer that sets a standard for professionalism and employee motivation, by developing their skills and diversity in their profiles. The Group applies its values wherever it operates, demanding integrity and respect for fundamental rights.

Commitments in this area:

- proactively reducing work-related accidents for employees and subcontractors;
- maintaining professional excellence and effective performance by its teams, through training and promotion of diversity;
- refusing to tolerate any violation of human rights, fraud or corruption in all Group companies and also at suppliers.

Responsible partner

Because energy questions concern everyone, because the electricity produced transforms people's lives and also modifies their environments, the EDF group is involved in dialogue with stakeholders at all levels; its priorities are to reinforce transparency on subjects of interest to civilian society, create economic value wherever the Group has establishments, preserve and share water because it is vital for EDF's business and the life of its fellow citizens, and step up action against energy poverty which is on the rise in this time of crisis.

Commitments in this area:

- foster transparency and dialogue on sensitive subjects;
- contribute to local development through employment;
- take action to fight energy poverty and promote access to electricity;
- preserve water resources in all its activities.

2.1 Sustainable development policy

The Group's **Sustainable development policy** combines respect for the environment, societal responsibility and governance, and enables Group companies to place their actions in a shared framework of coherence. This policy is designed to meet three challenges and assign three commitments to each one.

1. Tackling climate change and protecting biodiversity.

- remain the lowest carbon emitting group of all the major European energy utilities;
- adapt our generation fleet and our customer offers to promote climate protection;
- reduce our environmental impact, especially on biodiversity.

2. Improving access to energy and developing close links with local communities.

- promote access to energy and energy efficiency;
- develop and sustain links with local communities where EDF works;
- support education on major energy-related issues.

3. Contributing to the debate on sustainable development through dialogue, information, and communication.

- continue to implement the sustainable development policy and share values inside the Group;
- communicate and report on our corporate social responsibility initiatives and results;
- contribute to the debate on sustainable development at both a national and international level.

In 2014, the EDF group expects to renew its sustainable development policy to incorporate changes in context (energy markets, societal issues, environmental situation, etc), reassess society's demands and strengthen its positions on subjects that have become real key issues in business today, chief among them being biodiversity, water, energy efficiency, local development and energy poverty.

2.1.1 Governance of sustainable development

Governance of sustainable development takes place through the following organisations, systems and monitoring bodies:

- a **Group Sustainable Development Department**, whose task is to coordinate and support actions by EDF departments and Group companies to meet its commitments under the sustainable development policy, and report on those actions.
  The sustainable development department has three levers: dialogue with stakeholders, support for sustainable development in projects, and management of sustainable development inside the Group;
- a **Group Sustainable Development Committee** made up of the heads of sustainable development from the principal Group subsidiaries and divisions. While respecting the independence of each Group entity, the Committee's task is to supervise implementation of the Group's sustainable development policy and coordinate actions associated with the Group's ISO 14001 certification, as well as to develop sharing of experiences and best practices between its entities. This Committee held three meetings in 2013, mainly to examine the adjustments necessary to the Group's current sustainable development policy in the light of new situations, share development of the Group's new corporate responsibility commitments, monitor progress on the rollout of the Group's charter of ethics, begin thinking on water resources and the Group's related commitments, and discuss the sustainability of developing a biomass policy;
- an **environmental management system** (EMS) that is used in all entities (see 2.2.1.1);
- **project screening:** projects must be approved by the Comex's Commitments Committee. Before being submitted to this committee, the Group's major investment projects undergo an assessment of their exposure to the risk of "non-achievement of sustainable development commitment".

2.1.2 Awareness and training in sustainable development for managers and employees

One of the objectives of the Group's sustainable development policy is awareness-raising and training of personnel on environmental issues.

The ISO 14001 certification process followed by the Group over the last decade is also encouraging it to maintain and develop employee skills in environmental and sustainable development matters.

2.1.2.1 Raising sustainable development awareness in managers and employees

In 2013 EDF and the other Group companies continued their programme to raise managers' and employees' awareness and consideration of sustainable development issues, essentially via:

- the sustainable development community, an intranet system to raise awareness of stakeholders' expectations and the environmental and societal challenges in the energy sector;
- systematically making purchasers aware of the issue of social integration through economic activity;
- a short film made to tackle preconceived ideas about services provided by firms in the protected and special work sector, to be shown to the Group's purchasers.

Every company also has its own specific operations, some examples being:

- continuation of EDF's "responsible purchasing" project in France, to encourage all purchasers to include environmental and societal components in the procurement contracts; 14 new training sessions were held in 2013;
- organisation of the third EDF – ERDF inter-business line waste reduction competition named *Ça déborde, à vous de jouer* for the Ademe's[1] European week on waste (109 projects were presented);
- awareness-raising modules are made available to EDF employees in the form of *e-learning* (a quiz on "Introduction to sustainable development" and another on "HR and sustainable development");
- inclusion of two sustainable development criteria in calculation of EDF's employee profit share. 40% of employee profit share is linked to achievement of these criteria, one concerning the recycling rate for waste managed by EDF, and the other concerning the proportion of employees who followed at least one training course during the year;
- at EDF Energy, introduction of a Company Incentive Plan (CIP) that includes employee profit share criteria based on the degree to which the company's economic, environmental and social performance commitments are kept;

1. *Agence de développement et de la maîtrise de l'énergie.*

- raising awareness of all new recruits on EDF Energy's sustainable development challenges through the "EDF Energy & me" programme;
- at EDF Luminus, management-led training sessions to raise employee awareness of the ecological footprint and water savings (900 hours of training given);
- organisation of environmentally-themes courses by Edison in Italy (2,800 hours, 309 employees concerned in 2013);
- continuation of an employee awareness programme on health, safety and the environment by Nam Theun Power Company in Laos (262 employees in 2013; more than 900 employees have attended in three years).

2.1.2.2 Sustainable development training for managers and employees

In **France**, EDF has reviewed its training focuses and created a "sustainable development" section to increase incorporation of sustainable development into the business lines' training plans. Meanwhile, a single catalogue of courses in sustainable development has been redesigned in connection with the major issues defined by the Sustainable Development Division: dialogue with stakeholders, calculation of the water footprint, regulation of biodiversity, waste management, and control of environmental chemical risks. The main actions concerned the following:

- rollout of the project management standards, along with their own local diagnosis system and the Durabilis methodology, to help managers develop action plans for sustainable development and more clearly identify the stakeholders concerned by their project, the project's consequences for local employment, and the biodiversity impacts. The Durabilis methodology was rolled out as part of the "Developing and monitoring a project" programme and through the "project management" community created for the purpose on the intranet in 2013;
- development after feedback of a new version of the "Purchasing and sustainable development" training accessible to all purchasers (364 hours of training given in 2013); this complements the "responsible purchasing" module followed by all new purchasers (2,485 hours of training given in 2013);
- creation of a new 4-day training in management and optimisation of industrial waste for employees in the generation activity, attended by 100 people in 2013;
- inclusion of a biodiversity component in the environmental training module, which is compulsory for all people joining the nuclear engineering departments.

ERDF added to its range of training on consideration of stakeholders by holding a seminar in 2013 on the theme of "Sharing our achievements and building our projects together", which was attended by most of the project leaders in urban renovation; the company also created a specific training for the same audience on the theme of "Urban regeneration: issues and actors".

EDF Énergies Nouvelles gave 30% of its French workforce training in environmental management, environmental safety, and the European directive 2004/17/EC on the procedures for contracts aiming to contribute to environmental protection and promotion of sustainable development. All new arrivals in the company in France have been trained in sustainable development issues and environmentally-friendly practices as part of their induction procedure.

Internationally, 150 employees of EDF Polska and 1,395 employees of EDF Demasz attended training courses on environmental protection and sustainable development in 2013. All new personnel joining EDF Energy were evaluated on their knowledge of the company's environmental and societal commitments, following the compulsory Sustainable Steps course they receive on their arrival.

2.2 Environmental information

2.2.1 Environmental matters

2.2.1.1 Organisation and ISO 14001 certification

The environmental management system (EMS) coordinates initiatives, objectives and indicators at Group level according to the environmental commitments in the Group's sustainable development policy, through action by a Group Sustainable Development Committee that is overseen by an environmental supervisory Board for EDF and groups focusing on specific themes.

The EDF group has held ISO 14001 certification since 2012. In 2013, the certified scope accounts for 95% of the consolidated sales revenues of EDF and its subsidiaries and associates.

In June 2013, the independent certification body AFNOR awarded the Group a new ISO 14001 certification including new certified sites at EDF Trading, Sloe Centrale and Électricité de Strasbourg.

The AFNOR audit noted that the EDF group's Corporate Social Responsibility commitments reinforced the perspective and propensity for committed environmental action.

In **France**, the environmental management programme (EMP) updated and validated when the SME was reviewed by the environmental Supervisory Board on 20 March 2013, aims to consolidate the environmental initiatives in order to achieve the targets set in EDF's sustainable development policy.

The most significant actions are the following:

- continuing to reduce the Group's CO_2 emissions by improving nuclear fleet availability and adjusting the energy mix (developing renewable energies and commissioning new generation units);
- incorporating the requirements of the new regulations into the business lines (EPR, Basic Nuclear Facility decision, etc);
- controlling incident-free radioactive waste management and complying with authorised discharge levels;
- continuing to prepare biodiversity guides and preparing for EDF's membership of the French National Biodiversity Strategy (see 2.2.6, Preserving biodiversity);
- improving management and recycling of non-nuclear waste, in particular reducing site waste at the point of production;
- screening sustainable development criteria for investment, development and maintenance projects for industrial installations;
- maintaining the good level of employment and management awareness (communication and training);
- giving greater recognition to employees' efforts to achieve targets;
- improving organisation further, ensuring that activities are in compliance with regulations (renovation of the monitoring mechanism).

At **Group** level, at the annual review of the EMS in June 2013, the members of the Sustainable Development Committee defined the following major orientations:

- continued integration of certified companies into the Group's ISO 14001 certification;
- implementation of Group commitments regarding water (see 2.2.4.2) with the support of a dedicated international working party;

- presenting analysis of the water theme to the Group's decision-making bodies, to increase understanding of the risks and opportunities;
- analysing each Group entity's approach to the European REACH directive[1].

2.2.1.2 Oversight of environmental risks

Risk mapping and assessment of risk control levels, including EDF's environmental risks, are carried out by the Group's Risk Control Division, in relation with all Group subsidiaries and entities.

The 2013 update highlighted a gradual tightening of the regulations, generating potential risks of non-compliance, and also showed that the risks related to use of chemicals are falling due to elimination of certain substances (PCBs and replacement of chemicals).

As in 2012, financially and economically, the most significant factors associated with environmental risks relate to:

- deployment of energy efficiency actions and achieving the associated certificates;
- impacts of EDF businesses on the air, water and ground quality and waste production;
- protection of biodiversity and the services rendered by eco-systems;
- management of water resources;
- greenhouse gas emissions.

These risks are fully integrated into EDF's environmental management system and the Group's internal control system, and are covered by action plans resulting from the orientations laid down in the Group's Sustainable Development policy.

Resources devoted to preventing risk and pollution

To control the risks of industrial accidents with potential consequences for the natural environment and/or public health, EDF carries out:

- an active investment policy and programme for decommissioning of industrial assets now shut down, which involved depollution operations[2];
- a programme of employee training and awareness-raising of all stakeholders;
- inspections and audits of generation sites (see 2.2.2.1 "Nuclear safety" and 2.2.2.2 "Hydropower safety");
- crisis drill exercises; in 2013 in France, in addition to the regular local exercises on each nuclear site, 13 national exercises (including 5 conducted together with the French authorities) took place at the 19 French nuclear power plants. At international level, the companies regularly test their procedures through crisis exercises; in 2013, EDF Energy conducted an exercise on the construction site for the new Hinkley Point C power plant;
- a Group environmental management system, which is constantly maintained and improved in the entities and on the sites, with external ISO 14001 certification audits.

2.2.1.3 Environmental incidents

Each operational unit and company in the Group identifies potential events with environmental impacts, manages the emergencies that may result and carries out the corresponding crisis drill exercises, with its own monitoring system and reporting on the environmental events under its responsibility.

Such events are of minor importance and generally relate to operating problems such as low-volume, localised hydrocarbon spills, dust emissions in the air, legacy ground pollution, and changes in water flow downstream of hydropower facilities.

Each event is analysed individually, and the necessary corrective action to prevent recurrence is defined based on an overall review using the ISO 14001 certified management system.

The incidents arising in 2013 had no environmental or health impact. They principally concerned hydrocarbon or acid leaks or discharge, and were all brought under using the applicable emergency procedures.

Some of these incidents were followed by litigation after formal action was taken with the legal authorities by NGOs, particularly *Sortir du Nucléaire*. Two court rulings against EDF were issued in France in 2013. Action plans have been introduced in the operating units to ensure better containment of products.

There were no major significant environmental events[3] in 2013.

2.2.1.4 Environmental research and development

With its forward-looking action for the medium and long term, EDF group R&D is preparing for change in the Group's business lines in liaison with its member companies, and rising to its environmental challenges. In France, EDF devotes more than 20% of its R&D budget to environmental concerns. One third of the budget is used to plan for industrial technological innovations, and the R&D teams also initiate other forms of collaborative research, especially with the Ademe and the Institute for excellence in low-carbon energies (*Institut d'excellence pour les énergies décarbonées* -IEED).

EDF is also a partner in four venture capital funds for clean technologies, including Electranova Capital, endowed with a minimum investment capacity of €60 million, including €30 million contributed by EDF. In 2013, the fund made two new investments: in the French company Forsee (development of energy storage solutions) and the American startup Enlighted (a specialist in energy optimisation for buildings).

The three major R&D priorities focus on the following themes (see 1.5.2):

- consolidating and developing a carbon-free energy mix;
- adapting the electricity system;
- steering energy demand.

The main areas of attention in 2013 in sustainable development are:

- control of nuclear plants' impact in the environment; intensification of research on safety (risks of flooding from outside) and plant operating lifetime;

1. *The European Union (UE) introduced the REACH regulation for registration, evaluation, authorisation and restriction of chemical substances and set up a European chemicals agency.*
2. *These depollution operations may concern contamination and alteration dating from before EDF's became the operator.*
3. *Such events are: accidents and incidents with serious consequences for the environment (impact on human health and/or biodiversity and/or natural resources) or consequences for the Group: legal or financial (reparation for damage, settlement of litigation) or damage to its reputation. An event affecting the environment that could harm human health falls into the scope of application of a significant event for EDF.*

- improving competitivity and availability of nuclear plant, with the objective of producing as much electricity but reducing fuel consumption;
- assessment and control of the impact of EDF's installations on the quality oif surface water;
- assessment of future water flows in rivers close to EDF's generation plants, with reference to climate change developments;
- assessment of the risk of shortages in 11 commodities at risk of becoming scarce (chrome, silver, indium, cadmium, lithium, boron, etc);
- reducing the costs of renewable energies, especially offshore wind power and photovoltaic solar power;
- impact of the development of intermittent energies in Europe, which require greater flexibility in centralised generation resources;
- mass storage of electricity, in association with development of renewable energies;
- insertion into the networks of intermittent, decentralised power generation from renewable sources, notably through application of *Concept Grid*, an experimental platform unique in the world, half-way between laboratory testing and field experiments;
- carbon capture and geological storage, with commissioning of the first carbon capture demonstrator at Le Havre fossil-fired power plant (the first tonne was captured in July 2013);
- recycling of industrial energy loss using high-temperature heat pumps;
- development of planning instruments for sustainable cities and areas;
- new architectures for intelligent metering and direct control of use, in support for development of the "Linky" smart meter project (a tool to help control consumption).

2.2.2 Safety of industrial facilities, and personal safety for employees and third parties

2.2.2.1 Nuclear safety

Safety in nuclear operation is the top priority for the EDF group. It is taken into consideration from the initial design stage, and is regularly monitored, together with 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 several controls both internal (annual reviews, internal control plans and nuclear inspections in France) and external (peer reviews between WANO[1] member firms and OSART[2] audits conducted by experts from the IAEA[3]).

In France, the safety of nuclear facilities is verified by the Nuclear Safety Authority (ASN). The International Nuclear Event Scale (INES) classifies events on a scale of 1 to 7, with 7 being the most serious. Incidents of no consequence for nuclear safety are classified as "deviations" or level 0 events.

The ASN also approved the creation of an additional FARN (*Force d'Action Rapide du Nucléaire* or Nuclear Rapid Action Force) crisis management unit, after additional safety assessments carried out by EDF.

To ensure the nuclear fleet remains effective and safe after 40 years of operation, EDF is implementing a coherent industrial project. A key aim of this project is to improve safety performances, as required for the ASN and the State to receive permission to continue operation.

In the United Kingdom, the Office for Civil Nuclear Security (OCNS) is the independent watchdog authority for safety in the civil nuclear sector. It monitors compliance with security rules, including for transportation of radioactive matter.

In the United States, the Nuclear Regulatory Commission (NRC) oversees the quality and safety of the nuclear fleet's operations. The Institute of Nuclear Power Operations (INPO), of which all US nuclear operators are members, conducts evaluations and analyses with the aim of achieving excellence in operation.

Results for 2013

There was no serious safety event or above-limit discharge in 2013.

In **France**, the results for the nuclear power fleet held up well in 2013. For the first time since 2010 there was no event classified as INES level 2, and INES level 1 events were down significantly by 23% (1.19 per reactor compared to 1.55 in 2012). The total number of significant safety events declared to the French Nuclear Safety Authority in 2013 was 11.6 per reactor, stable in comparison to 2012 (11.9). The number of automatic reactor trips (ARTs) reached 0.59 (0.55 in 2012), which was satisfactory in view of the better international performances and comparable to the figure for the 69 EPRs in the United States (0.60). In 2013, 32 reactors had no ART all year (36 in 2012).

The good results on fire safety in 2012, a major risk in nuclear installations, were confirmed in 2013: few fires started and preventive measures and organisation was improved on all sites. After a slight fallback in 2012, progress was made in control of regular testing, an activity that helps to demonstrate the availability of key safety materials and systems throughout the reactor's operating life: the number of significant safety events detected during tests showed a substantial decrease of 20%.

In the **United Kingdom**, safety event declaration procedures are different due to different reporting requirements, affecting comparability with EDF results. The number of significant safety events declared by EDF Energy was up slightly in 2013 (to 5.1 per reactor from 4.6 in 2012). More comparable is the number of events classified under the INES: the number of events declared, all limited to level 1, remained low as in 2012 (0.80 per reactor). 2013 confirmed the progress made the previous year as regards operation of the fuel handling machines in AGR reactors, following significant efforts to improve reliability. No fires started and there was no major fire incident in 2013; nonetheless, the observations made during a nuclear safety inspection concur with the WANO Peer Reviews, noting that despite the markedly lower level of oil leaks, further efforts are needed in raising employee awareness about fire prevention.

In the **United States**, the INPO classifies and analyses significant safety events. The number of significant safety events declared by CENG was down slightly from 11 per reactor in 2012 to 8.8 in 2013. The number of events classified under the INES were all were limited to level 1, and dropped slightly (0.8 per reactor) back to the 2011 level. In the Unites States, the total

1. *World Association of Nuclear Operators, Association des exploitants nucléaires mondiaux.*
2. *Operational Safety Review Team.*
3. *International Atomic Energy Agency.*

automatic and manual trips must be considered together, as US procedures rely more often on operators to trigger a reactor trip before the automatic measures are activated. CENG's results improved, declining to 0.68 per reactor after 0.87 in 2012, with contrasting situations depending on the site. The rate of unscheduled outages was good at 1.7%, placing the CENG fleet's performance above than the American average.

Detailed results on nuclear safety for 2013 are published in the annual report drawn up by the Inspector of Nuclear Safety, available from EDF's sustainable development report website (http://rapport-dd.edf.com, to be released in May 2014).

2.2.2.2 Hydropower safety

In France, EDF operates 436 hydropower plants and manages the water reservoirs held by its 239 large dams. The average age of French hydropower facilities is 70 years. Hydropower safety measures are designed to control risks of breaches in dams or related facilities, the risks associated with operating during high water level periods, and the risks related to water flow variability during operation.

Safety at EDF's hydropower fleet remained satisfactory in 2013. There was only one incident classified as "orange" (hydropower safety incident that placed people in danger, as defined in the decision of 21 May 2010) and no injuries were caused. Nonetheless, this confirms the need to continue action plans for safety. The key indicators are still at good levels:

- good detection of significant (non-serious) events (level 0) by local teams (around 3,000 detected);
- low proportion of events with external effects (level 1 or below): 57 arose, of which 24 were caused by exceptionally high water levels;
- a lower number of sites with high sensitivity to risks associated with variations in water flow downstream of installations: it has fallen from 114 in 2005 to 19 in 2013, although this was slightly up on the 16 sites identified in 2012.

Several regions of France had very high water levels in June 2013 as a result of the weather. The exceptionally water levels in the Pyrenees caused considerable damage around the mountain riverways, and were the source of damage to certain components of concession facilities. The most important point is the avoidance of human injury and material damage due to the reaction of the flooded installations, confirming that dams are well-managed by EDF teams.

Control of risks associated with wear and tear is a major concern in hydropower, and the long-term maintenance policy was updated in 2012.

The long-term SuperHydro hydropower facility renovation programme launched in 2007 for fleet safety and efficiency is 88% complete. It is being rolled out through a long-term maintenance programme designed to succeed it, including a dedicated hydropower safety dimension IPHE-S, covering the safety aspects of hydropower engineering for plants in operation, which in 2013 accounted for more actions and more annual resources than SuperHydro.

Immediate maintenance action (specific measures and resources) was taken through this programme to ensure that the safety margins are clearly identified and countermeasures are active until the work is complete. At the end of 2013, 610 specific actions were in process and monitored in 5 priority groups of facilities: galleries, pipes, dams, penstocks and floodgates.

Overall, by 2017, €908 million will have been invested in safety.

Both these programmes are backed up by the RenouvEau programme to improve the safety, performance and competitivity of the hydropower fleet. This programme will be rolled out to all major installations of the hydropower fleet in 2014 after a validation phase on pilot sites last year.

The decree of 11 December 2007 set new regulatory requirements for owners or operators of dams, one of which is to conduct exhaustive studies that contribute to safety: danger assessments for class A facilities (dams at least 20m high) and class B facilities (dams at least 10m high and above a certain volume), and safety reviews for class A facilities. EDF respects the timetable for these studies and assessments, which consolidate the overview of risks and countermeasures associated with dams.

For further details, see the 2013 report by the Inspector of Hydropower Safety, available from EDF's sustainable development report website (http://rapport-dd.edf.com, to be released in May 2014).

2.2.3 Waste management

2.2.3.1 Radioactive waste

In France, radioactive waste is classified by activity level and lifetime, following the classification used by the French national agency for radioactive waste management ANDRA (*Agence nationale pour la gestion des déchets radioactifs*). Waste is listed in an inventory stating its location, and the data are published and regularly updated by ANDRA.

Four industrial principles govern management of this waste: limiting quantities, sorting by nature, stable conditioning, isolation from humans and the environment. Limited quantities of radioactive waste are produced: 1 MWh of nuclear electricity (equivalent to a month's consumption for 2 households) generates around 11g of radioactive waste, 90% of which is short-life waste.

Results for EDF in France	Unit	**2013**	2012	2011
Very low-level radioactive waste from decommissioning	t	1,110	2,528	634
Low and medium-level short-life solid radioactive waste	m^3/TWh	19.0	20.7	15.6
High and medium-level long-life solid radioactive waste	m^3/TWh	0.86	0.88	0.87
Transported spent nuclear fuel	t	1,099	1,075	1,199

EDF applies a strategy of gradually increasing the performance of nuclear fuel. The objective is to raise nuclear energy output by increasing the combustion rate and optimising operating cycles to improve nuclear plant availability, while allowing for shutdown schedules in line with seasonal variance in demand.

EDF's current strategy for the nuclear fuel cycle, in agreement with the French state, is to process spent fuel and recycle the plutonium separated in this process in the form of MOX fuel. Currently 22 (of the total 34) 900 MW nuclear units use this type of fuel, and two more units have been authorised to do so by the ASN. The objective for future years is to load 120 tonnes of

MOX per year. Since 2010, recycling capacities have processed close to 1,050 tonnes of spent fuel annually, of a total of some 1,200 tonnes of fuel used.

The cost of removing and storing waste resulting from plant decommissioning is covered by a provision, and the charges related to operating waste are included in annual expenses.

EDF's provisions at 31 December 2013 are established in compliance with the law of 28 June 2006 and its implementing decrees, which were issued in 2007.

At 31 December 2013, the EDF group's provisions for decommissioning and last cores amounted to €22,150 million, and provisions for the back-end nuclear cycle totalled €20,547 million. The price per KWh thus includes all expenses related to this obligation, i.e. the cost of managing long-life waste and the cost of plant decommissioning and current waste conditioning.

In the **United Kingdom**, radioactive waste is classified as high, medium and low level (HL, ML and LL) and each type is treated differently. Medium level waste is stored on the plants' sites in dedicated facilities, and inspected in compliance with safety requirements. Low level waste is stored on the plants' sites until prepared for dispatch (for processing or elimination), and is monitored and regularly inspected.

Results for EDF Energy	Unit	**2013**	2012	2011
Transported uranium	t	177	216	211
Transported low level radioactive waste	m^3	655	698	608
Generated medium level radioactive waste	m^3	178	161	161

In the **United States**, the Federal Government has banned reprocessing of spent nuclear fuel, and the Nuclear Waste Policy Act (NWPA) enacted in 1982 requires CENG to construct permanent storage facilities for spent fuel and high level radioactive waste, through the intermediary of the Department of Energy (DOE).

Results for Constellation Energy Nuclear Group (CENG)	Unit	**2013**	2012	2011
Nuclear fuel delivered	t	44	46	48
Transported low and medium level solid radioactive waste	m^3	1,411	2,419	1,287

R&D for radioactive waste

Many of the EDF group's in-house and partnership R&D projects focus on radioactive waste. These research programmes mainly concern transportation, temporary storage, reprocessing and final storage of spent fuel and the associated waste.

EDF's R&D teams and ANDRA are continuing to work together on the question of how packages of nuclear waste behave in geological storage, and on models simulating the behaviour of the host rock, particularly argillite.

As its UK facilities mostly use graphite-gas technology (AGR – advanced gas-cooled reactors), EDF is part of the European Carbowaste project on management of the graphite resulting from decommissioning, alongside German research bodies, the CEA, Manchester University and ANDRA. This 4-year project started in 2013.

EDF Energy principally concentrates its research projects on long-life waste processing: the lead programme, "AGR ILW Debris Vaults Engineering Design Review", concerns the monitoring system for water infiltration during the dismantling/maintenance period.

2.2.3.2 Management of radioactive effluents

In **France**, management of the nuclear power plants' radioactive gas and liquid effluents is governed by strict regulations and EDF's ambition to limit the environmental and health impacts of its installations. In terms of radioactive emissions, plant performance depends not only on the efficiency of effluent processing systems, but also on operating practices.

The action taken in plant design and operation has kept the nuclear plants' radionuclide discharge in liquid form (other than tritium and carbon-14) to a very low "floor" level for several years, after reducing them by a factor of 100 in 15 years. This achievement results from the efforts put into capture, sorting and orientation of effluents at source, increasing evaporation treatments, implementing demineralisation processes and optimising recycling of effluents.

Tritium and carbon-14 are the only radioactive substances discharged by the nuclear plants. They have low radiotoxicity and their effect on dosimetry is also very low (less than a few µSv a year, well below the annual limit for the most exposed members of the public which is set at 1,000 µSv/year).

Measurements taken by the operator are monitored to confirm that the environment is not affected by the installations' operation.

Sampling and measurement campaigns carried out by external laboratories and universities for radio-ecological and hydro-biological monitoring have confirmed the lack of long-term impact.

In the **United Kingdom**, radioactive effluents remained stable and within regulatory limits given the varying levels of electricity generation.

2.2.3.3 Industrial waste

In its sustainable development policy, the EDF is committed to limiting the environmental and health impacts of its installations and businesses. With its ISO 14001 certified environmental management system, industrial waste is managed with the emphasis on reducing waste at source, sorting waste, recycling, particularly for onsite waste, and upstream use of products designed and produced in environmentally-friendly ways. A permanent progress approach is applied, founded on the conviction that the "best waste" is waste that is never produced This is getting results, as the recycling rate is showing steady progress despite the lack of regulation and organised recycling operations in certain countries.

Waste recycling

Construction, decommissioning and maintenance activities increased in 2013, particularly in France including the island energy system, but also in the United Kingdom, the Netherlands and Hungary, and this had an impact on the overall volumes of waste generated and recycled.

Results for the EDF group (in tonnes)	2013	2012	2011
Volume of non-nuclear waste recycled or transferred for recycling	294,378	253,412	251,908

Waste recycling rate (%)	2013	2012	2011
EDF group	70%	66%	69%
EDF	89%	87%	85%
EDF Energy	91%	84%	67%

In **France**, in nuclear engineering, waste management organisation plans are now drawn up before every important construction, decommissioning or maintenance project, and yearly feedback is monitored by the business line divisions. This approach is becoming standard practice for major projects in the fossil-fired and hydropower business lines.

EDF's sustainable development policy strengthened the target of recycling all suitable waste, raising it from 75% in 2011 to 85% in 2012 and 2013. The actual recycling rate for all non-nuclear waste produced by generation and engineering work (excluding fly ash and gypsum, which are fully recycled) has risen steadily in recent years, reaching 89% in 2013.

In the overseas French territories, where recycling of waste is hindered by isolation and the lack of certain local facilities, a 92% recycling rate was achieved in 2013 compared to 84% in 2012.

Internationally, EDF Energy has made a commitment to cut waste by 30% and stop sending office waste to refuse collection sites by 2020. Work on identifying alternative solutions has also begun. "Waste plans" devised at the industrial sites succeeded in reducing the proportion of waste sent each month to underground disposal sites (below 10%), with a forecast recycling rate of 95%.

In **Poland**, EDF Wybrzeze set up ash silos, which have enabled the company to sell its fly ash and limit the volumes transferred to disposal sites. In 2013, all slag and ashes produced (more than 1.6 million tonnes) by EDF Polska were reused, in building, road infrastructures, coal mine fill or land rehabilitation.

In **China**, 98% of fly ash and slag generated by the Figlec fossil-fired plant were sold in 2013 for uses such as paving roads, cement and brick-making.

2.2.4 Sustainable management of resources

The Group has several levers to reduce its consumption of natural resources:

- increasing plant efficiency and limiting loss during generation, transmission and distribution by using the most effective technologies. For example:
  - replacing old fossil-fired plants by the latest-generation coal-fired (supercritical) plants or combined-cycle gas plants,
  - developing cogeneration, i.e. combined generation of heat and electricity.
- using more effective fossil fuels (coal, fuel oil, gas) and fissile fuel (uranium);
- increasing the efficiency of uranium by recycling (of plutonium as MO_x fuel), and raising the capacity of certain "breeder reactors" to generate more fissile matter than they consume;
- developing renewable energies: hydropower, pumped storage power stations (STEP), onshore and offshore wind power, solar power (particularly photovoltaic), biomass, and marine energy (marine turbines and tide power) (see section 2.2.4.1);
- developing high-power pumped storage power stations (STEP) to cope with the need for high consumption in peak periods without using fossil fuels.

As all types of energy-saving campaigns are another source of resource protection, EDF develops and markets packages for its customers that incorporate energy-efficient equipment, use of renewable energies in buildings, and incentives for energy-saving behaviour.

These actions are founded on:

- demand side management (DSM) services: insulation, building renovation, advice and heat diagnoses;
- development and intensive integration of new distributed energies into buildings for heat generation (heat pumps, solar water-heaters, woodburning stoves and fireplaces);
- management of the load curve to reduce or defer peakload CO_2–producing consumption;
- use of smart meters, to optimize networks and carry out remote measurement services and remote actions to reduce greenhouse gas emissions;
- "green" energy options offered to customers, producing no CO_2 emissions, or partly carbon-offset offers.

2.2.4.1 Development of renewable energies

In a world where the pace of development of renewable energies is highly dependent on national and international policies supporting these energy sources (purchase obligations or quotas, favourable electricity purchase tariffs, tax incentives, green certificate systems, etc), the EDF group is continuing to make significant investments concentrating on hydropower and technologies it considers mature: wind power and photovoltaic power. To achieve its non-hydropower objectives it is supported mainly by EDF Énergies Nouvelles. The EDF group is working to reduce the risks associated with changing regulations by optimising its investment costs and reinforcing both its geographical diversification and multi-sector strategy.

EDF Énergies Nouvelles' operation and maintenance activity on its own behalf and for other entities is expanding significantly. It is punctuated by commissioning of new wind farms, and takeovers of wind farms previously operated by the turbine manufacturers when the contract comes up for renewal. At 31 December 2013, EDF Énergies Nouvelles was in charge of operation and maintenance of more than 9,000 MW. In the United States it has become leader in this business sector, through its subsidiary EDF Renewable Energy.

Investments

In the last three years the Group has devoted the greatest share of its gross operating development investments to renewable energies, ahead of annual investments in development of the nuclear sector. In 2013, renewable energies benefited from 36% of the Group's gross operating development investments (41% in 2012).

To finance future renewable energy projects, in November 2013 EDF launched its first "Green Bond", in Euros, the first large corporate issuer to do so. The funds raised (€1.4 billion) are exclusively dedicated to financing projects undertaken by EDF Énergies Nouvelles. For this inaugural issue, EDF made an innovative dual commitment, both in terms of project eligibility criteria and fund allocation. The selected projects will have to comply with five eligibility criteria drawn up by the Vigeo[1] rating agency: Civil rights compliance and governance in the country where the projects are located; Management of environmental impacts; Protection of workers' health and safety; Promotion of a responsible supplier relationship; Dialogue with local stakeholders. The investments made will be subject to a unique traceability process, being annually disclosed by EDF and audited by Deloitte & Associates. This initial operation paves the way for new channels of financing for other essential Group businesses, such as hydropower and energy services.

Thanks to its continuous investments, the EDF group is now the European leader in renewable energies in terms of installed capacity[2]. Excluding major hydropower facilities, it is ranked fifth, compared to just 10th in 2011, and under IHS typology it is second in Europe for emerging renewable energies (photovoltaic solar power, marine energies, geothermal techniques, small hydropower, biomass, waste combustion).

Objectives

The Group has set a target of achieving a 25% share of renewable energies in the energy mix by 2020 (installed capacities). Renewable energies accounted for 19.9% in 2013 (19.3% in 2012) mainly as a result of commissioning of major onshore wind power facilities in Mexico, Canada and Scotland, and large offshore wind farms off the coast of England and Belgium.

The French government aims to develop 6 GW of offshore wind power capacity by 2020. The Group in turn aims to be part of the emergence of a French offshore wind power industry, and EDF Énergies Nouvelles is the leader of the consortium selected by the authorities for a 1.5 GW offshore project. The first question to address is reducing generation costs, which currently vary between €170 and €200/MW. More than 200 wind turbines are to be installed under this programme off the coasts of Brittany and Normandy in north-west France. EDF Énergies Nouvelles is also bidding for the second contract tendered by the French government in 2013, which concerns 1 GW.

To contribute to development of renewable energies, the Group is working on three levers to reduce generation costs:

- **reducing engineering costs**, by insourcing the operations of transporting and erecting turbines, which were previously carried out by the manufacturers, or by changing to all-steel structures instead of wooden structures to hold solar panels;
- **reducing operation and maintenance costs**, by fitting wind farms with a vibration detection system that can predict risks of damage and thus improve turbine availability;
- **optimising technologies** by R&D programmes on matters such as raising onshore turbine hubs so that better quality winds can be captured and thus improving output per MW installed, or increasing the output of new-generation solar panels, for instance with Photowatt's LabFab, and research on thin-film solar panels with a partner.

1. *The European leader in Environmental, Social, and Governance ratings.*
2. *Source: IHS report, June 2013.*

Main developments in 2013 in the Group

Hydropower	■ Commissioning of the Rizzanese dam (55 MW) in Corsica.
	■ Continuation of the hydroelectric development project at Romanche Gavet (93 MW, €44 million), Isère, France, for commissioning in 2017. This plant will produce 560 GWh annually, 155 GWh more than the existing facilities.
	■ Authorisation has been received to increase the power of the Coche dam (+64 MW) in France.
	■ Start-up of the power-raising project for the Lixhe plan (+7 MW) in Belgium, which will help the plant to keep its operating permit.
	■ Start of industrial operation of the Rivière de l'Est facility on Réunion island (1 MW).
Onshore wind power	■ Commissioning of Fallago Rig (144 MW) in Scotland by EDF Energy Renewables, as well as Glassmoor II (12MW) and Boundary Lane (6 MW), in east and north England.
	■ Commissioning in Mexico of the Bii Stinu (164 MW) facility, jointly owned 50% by EDF Énergies Nouvelles and 50% by Mitsui&Co Ltd group, and the Santo Domingo wind farm (100 MW).
	■ Commissioning by EDF Énergies Nouvelles and Enbridge group (50/50) of the second phase of the Lac Alfred wind farm (150 MW) in Canada, doubling its capacity.
	■ Commissioning of 134 MW in Turkey by EDF Énergies Nouvelles.
	■ Commissioning in France of the Portes de Champagne wind farm (12,3 MW) in the Champagne Ardenne region, the Fraisse-sur-Argoût (23 MW) in the Hérault region and Pouzols (5,1 MW) in the Aude region.
	■ An additional 12 MW of capacity was commissioned by Edison in Italy.
Offshore wind power	■ Completion of construction of the Teesside wind farm in north-east England by EDF Energy Renewables, and commissioning of the first 13 turbines; this facility will ultimately have 27 turbines and capacity of 62 MW.
	■ Completion of the 54-turbine C-Power wind farm (325 MW) 30km off the coast of Belgium at Zeebrugge, constructed through the C-Power consortium (EDF Énergies Nouvelles: 9.1%).
Solar power	■ Commissioning by EDF Énergies Nouvelles of the Catalina plant in the United States (143 MWp) in California. With more than 1.1 million "thin film" solar panels, this is the largest photovoltaic plant ever built by EDF Énergies Nouvelles, and 8th largest in the world in terms of installed power.

Capacities under construction

Onshore wind power	■ The Hereford (200 MW gross), Longhorn (200 MW gross) and Spinning Spur 2 (161 MW gross) wind power facilities in the Unites States.
	■ The Blackspring Ridge (300 MW gross) and Rivière-du-Moulin (150 MW gross) wind farms in Canada.
	■ The Ecotera (72 MW gross), Luc-sur-Orbieu (11.5 MW gross), Cornihac (9.2 MW gross) and Vallée de l'Hérault (14 MW gross) wind farms in France.
	■ Soma 3 (100 MW gross) wind farm in Turkey.
	■ The Grassridge (66 MW gross) wind power plant in South Africa.
	■ A programme for 51 MW of new capacities in Italy, associated with a repowering plan for existing capacities (197 MW).
	■ The Burnhead Moss and Roade (33 MW) wind farms in the United Kingdom, due for commissioning in 2014.
	■ Extension (4.1 MW) to the Burnfoot Hill wind power plant in Scotland.
Solar power	■ Power generation plants with total gross capacity of 144 MW in Israel.
	■ The Madya Pradesh facility in India (30 MW gross).
	■ The Toucan facility in Guyana (5 MW), which combines a photovoltaic plant and energy storage.
Biogas	■ The Heartland facility (20 MW) in the United States.

Other developments

Offshore wind power	■ Phase 3 of the Navitus Bay offshore wind farm to the west of the Isle of Wight (a 50/50 EDF Energy/Eneco Wind UK Ltd joint venture), with installed capacity of up to 1100 MW. Construction is scheduled for 2017.
Marine energies	■ Progress on the marine STEPs (pumped storage power stations) that can store energy in Guadeloupe and Réunion islands by EDF Systèmes Energétiques Insulaires. Commissioning expected by 2020.
	■ Installation of a river hydropower demonstrator in Guyana (the Harvest project) by EDF Systèmes Energétiques Insulaires, intended to supply populations that are a long way from the networks, and replace fossil fuel use.
	■ EDF Énergies Nouvelles is participating in the 2nd generation floating wind farm project VertiMed, for which it is developing a pilot site off the coast at Marseille following a European project tender.
Solar power	■ Continuation of the Millener project in French overseas territories, aiming to install micro-power systems in homes, with individual energy storage and computerised electricity consumption management facilities. In Corsica, more than 300 installations began operation in 2013.

Research in renewable energies

Given the synergies developed with the Group, EDF Énergies Nouvelles signed a three-year agreement with Group R&D. The main areas of research in 2013 were reducing noise levels at onshore wind power facilities, modelling photovoltaic plants and assessing sunlight strength, studying new technologies such as floating offshore wind turbines and wave energy converters, and storage of electricity produced by these new energies.

The main challenge facing the Group remains the question of how to integrate decentralised renewable energies, which are intermittent by definition, into the networks. ERDF, Europe's leading electricity distribution network manager, is working on incorporation of renewable energies into the French grid, with the objective of absorbing 15 to 25 GW of wind power and 15 to 20 GW of photovoltaic power by 2030.

With the support of Group R&D, ERDF is experimenting with new ways of smoothing fluctuations in electricity output by wind farms. Together with the Ademe it manages the Ventea demonstrator launched in 2012. The aim is to test sensors that measure the voltage of the wind power supply to 1% accuracy, and send their data to an automated regulator.

2.2.4.2 Management of water resources

In view of the importance of water resources for its electricity and heat businesses (cooling for nuclear and fossil-fired plants; hydropower generation), the EDF group includes water risks in its risk management policy. Every investment decision is subjected to detailed risk analysis and impact studies. In France, a strategic committee for water has drawn up a water policy and oversees its implementation. This policy is a response to four major concerns: preparing for the future, in a more complex context for sharing the resource of water; adjusting to regulatory and societal change; contribution to multi-use management of water and local economic development; and optimising the energy producer's operational management of water.

Water levels were very favourable in **France** in 2013. They were more than 20% above annual average, largely due to record snowfall on the mountain ranges. EDF met all its commitments to stakeholders in terms of required water levels for tourism, water restitution, support for low-flow periods and farming, while retaining sufficient stocks for the start of the 2013-14 winter. Production losses due to environmental constraints (relating to flow volume or temperature) were comparable to 2012.

In operating its generation facilities, the Group seeks to optimise water use, especially by its fossil-fired plants. Several actions have been undertaken to reduce the consumption of fresh water by generation facilities. On **Réunion island**, desalination of sea water can save some 50,000 m³/year on the volume of water pumped from fresh water reserves and the water table.

Also outside France, other companies have set up programmes to cut water consumption.

In **the Netherlands**, the Sloe plant has halved its basic water consumption by revising he gas circuits through a "Hot Gas Path Inspection".

In **Hungary**, BE ZRt recovers and recycles cooling water from the plants and has achieved a recycling rate of 34% for certain facilities.

In **Poland**, the Kraków power plant is reducing water consumption by using recycled water from other industrial operators and collecting rain water (almost 680,000 m³ in 2013).

Volumes of water drawn and returned by the Group

(in billions of m³)	**2013**	2012	2011
Cooling water drawn	53.9	54.8	55.2
■ Fresh water	18.3	28.0	26.8
■ Brackish (or estuary) water	8.4		
Cooling water returned	53.4	54.2	54.6
■ Fresh water	18.0	27.5	26.3
■ Brackish (or estuary) water	8.4		

Nearly 99% of the volumes of water drawn are returned to the natural environment, in compliance with local rules on quality and temperature.

Specific consumption of evaporated water per kWh of electricity produced by the Group's fossil-fired and nuclear power plants

(litres per kWh)	**2013**	2012	2011
Water consumed / fossil-fired generation	0.938	0.933	1.002

EDF group involvement in international bodies

EDF is the joint leader of the World Business Council for Sustainable Development (WBCSD) Water working which reinforces two strategic positions: the Group's participation in the Board of Governors of the World Water Forum, and its management of the new Water group formed by French business managers' association MEDEF.

EDF has also joined the OECD initiative on water governance.

In 2012 the EDF group made commitments to:

- invest the necessary resources in development of methods and instruments to assess the water footprint of its electricity generation activities;
- control the water footprint of its electricity generation activities;
- create value locally, and incorporate the aim of minimising its water footprint from the design phase whenever an electricity generation project is in development.

Achievements of these commitments in 2013

As the first commitment concerns a very complex subject, work on methodology was begun in collaboration with the international scientific community.

For the second commitment, the evaluation methodology has been shared with Group companies and discussion have taken place on the Group's water concerns and reporting.

For the third commitment, the value creation project has concentrated on hydropower generation plants and two case studies have been selected: the Durance-Verdon facilities in France and the Nam Theun 2 project in Laos.

The Group has undertaken to use the IHA's[1] Hydropower Sustainability Assessment Protocol in assessing its hydro-electricity projects. It decided to assess the Romanche-Gavet project, which is currently the largest hydroelectricity project in development in France. It should increase power and energy output while also better integrating facilities into the valley and significantly reducing environmental impacts. The assessment was conducted from May to June 2013 by independent auditors and concerned the new dam and dismantling of the existing generation facilities. The results show very good performance in view of the hydroelectric durability criteria under the IHA protocol.

2.2.4.3 Ground management

The Group's industrial activities can cause ground pollution. An action plan exists for all Group land assets, consisting of four stages:

- identification of land sites (this stage is complete for EDF);
- identification of sites potentially affected by pollution;
- analysis of soil samples from the potentially polluted sites, beginning with sensitive areas;
- monitoring those sites to control sources of pollution and develop a management plan, and lastly rehabilitation where relevant, depending on the future use and regulatory requirements.

To reduce the likelihood of pollution, strong synergies are forming in the Group to step up efforts to replace dangerous products by products that are less harmful to the environment and health, when technically possible. This is the case between EDF, EDF Energy, EDF Luminus, EDF Norte Fluminense and BE ZRt through reinforced campaigns with small and medium-sized companies. In Italy, EDF Fenice has launched a programme with the University of Rome on substitutes for chlorinated solvents. R&D action to improve techniques for identification of polluted ground areas has continued, as seen in the Innovasol partnership with the University of Bordeaux and other industrial operators. In France, the nuclear fleet stepped up its monitoring programme in 2013 for underground water by intensifying the measurements made on water samples. In overseas French territories where there is a large risk of marine and land pollution due to fuel oil, IES worked with EDF-Trading Logistics to reinforce security of transportation and prevention procedures, and undertook crisis drills.

Askarel transformers

European directive 96/59/EC of 16 September 1996 requires an inventory of equipment containing PCBs[2] and PCTs[3], together with a national plan for decontamination and the gradual elimination of these substances, which are principally found in certain electricity transformers and condensers.

Decontamination of equipment with containing more than 500ppm PCBs was completed by the regulatory deadline of 31 December 2010 (70,000 transformers were removed between 2006 and 2010). ERDF has since embarked on depollution of transformers with PCB content below 500pm, ahead of the regulatory requirement to do so, setting itself a target of entirely eliminating PCBs by 2025, with an interim target of 50% to be reached in 2019. Of the 59,000 transformers concerned at 31 December 2012, 6,000 were treated in 2013.

Phytosanitary products

The Group's Real Estate division has undertaken an inventory of phytosanitary product consumption across all property sites managed in France.

In 2013, an action plan to reduce phytosanitary product use achieved its first result: consumption was reduced by 7.3% from 2012 (and 21% compared to 2009 levels).

2.2.5 Climate change

Thanks to the high proportion of nuclear and low-carbon renewable energy plants in its generation fleet (including hydropower facilities), the EDF group is committed to remaining the leading electricity operator in action to fight climate change and reduce greenhouse gas emissions. It subscribes to the EU objective of cutting emissions by at least 20% between 1990 and 2020, taking into account the diversity of local energy situations.

The Group is addressing the issue of climate change by investing in low-carbon or carbon-free generation facilities, including renewable energies (see 2.2.4.1) and nuclear power, with the aim of achieving 75% carbon-free generation by 2020 (for total installed gross capacity of 160 GW[4]).

The Group has made a commitment to cut indirect emission, for example by office buildings, through appropriate management of buildings and employee motivation.

Since 2011 EDF has published its greenhouse gas (GHG) emissions figures, including indirect emissions, going beyond its legal obligations under article 75 of the "Grenelle 2" law. This report covers all EDF activities, mainland France and island energy systems, from fuel production to power generation, to the office activities of employees.

Comparative figures 2010-2012*, emissions in kilotonnes of CO_2 equivalent:

	2012	2011	2010
Scope 1** - direct emissions	17,000	14,800	19,600
Scope 2** - emissions related to consumption for the company's own operations	49	50	57
Scope 3** - indirect emissions	16,300	16,000	17,700

* *2013 figures not available at the date of publication. The figures will be available in the Indicators at: http://strategie.edf.com/investisseurs-socialement-responsables/indicateurs-de-developpement-durable/indicateurs-281609.html.*

** *Scopes 1, 2 and 3 are defined by the GHG Protocol 1, covering the six greenhouse gases in the Kyoto Protocol (CO_2, CH_4, N_2O, HFC, PFC, SF_6).*

1. *International Hydropower Association: a nonprofit organisation formed in 1995 by Unesco to promote sustainable hydropower, http://www.hydropower.org/.*
2. *PCB: Polychlorinated biphenyls.*
3. *PCT: polychlorinated terphenyls.*
4. *Including 100% of capacities for fully consolidated companies and at the prorata share of equity interest at 31 December 2013 for proportionately consolidated companies or companies accounted for under the equity method.*

The change in GHG emissions between 2010 and 2012 is correlated with variations in weather conditions in mainland France: 2010 particularly, and 2012 to a lesser extent, were colder than normal, while 2011 was particularly mild.

The 23% increase in direct emissions between 2011 and 2012 is mainly explained by the colder weather of 2012, which meant more use was made of the fossil-fired power plants to generate electricity.

Significant energy efficiency efforts have been made by EDF in its buildings, successfully stabilising emissions relating to electricity consumption to heat its premises (scope 2) despite the weather effects.

Meanwhile, the Group's strategy also involves helping customers to reduce their own CO_2 emissions by creating and promoting eco-efficient packages and advice on rational energy use.

CO_2 emissions by electricity and heat generation, in g/kWh

	2013	2012	2011
EDF group	116.3	117.0	99.6
EDF	35.1	35.2	30.4

2.2.5.1 Reducing CO_2 emissions by industrial facilities, particularly in generation

In 2013, the Group produced 80.6 million tonnes of CO_2 emissions worldwide. In France, EDF produced 16.6 million tonnes of CO_2 even though close to 96% of electricity generation emits no CO_2, bringing its specific emission rate to 35.1g CO_2/kWh.

On the European scale, the most recent study by PWC[1] stressed that "the EDF group contributes to a very significant extent to maintaining Europe's average emission rate at a relatively low level" (excluding EDF, the carbon factor amounted to 452 kg CO_2/MWh in 2012, against only 350 kg CO_2/MWh when the EDF is included).

EDF has several levers to reduce its greenhouse gas emissions and keep them at one of the lowest European levels, below 150 g/kWh, in view of the Corporate Responsibility commitment made in 2012:

- in the short term, optimisation of the generation fleet by improving operating performance;
- in the longer term, adapting the generation fleet: renewing plants (combustion turbine and combined-cycle gas plants), protecting hydropower potential, developing renewable energies and downgrading the highest-pollution facilities.

Optimising environmental performance by the fossil-fired plants

The environmental performances of fossil-fired plants have been constantly improved in response to the progressively stricter regulatory requirements. Investment programmes incorporate the requirements for improvement of air quality and reduction of atmospheric emissions. They also respond to the regulations on greenhouse gases, taking into consideration security of supply and the cost of fossil fuels.

Since the $DeNo_x$ systems to reduce nitrogen oxide were put into operation in recent years, the Group's atmospheric emissions have fallen considerably.

In **France**, all oil-fired facilities now use oil with very very low sulphur content (0.55% sulphur). With the R&D teams, EDF is continuing studies on reducing NO_x emissions through the Sperone Q600 project (low-NO_x configuration studies to optimise boiler operation).

In **Italy**, Edison's fossil-fired fleet consists entirely of high-efficiency, low-carbon CCG plants. These efficient plants and the hydroelectric and renewable energy facilities (particularly wind farms) make Edison one of Italy's lowest-emission electricity operators.

In **Poland**, the fossil-fired plants are particularly challenged by pollutant emissions in the air. Most of EDF Polska's boilers are now fitted with low-NO_x burners. In preparation for application from January 1, 2016 of the EU's Industrial Emissions directive that will limit sulphur oxise (SO_x) and nitrogen oxide (NO_x) emissions to 200 mg/Nm^3, EDF Polska will fit desulphurisation systems in the EC Krakow, Kogeneracja and EC Wybrzeze cogeneration units.

Modernisation of the fossil-fired plants

In **France**, three CCGTs were commissioned between 2011 and 2013, at the Blénod (430 MW) site in 2011 and at, Martigues in 2012 and 2013 (Martigues 5 and 6, 465 MW each). The programme is continuing with construction of the CCGT at Bouchain (510 MW) in north France. In late 2011 EDF signed a partnership agreement with General Electric for joint development of a new-generation CCGT at the Bouchain site. It will use FlexEfficiency50 technology, and benefit from the best technical performances (efficiency raised to 61%, 3-4% higher than a traditional CCGT) and environmental efficiency (CO_2 emissions cut by 10%). Commissioning is scheduled for late 2015.

Some of the highest-pollution fossil-fired plants were closed down in 2013 (Blénod 2 in May 2013 and Le Havre 1 and 2 during the summer).

In the **United Kingdom**, the three new units of the combined cycle gas plant at West Burton B (1,300 MW) are now in operations. Serving 1.5 million customers every year for a forecast operating lifetime of 25 years, this plant will contribute to achievement of EDF Energy's objective for 2020: to cut specific CO_2 emissions by 60%.

In **Poland** in 2013, EC Zielona Góra completed modernisation of its power plant and now uses gas instead of coal as fuel.

Finally, concerning CCS (Carbon Dioxide Capture and Storage) technology, the EDF group is participating in post-combustion and oxy-combustion harnessing projects with both Group and non-Group industrial partners, and studies concerning the transmission and storage of CO_2. In 2013, the carbon capture demonstrator built at Le Havre in conjunction with Alstom and Veolia Environnement, with the support of the French environment and energy management agency ADEME, was put into operation.

1. *PricewaterhouseCoopers (PWC) study of November 2013: European Carbon Factor – Climate Change and the Power Industry.*

2.2.5.2 Diffuse greenhouse gas emissions

In addition to direct emissions by its industrial facilities, EDF is committed to reducing its diffuse emissions from office buildings, company vehicles and business-related travel, and to promoting a DSM (demand side management) programme with Group employees.

The EDF group manages a significant real estate portfolio (more than 4.5 million m² excluding electricity generation buildings). The Group monitors and seeks to reduce the environmental impact of all its buildings, whether owned outright or leased.

Under EDF's sustainable development policy, the Real Estate department has set itself the target of cutting energy consumption by the service buildings it manages by 8 GWh/year, drawing on the following levers:

- DSM actions through adjustment of the way installations are operated;
- optimisation of surface occupation;
- renewal of the portfolio of directly-owned buildings;
- use of the best available technology, particularly in maintenance work;
- application of energy performance contracts for all office locations under subcontracted management.

In 2013, EDF devoted almost €10 million to improving the energy efficiency of its buildings.

EDF is a member of the International Sustainability Alliance (ISA), whose main objective is to contribute to development of sustainable buildings at European and worldwide level. Since this primarily requires good knowledge of the current portfolio's actual performance, ISA members have joined forces with the BRE (Building Research Establishment) to create an environmental database currently covering some 10,000 buildings.

2.2.5.3 Demand side management

2.2.5.3.1 Energy efficiency

Promoting energy efficiency to all customers is an integral part of the EDF group's sustainable development policy, and one of the principal levers in the battle against climate change. One essential aspect of its work concerns improving insulation in the homes of people with low financial security (see 2.3.3.1). In early 2013, the Group formed an Energy services section grouping all energy service activities for business customers and local authorities, principally in Europe. Energy efficiency for service sector and industrial companies is one of the five key areas of development.

In **France**, EDF is deploying offers that encourage customers to control their demand for energy and give priority to the lowest-carbon generation methods. This entitles it to energy savings certificates under the system which assigns every supplier obligations to save energy with customers (see section 6.6 of the reference document). As the leading French energy producer in the EU, EDF met its obligations for the period 1 January 2013 – 31 December 2013.

EDF has also achieved its goal of a cumulative reduction of 2 million tonnes in CO_2 emissions by customers, which was part of its sustainable development policy and covered the period from July 2009 to June 2013.

DSM action by EDF in 2013 with residential customers, business customers and local authorities

France	
Energy saving promotion and training	■ Launch of the dedicated energy-saving website www.mamaisonbleuciel.fr for residential customers.
	■ Funding of training in saving energy for employees and tradesmen in the building sector through the FEEBAT system to develop these businesses' capacity to respond to the thermal renovation market (13,000 professionals trained in 2013).
Awareness-raising/ information	■ Organisation of an information campaign on environmentally-friendly habits: several million leaflets, mobile apps, advertising.
	■ Events on the theme of controlling energy consumption for businesses through the *Club Business Entreprises*.
	■ Launch of a quarterly magazine for 100,000 public sector decision-makers, to give a forward-looking overview of local energy issues.
Energy-efficient offers and advice	■ General rollout of free "Energy Label" advice, to show residential customers the heat efficiency of their home.
	■ Launch of the new "*Diagnostic Habitat Bleu Ciel*" offer: an energy-saving expert visits the home for a heating assessment, simulation of potential savings, recommendations, estimation of the cost of work required and advice on financing it.
	■ Almost 100% of large business customers have signed up to the Energy Productivity Plan in which EDF makes a commitment to make energy savings (and is rewarded by a share of the savings achieved over a multi-year period).
	■ Launch of the Energy Savings Awareness offer to help local authorities cut energy consumption.
	■ Development of the "Energy analysis of assets" and "Local energy optimisation" for local authorities (economically suitable energy diagnoses to encourage carbon-free local energy in defining energy strategies); more than 200 projects are under way.
Experiments	■ EDF is continuing experiments on energy consumption at peak times. In Lyon and Brittany, the "*Modération Conso 18h-20h*" project is testing a new tariff grid that provides incentives to limit consumption between 6 and 8pm for a few days in winter.
	■ EDF is also testing new load-reducing tariffs in Brittany though the project named "Une Bretagne d'Avance", which involves consumers in reducing peaks in consumption by remote control of their electric heating.
Controlling consumption	■ Signature of an agreement with the French National Space Studies Centre in Kourou, Guyana, to help it reduce energy requirements by 15% in the first three years (or nearly 2.7 million kWh per year).
	■ A pilot sea-water-based air conditioning project to reduce electricity consumption by 90% was undertaken in partnership with the Ademe and the regional authorities in Réunion island (the Saint Pierre hospital has already adopted this project).
	■ At Electricité de Strasbourg, development of temporary disconnection of solar-powered water heating equipment and load-reducing tariffs for 40% of residential sites (close to 200,000 customers); promotion of the text-message alert system for customers on the Tempo or Effacement Jour de Pointe tariffs.

Internationally	
Controlling consumption	■ Continuation in the United Kingdom of EDF Energy's EcoManager energy monitor for residential customers, showing energy consumption by electric appliances in order to help people cut energy use; 253 customers signed up in 2013.
	■ Rollout of an offer of free cavity wall insulation offer for homes and boiler replacement under the government's Energy Carbon Obligation (ECO) campaign which introduces an obligation to reduce domestic heating costs for poorer customers and customers aged over 70.
	■ In Hungary at Demasz, launch of a pilot smart meter project, and proposal of an energy audit service to business customers.
Energy efficiency	■ At EDF Energy, commercial action has been stepped up on the business customer segment, based on the Energy performance contract and Energy efficiency tariffs, which account for 46% of the company's sales.
	■ In Italy at Edison, launch of energy review offers, assistance with Environmental Management Systems, energy efficiency advice and training: introduction of pilot public lighting systems with external partners.

2.2.5.3.2 The sustainable city

By 2050, three quarters of the world's population will live in towns and cities, which will account for almost three quarters of the energy consumed in the world[1]. This trend is bringing new challenges for our cities and local areas: controlling land and urbanisation, respecting environmental requirements, guaranteeing access to electricity, improving transport and transport networks, and reinforcing inter-urban solidarities.

For the EDF group, the city of the future must be energy efficient, low-carbon, green to preserve biodiversity and resident comfort, inclusive and united, with an attractive economy and services.

To meet the requirements of local authorities for a more sustainable city, EDF has proposed a cross-functional approach since 2013, structured in three phases:

- First, **advice on energy questions**, to identify and describe local energy resources as they stand now and up to 2030, but also to identify priority sectors for saving resources. The aim is to supply an analysis of the possible options by taking into account parameters concerning energy consumption, energy poverty and access to transport, in order to make the best energy choices for the area under consideration;
- **Design and production of facilities**, together with an operation and maintenance service offer executed for new districts by EDF Optimal Solutions which develops new low-carbon techniques (recovery of lost energy from the water tables or sea water, biomass, solar power). For today's towns and cities, EDF helps local authorities to target the least energy-efficient housing and undertake renovation work that strikes a judicious balance between the investment level and the expected benefits. EDF can help with street lighting (30 to 40% of a town budget), which offers the best return on investment (within 10 years) thanks to recent technological advances. Supplying equipment and facilities also covers alternative low-carbon mobility solutions (electric shuttles, car sharing, battery charging terminals);
- Finally, **monitoring and measurement of the installations' energy performance** (energy management) backed up with educational action to raise user awareness of energy saving (behavioural action).

Internationally, EDF is focusing on improving energy efficiency in developing countries. In east Morocco, the Group is constructing a project begun in 2012 that involves local actors in development of energy efficiency and use of local renewable energies. The earliest actions were a study conducted with Ademe on family energy consumption by type of use in the town of Oujda, preparation of an energy efficiency charter for the new buildings in the region (in anticipation of the forthcoming Moroccan heat efficiency regulations), energy audits of buildings, and lighting plans appropriate to the types of district to be lit.

In 2013, EDF and Veolia also signed a contract with Singapore's Housing Development Board, the city's leading constructor of homes, to develop a computerised urban modelling system. The collaboration covers energy efficiency in buildings and their air conditioning systems, as well as collection of household waste. It includes the possibility of incorporating photovoltaic panels into the home, rooftop gardens and total water recycling.

2.2.5.3.3 Smart grids

Adapting the existing electricity network to the new needs of today's society is a major strategic point of focus.

Making new information and communication technologies a more integrated part of modern electricity networks will help bring about the transition towards a carbon-free energy economy:

- The new grids will facilitate inclusion of intermittent renewable energies, and adoption of new uses (heat pumps, electric vehicles/rechargeable hybrid vehicles, etc), both key factors for the future of distribution networks. The aim is to create mesh networks equipped with remote control systems and software to identify damaged areas in the network, and compensate for any shortfalls or even optimise electricity deliveries. The Group's distributors are cooperating on these new networks. ERDF took part in the launch of the "EDSO for smart grids" association created with other European distributors in order to share experiences and establish an industry standard;
- The new grids will allow consumers to take charge of their energy use, to achieve greater energy efficiency in interaction with the network.

In **France**, ERDF is developing the "Linky" system of new-generation smart meters. The aim is to modernize the 35 million electricity meters all over France. Following a successful pilot experiment validated by the authorities, 300,000 Linky smart meters are now in use in the Lyon and Touraine regions.

ERDF is also coordinating the European GRID4EU (Grid for you) project, which has been set up as part of the European Commission-financed smart grid research programme. GRID4EU is the largest programme for smart grids co-financed by the European Union (€25 million of the total €54 million cost), and involves a consortium of six European distributors representing 50% of customers in Europe.

The aim is to work together to move forward on:

- integration of generation from renewable energy sources;
- automation and security of the electricity network;
- effective customer participation in consumption management;
- support for development of electric vehicles and electricity storage solutions.

1. *Source: International Energy Agency.*

2.2.5.4 Adapting the Group's businesses to climate change

As climate change directly affects energy demand as well as the physical environment in which generation, distribution and transmission are carried out, EDF has a strategy for adaptation to climate change, in a timely response to France's National Plan for Adaptation to Climate Change for 2011-2015, which covers most of the Group's nuclear fleet and distribution networks. This strategy concerns current and future industrial facilities, customer offers, production/consumption optimisation, and R&D themes. It is organised around the following aims:

- evaluating the impact of climate change (currently observed and predicted) on installations and activities;
- adapting the installations concerned to reduce their sensitivity to extreme weather conditions;
- taking future weather and climate into consideration in the design of new facilities;
- improving resistance to extreme changes and situations that are harder to predict.

In France, EDF heads action 3.3 of the National Plan for Adaptation to Climate Change, « In the energy sector, improve performances in terms of water drawing and consumption by existing and future power plants ».

The nuclear power plants have been designed to withstand serious external weather events. To improve efficiency in hot weather, renovation work is under way (€400 million until 2019) for 15 French plants that have cooling towers.

According to the Intergovernmental panel on climate change (IPCC), sea and ocean levels are rising and could rise a further 18 to 42cm by 2100 as a result of climate change. This potential rise has been incorporated into the design of the Group's new EPR plants. The Flamanville EPR, for example, is built 4m higher than the maximum forecast rise in sea level.

In the **United Kingdom**, as well as the Group's adaptation strategy, EDF has joined the JER (Japanese Earthquake Response) study programme on extreme weather events. It is working with the Met Office (the national UK weather office) and universities on long-term weather studies, and has given its R&D the task of researching adaptations to extreme rainfall situations.

In the French overseas territories, the design of the four new oil-fired plants under construction by EDF incorporates the risks related to climate change: they include a sea wall able to withstand 13m tsunami waves at Réunion island, and a flood wall in Martinique (flooding recurrence interval: 2,500 years). All openings of the industrial buildings are protected against cyclones and special pools to collect water in major storms.

Weather risks

Given the recurrence of large-scale weather events, EDF and ERDF have drawn up a "Weather event" plan. EDF has introduced measures to reinforce resilience to external weather effects (the aim being to withstand the initial exceptional event then return to normal as soon as possible). The lessons learned from the Fukushima accident have been integrated into these measures, and a rapid response nuclear task force (*Force d'Action Rapide du Nucléaire* - FARN) has existed since 1 January 2013 to intervene in an emergency (see section 4.2 of the reference document).

ERDF's plan describes the measures taken to reduce network vulnerability (1.3 million km) and shorten the time to resupply customers in the event of a power cut. It also covers risks of flooding and summer heatwaves. The plan essentially consists of putting high-voltage overhead lines underground to avoid risks of falling trees, wind, snow and frost, beginning with the most exposed and significant facilities for customer connection. ERDF thus took down 27,400 km of high-voltage overhead lines between 2007 and the end of 2013, including 12,600 with an indentified weather risk. 98% of new high-voltage networks are underground, and 80% of new low-voltage networks use more discreet, safer techniques.

In addition to this investment programme, a Rapid intervention electricity task force (*Force d'intervention rapide électricité* - FIRE) has been formed. It can involve up to 2,000 persons both in and outside France. In 2013 the task force was called in three times.

2.2.6 Preserving biodiversity

2.2.6.1 The EDF group's biodiversity policy

The EDF group's industrial activities take place in sometimes remarkable natural areas. They interact with this biodiversity and benefit from the services of the ecosystems. Biodiversity is a strong economic consideration for the Group, as failure to respect it may lead to sites or plants being stopped, or result in a ban on new industrial programmes.

The Group's commitment is structured by its biodiversity policy (2009) which is built on three objectives in line with the Global Reporting Initiative (GRI4) indicators:

- developing knowledge of natural environments and potential impact of Group activities on these ecosystems;
- preserving biodiversity, while protecting or restoring natural spaces;
- informing employees and local residents, raising awareness, and dialogue with scientific communities and associations.

This policy is adjusted by the Group's companies and business lines, which implement strategies appropriate to their businesses and local regulations. This is part of the ISO 14001 certified Environmental Management System.

The Group's Sustainable Development department, in direct liaison with the subsidiaries and business lines, is pursuing and guiding a policy of biodiversity partnerships to encourage exchanges of technical knowledge, support projects led by associations and implement practical technical projects. In France, priority is given to projects with EDF's longstanding NGO partners: the Bird Protection League (*Ligue pour la Protection des Oiseaux*), the Coastal Protection Agency (*Conservatoire du Littoral*), French Nature Reserves (*Réserves Naturelles de France*), the French Committee of the International Union for Conservation of Nature, and the National Federation for Fishing in France (*Fédération nationale pour la pêche en France*) (see 2.3.2.3).

2.2.6.2 Generation sites' sensitivity to biodiversity (GRI4 indicators EN11 to EN14)

In France, the great majority of EDF's generation sites are in or near protected sites (80% of hydropower facilities are in or near a Natura 2000 classified site), which are preserved from farming and urbanisation and near some kind of waterway, all factors that favour biodiversity. The fossil-fired and nuclear plants draw their water and make discharge into rivers or the sea. The company's sites and land near conservation areas or rich biodiversity zones involve key biodiversity challenges, and the company must be well aware of them in order to reconcile the needs to protect biodiversity with the needs of its industrial activity.

IUCN categories[1]		Number of industrial sites		
		Nuclear[(1)]	Fossil-fired[(2)]	Hydropower
I	Nature reserve	2		14
II	National park (core zone)			18
III	National monument or Feature			53 classified 113 registered
IV	Species protection area	1	2	39
	Ecological reserves (integral or managed)			4
	National Hunting and Wildlife reserves	1		7
V	Regional national park	4	1	109
	Marine natural park	1		
Rich biodiversity zones	Natural zones of interest for ecological, wildlife and plant reasons	15	7	458
	Natura 2000 (special protection zone, sites of community interest)	13[(3)]	2	167
Total *(not equal to the direct sum of columns as certain spaces correspond to more than one classification)*		**21**	**15**	**502**

EDF generation sites partly or entirely located in protected areas and rich biodiversity zones (source: EDF):
1: sites in operation or being dismantled
2: sites in operation
3: through discharge facilities

Main actions in 2013

EDF	■ Development of ecological quality indicators in partnership with EDF R&D and the French national history museum *Muséum National d'Histoire Naturelle*.
	■ Analysis of natural environments in and around the 19 nuclear generation sites and the Brennilis and Creys Malville sites being decommissioned, and fossil-fired plants in operation, decommissioned or currently being decommissioned.
	■ Launch of a "Biodiversity Atlas" for hydropower sites, to assess their ecological value.
	■ Launch of a guide on attention to the species that interact with hydropower activities.
Edison	■ Completion of the "Assessment of the value of biodiversity" programme.
	■ Analysis of natural ecosystems upstream and downstream of the Chievolis dam in the Friuli region of Italy.

1. *International Union for Conservation of Nature.*

2.2.6.3 Description and management of impacts (GRI4 indicators EN12 to LA)

The potential impacts of EDF's generation activities principally concern:

- Water and aquatic biodiversity, chiefly through:
  - Hydropower plants, which can modify biodiversity upstream of facilities if they hold back water, and downstream due to fragmentation of spaces and limitation or changes in flow volumes,
  - Fossil-fired and nuclear plants, to a lesser degree.
- The natural habitats of the flora and fauna in the areas concerned, when building or maintenance work is in progress;
- Flying wildlife (birds and bats), due to the overhead distribution lines and wind farm installations.

However, some of the locations of EDF's hydropower and other plants can also provide spaces for protection or restoration of biodiversity.

For all large-scale projects, detailed studies of the effects on biodiversity are conducted and reported formally in environmental impact studies. In particular, measures to avoid and reduce significant impacts on biodiversity are presented in the spirit of the French ecology ministry's Avoid – Reduce – Offset approach, along with any relevant offsetting measures for unavoidable residual impacts.

Main actions in 2013

EDF	■ Hydroelectric and radio-electric supervision of nuclear sites and the main fossil-fired sites, together with national partners (Onéma, Ifremer, Irstea, IRSN, etc).
	■ During renovation of the water intake system for the Cordemais fossil-fired plant, installation of a pump that reduces aspiration of fish.
EDF Énergies Nouvelles	■ Installation of bird and bat-scaring devices at the Aumelas wind farm.
	■ In France, partnership with the French Bird Protection league to examine the biodiversity issues of offshore wind power.
	■ Differentiated management of green spaces at all photovoltaic plants, to preserve local species' reproduction periods.
EDF Energy	■ Preliminary studies for construction of a flood wall at the Dungeness B nuclear site, which showed the presence of two protected species protégées (the Sussex emerald butterfly and the early spider orchid). The protection plan was approved by Natural England, which has given permission for the necessary work.
ERDF	■ In France, extension of the action plan to save the Bonelli's eagle, previously focused on the Mediterranean region, to the Ardèche region.
	■ 50 more sensitive sites have been equipped with tags to reduce the risks of collision for birds.
Island Energy Systems	■ In Guyana, monitoring of the oxygenation and methane levels in the water held by the Petit Saut dam (365 km² of a river and forest ecosystem transformed into a lake ecosystem). The results of these observations are used in UNESCO-sponsored research into hydropower in the tropical environment.
	■ On Réunion island, after changing public lighting, training of personnel in protective measures for the petrel (a native bird classified as an endangered species on the IUCN's Red List) if one is stranded, and tests of anti-collision devices on the lines.
	■ On Réunion island, a study on the Reunion Island Day Gecko (a native protected reptile) on the Rivière de l'Est dam.
EDF Luminus	■ Pursuit of a study on mortality and migration of salmon and eels, which is a prerequisite for the Lixhe hydropower plant to be authorised to operate. The programme is being extended to two other hydropower sites.

2.2.6.4 Protection and restoration action (GRI4 indicator EN13)

The concern for biodiversity is leading the EDF group to become a manager of natural spaces, generally in partnership with local associations; either setting up and managing offsetting measures, or taking proactive measures on its land.

The EDF group is also helping to roll out public policies in favour of biodiversity:

- EDF and ERDF are involved in several national action plans : Pyrenean desman, cinereous Vulture, bearded vulture, European otter, Zingel asper, Bonelli's eagle;
- Some of EDF group's sites contribute to the protection objectives for Natura 2000 zones;
- The EDF group is organising an internal procedure to incorporate recommendations for measures against invasive non-native species to limit their spread.

Main actions in 2013

EDF	■ Introduction of protective measures for the common wall lizard on the Bouchain CCG plant site.
	■ A preservation plan for the local Ophrys orchid on the Martigues CCG plant site.
	■ Signature of a partnership agreement between the hydropower business line and the French bird protection league to manage biodiversity on certain hydropower sites.
EDF Energy	■ Hinkley Point C EPR plant: validation of natural habitat management plans (preparation phase) and plans to reduce ecological impacts and monitoring (operational phase) by the local authorities.
	■ The Wildlife Trust Biodiversity Benchmark label was achieved for environmental management of the Dungeness B nuclear plant site. The site has been recognised as a site of special scientific importance (SSSI) and partly classified as being of European importance. 100% of the English nuclear plants now hold an approved label. Submission of application for the label for the two Scottish nuclear power plants in 2014.
EDF Luminus	■ Introduction of green zones at the Angleur gas-fired plant site, and definition of measures against invasive species.
ERDF	■ Study of the creation of "ecological corridors" for natural species as part of the national reflections on the "Green and Blue Grid" (Trame Verte et Bleue) with the Biodiversity Club for infrastructure operators (CIL&B).
	■ Assessment of the efficiency of environmental measures in the Mediterranean region by the French Bird Protection League, as an experiment.
Island Energy Systems	■ On Réunion island, creation of a botanical station to study a native orchid that will be a species bank in view of revegetation operations.
	■ Participation in the "Koudmen pour la mangrove" project in Guadeloupe, ecological coastal restoration operations which were awarded Palme IFRECOR first prize.
	■ Heritage restoration operations with the Martinique coast conservation agency.
	■ Creation of artificial reefs that foster development of coral by immersing old electric pylons from Réunion.

2.2.6.5 Offsetting measures (GRI4 indicator EN15)

In France, EDF was selected by the Minister for Ecology, sustainable development and energy in 2012 as the biodiversity offsetting operator in the French region of Isère for the Combe-Madame project. This experiment is one of the biodiversity offsetting mechanisms currently being tested. It consists of joint ecological management with local partners and NGOs of 120 hectares belonging to EDF, to rehabilitate environments and make re-implantation possible for notable Alpine species. This initiative would enable regional planners to offset the impact of their work on natural environments.

2.3 Societal information

The EDF group's societal policy aims to create and develop bonds and dialogue with all external stakeholders at all levels (worldwide (UN, NGOs), regional (European Union, etc), national and local), to optimise and strengthen connections with vulnerable customers, by helping to reduce energy poverty and make intraGroup links more active.

This policy incorporates, supports and reinforces the existing initiatives, ensuring they are coherent within the Group. It complies with the United Nations Global Compact and is integrated into the EDF group's sustainable development policy, its CSR agreement and the public service contract.

2.3.1 Ethics and transparency to stakeholders

The new ethical standards

The Group Management's decision to renew and adjust its ethical guidelines led to concerted elaboration and adoption by EDF group's Management Committee and Board of Directors of the Group's Charter of Ethics.

The Charter complements the laws, regulations and national and international conventions by simply stating the values, actions and rules of conduct that apply to workplace in each company and for each employee of the Group. It must be known and shared by all members of the Group. It is accessible directly from the edf.com website in French and English, with local translations supplied by the subsidiaries. In April 2013 the Chairman and CEO launched the rollout of the Charter of Ethics across the whole Group. The first phase covered the main companies, representing approximately 85% of the Group's workforce.

In application of the Charter of Ethics, every Group employee has the right to report concerns, confidentially and without risk of reprisal, to his/her manager or a dedicated Ethics correspondent in the Unit or Company concerned, and as a last resort to the Group's Ethics and Deontology committee[1] which was set up in 2013. It consists of a chairman appointed by EDF's Chairman and CEO, an executive secretary, five discussant members and three consultative members. This committee exists to provide advice, consultation and support. It receives reporting from each company on implementation of the Group's ethical approach. Its chairman reports to the Chairman and CEO of EDF in the name of the Committee, and to the EDF Board of Directors' Ethics Committee.

1. *Form available on the edf.com website, addressed to the specific e-mail alerte-ethique@edf.com.*

Fraud prevention

The Chairman and CEO's decision on anti-fraud action in the Group, with its basic principle of zero tolerance, has been in application since late 2010. To ensure this decision is correctly implemented, the managers have prepared and adopted anti-fraud plans in the principal entities, supported by the distribution of the Group fraud prevention guidelines which specifically address risks of fraud and corruption.

All these ethical actions are subject to the Group's internal control, which has made it possible to spread generalise practices that encourage auto-evaluation and sharing of good practices, in line with the recommendations on Ethics and Anti-fraud measures that make up some of the first sections of the Group's internal control guide.

In 2012, a "Fraud alert" working party was formed at EDF to supply all levels of management with a methodology and instruments to handle and manager alerts that could indicate fraud. The process was presented in the second quarter of 2013 to the Group's General Secretary, who has asked for it to be extended to the other companies.

Anti-corruption measures

In the issue of corruption, procedures for validation of intermediaries' contracts were reinforced by application of the Chairman's decision of 31 May 2010 on consultancy and agency agreements. A control system for these contracts has been put in place at the top level of the Group.

A programme to raise awareness of EDF's criminal risk (Chairman's decision of 28 July 2011) was launched in response to the emergence of higher exposure to this type of risk as the Group has expanded and diversified its establishments across the world. This also results from tightening of anti-corruption laws in the US (the 1997 Foreign Corrupt Practices Act) and the UK (the Anti-Bribery Act): due to the extraterritorial aspect of these laws, international anticorruption regulations are taking shape.

Increasing harmonisation of Group activities in changing regulatory contexts is leading EDF to launch a programme to harmonise practices to prevent corruption in all its forms.

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 application of competition rules, the competition compliance programme deriving from the Chairman's decision of 22 December 2010 extended its awareness-raising and training action in 2011 to the greatest possible number of operative staff in all subsidiaries, both in and outside France. This programme involves a set of awareness-raising, training and control measures designed to best spread a competition law culture in the Group, and make employees and partners more accountable as regards compliance with those rules.

Human rights policy

As part of its CSR commitments, the EDF group has undertaken not to tolerate any violation of human rights, fraud or corruption in any Group company or at any supplier.

This commitment is notably reflected in the Group's membership of the United Nations Global Compact, and introduction of ethical clauses into all long-term purchase contracts with suppliers.

EDF is also a founder member of the EDH association (*Entreprises pour les Droits de l'Homme* or Companies for Human Rights).

2.3.2 Dialogue with stakeholders

The Group is investing in what it hopes will be more effective dialogue with stakeholders at all levels of the territory. In its CSR commitments, it promises to encourage transparency and dialogue on sensitive subjects, with a commitment for eight of its companies to have a formal space for dialogue with stakeholders by the end of 2015; this has already been achieved by three companies, EDF, EDF Energy and Edison.

All Group companies engage in dialogue with stakeholders, each using its own procedures. This dialogue covers 5 areas:

- local consultation concerning generation sites and proposed new industrial establishments;
- organised relations with customers, suppliers, sector partners, socio-professional associations, local authorities and national and international institutions;
- operational partnerships with NGOs and the academic world;
- gatherings of experts and representative personalities in independent boards or panels (see 2.3.2.2) to provide Group managers with external critical analysis;
- public Information and education in energy and sustainable development issues, especially for young people.

2.3.2.1 Informing local populations near generation sites and consultation on industrial projects

Generation sites

In **France**, 38 local information commissions consisting of elected officials, State representatives, associations and professional bodies keep local residents informed of nuclear facility activities, as required by regulations. EDF works with these commissions at its power plants and provides the information needed to fulfil their mission.

In addition to this regulatory system, EDF has set up a public information centre at each nuclear power plant to inform local populations of the plants' operations and impacts, energy-related issues, control of energy consumption and presentation of business lines that will provide jobs in the electricity sector in the future. In line with last year, EDF's image with local populations remained broadly positive: 86% declared it has a good image, 84% thought nuclear power plants had a high level of operation and 78% acknowledged that there was a positive impact on economic activity.

In hydropower, EDF pursued its permanent information and safety campaigns to warn water users of the risks of variable water flow in the rivers. Hydroguides were again employed in the summer season. Special relations were developed on local projects, such as setting up a Monitoring committee for the work on the Poutès dam project in Haute-Loire, bringing together elected officers, State departments and representatives and NGOs.

In the **United Kingdom**, EDF Energy organises regular meetings with local stakeholders (three to four times a year depending on requirements) covering matters related to its business activities and impacts. In line with the objective announced in 2012, it opened three new visitor centres in 2013 near its nuclear power plants (7 new plants in two years). Given its industrial plan, EDF Energy also began considerations under the Better Energy programme to strengthen relations with local populations in the long term, and will publish its new ambitions in 2014 together with the associated objectives.

New industrial projects

In **France**, authorisation procedures for the Bouchain CCG plant were completed in a short 16-month period, thanks to dynamic dialogue with local residents, the national and local authorities and local associations.

The regulatory public debate procedure was held for construction of the Dunkirk methane terminal. In 2007, an earlier consultation led to amendments to the initial project, to avoid encroaching on a protected area with the risk of harming endangered bird and plant species, and protect living and leisure areas for families. Since the construction work began, local dialogue has continued and has led to jointly developed solutions with

stakeholders: environmental offset measures defined with a committee of experts and environmental protection associations, social and economic development measures in liaison with local authorities and economic actors, establishment of a concrete production unit and transport of some materials by barge, to reduce truck deliveries which were a point of anxiety for the local population.

For development of EDF Énergies Nouvelles' three offshore wind power projects (Fécamp, Courseulles-sur-Mer and Saint-Nazaire), three public debates were held between March and July 2013 as required by the French Environmental Code for projects above €300 million. More than 5,000 people attended the debates. Their main concerns were respect of the environment, attention to uses of the sea, disturbances caused by the work, the visual impact (visibility from the coast) and the economic consequences. EDF Énergies Nouvelles is voluntarily continuing the dialogue by holding regular public meetings and setting up information points near the future sites.

In **international** activities, 2013 saw confirmation of the EDF group's commitment to the undersea section of the South Stream gas pipeline. This pipeline will connect Anapa in Russia to Varna in Bulgaria, successively crossing Russian, Turkish and Bulgarian economic territories. The project will be conducted in compliance with national laws, EU directives, international conventions and protocols, standards issued by the international financial institutions, and industrial good practices for social and environmental performance.

Impact study reports are currently being drawn up for all the countries concerned. They will cover the socio-economic dimension, the environmental and social dimension, and the cultural, onshore and maritime heritage, and will also incorporate the opinions expressed by stakeholders. These reports will be published in mid-2014.

2.3.2.2 Advice from independent panels

Several panels of experts provide their outside view to Group managers and companies: the Sustainable development panel at Group level, the Sustainable development, Scientific and Medical Councils at EDF in France, the Stakeholder Advisory Panel for EDF Energy, and the Social Committee at Edison (which is currently being reorganised).

The **International sustainable development panel** is a body for dialogue made of independent, global specialists in fields relating to the Group's activities or who represent the expectations and interests of civil society. It also includes, as automatic statutory members, the Chairmen of the Sustainable development and Scientific Councils for France, as well as the Chairman of EDF Energy's Stakeholder Advisory Panel. The International sustainable development panel provides advice and a critical assessment of the Group's commitments to sustainable development and their implementation.

In 2013, this panel met twice to examine the CSR commitments made by the Group in 2013 and the new Group sustainable development policy, which will be introduced in the first quarter of 2014. Every year, it issues a critical analysis of the Group's sustainable development performance[1].

The **Sustainable development council in France**, whose members are also external personalities who are representatives of the issues associated with the impact of EDF's installations and businesses, challenges managers and experts at EDF as early as possible over the company's proposed options regarding sustainable development.

In 2013 this council met twice to examine subjects related to nuclear plant decommissioning and the role of electricity in heating buildings.

Regarding decommissioning, the selected strategy is "immediate decommissioning" (the choice made by the Nuclear Safety Authority, which is compatible with the Finance Law) and wishes EDF to constantly question its decommissioning strategies in a "peer review" approach recommended at European level (Directive of 19 July 2011). Among its six other recommendations, it recommends that EDF should take a leading role in the emergence of a nuclear plant decommissioning industry, and has encouraged the company to play a proactive part in setting the release threshold for radioactive waste, which is a decisive factor for volumes.

Regarding the role of electricity in heating buildings, the council wishes EDF to examine the "zero-carbon heating" scenario further (developing insulation and extensive use of optimised-performance heat pumps) for each company, commenting that the debate on the energy transition lacked pertinence.

EDF's Scientific Council is a consultative body that gives the company well-known senior scientists' opinions and advice on the impact of scientific and technical developments on its business lines, and on long and medium-term research activities. It discusses specific themes, issuing detailed reports and recommendations to EDF's Chairman.

In 2013, the Council covered three subjects:

- the cities and local areas of the future: challenges and the electricity operator's role;
- industrial approach to progress in nuclear safety;
- the local/global connection: which electricity system for the future.

EDF's Medical Council, composed of leading personalities from the medical world, and university professors, is a body for reflection and advice on a number of current health topics connected to EDF's activities. Its Chairman is Professor André Aurengo of the French Academy of Medicine. The Medical Council held three plenary meetings in 2013.

The main subjects discussed by the Council covered the essential health and environmental issues of current relevance – the European REACH[2] regulation and the case of monochloramine, Géocap[3] studies on infant leukaemia near electricity transmission lines, energy poverty and health, absenteeism for medical reasons in the electricity and gas industries, leukaemias near nuclear power plants in the United Kingdom through a new case study, the energy transition and radioactive exposure of contractors

The **Stakeholder Advisory Panel** advises EDF Energy's management committee on corporate strategy and sustainable development. It consists of six independent members and met three times in 2013 to discuss questions related to the British electricity market reform, smart meters, the new tariff conditions defined for the energy regulator Ofgem effective in 2013 and 2014 and the resulting Standards of Conduct. The panel also examined EDF Energy' sustainable development performances and published its critical assessment *(http://www.edfenergy.com/about-us/annual-report/stakeholder-views.shtml)*.

1. *The Group's sustainable development report will be published in the first quarter of 2014, exclusively online at: http://rapport-dd-2013.edf.com/fr/avis-du-panel-des-parties-prenantes.*
2. *The European Union has set up the REACH system, an integrated business registration, evaluation and authorization of chimicals system and has established a European Chemicals Agency.*
3. *A scientific publication by research bodies Inserm and IRSN concerning childhood leukemia around French nuclear power plants on the website of the International Journal of Cancer on 4 January 2012.*

2.3.2.3 Redesigned sustainable development partnership strategy

The sustainable development partnerships cover three main aspects: strategic partnerships, biodiversity partnerships, and societal partnerships.

Strategic partnerships

Against the backdrop of the debate on the energy transition, the Sustainable Development division continued its strategic partnerships in 2013 with think tanks and research chairs, for instance that of the MIT (*Massachussets Institute of Technology*) and Paris-Dauphine University on climate matters. In 2013, the partnership with the Nicolas Hulot foundation for nature and humans focused on support to the think tank founded by the association to consider the ecological transition, involving academics, researchers and top scientists with the aim of bringing out new ideas and proposals to govern the ecological transition, and making them known to the general public.

EDF continued to support the *Institut du développement durable et des relations internationales*, a think tank renowned for the quality of its research, and it took part in preparation of international negotiations and laws in France. EDF provides particular support in three programmes that are closely related to its sustainable development activities and commitments: climate, the economy of biodiversity and the urban fabric. In 2013, EDF and IDDRI launched a project for modelling scenarios for cutting CO_2 emissions by the world's largest economies.

Biodiversity partnerships

In view of the two developments of reinforced regulations and the new environmental governance resulting from France's *Grenelle de l'Environnement* Round Table, biodiversity is now a factor in sustaining and developing EDF's activities both in and outside France. Application of the Group's biodiversity policy requires external expert input from organisations such as the French natural history museum (*Muséum national d'histoire naturelle*), the International Union for Conservation of Nature, the Bird Protection League (*Ligue pour la Protection des Oiseaux*), the Coastal Protection Agency (*Conservatoire du Littoral*), French Nature Reserves (*Réserves Naturelles de France*), and the National Federation for Fishing in France (*Fédération nationale pour la pêche en France*). These longstanding partnerships foster sharing of technical knowledge and dialogue with various business lines (particularly generation and the networks), support for the associations' long-term projects, and implementation of practical measures overseen locally by EDF's business lines and companies.

Societal partnerships

In 2013, in coherence with the Group's CSR approach, the Sustainable Development division decided to redefine its strategy for societal partnerships in relation with the business lines concerned. This focused on access to energy and the fight against energy poverty, social development in local areas, social integration and education, with the objective of elaborating innovative solutions with multi-actor economic partners. Priority was given to partnerships with an international scope, and the following are currently under consideration: partnerships with the European Anti-Poverty Network, the *Compagnons Bâtisseurs* master tradesmen's network, the Action Tank set up by French business school HEC (for a project on "Damaged co-ownership" including a social business solution), and the Electrification Roadmap, an emerging international initiative aiming to make the United Nations' "universal access to energy" objective a reality, especially in Africa, working with other electricity operators such as Duke and Eskom.

2.3.2.4 Information on energy and sustainable development issues

In 2013 the Group's companies continued their programmes to raise awareness in the general public and young people of energy control and sustainable development issues.

Main actions of 2013

EDF	■ Repositioning of EDF's Bleu Ciel brand for residential customers with a focus on energy savings. An information letter was sent out (several million copies) to raise awareness of the website mamaisonbleuciel.fr and the associated mobile apps to develop ecological habits, backed up by a press advertising campaign also based on ecologically-friendly habits.
	■ Reorganisation of the educational content on sustainable development issues of the website aimed at young people (*http://jeunes.edf.com*; over 480,000 visits in 2013; 197,000 in 2012).
	■ 1,780 talks on sustainable development issues given in secondary schools, in connection with the curriculum and at the request of teachers (more than 43,000 young people have attended).
	■ 2,688 lectures on safety for primary schools, including an energy saving aspect on uses in the home (more than 65,000 have been informed).
EDF Energy	■ Pursuit of the online educational programme The Pod, in partnership with the European Eco-School programme and the British NGO Eden Project, with the participation of over 17,500 schools and more than 10 million children since its launch in 2008 (initial target :2.5 million).
Edison	■ Continuation of the *Eco Generation School is the climate's friend* campaign conducted with the NGO Legambiente in pilot schools (20 schools in 20 Italian towns), teaching pupils to assess their school's energy efficiency and helping them to look for ways to control energy consumption (2,600 children and 2,100 parents participated; 40 associations and 35 public authorities were involved).
EDF Asia Pacific	■ Continued distribution of a book on the uses of electricity and reasonable use of natural resources, intended for children in rural areas and distributed in China, Thailand, Vietnam and Laos. This book is now part of school curricula.

2.3.3 Societal affairs

The EDF group's societal policy is an integral part of its sustainable development policy, in compliance with the UN Global Compact.

The three main strategies of the societal policy, in coherence with the Group's CSR commitments, are:

- to facilitate access to energy and energy eco-efficiency for vulnerable people;
- to contribute to the economic and social development of the areas covered by EDF;
- to contribute to the debate on sustainable development and EDF's activities, fostering local dialogue and knowledge of energy-related issues.

The sustainable development division leads a specific network of correspondents of the Group's various entities on these questions. The network meets annually to discuss good practices and share the main actions initiated.

2.3.3.1 Contributing to action against energy poverty

As the issue of energy poverty intensifies across Europe, the EDF group reinforced its involvement in action against energy poverty in 2013, going further than the regulatory obligations. This is reflected by the incorporation of this issue into the eleven CSR commitments made in May 2013, and implementation of new solutions and programmes specific to each country concerned. The Group's chosen approach is to accompany customers in difficulty by tailored aid, and wherever possible, more long-term upstream action to reduce the most vulnerable households' consumption costs.

In France, in addition to operations conducted as part of public programmes[1], EDF's action has three focuses:

- help with paying bills;
- assistance to customers in difficulty;
- preventive action.

Help with paying bills: EDF was the largest contributor to the *Fonds de solidarité pour le logement* (FSL) housing solidarity fund applied with local authorities, paying in €23.3 million in 2013. EDF's 350 social advisors handled 400,000 applications and more than 200,000 underprivileged households, after local commission decisions, received financial aid to pay part of the energy bill.

Assistance: EDF increased the alert resources for fragile customers as the winter approached (mailings, text message campaigns and automatic phone calls). In 2013 the firm helped more than 466,000 customers under its « Energy Assistance » system (324,000 in 2012), working with them to find appropriate solutions to their situations: deadline extensions, putting them in touch with social services, providing advice on making energy savings.

As well as its in social mediation centres (170 reception points), EDF concluded a new partnership with the French Red Cross in June 2013, based on three actions: aid in finding solutions to energy debts, training action in energy uses and information on social tariffs, and help with improving home insulation.

In **French overseas territories,** the Group continued the measures initiated in previous years, distributing more than 95,000 low-energy lamp kits and multisocket standby savers (Packécos) and HydroEko domestic water regulation kits to customers who benefit from the basic need tariff, to help them control their electricity consumption. More than 70,000 customers in difficulty were supported, especially through the *Eco Solidaire* system in Réunion island, which can finance almost all the cost of installing an individual solar-powered water heater. In **Guadeloupe**, EDF and the housing information agency *Agence Départementale d'Information sur le Logement* (ADIL) have begun to prepare an agreement to provide vulnerable people with more accessible information on the energy support available.

External partners consider EDF's customer support arrangements effective overall: 78% of local authorities declare they are satisfied (BVA survey, 2013).

Prevention: EDF develops long-term campaigns to improve the energy efficiency of the homes of people in energy poverty situations. It has continued its involvement in the *Habiter mieux* (Better living) programme headed by the ANAH agency for home improvement subsidies. Under the agreement signed in 2011 under supervision of the Government and in response to the "Grenelle 2" environmental law, EDF's financial contribution is a maximum €49 million over three years, making EDF the largest contributor ahead of GDF-Suez and Total. In 2013, renovation work begun on more than 31,230 homes occupied by owners in energy poverty situations (13,000 in 2012). EDF also participates in identifying the households eligible for aid, and provides expert advice in energy control (awareness-raising and training).

This commitment adds to EDF's voluntary contributions, for instance:

- the *Toits d'abord* operation in partnership with the *Fondation Abbé Pierre*, aiming to build 2,000 « very social » housing units for disadvantaged sections of the population (more than 1,300 homes were being built or renovated at 31 December 2013);
- the "Médiaterre" programme in partnership with *Unis Cités*, in which young volunteers do outreach work with residents in housing estates, to help them adjust their energy consumption behaviour (operation conducted in 23 towns);
- organisation of "Energy poverty meetings" with local actors to identify the new questions raised by energy poverty (5 meetings held in 2013 in Bordeaux, Nantes, Orléans, Nancy and Vesoul).

In other Group companies:

In 2013, **ERDF** launched the PRECARITER programme for local authorities, a statistical and mapping software to evaluate the various forms of energy poverty in mainland France. This is based on statistics for all French households[2], their income and expenses (energy for the home, transport, rent, food, health, etc). Considering all unavoidable expenses faced by households, it offers a more detailed overview of energy poverty, without reducing understanding of the question simply to analysis of energy bills.

Given the growing numbers of payment difficulties (1,000 new cases of serious debt and tens of thousands of rescheduled payments) the **Électricité de Strasbourg** group is going beyond its obligations and stepped up its participation in the housing aid fund *Fonds de Solidarité Logement* (€130,000), extended its convention for helping customers in difficulty in the town of Illkirch, and signed an agreement with the city of Strasbourg so that its agencies can use special aid cheques to help customers.

1. *EDF offers social tariffs in France for electricity (it is the only operator authorised to apply the Basic Necessity tariff) and natural gas (Special Solidarity tariff): it receives compensation for these tariffs through the Contribution to the Public Electricity Service (CSPE) and the Contribution to the special solidarity tariff for gas (CTSSG) respectively, and the startup of electricity supply is free. In 2013, the Brottes law extended the number of potential beneficiaries to 4 million households compare to more than one million in 2012.*
2. *All information is public data, essentially drawn from surveys by the national economic statistics body INSEE (*Institut national des statistiques et des études économiques*) and comply with CNIL data protection regulations.*

In the **United Kingdom**, EDF Energy's action is organised in several regulatory and voluntary systems.

Regulatory aid for vulnerable customers

2013 was the third year of application of the Warm Home Discount Regulations (obligation incumbent on energy suppliers with more than 250,000 customers, requiring them to provide support for customers at risk or in a situation of energy poverty, via an annual discount of £135 on their bills). EDF Energy helped more than 175,000 customers for a total amount of £23 million. In 2014 the discount will be raised to £140.

The government ECO initiative (Energy Companies Obligation) was introduced in early 2013 to reduce energy consumption in the United Kingdom, and help households in energy poverty by funding measures to improve energy efficiency. EDF Energy's obligation for the period 2013-2015 concerns a total estimated amount of £490 million, including £150 million to priority need customers: people on benefits, people aged over 70, residents of rural areas or underprivileged areas. The company achieved its objective of completing 45% of the programme in 2013, particularly through more than 42,800 insulation projects.

Voluntary support mechanisms

In view of the new British regulations, EDF Energy discontinues its previous tariffs for vulnerable customers (automatic application of the lowest tariffs to eligible customers) and in November relaunched a personalised online aid service to help people in difficulty to get access to all the support offered by the company, and easily locate the cheapest tariffs and payment terms, to fight indebtedness. Advice is also available on reducing consumption and reinforcing household energy efficiency.

Partnerships and voluntary support to charities were continued in 2013:

- with the Plymouth Citizens Advice Bureau, an independent body that helps concerned customers of EDF Energy find solutions to their debt problems;
- support for the London Warm Zone programme, which launched a boiler replacement plan in 14 disadvantaged areas of London, and the Newham Warm Zone programme, one of five pilot schemes supported by the government to increase efficiency in the support systems to help vulnerable households cut their energy bills;
- sponsorship of energy poverty forums as part of the National Energy Action programme;
- the Trust Fund, which allocates aid to help families in serious debt after serious illnesses or bereavement get back on their feet (donation of £1.6 million for 2,720 households);
- work with the Chesshire Lehmann Fund, which supports academics and associations in research on the correlation between energy poverty and energy efficiency.

In **Poland**, where Group companies produce electricity and heat for local authorities but have no energy sales dealings with residential customers, all action to fight energy poverty is implemented voluntarily by EDF Polska through a policy of donations to town councils and NGOs.

In **Hungary**, EDF Démász continued its partnership with the Hungarian branch of the Order of Malta (Maltese charity service), to provide financial aid and personalised advice for the people with unpaid energy bills.

2.3.3.2 Contributing to local economic development

In all the countries where it does business, the EDF group's industrial activities (nuclear plants, fossil-fired plants, hydropower plants, renewable energies, distribution networks) are part of local areas and generate direct and indirect local employment, local purchases and payment of taxes that support local development.

In France, EDF has always has a public service mission designed to reduce inequalities between different regions. Through its investment policy it is the country's largest investor, contributing €8.8 billion of net investments to the French economy in 2013 (8.1 billion in 2012). It is also the largest customer of France's small and medium-sized businesses, placing orders worth €2.4 billion in 2012 with 26,500 SMEs. One in two of EDF's suppliers is a SME. In the current crisis that has been affecting Europe since 2009, and in response to demand from local areas to develop local energy projects, EDF is taking action in several areas:

- preserving firms' competitivity by offering them the cheapest possible energy;
- increasing the share of purchases related to investments (networks, new generation facilities, industrial maintenance) in regional businesses;
- becoming the leader of new industries that will generate jobs and local economic development, such as the offshore wind farm with EDF Énergies Nouvelles (more than 7,000 jobs are expected to be created directly and indirectly for development of 1.5 GW of wind power capacity), and energy services with Dalkia;
- setting up innovative growth-driving partnerships with firms or local authorities to define local projects that will gradually integrate more local production and local management of energy demand.

This approach is coherent with the Group's CSR commitments as a "Responsible partner".

In October 2013, the Group reinforced its presence on the **energy services** sector, announcing an agreement with Veolia concerning their joint subsidiary Dalkia. All the Dalkia France activities and teams will join EDF, and the operation will enable EDF to develop these activities in France and Europe. EDF sees this as a response to local authorities' energy supply needs, and will open up a full range of energy solutions: collective heating, local energy generation, energy efficiency solutions for buildings on a scale appropriate to the location depending on installation cost, operation and the carbon footprint, urban transport and public lighting. Making local facilities that will need to be operated and maintained will stimulate the local job market.

Main contributions to local development in 2013

France	■ **Investments in distribution networks** have risen by more than 50% over the last four years to €4 billion in 2013 (to meet connection needs and improve supply quality). 22,000 jobs have been generated directly and indirectly. In application of its new industrial policy, ERDF is balancing its purchases between large firms and small and medium businesses. In 2013, 95% of work and services were ordered from French companies, 53% from small and medium companies.
	■ **Dunkirk methane terminal:** at the end of 2013, 37% of the 693 contracts for construction of this terminal were with firms on the Opal Coast and 24% to regional firms. A partnership has been formed with Dunkirk borough, the local university, local research laboratories and industrial firms to develop a research and development activity on refrigeration.
	■ **Romanche-Gavet hydroelectric development project:** in addition to increasing the production capacity (93 MW compared 85 MW previously), access to the waterway will become open to other economic activities by reinforcing security on the new installations. The town's drinking water will be improved by financial contributions and loans. The riverbanks will be rehabilitated as natural land (six installations removed, to be replaced by a single dam). Construction of a low-energy building that will be moved to the town when building is complete. Incentives to use local companies (currently 24%).
	■ **Flamanville EPR:** at the end of 2013, 39 of the 58 projects selected for the support programme had been completed. The main achievements of 2013 were: safety improvement and widening of the main road leading to the site, modernisation of Barneville-Carteret school and building a crèche in the Cherbourg conurbation. Fifteen other projects are still in progress.
	■ **Corsica:** application of an agreement for commissioning of the new Rizzanese dam with the Corsican local authorities; EDF will make 1.6 million m³ of water available to support farming needs every year. Construction of the project (500,000 working hours) employed up to 300 people at its busiest point, one third of them from local firms. Almost 170 new staff were hired by EDF in five years and over a hundred apprentices were trained. Local companies benefited directly from a total €60 million via new roads, reinforcement of telecommunications networks required for the site, development plans around the reservoir, creation of an Energy-themed visitor centre and landscaping around Saint Jean-Baptiste de Poggio chapel, which is a popular tourist site.
	■ **Plan Energie Alsace:** €16 million (54% of the total budget) and 42 agreements or projects were in progress by the end of 2013 under a 3-year local support agreement. Areas of intervention: energy efficiency and poverty innovation, biodiversity, training, energy education, integration of disabled people.
	■ **Local energy projects:** more than 200 projects for development of sustainable cities and areas are in progress, with the objective of applying economically suitable, low-carbon energy solutions that can be adapted to urban projects, with the emphasis on renewable energies.
	■ **Energy Productivity Plans:** 20 new plans of the kind have been signed, and a service has been introduced to reinforce competitivity in large French companies (10% of the portfolio of customers consuming more than 7 GWh annually).
Canada	■ To construct a 1 GW wind farm projects in Quebec, EDF Énergies Nouvelles has made a commitment to use 60% of regionally-made components in an exclusive partnership with the German turbine manufacturer REpower.
Laos	■ Continuation of economic support programmes by NTPC in connection with the Nam Theun hydropower plant. Development of farming and forestry activities by transfer of 190 local plots of public land for the purpose by the end of 2013, something not seen before in Laos. The reservoir will be used for fishing. NTPC also runs a micro-credit system (via a fund of €520,000) for individual entrepreneurs (516 loans had been made by the end of 2013, for a total of €100,000).

Information on direct and indirect job creation by the EDF group, and integration of young people and vulnerable people, is provided in section 2.4.1.4.

Contributing to local cohesion

Under a partnership agreement between the French government and nine major public service operators including EDF, intended to provide inhabitants of rural areas with a range of services in a single place, 22 contracts with French departments were signed in 2013.

2.3.3.3. Responsible suppliers and purchasing

Responsible purchases

The EDF group's Purchases Division is rolling out a "Responsible purchases" approach in all EDF business lines and Group companies to incorporate consideration of the following into all stages of the purchase process:

- the environmental impact of purchasing decisions;
- societal and social aspects of the supply chain;
- the economic impact of purchasing decisions on the firm, its environment and its suppliers.

EDF, EDF Energy and EDF Luminus include in their purchasing terms and conditions the **sustainable development charter** that is always signed between EDF and its suppliers. In 2013, the EDF group made a commitment that 10 other companies would include an ethical / sustainable development clause in their purchasing contracts[1] by 2015. This project is being led by the Group's Purchases Division.

The division has also implemented the "Responsible purchases – Group synergies" programme which provides subsidiaries with tools and contracts it has developed, particularly concerning assessment of the supplier's attention to sustainable development.

At the end of 2013, ERDF signed a good practices charter with the electricity cables union SYCABEL (*Syndicat professionnel des fabricants de fils et câbles électriques et de communication*) in which the company undertakes to incorporate environmental concerns, including the environmental impact of cables, into its purchases and supplies.

1. *Excluding energy purchases on the SPOT market.*

In practice, respect of environmental and societal issues by suppliers is executed through auto-evaluation questionnaires and sustainable development and social responsibility audits at suppliers' premises, chiefly covering:

- control of their risks, including risks related to their manufacturing equipment;
- establishment of a carbon review of their manufacturing sites or their services;
- establishment of a study concerning the impact of their business on biodiversity;
- application of innovation policies to develop environmentally-friendly substitute technologies or to save resources and cut polluting emissions;
- introduction of a waste-cutting programme;
- implementation of a proactive policy to foster development of the local economic fabric.

Almost 80 audits were launched in 2013 and 60 were completed (57 in 2012), for a declared target of 54. 45% of audits reported a rating of "satisfactory", 47% "acceptable with comments" and 8% "unsatisfactory". This confirms experience of previous years: problems with environmental and social impacts are low and often unusual in France, but are frequent in Asia. 50% of the suppliers audited are aware of EDF's sustainable development concerns.

The main areas for improvement mainly concern subcontractors to whom the suppliers do not transmit EDF's demands. For EDF, these areas are: local purchases, purchases from small and medium sized businesses, the payment times, and the supplier audit process itself.

The number of SD / SR[1] services (audits and auto-evaluation questionnaires) will be increased to 100 in 2014 and will focus on risky purchase segments, especially when manufacturing is offshored.

Coal supply chain

The Group's coal supply chain has been the focus of particular attention for several years, and the Group has been a member of the Bettercoal[2] initiative since 2011. This initiative aims to improve corporate responsibility in the coal supply chain, particularly in mining sites, and ensure that fundamental rights (human rights, working conditions, workers and community life, environmental protection) are respected on those sites. A set of common standards of social, environmental and ethical principles was adopted in 2013 by all signatory companies, in line with existing international standards (issued by organisations such as the International Labour Organisation) and existing measures concerning the extractive industries (e.g. the Extractive Industries Initiative). From 2014, it will form the basis for audits and auto-evaluations of suppliers at the mining sites. The audit results will be recorded in a dedicated database managed by Bettercoal and shared by its members in compliance with antitrust rules.

Purchases from the protected sector

EDF has an objective for purchases from the protected sector, set by its sustainable development policy. Since 2010, the minimum volume objective has been €2.1 million annually. In 2013, these purchases amounted to €1.1 million and €1.5 million in 2012. For ERDF, the volume of these purchases was stable in 2013 from 2012 at around €2.5 million. More than 95% of these purchases concerned three areas: work on the networks (40%), pruning and clearing land (35%) and meter reading (20%).

2.3.3.4 Consumer health and safety

In **France**, EDF offers residential customers an electricity safety survey service proposed in partnership with the Consuel[3] (electricity users' safety inspectors). This service is designed to enhance the safety of interior electricity installations: a Consuel inspector can come to customers' homes to look at the key points of their electricity fittings in all accessible rooms, checking that they meet minimum safety requirements under the UTE XP C 16-600 "State of electricity fittings in residential property" standard. A report of any problems noted and the associated risks is remitted to the customer.

2.4 Social information

Social and human dimensions are pillars of the EDF group's strategy on a par with its financial, economic and industrial ambitions. This support for strategy is reflected in the ambitious human resources project named Vision RH 2020, which is to be tolled out until 2020. It expresses the EDF group's employer model and forms a reference framework for all Group companies, built on the following major orientations:

- women and men as key actors in Group performance;
- a standard-setting employer for employee commitment and HR performance;
- local roots and an international profile;
- support for change, combining adaptability and responsibility.

The model of employer that the EDF group has chosen to embody seeks to make people central to its industrial plan, and aid social mobility through a dynamic hiring and training policy; to construct an integrated group in and outside France, on a sound existing basis; to set a standard for social innovation by instigating a participative approach and facilitating sharing of good practices, which are real levers for commitment by all for long-term performance. Based on this employer model, human resources are managed and led at Group level through the HR Steering Committee.

The EDF group intends to consolidate its position as an exemplary employer in priority areas such as hiring training, health and safety and employee welfare, and develop excellent practices in diversity and anti-discrimination by raising awareness in all Group members and training managers.

This model is also seen in practical terms through the three CSR commitments concerning employer responsibility among the eleven commitments made by the Group as a responsible firm:

- maintaining professional excellence and effective performance by its teams, through training and promotion of diversity;
- proactively reducing work-related accidents for employees and subcontractors;
- refusing to tolerate any violation of human rights, fraud or corruption in all Group companies and also at suppliers.

1. *Sustainable development / social responsibility.*
2. *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. *The Consuel electricity users' safety committee (*Comité National pour la Sécurité des usagers de l'électricité*) is a public interest body in France that certifies the conformity of electric fittings in new or entirely-renovated homes, after inspection where necessary.*

These commitments are systematically associated with measurable targets expressed in figures, as discussed below in the various areas concerned: employment and skill development, health and safety, diversity and human rights.

2.4.1 Employment and skill development

2.4.1.1 Group workforce

The EDF group' consolidated workforce totalled 158,647 people at 31 December 2013: 109,754 for EDF and ERDF[1] and 48,713 for all other Group subsidiaries and affiliates included in the scope of consolidation.

Group workforce in France

For the Group's two main companies EDF and ERDF, after a decline since the early 1990s the total workforce stabilised in 2010. From 2011 the workforce began to grow significantly and this trend has intensified since 2012. This increase was sustained by a large recruitment level that was much higher than the number of employees retiring: in 2013, more than 6,000 people were hired while 3,500 people reached retirement.

The table below shows the distribution of Group workforce in France (EDF share for French subsidiaries) over the last three years.

2.4.1.2 Forward-looking management of jobs and reinforced skills

For the last few years the internal and external context of EDF's business has been marked by significant changes of many kinds: demographic, regulatory, technological, societal, etc. In 2011, the company therefore developed a more flexible system to plan ahead for its requirements in terms of jobs and skills to meet its strategic challenges, and in 2013 it signed an agreement on forward-looking management of jobs and skills (GPEC) for the period 2013-2015.

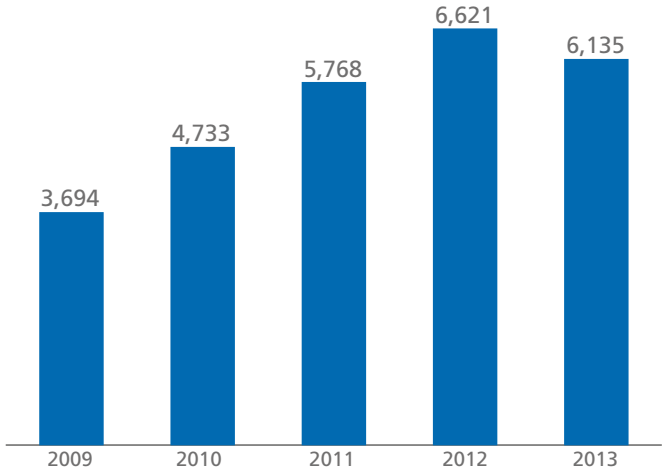
In direct connection with this GPEC agreement, for the first time this year employment prospects for the coming years in generation, engineering and distribution in the island zones were presented to the company's Central Committee, reflecting EDF's commitment to broaden social dialogue on medium-term employment prospects.

EDF also launched its "Horizon Compétences" project intended to harmonise and optimise the employment planning measures already in existence in the company.

2.4.1.3 A confimed recruitment dynamic in France in 2013

To meet its current and future challenges regarding employment, the EDF group in France has followed an ambitious recruitment policy for several years, and almost 27,000 people have joined EDF and ERDF in 5 years.

EDF and ERDF recruitment since 2009



These challenges are:

- resumption of industrial investments in all generation and engineering segments;
  - existing nuclear, with the preparation of the Major Refit programme to extend the plants' operating lifetimes;
  - new nuclear, with progress on projects related to preparation for renewal of the fleet;
  - fossil-fired power, with new generation facilities installed and certain sites shut down.
- numbers of retiring employees remain high (3.4% of the workforce in 2013), many of them in maintenance and operation for the generation, engineering and distribution activities;
- changes in the business in line with technological, economic, and environmental issues in the energy sector, and the EDF's ambition for expansion in France and internationally.

All these concerns call for adaptation and forward planning for change, notably by renewing the workforce to make up for the foreseeable loss of skills due to retirements, increasing employee numbers and acquiring new skills.

EDF and ERDF hired more than 6,000 people in 2013. The movement was begun in 2010 and will continue in 2014. The requirements for skill renewal should stabilise from 2015. Due to the levels of recruitment, a net number of over 2,500 jobs were created in 2013.

New recruits were hired in all the Group's technical business lines; the largest numbers joined the electricity engineering, generation distribution sectors, and the sales and R&D activities. 45% of new employees have 2 or 3 years studies after the Baccalauréat, and the rest are evenly divided between Baccalauréat level and 5 years studies after the Baccalauréat. Most are recently qualified (65% of the total), but EDF also hires more experienced profiles.

The key jobs concerned are: operations agent and technician, maintenance technician / electrical engineer, mechanics, boilerworks and pipeworks, automated equipment, customer advisor.

1. *The EDF and ERDF workforce include non-IEG status employees in both companies. In addition to its own employees, the ERDF workforce includes shared employees: 34,859 employees belonging entirely to electricity activities, and a share of employees (3,807) assigned to mixed electricity and gas activities based on an allocation of 76 / 24 to electricity/gas.*

Generation and engineering are the business lines at the greatest risk of loss of skills, due to the large numbers of retiring employees. This risk has been known for several years, and is covered by ongoing social dialogue. The rate of replacement was at least 140% for 2013 / 2015 due to recruitment numbers, in line with the recent agreement on social dialogue at EDF's Generation-Engineering division. In this context, transferring skills between the generations is of key importance, and must enable EDF to maintain and improve skills levels in the long term.

The nuclear activities remain the largest recruiter, with more than 2,000 people hired in 2013. The fossil-fired sector hired around a hundred employees and hydropower more than 300, while the industrial generation support sectors hired 324. These figures must be considered in conjunction with the number of retirements, which has been high for several years. In 2013, 1,329 experienced employees left the Generation-Engineering division.

To organise efficient skill transfer between the generations, action plans such as MANIOC and RACINES have been introduced in the engineering departments.

The EDF group, an attractive employer

In this period of high recruitment, the appeal of EDF is a major lever. In 2013 the Group continued its action to promote its businesses, and started new initiatives to consolidate its image as employer both in and outside France.

EDF is attractive to new graduates, who make up 70% of people hired for management jobs. This year the Group was highly-rated by future engineers, holding first place in the TNS Sofrès rankings, 5th for Universum (up one place from 2012) and 4th for Trendence. EDF was also awarded a special prize for the greatest improvement with business school students. The Randstad Awards 2012 named it top employer in the energy sector.

Among the action taken, EDF has reinforced the digital dynamic begun in connection with the job website *www.edfrecrute.com,* which registered 4 million hits (+25% compared to 2012) and 600,000 applications filed online in 2013 (+20% compared to 2012), as well as its presence on the social networks. This website was 5th in the rankings published by PotentialPark. Having made all its job offers available on Twitter and EDF's Facebook page, the Group raised its smartphone profile and created a dedicated LinkedIn page which permanently displays 25 carefully-targeted job vacancies. EDF also decided in 2013 to broaden its communication media and work with the French job centre Pôle Emploi in its public service mission, with the aim of improving transparency on the job market.

EDF maintains long-term contacts with target schools and universities, and is developing partnerships with engineering schools through its EDF Graduates network. It is also working to raise the profile and appeal of its business lines with high school and university students, with a special focus on women, to make them more familiar with the Group's businesses and the technical areas in particular. The company is also involved in associations such as:

- the "Elles Bougent" association, which works to encourage young female secondary school pupils and students to go into technical and scientific careers;
- WIN (Women in Nuclear) France: EDF organised the Fem Energia Prize in partnership with the association, which promotes and rewards the careers of young female students or women working in the nuclear industry.

In 2013, the EDF group participated in 43 forums and salons in France, and several international forums (Brussels, London, Milan and Madrid). EDF held its 7th Energy Day, when 400 employees met with more than 2,000 students looking for internships or jobs.

Stronger, well-structured induction for new employees

In a context of significant skill renewal on a competitive job market, employee induction and loyalty-building are essential for the EDF group. A shared induction approach has been initiated at Group level using a comprehensive common 2-day induction mechanism called 2days2gether for managers with 3 to 4 years' experience. In France, the integration programme runs over 4 years: induction in the unit, then the business lines (through the Academies), followed by regional and cross-function induction to encourage an open attitude to other working environments, and finally international induction for managers.

2.4.1.4 Training and skill development: priorities for the Group

The Group's key focus point as regards training cover three areas:

- planning ahead for and supporting changes in the EDF group's businesses;
- making training a vector for Group performance;
- preparing and supporting employee development in his/her current and future tasks, and encouraging mobility and the capacity to switch jobs.

The EDF group is investing in employee skill development: in 2013, 85% of Group employees attended at least one course of an average 64 hours. Career-long access to training is one of the Group's CSR commitments, with the objective of giving 75% of employees access to at least one training action each year.

The Group devoted a significant budget to employee training in 2013, spending €630 million. To implement its training programme, it has a network of 35 business lines campuses and training sites and close to 1,300 course designers and leaders in France.

As well as its physical training sites, EDF is also investing in distance learning: e-learning, serious games[1], virtual simulators. Given the strong need to renew skills, EDF is acting on several levers:

- involvement in initial training through partnerships with business and engineering schools and universities in France and elsewhere (creation of a Nuclear Energy master qualification in English, and 12 university research chairs);
- induction and support for new arrivals, with appropriate training in the Group's specific business lines (for example operation of nuclear installations, which requires 2 to 3 years' training);
- training courses are available through the employees' career to improve or extend their skill portfolios (changes in the business, control of new systems, etc);
- developing approaches to skill transfer, particularly from the most experienced employees who are retiring to their younger colleagues.

In France, the "Training Challenge" (Défi Formation) agreement in 2010 by all unions representing EDF, ERDF, and RTE employees has breathed new life into the Group's training policy since it was initiated.

To anticipate and respond to changes in the business and make training a vector for performance, the EDF group has set up 14 "academies" for the technical businesses and cross-functional groups, and a *Université Groupe du Management* (UGM) which embodies the EDF group's ambition for development, renewal and creation of skills.

Each of these academies is a space where professional development opportunities are constructed, closely in line with current and future needs.

The UGM was set up in 2010 to train the Group's 12,000 managers. It is one of the 17 universities created by large international groups that holds CLIP (Corporate Learning Improvement Process) accreditation, placing it among the best corporate universities.

The UGM contributes to the EDF group's integration and internationalisation. It develops managers' skills in leadership, management, managing change and strategic thinking trough tried and tested courses and modern learning techniques (e-learning, coaching, mentors). The UGM is increasing the professionalism of managers in all geographical zones where the Group has establishments: Asia-Pacific, United Kingdom, Italy, France and Central Europe.

1. *A software combining a "serious" educational, informative or training purpose with a game-type approach.*

In 2013, the UGM broadened access to the Group's e-learning platform to 14,500 authorised French, Hungarian, Italian, Belgian, Polish, Chinese and other employees (including the Group's 12,000 managers). In 2013, this platform delivered more than 9,000 hours of training (a rise of over 230% from 2012). In addition to e-learning, the UGM offers 40 training courses, which were attended by 1,530 managers in 2013. In line with the Group's objectives, new training arrangements have been prepared with the Asia-Pacific division and Edison. The UGM also runs programmes for high performers and managers: in 2013, at least 140 managers and 360 high performers benefited from these programmes.

Training leading to promotion, to restimulate social mobility at all levels

Unusual career-accelerating « bridges » have been created to help employees advance from the position of operator to supervisor, then manager. These bridges are undeniably performance drivers; they foster construction of career paths and increase the appeal of EDF.

Almost half of the EDF group's 30,000 managers in France (EDF, ERDF) reached managerial status in the course of their career. The "Training Challenge" agreement stimulates promotion through training in several ways:

- support for employees moving to a higher employee category (Pass cadre and Pass maîtrise), benefiting more than 1,700 Group employees since 2010;
- promotion of long-term training schemes (2 to 4 years) leading to a qualification:
  - the *Cap Initiative Cadre* and *Cap Initiative Maîtrise* programmes promoting equal opportunities and diversity in the Group;
  - an experimental training course (*Cap Exécution Cadre*) organised with Institut Vaucanson and the *Conservatoire National des Arts et Métiers* (CNAM) is designed to support employees in operative posts as they move into posts with managerial responsibility.

Since 2011, these schemes have helped more than 400 employees to accelerate their career development.

Group campuses and employee training

The Group has a network of campuses on 35 sites, including one in the United Kingdom.

- three corporate campuses open to all Group companies' management, at Les Mureaux, Chatou and Lyon;
- business line campuses training employees in electricity generation and distribution activities;
- a new campus currently in development in the United Kingdom is due to open in 2014 at Cannington near Bristol not far from the future Hinkley Point EPR.

The campus currently at Les Mureaux will be transferred in 2016 to the new EDF site at Saclay. For an investment of more than €380 million, this site will combine the future EDF group Campus and its new R&D centre EDF Lab. This facility will be a key channel for integration and encounters between the 160,000 Group employees, from the apprentice to the senior manager, from all business lines and all nationalities, encouraging development of a common culture. It will have a permanent staff of nearly 1,500 researchers and 20,000 trainees.

The close proximity to EDF's new research and development centre will encourage synergies between innovation and skills and between research and training, and will benefit from the latest technological innovations for learning. Complex technical training courses will take place there, using equipment specific to EDF's business lines:

- a simulator of the controls for a new-generation plant, and teaching sites for generation training;
- simulators for operation and maintenance, and overhead and underground power line facilities for training in electricity distribution.

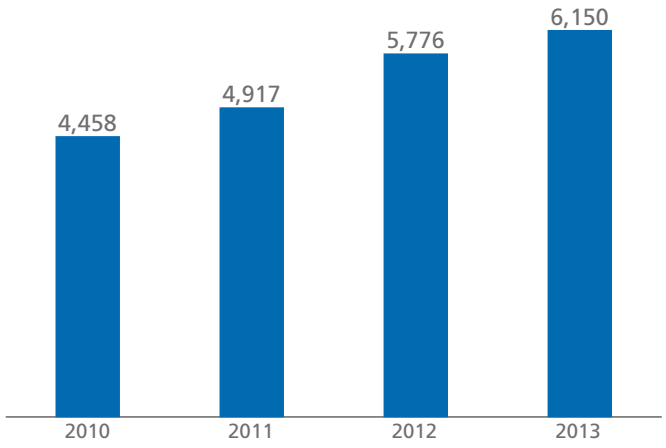
Work-study contracts: a societal commitment and a lever for recruitment

EDF has a long-standing commitment to work-study training. In the early 1990s, EDF set up an apprentice training centre for careers to stimulate learning in the firm.

There are two major reasons for developing work-study training in the Group:

- at a time when there is a need to replace the large number of employees who will retire by 2020, work-study schemes are an essential lever for the Group's recruitment in France, and a channel for excellence that fosters transfer of skills and diversity in terms of experience and origins;
- in addition to its recruitment needs, work-study contracts are also a way for the Group to assert a strong societal commitment to qualifications and employment for young people and others finding it difficult to enter the world of work (see 2.4.4.2).

Change in number of work-study trainees in EDF and ERDF since 2010



In France, the objectives EDF set itself in the 2010 "Training Challenge" have now been achieved overall:

- EDF and ERDF currently have more than 6,000 students on work-study schemes (5.9% of the workforce, up by 35% in the last three years), and more than 6,800 worldwide;
- A significant portion of permanent job contracts is reserved for former work-study trainees (28% of people hired for supervisory and operative jobs and 11% of the people hired for management jobs);
- The Group aims to offer work-study position at all levels of qualification, from the CAP vocational qualification to candidates with 5 years of higher education (see 2.4.4.2).

There are work-study trainees in all Group business lines; most of them are training in generation, distribution and customer relations.

More than 5,000 qualified mentors, trained in compliance with the Group's "mentor standards", provide guidance and support for these trainee employees, who also benefit from specific measures that are more favourable than the minimum legal requirements, including pay and help with travel or housing expenses.

The EDF group is attentive to the quality of training received by work-study employees. For the main courses concerned, "Job / qualification" guides are prepared in conjunction with the schools, to define which activities could be offered by the Group to ensure successful completion of the course. EDF also has a specific training centre based in the Paris region: it can both directly monitor the quality of training received by close to 200 work-study trainees, and develop close links with the academic world. Work-study schemes should be a way to facilitate access to the world of work, and the Group makes sure it is by having follow-up contact with its trainees after the end of their contract (see 2.4.4.2).

2.4.1.5 Career management

High performers and managers

EDF's system to identify high performers is considered to set a standard. A policy was adopted in 2011 and is being tolled out to the whole Group.

Career management for managers is organised under Group control. "People reviews" are held by business line and zone to make sure that managers' careers advance and that they are appointed to suitable positions. Supervisory bodies have been set up such as the Managers' committee, which presents the main appointments, remuneration principles and development programmes to Executive Committee members.

Employee career path management

The annual interviews, which concerned 73%[1] of Group employees in 2013, are an opportunity for employees to discuss career plans and training needs with their manager.

The company is also pursuing two further aims for Group employees:

- facilitating access to information of business sectors and career paths;
- providing resources to help the employee in his career plan.

In France more specifically, these aims are put into practice through a number of actions: the career planning website *Mon parcours professionnel* which was given new functions in 2013, interviews on professional development, and personalised support for career plans from a career advisors. A dedicated community was launched in 2013, and is open to Group companies outside France (Edison, EDF Polska, EDF Energy, EDF Luminus).

Age management

The longer working life in France presents a real challenge for the EDF group, especially in terms of older employees' motivation and loyalty. The situation observed at both ends of the chain, namely the arrival of a large number of young employees, and meanwhile the growing number of people expecting to keep working after the age of 60 and spend their entire career with EDF, has led to the following measures for age management:

- reactivation of induction procedures for new arrivals and action to integrate new recruits;
- work on integration of apprentices and mentoring;
- work on career paths and forward-looking management of jobs and skills (GPEC);
- introduction of mid-career interviews, with training for representatives of human resources and employee awareness-raising;
- a series of action plans on different age groups.

In 2013 two major coordinated and complementary measures were rolled out: the "age management" project and a Group action plan for France entitled the "Generation contract 2013-2015" in application of French law of 1 March 2013.

The "age management" project initiated in 2012 with all EDF's business lines was generalised in 2013. Its ultimate aim is to encourage change in cultural representations, HR and managerial practices, in line with the fundamentals of the Diversity policy.

Several actions were taken in 2013:

- examination and analysis of demographics in the working population, inspired by the 'tempo' project (*Travail EMploi POpulation*) devised by the National Agency for Improving working conditions (ANACT);
- training and learning facilities suitable for all ages and conducive to inter-generational transfer of skills and knowledge (mentoring, support, knowledge or practice communities, reverse mentoring, etc);
- awareness-raising campaigns such as an "age management" serious game with the CNAM and other firms. This serious game is one of a series dedicated to Corporate Social Responsibility on themes such as disability, workplace equality and cultural diversity;
- action connecting longer working lives and preserving employee health throughout their careers.

Similarly, the "Generation contract 2013-2015" action plan was drawn up together with 88 EDF group companies in France. In this ambitious plan the Group has undertaken to hire 10,000 young people aged 28 and under on permanent contracts and 300 employees aged over 50 in the next three years, and to keep 13,000 employees aged 55 and over in employment.

2.4.2 Health and safety

2.4.2.1 Workplace health policy

The Group operates in a high-technology sector where risks are also high, and the health and safety of its employees and contractors are a key concern. The highest regard for health and safety issues is vital in exercising social responsibility towards employees and contractors.

Since 2008, all Group companies have used six common indicators for health and safety, and the results are reported to the Group Committee for France.

At Group level, a review of health and safety results is presented annually to EDF's Executive Committee for analysis and discussion.

In 2013, the Group reached a new milestone

A Group health and safety policy was decided by the Chairman and CEO in late 2013. The ambition expressed through this policy is to enable teams to carry out their tasks in the best conditions for working and workplace life, with a target of zero accidents and zero impact on health.

The policy is based on four principles: responsibility, commitment, continuous improvement and sharing.

The rollout of the policy will be conducted based on regular monitoring and control of results:

- target figures for accidents and absenteeism (see below);
- each company is responsible for implementing this policy at its own level, and a control system will be organised at Group level;

1. *Not including Dalkia International.*

- an annual Groupwide review will be presented to the Executive Committee, which will also examine the quarterly results concerning fatal accidents, the frequency rate for work-related accidents, the number of employees declaring a work-related illness, the number of days' absence for health reasons and employees' perceptions of health and safety, working conditions and wellbeing, via the internal "My EDF" commitment survey;
- managers will be expected to take responsibility for these results, through a social performance indicator taken into account in determining performance-related pay.

Halving the frequency rate for work-related accidents by 2017

Under the Group policy EDF has made a commitment to halve the frequency rate of work-related accidents by 2017 (a CSR commitment).

The prevention and training efforts undertaken in the last ten years had already achieved a significant reduction in the rate of work-related accidents causing sick leave at EDF and other Group companies. The Group has registered a regular improvement in the frequency rate (number of industrial accidents causing sick leave of more than one day during the current year, per million hours worked): from 4.5 in 2010 to 3.1 in 2013.

(Group figures)	2010	2011	2012	**2013**
Frequency rate	4.5	3.9	3.8	3.1

The severity rate (number of calendar days' sick leave during the year for work-related accidents per thousand hours worked[1]) is 0.16 for 2013 (0.16 for 2012, 0.14 for 2011 and 0.16 for 2010).

(Group figures)	2010	2011	2012	**2013**
Severity rate	0.16	0.14	0.16	0.16

The development of a system to share information at Group level on the causes of risks such as falls from heights, electric risks and road risks, and the spread of preventive systems for frequent accidents, made contribution to the improvement in the results.

Every fatal accident is immediately declared to the Chairman and CEO, and from 2014 an in-depth analysis will be presented to the Executive Committee in every case.

There has been a steady decline in fatal accidents since 2011:

(Group figures)	2010	2011	2012	**2013**
Number of fatal accidents[2]	26	27	21	13

The planned adoption in 2014 of a set of "life-saving" rules in all the Group's companies and business lines will be a key lever to reinforce preventive action in the field.

To continue to develop a Safety culture, the following initiative were taken or continued in 2013: an e-learning training module designed by the INRS was made available to managers, video feedback was broadcast following serious accidents (United Kingdom, Poland), dedicated communities 2.0 were created (such as the Doctors Community), a "safety" message was given out at the start of meetings. With the organisation of a "Group Health and Safety Week", EDF reinforced its adoption of the campaign developed by the European Agency for Safety and Health at Work (OSHA Week). In 2013, more than 40,000 employees worked on the theme of "developing cooperation to strengthen prevention".

The Group's health and safety policy aims to improve the results on absenteeism for health reasons

The objective has been set of reducing the number of days' absence for health reasons to 8 per employee per year by the end of 2015. Among the selected areas of focus, preventing stress and repetitive strain injury will be the subject of Group level initiatives in 2014 and 2015.

(Group figures)	2010	2011	2012	**2013**
Number of days' absence for health reasons per employee per year[3]	9.4	9.2	9	8.8

Work-related illness

The annual data published by the Group's French companies (particularly EDF and ERDF) identify the following main causes of work-related illness: asbestos (pleurisy, pleural plaques, primary lung cancer), posture and movements (shoulder problems, tendinitis, carpal tunnel), ionising radiation, silica (pneumoconiosis) and noise-related lesions (deafness).

From 2014, an indicator specific to the Group will be used to monitor the number of employees with an illness of this type and define new preventive action.

1. *Days of leave are reported for the year they are taken, even when the accident happened the previous year.*
2. *The number of fatal accidents includes fatal accidents suffered by employees and subcontractors that do not occur in transit between work and home.*
3. *The total number of days' absence for health reasons in the Group per Group employee per year includes illnesses and long-term illnesses.*

Asbestos

In the past, the EDF group has used products, materials and facilities containing asbestos. In accordance with current regulations, the replacement of materials containing asbestos in EDF establishments and facilities began in the late 1980s, with all materials containing asbestos being treated, and EDF set up reporting measures and procedures to protect employees and third parties working at the company.

In July 1998, EDF signed an agreement (revised in June 2002) with all trade union federations, for the prevention of and compensation for exposure to asbestos. Following this agreement, EDF introduced an early retirement plan for workers who are duly recognised as suffering from an occupational disease associated with asbestos, established voluntary financial assistance and a pension supplement, and provided social assistance to sick workers and their families, with information and support during the compensation process.

Ionising radiation

Mobilisation of on-site actors has achieved ongoing improvement in the protection of personnel against ionising radiation. In France, the average annual collective dose of all workers, employees of both EDF and outside companies working in the power plants, was halved in less than 10 years. In the United Kingdom it was reduced mainly through optimised governance of maintenance and repair work. In both France and the United Kingdom, no employee or contractor exceeded the regulatory threshold (individual dose over a rolling 12-month period) in 2013.

In France in 2013, the average collective dose was 0.79 mansieverts (mSv) per reactor (0.67 mSv per reactor in 2012). The increase is principally due to new maintenance activities, extended outages and certain unscheduled outages at some units.

In the United Kingdom in 2013, the average collective dose was 0.386 mSv for the EPR (0.037 in 2012 and 0.54 in 2011), and 0.034 mSv for the AGR (0.063 in 2012 and 0.08 in 2011).

The current level is comparable to the average values recorded by operators of PWRs. EDF is actively continuing the ALARA (As Low as Reasonably Achievable) approach to controlling the collective dose, in anticipation of major refits and the resulting volumes of work.

Given the achievements so far, efforts in future years will focus primarily on plants where the dosimetry results need to be brought in line with the best.

2.4.2.2 Social dialogue and workplace health

Social dialogue concerning workplace health takes place at 3 levels.

Preventive actions are presented annually to the Health and Safety Commission of the European Works Council, which was consulted in December 2013 on the Group's Health and Safety policy.

In 2013, major health subjects such as health and safety at work and key figures of workplace health were presented to the France Group Committee made up employee representatives from the main French companies.

At EDF level, a collective agreement relating to social dialogue on health at work was signed in 2010 and gave rise to a National Health at Work Group, created in 2011.

This multidisciplinary group put in place 4 working groups devoted to reforming occupational medicine and its impact on the organisation of workplace health services, the health of contractors, addictive practices and the link between health and a longer working life. The work of these groups will result in recommendations for the company managements.

The secretaries of the Health, Safety & Working Conditions Committee now meet annually. These meetings help to facilitate discussions about the running of the various bodies, pinpoint training requirements and discuss both legal issues and topical themes (single document, reform of occupational medicine, etc). Since 2011, the CWC (Central Works Council) has held an annual meeting focusing exclusively on the issue of health and safety, putting into action the multidisciplinary approach to health issues.

Internationally, social dialogue on the fields of health and safety at work has resulted either from direct application of each country's specific legislation, or from an agreement with social partners.

In 2013, EDF Energy and the unions reached an agreement to work together on implementation of the safety charter for employee representatives, developing and monitoring a set of key indicators. Another joint project was the preparation of a strategic plan on health and wellbeing at work.

In November 2013, EDF Energy and the unions GMB and Unite reached a major agreement for the employees who will contribute to construction of the future Hinkley Point C nuclear power plant. These agreements are part of EDF Energy's commitment to working with unions and contractors in order to create a favourable climate for an industry that takes safety, quality and productivity seriously.

At Edison, there is continuous dialogue between employees and management on questions of health and safety, through several scheduled meetings across the year involving a large number of employees. This dialogue led to a specific agreement on training in health and safety that was signed by the unions on 20 May 2013.

At Demasz, health and safety issues are regularly discussed in the joint committee for health and safety. The management regularly consults employees in connection with implementation of its Health action plan.

2.4.2.3 Organisation and quality of life in the workplace

Quality of life in the workplace

Quality of life in the workplace covers work organisation, workplace relations, career development, the working environment, and the work-life balance.

To take consideration of all these levers to a new level in the Group, a National Observatory of quality of life in the workplace was set up, involving managers, unions, doctors and external experts. The Observatory monitors working conditions, commissions studies and issues recommendations, such as introducing indicators to provide combined health / work information, promoting working environments that are conducive to career development for all ages, and a method for managing change in the company.

At Group level, improving health and quality of life in the workplace is reflected in sharing experiences, comparing data and studies, and observing practices in the business lines and companies (the Group's *Health and Safety* community, "learning expeditions" to France, the United Kingdom, Poland and the Netherlands).

Three studies with the Group's main companies brought out changes in the working environment. One examined the links between organisation and sick leave, another the work-life balance and the impact on performance, and a third the use of collaborative systems. A groupware space, "Innovation for better work", provides information and spreads good practices on the theme of quality of life in the workplace.

Psychosocial risks

As work and people's demands change, EDF has set up action and measures in France developed in conjunction with social partners to prevent or treat problems at work:

- designation of ethics officers, and provision of a national toll-free telephone number available to all employees in case of serious difficulties at work;
- organisation of permanent support from doctors specialised in management in case of traumatic events; under the agreement on "Preventing psychosocial risks and improving quality of life at work", 70 multidisciplinary groups have been formed. The early results of these groups are satisfactory and show that they refresh the conditions for social dialogue, can handle both individual and collective cases, sometimes playing a role in managing change and thus bringing out the link between health issues and economic performance.

In 2013, EDF Energy incorporated into its health and safety policy a new wellbeing dimension, which reflects the mental aspects of health. Edison, in its "Edison per te" programme, has offered its employees general medical check-ups since 2008 on a voluntary basis. Finally, EDF in Poland holds discussions with union representatives to better prevent employee stress.

Organisation and working time

Since 1 October 1999, the duration of the working week in France has been 35 hours, with services available for a minimum five days a week.

In order to ensure the continuous operation of EDF and ERDF's facilities or to re-establish electricity supply in the shortest time possible in the event of a technical failure, a portion of EDF's personnel provides a continuous service 365 days a year and another portion is on call outside regular working hours.

In 2013, EDF began reflections on the organisation of working time in response to major forthcoming industrial projects and the key issues of the future. Given the lack of flexibility of this working time organisation for EDF's major industrial projects, its impacts on Group competitivity, the observations of the French court of accounts on working time and employee remuneration, and finally the action undertaken by work inspectors, mainly at the nuclear power plants, an overall approach to this theme is required to enable EDF to find enough room for manoeuvre on organisation of its activities to rise to the medium-term industrial challenges. An initial diagnosis phase was conducted during 2013, and will lead to action in 2014 including a timetable for negotiation over managers' working time.

2.4.3 Remuneration and employee protection

2.4.3.1 A fair, competitive general remuneration policy

In order to attract, encourage and retain the talents that will enable EDF to rise to the industrial and commercial challenges it faces, EDF is developing a global remuneration policy in line with the best practices observed in comparable sectors.

This global compensation policy covers:

- recognition of the level of responsibility and the results achieved through the wage policy;
- recognition of collective performance through profit-sharing;
- employee savings plans and a company contribution to these savings;
- employee shareholding;
- social security coverage and employee benefits.

Since 2011, all EDF's employees in the Operatives-Technicians-Supervisors category have benefited from individual performance-related pay in the same way as managerial employees, based on individual and collective results.

For EDF and ERDF, the profit share agreements cover three years. Under these agreements the amount payable is determined according to achievement of national objectives reflecting different aspects of the corporate performance (economic, business line, social and environmental). EDF's agreement for the period 2011-2013 included five national performance criteria (Group EBITDA, electricity generation, customer satisfaction, proportion of trained employees, and percentage of waste reprocessed).

Most EDF group employees are eligible for performance-related remuneration.

2013 remuneration: points of note

Beyond the organic growth resulting from changes in the workforce and wage increases, the rise in personnel expenses is explained by changes in the scope of consolidation, especially the takeover of Edison in 2012 and the reclassification of Dalkia International in 2013. For further details on total gross remuneration, see note 10.1 to the 2013 financial statements. For further details on the reclassification of Dalkia International, see section 1.2.2.1.2 in this report.

In 2013, for EDF and ERDF, the average gross annual salary was €39,900 (paid over 13 months). For further details of remuneration by category of employee, see section 2.5.3.3, Social indicators.

At 1 January 2014, the lowest starting salary at EDF was 19% higher than the French minimum wage (see section 17.3.1 of the 2013 reference document).

2.4.3.2 Welfare policy

The Group's policy on employee welfare follows three guiding principles.

A responsibility principle involving three key factors:

- welfare, health and pension coverage: the company coverage complements the basic social security coverage if this is considered insufficient. When this type of company coverage is set up to cover major risks such as illness and death, it must apply to all employees;
- non-discrimination: access to healthcare coverage should not be dependent on the employee's state of health; maternity coverage contributes to gender equality in the workplace;
- compliance with regulations: the welfare policy respects the applicable local regulations for funding or availability of the compulsory systems, and the rule governing optional systems.

A balance between competitivity and durability:

- the combined level of remuneration and employee benefits meets the Group companies' requirements to be attractive on their market local;
- it must be possible to continue employee benefits in the long term, which means they must be financially sustainable in the long term for employees and employer alike. A durable balance between resources and expenses must be a concern from the moment the coverage is set up. The Group takes care to control the costs of employee benefits.

A principle of employee appropriation:

- employees are informed of the content of employee benefits in a way that facilitates understanding and effective access; information-sharing on employee benefit systems must be organised with employee representatives.

For further details, see section 17.3.2. of the 2013 reference document.

The special pension system and recent developments

The pension system for the electricity and gas industries in France is a special social security system that has been managed by CNIEG (*Caisse Nationale des IEG*, the sector's specific pension body) since 1 January 2005. The French law of 9 August 2004 that created the CNIEG financially integrated this special system to France's standard systems (CNAV and ARRCO-AGIRC).

Like all pension systems, this special pension system has been substantially reformed in recent years.

1/ In 2008, with transition to special pension systems of the main measures of the law of 21 August 2003 for the standard and public-sector pension system: the gradual extension of the contribution period to qualify for a full pension, and introduction of discount/premium mechanisms. The 2008 reform also revalued pensions based on inflation, no longer on salary levels.

2/ Since the 2008 reform discontinued additional entitlements for jobs with difficult working conditions for employees hired into the IEG sector after 1 January 2009, there was a change in the way this issue was taken into consideration. A sector-specific agreement of 16 April 2010 created a pension time banking account (*CEJR - Compte Epargne Jours Retraite*) to accumulate days of leave for periods of work by employees in the jobs classified as "active". The criteria and attribution system for these "active" jobs were updated by the decree of 23 September 2011 which defined rules for covering the degree of difficulty associated with the job features.

3/ The decree of 18 March 2011 followed the law of 9 November 2010 by raising the retirement age by two years and cancelling the discount, with an appropriate timetable in relation to the standard and public-sector pensions (the retirement age was raised to 62 by 2024, and the discount cancellation age to 67 by 2029).

4/ The broader possibility of retiring at 60 introduced by the decree of 2 July 2012 will apply to IEG pensions from 2017.

Finally, the authorities announced that the pension reform of 2013 laid down in the law of 20 January 2014, which extends the contribution period required to qualify for a full pension to 43 years starting with employees born in 1973, raises old age pension contributions and defers the date of the annual review of pension values from 1 April to 1 October, will also apply to the IEG pension system and all other special pensions.

2.4.4 Other social commitments

These other commitments concentrate on Group companies' relations with their subcontractors, employee representatives, local populations as contributors to local development, and employees through action to promote diversity and human rights.

2.4.4.1 Responsible subcontracting

EDF's socially responsible subcontracting policy covers three major areas:

- raising the profile of contractors and having suppliers that become partners in a long-term partnership;
- taking the Group's subcontracting practices forward by defining decision-aid criteria in terms of strategy, economy, skills and social impact;
- developing socially responsible subcontracting practices, including signing or extending agreements on the EDF group's social responsibility or Socially Responsible Subcontracting.

Requirements

The EDF group companies always check that their subcontractors provide quality work in compliance with the law and international standards (for example bans on child labour). They make every effort to provide subcontractors and their employees with the highest level of working, health and safety conditions for businesses in the sector and country concerned.

The Group's requirements particularly concern:

- compliance with the law;
- employee health and safety;
- ethical behaviour with customers, especially respect for people and integrity;
- respect for the environment.

Appropriate subcontractor selection and evaluation procedures meeting these requirements have been put in place. Any serious noncompliance with the law, employee health and safety rules, the principles governing customer relations, or environmental regulations will, if not remedied, entail termination of relations with the subcontractor in line with contractual obligations.

The subcontractor must also apply the same requirements set by the EDF group to any subcontractor he himself may engage for the mission concerned.

Subcontracting areas

The major areas in which EDF employed subcontracting in 2013 were industrial, commercial and information systems activities.

Industrial subcontracting

Work was begun in 2012 in the Strategic nuclear power committee, bringing together civilian nuclear operators, unions, professional bodies, public authorities, contractors and the Nuclear Safety authority as observer. Based on the results of this work, "social specifications" were drawn up and gave rise to proposals for changes to the regulations.

These social specifications, which operators could incorporate into their tenders for all service and other work on basic nuclear facilities, include transparent rules shared by all actors in the nuclear power sector. They consist of a set of coherent, structuring measures covering areas concerned by subcontracting: transparency in the call for tenders, development of skills and the professionalism of the people involved, the conditions in which subcontractors can use temporary staff, the purchasing policy and process, management of radioprotection, prevention of occupational risks, medical monitoring, working conditions and the conditions in which they will stay near the nuclear sites, information for foreign employees on radioprotection, safety and medical monitoring, concerted arrangements to favour continued employment, respect of fundamental rights and promotion of diversity.

Information systems subcontracting

An in-depth overhaul of the subcontracting policy for information systems is currently in process. To meet the strategic objectives determined for the period 2013-2015 concerning EDF's information systems, the following orientations have been defined for subcontracting:

- reducing the number of service contracts and engineering resources in coherence with the changing service provider model of the internal IT and telecom operator;
- streamlining the number of service providers;
- increasing use of cloud computing and more generally of packaged service.

Commercial subcontracting

Subcontracting is used to meet growing customer demands. In commercial activities, using subcontractors provides the extra flexibility needed to cope with varying volumes of customer needs, stabilise the internal workload, cover the extended business hours for customer service (particularly evenings and Saturdays), and respond to any technical problems. All EDF's internal and external customer relations centres are located in urban areas.

The outsourcer survey

An outsourcer survey has existed since 2007 and is reviewed to develop a targeted action plan. More than 2,600 questionnaires were completed in 2013 and the results of the survey indicate how effective the action taken is. Several measures were decided for 2013, such as installing women's changing rooms at Le Havre, website-assisted access management at Cordemais, and replacing the changing rooms, lavatories and dining room at Porcheville.

More broadly, this survey can evaluate employees' perceptions in a certain number of areas: reception, the comfort level of accommodation, food, cleanliness of shared site facilities, communication, discomfort at work, time-wasting, etc. Over the last three years, there has been an improvement in results in all areas. Continued vigilance is needed for perceived differences of treatment between outsourcers and EDF employees, especially regarding logistics.

2.4.4.2 Contributing to local development through employment

The Group's commitment to helping people into employment

As an industrial actor firmly rooted in the local area, the EDF group is committed in the long term to serving the public interest, and has been active in helping people into work for several years.

The Group's action in favour of employment focuses on four main levers:

1- The Group has an ambitious work-study programme with a constantly renewed aim of encouraging social mobility

EDF considers work-study schemes as a vital lever for developing employment opportunities for young people and people having difficulty entering the job market, and to enable them to acquire or enhance a qualification.

Every year, more than 100 work-study places are reserved for CAP (vocational qualification) level students, with a job opening at the end of the contract. EDF works in cooperation with local and regional actors for employment (local agencies, "second-chance" schools, AFPA, *Compagnons du Devoir* skilled trade associations, etc) to help young people, especially from the priority zones, to train for work in expanding sectors.

Some work-study offers are specifically proposed to young people in socially difficult situations, in conjunction with organisations that help people enter the job market. These offers lead to a qualification at least equivalent to the basic level of vocation qualifications.

EDF and ERDF hire a significant portion of the work-study students who train with them (more than one in two in 2013), and provide support for those not hired, notably through jobseeking workshops organised in partnership with French job centres (more than 80 workshops were held in 2013, attended by more than 850 participants). They can also be put in touch with related companies looking to hire personnel. 6 months after the end of the work-study contract, participants are surveyed for information on their situation and to evaluate success in seeking employment: of the total number who left in 2012, 90% are in employment or further training. Given the current climate, this result shows the value of involvement in this system for helping people into work.

2- EDF's Action for Work fund (Fonds Agir pour l'Emploi EDF - FAPE) provides financial support for organisations that work for social integration through economic activity (supported worksites, half-way associations, district development agencies, etc) and is one of the very first sponsorship systems of the kind in France

EDF's FAPE is a social initiative by Group companies, the Fondation EDF and union organisations. It is jointly managed with equal representation for all parties, and primarily funded by donations from 13,700 EDF group employees and retirees (each donation is matched by a donation of double the amount from the companies).

Close to 118 employment projects for people in difficulty were supported in 2013 (€1.6 million in subsidies, contributing to creation and consolidation of nearly 3,000 jobs).

3- As a local industrial actor, the EDF group supports local action for employment

EDF regularly encourages employing jobseekers in its projects, and develops partnerships to support organisations dedicated to helping people into work. It is an active contributor to development of "second-chance" schools which help young people with no qualifications who have dropped out of the school system and find themselves becoming excluded from society and the job market.

In distribution, ERDF works with District Development agencies to improve the local area (for instance by renovating and enhancing the exterior of public distribution facilities), developing local relations (informing residents about the electricity market and prevention of electricity-related accidents) and helping members of these agencies to find permanent jobs.

4- EDF encourages socially responsible purchasing, including employment conditions in its contracts and purchasing from organisations that help social integration through economic activity

Clauses concerning employment for jobseekers can be included in the contracts signed with suppliers and subcontractors, in order to develop action to help people in social difficulty or other specific employment difficulties to find or return to work.

Every year the Group sets objectives for purchases from organisations that help jobseekers, contributing to increasing their sales by several thousand euros. This also fosters employment for disabled people, and supports the sector assisting people who have been excluded from the job market for a long time. It is a key concern of EDF's agreement on equal opportunities and employment for the disabled, with an objective of 500 Beneficiary Units, equivalent to 500 external jobs by the end of 2015: for example, a contractual arrangement with APF (Association of Paralysed People in France) provides 4 to 8 "job equivalents" each year through EDF's purchases of recycled or adaptable laser printing consumables from the association.

To reinforce this approach, EDF raises awareness of purchasers and suppliers through training presenting the principles described above, as well as its "Responsible purchasing" guide encouraging buyers to work with firms in the protected sector, and a film to fight misconceptions about the services provided by firms in the protected sector and organisations where the majority of the workforce is disabled (see 2.3.3.3).

2.4.4.3 Human rights

The EDF group has subscribed for years to the United Nations international commitment to protecting and defending human rights: the Universal Declaration of Human Rights, the Convention on the Elimination of all forms of discrimination against women, and the Declaration of the Rights of the Child. It also follows the OECD Guidelines for multinational enterprises.

The Group regularly reasserts – particularly through its most recent Charter of Ethics – its adhesion to the 10 principles of the United National Global Compact. Under its CSR agreement, the Group has a commitment to ensuring respect of the ILO fundamental conventions in all companies it controls. All these commitments are also carried by Group companies through their own CSR and sustainable development commitments.

Some Group companies have taken additional measures. Edison, for example, has a specific policy on human rights and has defined a procedure for evaluating and controlling respect of human rights that applies to all its sites. In 2013, EDF Energy reinforced its code of ethics with anti-discrimination, anti-harassment and integrity themes.

Also, as part of its CSR commitments as a "responsible employer", the Group has undertaken to "refuse to tolerate any violation of human rights, fraud or corruption in all Group companies and also at suppliers". As a result 13 Group companies should attain Global Compact advanced level by 2017.

The current measures for control and verification of respect of human rights appear sufficient for most EDF group companies. As well as the usual channels (management, HR, employee representatives), most companies have alert systems available to employees in the event of problems (ethics officers, ombudsman, ethics committee, toll-free numbers, etc).

2.4.4.4 Diversity

The EDF group believes in promoting diversity as a performance driver, in order to:

- build up better perception of the diversity of customers, to meet their needs better;
- provide a better reflection of the society in which the Group operates;
- enable men and women to express their talents to the best of their ability.

To achieve these aims, EDF has made several commitments to diversity, beginning in 2005 with its Group CSR agreement including several articles devoted to anti-discrimination, respect of diversity and promotion of equal opportunities. Along with the Charter of Ethics, this is the principal framework of reference for Group companies. Promoting diversity is one of the Group's 11 CSR commitments published in 2013: "maintaining professional excellence and effective performance by its teams, through training and promotion of diversity". There is an objective associated with this commitment: achieving a 30% proportion of women in the pool of future top executives by 2015.

In the Group-wide internal commitment survey "My EDF" (see 2.4.4.6), the responses to the statement "the management is acting in favour of Diversity in the working environment" were positive in 60% of cases.

The level and definition of more specific local-level commitments vary according to the laws in force.

EDF Demasz, for example, has had an equal opportunities action plan since 2010, while in the French companies action is structured around agreements on gender equality, disability and age diversity. In November 2012 EDF Energy was awarded the "Diversity Works for London" Gold Standard for its measures in favour of equality and diversity. The British subsidiary has continued its action and developed an inclusive strategy "to create an environment in which employees share a sense of belonging, mutual respect, and support from others so that they can do their best work". It also has a specific guide intended for suppliers.

In 2013 Fenice and EDF Polska signed the Italian and Polish diversity charter respectively, following in the footsteps of the French companies (EDF, ERDF, ES) who signed their diversity charter in 2006. EDF Luminus emphasised diversity in its first sustainable development report (introducing various indicators including the proportion of women, the number of disabled employees, and the number of nationalities represented).

The Group undertakes many actions for diversity. Examples are:

Organisation of a "Diversity Day" across the Group, comprising events to promote diversity, raise awareness of stereotypes and thus help to prevent all kinds of discrimination. In May 2013, all Group companies took part in this themed event focusing on diversity as a source of innovation and progress.

In France, EDF's commitments on diversity have resulted in creation of a training programme for managers, HR managers and employees on the images and stereotypes linked to diversity. More than 7,000 staff have been trained in France since 2007. Other companies such as EDF Energy have also introduced training action for management (400 managers have undergone training) and awareness-raising regarding stereotypes for employees.

EDF regularly conducts surveys to prevent discrimination risks. In 2013 in France, it was part of the inter-business study on "Stereotypes and Origins" conducted by the Institut du Mécénat de Solidarité. EDF also carried out testing on recruitment of work-study trainees, and a survey of employees' perceptions of equal opportunities.

The international diversity community launched in the Group in 2012 continued discussions in 2013 to facilitate implementation of action for diversity, and sharing of good practices between Group companies.

EDF consolidated its partnership with the association "L'Autre Cercle", which campaigns against discrimination based on sexual orientation and homophobia at work: action involved auto-diagnosis, special statements for the international day against homophobia, work to raise awareness of occupational doctors and management, etc.

Support to employee network initiatives is another channel for promoting diversity. EDF Energy has a number of networks that are regularly showcased in its internal communications: the ethnic minorities, women's, disabled, and gay and lesbian networks. More than 3,200 employees are involved, and the ethnic minorities network won a prize for its mentoring system in 2013.

These networks are particularly active and continued in 2013 to take opportunities for consciousness-raising, with some of the networks also developing a mentoring system.

In France, EDF has provided financial and logistical support since 2012 to Energay, a LGBT association for EDF and IEG (electricity and gas) companies.

Gender equality

Equality between men and women in the workplace is a powerful lever for change and modernisation in organisations, and a founding component of the Group's diversity policy.

EDF and ERDF renewed their agreements for gender equality at work, signed by all union organisations, in 2012. These agreements mark a shift towards target-setting in terms of results, not just resources and monitoring. The directors EDF's business lines were involved in preparation and implementation of 56 action plans, which also provided an opportunity for social dialogues and sharing of good practices in the different levels of the firm.

Pay equality for men and women has been broadly achieved as regards principal salary and performance-related salary. EDF still holds the *Egalité professionnelle* label, first awarded in 2006 and renewed in 2008 and 2011. More consideration was given in 2013 to the question of additional remuneration, training and career paths, and this work is continuing.

Also in 2013, the Central Works Council's workplace equality commission continued to adjust the indicators and presentation of the Comparative situation report. Thanks to a technical improvement in the information system, data reporting is now more reliable and standardised, which reinforces transparency.

EDF is now publicly recognised as a firm that is active in workplace equality matters. At the request of the French Ministry for women's rights, EDF was among the signatory firms to a framework agreement in April 2013, in which it undertakes to contribute to experiments aiming to encourage attention to workplace equality in small and medium businesses.

In line with EDF's parenthood charter, initiatives have been taken to make it easier to combine work and family time: a guide on personal services has been issued, a framework contract exists for crèche places, and training times have been adjusted to increase compatibility with personal and family constraints.

A new gender-based indicator will be introduced at Group level in 2014 to monitor fluctuations in the frequency rate of work-related accidents for men and women separately.

EDF Energies concluded an action plan to encourage a gender mix in the business lines, maintain equal pay for equal skills, and focus more closely on working conditions.

Edison monitors indicators on the gender mix in its workforce and pay differences between men and women with positions of equivalent responsibility. They are published in its sustainable development report.

The Group also takes action ahead of recruitment to encourage a good gender mix (see 2.4.1.3).

EDF Energy runs targeted recruitment campaigns to attract more young female engineers and apprentices to its business lines.

In 2013, the Asia-Pacific region and EDF Polska set up their women's network on the same lines as the French and British networks. EDF Luminus takes action for women executives in connection with international women's day.

Measures to encourage disabled employment

New agreements for the integration of disabled people were negotiated in 2013 at EDF and ERDF and signed unanimously. Building on past experience, these new agreements contain even more ambitious, meaningful objectives for inclusion and support concerning the 3,000 disabled people employed by EDF and ERDF.

For example, ERDF's agreement for 2013-2016 sets the target of a 1 point increase in the disabled employment rate to 5.09% by the end of 2016 from 4.09% at the end of 2012. Disabled employees are central to the agreement and the emphasis is on accessibility to all types of jobs in the company, the training on offer and career advancement for the disabled. A number of innovative, practical plans were introduced in 2013 as this agreement was rolled out. Meetings with managers were held throughout the year at ERDF to hear personal experiences, share and enhance practices to help manager in unusual situations (including managing disabilities). New, original digital aids have been developed to facilitate everyday life for disabled employees, for instance people with physical coordination problems, and are currently being adjusted for other types of disability.

EDF's new agreement for 2013-2015 also marks a new stage in inclusion of disability. In particular, it stresses creation of conditions conducive to equal opportunities at all stages of working life, particularly career development and continuing employment. The target proportion of disabled employees is 4.4% by the end of 2015 (from 3.8% at the end of 2012). Other priorities are support for changing mindsets, and communication to facilitate access to rights and professional qualifications. In 2013, training for disability officers and unions was redesigned and enhanced, and similar work is ongoing for managerial training. A set of communication materials was also made (a video presenting the agreement with its signatories, a guide to good use of disability officers, a "make yourself known" brochure, and more).

In line with the "facilitating access to employment" aspect of EDF's agreement, partnerships have been renewed or instigated (with Arpejeh, *Université Pierre et Marie Curie*, and other bodies) to encourage contacts with candidates or support training for disabled people.

Follow-up and social dialogue will take place in the divisions and units regarding the business line action plans set forth by the agreement.

2.4.4.5 Planning ahead for controlled management of reorganisations and restructuring

The Group is well aware that organisations must be adaptable to changes in the economic and social context both in France and elsewhere, and set up a policy in 2003 and an agreement in 2005 for Corporate Social Responsibility. Its Vision RH 2020 human resources plan published in 2013 confirms that adjusting to changes is a key issue for the Group. Management involvement and the special importance of Dialogue with employees and employee representatives are major levers. These principles were respected in the Group's restructuring operations of 2013. For example, when SSE was sold, employee representative bodies were informed in advance of the nature of the operation, and an agreement was negotiated to define the social protection measures applicable to the employees concerned.

2.4.4.6 Social dialogue

56 company works councils currently exist at EDF, as well as a Central Works Council and 104 bodies for employee representatives.

Employee representatives are elected for a term of three years in the IEG sector, and the appointments were renewed on 21 November 2013.

In France

Social dialogue with employee representatives and unions is a fundamental part of EDF's human resources ambition. One of EDF's priorities is to uphold its long tradition of social dialogue and consultation in order to serve the company's industrial changes and contribute to employee development.

In 2013, there were significant negotiations on the forward-looking management of jobs and skills (GPEC), diversity and social dialogue that led to signature of agreements during the first half-year. In the second half-year, company elections were held. The main agreements signed by the end of November 2013 were:

- the collective agreement on forward-looking management of jobs and skills at EDF for 2013-2015, signed unanimously on 19 February 2013;

- EDF's 2013-2015 agreement on equal opportunities and employment for disabled people, signed unanimously on 13 May 2013;
- the 2013 amendment to EDF's profit share agreement for 2011-2013, signed on 21 May 2013 by three representative unions.

Further themes were covered in social dialogue in certain EDF business lines: 2013-2015 framework agreement on social dialogue at the Generation-Engineering Division, framework agreement on "quality of life and employee recognition in the customer services and technical business lines" at the Island Energy Systems division, a "working time" agreement at the Shared Services and Commerce divisions, and a "support for change" agreement at the Research and Development, and Real estate divisions.

The main agreements signed at ERDF in 2013 concerned prevention and compensation for exposure to the asbestos risk, and the 2013-2016 agreement for employment, continuing employment and career development for disabled people.

French Works Council

An agreement relating to the French Works council was signed on 1 September 2008 by all unions. To renew this committee, an agreement on the configuration of the EDF group in France was signed by three unions (CFDT, CGT, CGT-FO) on 6 March 2012. The committee has 28 elected members from the Group's main companies (EDF, ERDF, RTE, TIRU, CHAM, etc) and is a place for discussions covering all of France. This Group Committee met three times in 2013.

Internationally

European Works Council

The European Works Council was set up in 2001 and is consulted on the Group's major strategies. The Council's working parties have examined the question of human resource policies at international level, especially as regards health and safety in the Group's various companies in Europe, or in relation to start of negotiation of the EDF group's Corporate Social Responsibility agreement.

The European Works Council has grown since its inception and is kept informed of the Group's economic, financial and social strategies. In accordance with its founding agreement, in May 2011 the members of the Council elected a new secretary and the terms of office of more than half the ordinary members were renewed at the same time. The European Works Council met four times during 2013. Among other matters the meetings covered the Group's industrial development in the United Kingdom, and changes in Group assets in Central Europe.

Corporate Social Responsibility Dialogue Committee

The Corporate Social Responsibility Dialogue Committee is an offshoot of the Group's framework CSR agreement signed in 2005 by all employee representatives and unions of the Group's main companies, and international federations in the business sector. The original commitments were reinforced by signature of a new agreement in 2009, especially on matters such as subcontracting, the battle against climate change, and biodiversity.

These agreements structure social dialogue relating to CSR questions. They have given the Group a foundation of core commitments and shared directions, which contribute to renewal and extension of the themes of social dialogue. In 2013, a CSR seminar was held to share changes in global CSR / sustainable development issues and discuss potential adjustments to the agreement. All signatories attended this seminar.

Topics of social dialogue in Group companies and internationally

In the principal Group companies, social dialogue mainly focused on:

- the merger between EDF Polska, EDF Energia and EDF Wybrzeze;
- salaries (EDF Demasz, EDF Polska);
- the agreement between EDF Energy's unions and management governing social dialogue concerning the Hinkley Point project, with input from subcontractors;
- renegotiation at national level (Italy) of the collective bargaining agreement for the electricity sector, concerning 1,700 Edison employees;
- renegotiation at national level (Italy) of the collective bargaining agreement for the oil and energy sector, concerning 300 Edison employees;
- renegotiation at industrial branch level (Hungary) of the collective bargaining agreement;
- the labour relations implication of the sale of SSE;
- restructuring and support in times of restructuring (EDF Luminus, SSE, Edison group).

"My EDF" commitment survey

After the first "My EDF" commitment survey of all Group employees in November 2012, a plan to report to employees on the results was implemented and the companies prepared action plans for new or further progress in response to the results for their scope. The Executive Committee decided in July 2013 to introduce an action plan for the whole Group, primarily to meet employee demand for better knowledge and understanding of Group strategy. The second survey was conducted in October 2013. The participation rate of 64.3% was higher than the first time, confirming employees' interest in this survey, which is a chance to express their level of commitment to the Group's general strategic choices, their view of management practices, and their opinion on many aspects of their working situation, particularly career development and training, pay, and workplace life quality. The results of the 2013 survey confirm the great pride employees take in belonging to the Group, their commitment and motivation. It also indicates genuine progress in their satisfaction levels, reflecting the impact of the Group's action plan and those of individual companies.

2.5 Environmental and social indicators

The commitment of transparency to stakeholders is put into practice through reporting action and non-financial ratings. EDF publishes an annual sustainable development report on its website analysing the environmental, societal and social impacts of Group companies' industrial and commercial businesses.

2.5.1 Reporting

This reporting uses the non-financial indicators defined in the Global Reporting Initiative. It complies with France's NRE 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 non-financial reporting are constantly reviewed for improvement: reinforcing reporting processes for qualitative information; publishing a schema mapping relations between Group companies and their stakeholders; publishing supplier audits; comparing EDF's performance with others in the sector; taking on board stakeholder views (safety authorities, service providers, customers); simplifying access to information for internet users; including educational graphics (illustrating the environmental, societal and social issues related to Group activities); and publishing assessments by non-financial ratings agencies.

In 2013 the Group has made a commitment that 13 Group companies will attain Global Compact advanced level by 2017. This is earned through detailed reporting on four items: human rights, working conditions, environment and the fight against corruption. 7 Group companies were members of the Global Compact at 31 December 2013, and two, EDF and Edison, are already at advanced level.

The Group is also engaged in a progressive process to have the quality of these non-financial indicators verified by the Statutory Auditors, initially voluntarily since 2007, and since 2013 in compliance with article L. 225-102-1 of the French Commercial Code.

The EDF group's Statutory Auditors have accordingly issued a report certifying the presence and fair presentation of the 42 required themes, in compliance with the decision of 13 May 2013.

In keeping with the Group's commitment to transparent communication, the Statutory Auditors issued "unreserved assurance" regarding the reasonableness of the "CO_2 emissions (for electricity and heat generation)" and "total workforce at year-end" indicators, broken down by sex, age and geographical area[1].

The sustainable development information published by the Group is based on evaluations by ratings agencies or non-financial analyst departments acting on behalf of investors.

2.5.2 Non-financial ratings

In March 2012, EDF 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.

EDF is also part of the Vigeo France 20 and Vigeo Europe 120 indexes, which include 20 firms in France and 120 in Europe which are the most advanced in six areas (human rights, the environment, human resources, market behaviour, corporate governance and societal commitment). In the most recent ratings in 2012 EDF was given an overall score of 55 out of 100. It is ranked ninth of the 34 electricity and gas sector companies.

EDF also participates in the Carbon Disclosure Project (CDP), an international organisation representing large investors and aiming to assess the leading global companies' impact on climate change.EDF's transparency score was 95 out of 100 in 2013 (up by 8 points from 2012) and its performance was graded B (on a scale from A to F).

2.5.3 Summary of environmental and social indicators

2.5.3.1 Economic indicators

					Scope[2]			
Economic indicators	Unit	**2013**	2012	2011	**2013**	2012	2011	GRI ref[3]
Provisions for decommissioning and last cores	€ million	**22,150**	20,979	19,843	2	2	2	
Provisions for back-end nuclear fuel cycle	€ million	**20,547**	19,525	18,830	2	2	2	
Indemnities paid or payable following a court ruling in an environmental matter	€ thousand	**8.1**	6.9	0	1	1	1	
Management								
Environmental protection expenditure *Increases in provisions*	€ million	**2,924** ***1,901***	3,465 *2,465*	2,800 *1,765*	1	1	1	EN 30
Environmental management (% of the Group consolidated sales revenues covered by an ISO 14001 certification)	%	**95**[4]	98[4]	79	2	2	2	

1. *Breakdown by geographical area is based on head office location for subsidiaries.*
2. *Scope 1 : EDF*
   Scope 2: EDF group.
3. *GRI: Global Reporting Initiative, version 3.*
4. *Including companies not covered by the Group certificate.*

2.5.3.2 Environmental indicators

					Scope[1]			
FUELS AND RAW MATERIALS	Unit	**2013**	2012	2011	**2013**	2012	2011	GRI ref
Fuel consumption								
Nuclear reactor fuel	t	**1,205**	1,096	1,205	1	1	1	EN 1
Coal	Kt	**25,314**	24,277	21,024	2	2	2	EN 1
Heavy fuel oil	Kt	**885**	1,098	1,170	2	2	2	EN 1
Domestic fuel oil	Kt	**329**	317	402	2	2	2	EN 1
Natural gas	10^6m^3	**8,842**	9,290	6,859	2	2	2	EN 1
Industrial gas	10^6m^3	**797**	842	3,555	2	2	2	EN 1
Water[2] – consumption of raw materials from sources outside the company								
Cooling water drawn	10^9m^3	**53.9**	54.8	55.2	2	2	2	EN 8
Fresh water	10^9m^3	***18.3***	*28.0*	*26.8*	2	2	2	EN 8
Brackish (or estuary) water	10^9m^3	***8.4***			2			
Cooling water returned	10^9m^3	**53.4**	54.2	54.6	2	2	2	EN 21
Fresh water	10^9m^3	***18.0***	*27.5*	*26.3*	2	2	2	EN 21
Brackish (or estuary) water	10^9m^3	***8.4***			2			
Air – gas emissions								
Total CO_2 emissions * (including installations not subject to quotas)	Mt	**80.6**	79.8	70.5	2	2	2	EN 16
SO_2 emissions	Kt	**134.3**	137.8	140.6	2	2	2	EN 20
NO_x emissions	Kt	**171.7**	182.2	157.0	2	2	2	EN 20
Dusts	t	**7,246**	6,968	5,407	2	2	2	EN 20
Particles (PM_{10})	t	**2,602**	1,745	nc	1	1a	nc	G4-EN21
Mercury	t	**0.16**	0.16	nc	1	1a	nc	G4-EN21
CH_4 emissions	Kt eq. CO_2	**38.2**	40.5	32.2	2	2	2	EN 16
N_2O emissions	Kt eq. CO_2	**349.0**	329.8	254.7	2	2	2	EN 16
SF_6 emissions – EDF	Kt eq. CO_2	**71.6**	83.8	94.3	1	1	1	EN 16
SF_6 emissions – EDF + ERDF	Kt eq. CO_2	**78.9**	93.3	102.8	1b	1b	1b	EN 16
SF_6 emissions – Group	Kt eq. CO_2	**95.2**	109.8	nc	2	2	nc	EN 16
Non-nuclear waste[3]								
Dangerous waste	t	**68,443**	64,598	60,956	2	2	2	EN 22
Non-dangerous waste	t	**354,554**	321,789	302,251	2	2	2	EN 22
Non-nuclear industrial waste recycled or removed for recycling	t	**294,378**	253,412	251,908	2	2	2	EN 22
Ash produced	Kt	**3,860**	3,816	3,617	2	2	2	EN 22
Energy								
Renewable energies: quantity of electricity and heat generated using renewable energy sources (other than hydro)	GWh	**17,198**	15,583	11,032	2	2	2	EN 6
Direct energy consumption by primary source								
Internal consumption, pumping electricity	TWh	**7.0**	6.7	6.9	1	1	1	EN 3
Internal consumption, electricity	TWh	**22.1**	22.5	22.8	1	1	1	EN 3

** 2013 data was verified with reasonable assurance by the Statutory Auditors.*

1. *Scope 1 : EDF*
   Scope 1a : EDF mainland France
   Scope 1b : EDF + ERDF
   Scope 2: EDF group.
2. *In 2011 and 2012, brackish (or estuary) water are included in fresh water.*
3. *Edison' hydrocarbon activities are excluded from the waste indicators in 2011.*

nc : non communicated.

NUCLEAR INDICATORS – EDF	Unit	2013	2012	2011	GRI ref
Radioactive emissions to water[1]					
Carbon 14	GBq/reac	n.a.	13.19	13.06	EN 21
Tritium	TBq/reac	n.a.	20.47	18.07	EN 21
Radioactive emissions to air[1]					
Carbon 14	TBq/reac	n.a.	0.18	0.17	EN 20
Tritium	TBq/reac	n.a.	0.64	0.65	EN 20
Fuel					
Transported spent nuclear fuel	t	1,099	1,075	1,199	EN 24
Nuclear waste					
Very low-level radioactive waste from decommissioning	t	1,110	2,528	634	EN 24
Low and medium level short-life solid radioactive waste	m^3/TWh	19.0	20.7	15.6	EN 24
High and medium level long-life solid radioactive waste	m^3/TWh	0.86	0.88	0.87	EN 24

NUCLEAR INDICATORS – EDF ENERGY	Unit	2013	2012	2011	GRI ref
Radioactive emissions to water					
Tritium – AGR (Advanced Gas-cooled Reactor)	TBq/reac	150	135.7	124.5	EN 21
Tritium – PWR (Pressurised Water Reactor)	TBq/reac	41	44	46	EN 21
Radioactive emissions to air					
Carbon 14 – AGR	TBq/reac	0.67	0.71	0.68	EN 20
Carbon 14 – PWR	TBq/reac	0.20	0.30	0.30	EN 20
Tritium – AGR	TBq/reac	0.59	0.68	0.80	EN 20
Tritium – PWR	TBq/reac	0.80	0.80	0.70	EN 20
Fuel					
Uranium sent off site	t	177	216	211	EN 24
Nuclear waste					
Transported low level radioactive waste	m^3	655	698	608	EN 24
Medium level radioactive waste generated	m^3	178	161	161	EN 24

NUCLEAR INDICATORS – CONSTELLATION ENERGY NUCLEAR GROUP	Unit	2013	2012	2011	GRI ref
Radioactive emissions to water					
Tritium	TBq/reac	8.34	12.91	12	EN 21
Radioactive emissions to air					
Carbon 14	TBq/reac	0.37	0.33	0.34	EN 20
Tritium	TBq/reac	1.16	1.38	1.40	EN 20
Fuels[2]					
Nuclear fuel delivered	t	44	46	48	EN 24
Nuclear waste[2]					
Transported low and medium level radioactive waste	m^3	1,411	2,419	1,287	EN 24

na : not available.

1. *Data 2013 of radioactive emissions to water and air are not available at the reporting date.*
2. *Data is consolidated according to the percentage ownership in the subsidiary.*

2.5.3.3 Social indicators

EDF GROUP	Unit	2013	2012	2011	GRI ref
Workforce numbers and breakdown at 31 Dec 2013[1]					
EDF + ERDF	Number	**109,754**	107,333	103,954	LA 1
TOTAL EDF Group*	Number	**158,467**	159,740	156,168	LA 1
Employees by age					
Employees under 25*	%	**8**	8		
Employees aged 25-35*	%	**25**	23		
Employees aged 36-45*	%	**25**	25		
Employees aged 46-55*	%	**32**	34		
Employees aged 56 and over*	%	**10**	10		
Employees by geographical zone (based on head office location)					
France	Number	**129,492**	129,328		
Including DALKIA	*Number*	***13,056***	*15,964*		
United Kingdom	Number	**16,190**	16,178		
Italy	Number	**5,175**	5,210		
Other European countries	Number	**6,114**	7,503		
Other international	Number	**1,496**	1,521		
Number of managers (as defined by French regulations)	Number	**42,327**	40,355	37,786	LA 1
Percentage of women managers	%	**25.7**	25.0	23.9	LA 13
Number of "non-managers"	Number	**116,140**	119,385	118,382	LA 13
Gender equality					
▪ Male workforce*	Number	**116,928**	118,512	117,023	LA 13
▪ Female workforce*	Number	**41,539**	41,228	39,145	LA 13
▪ Male managers	Number	**31,468**	30,286	28,753	LA 13
▪ Female managers	Number	**10,859**	10,069	9,033	LA 13
Hiring / departures					
Recruitments	Number	**10,945**	12,577	12,755	LA 2
Other arrivals[1]	Number	**8,027**	7,499	5,849	LA 2
Retirements	Number	**4,321**	4,185	4,200	LA 2
Resignations[2]	Number	**1,768**	2,355	2,761	LA 2
Redundancies and dismissals	Number	**864**	1,739	1,689	LA 2
Other departures[1]	Number	**8,424**	9,304	9,398	LA 2
Remunerations					
Total gross remuneration	€ million	**7,494**	7,400		
Part-time employees	Number	**12,943**	14,690	15,296	LA 1
Absenteeism					
Average number of days' absence (illness + accident)	Number	**8.8**	9.0		

**2013 data was verified with reasonable assurance by the Statutory Auditors.*

1. *Companies joining or leaving the scope in the year are included in "Other arrivals" and "Other departures".*
2. *Terminated special contracts (including work-study contracts) are included in "Other departures" regardless of whether a further contract was signed. Departures during the period are included in "Other departures".*

EDF GROUP	Unit	2013	2012	2011	GRI ref
Health and safety					
Fatal accidents[1]	Number	**4**	14	13	LA 7
Injury frequency rate		**3.1**	3.8	3.9	LA 7
Work-related accidents (causing leave of one day or more)	Number	**750**	921	933	LA 7
Severity rate		**0.16**	0.16		
Management-employee relations					
Percentage of employees covered by collective bargaining agreements	%	**89**	88	87	LA 4
Training					
Total hours of training	Number	**8,636,882**	7,631,618		
Number of employees benefiting from training[2]	Number	**134,910**	131,311	118,930	LA 10
Employment and integration of employees with disabilities					
Number of disabled employees[3]	Number	**4,645**	4,519	4,601	LA 13

1. *Group employees, excluding subcontractors.*
2. *Excluding Estag in 2011.*
3. *Collected by declaration at EDF Energy. For reasons of confidentiality, CENG does not report this information in 2011, 2012 or 2013. The figure collected by Edison in 2011 does not include the subsidiary Abu Qir, first consolidated during 2009.*

EDF	Unit	2013	2012	2011	GRI ref
Workforce numbers and breakdown at 31 Dec 2013					
Total EDF staff covered by collective bargaining agreement (at 31 Dec 2013)	Number	**66,561**	64,838	63,002	LA 1
Other permanent EDF staff not covered by collective bargaining agreement	Number	**434**	433	409	LA 1
Other non-permanent EDF staff not covered by collective bargaining agreement	Number	**4,094**	3,851	3,773	LA 1
Total EDF SA staff not covered by collective bargaining agreement	Number	**4,528**	4,284	4,182	LA 1
Total EDF SA workforce	Number	**71,088**	69,122	67,184	LA 1
Number of managers (as defined by French regulations)	Number	**29,595**	28,230	26,644	LA 1
Percentage of women managers	%	**26.8**	26.0	25.1	LA 13
Number of "non-managers"	Number	**41,493**	40,892	40,540	LA 13
Technicians and supervisory staff	Number	**33,410**	33,084	32,871	LA 13
Operatives	Number	**8,084**	7,808	7,669	LA 13
Gender equality					
Male workforce	Number	**48,991**	47,852	46,938	LA 13
Female workforce	Number	**22,097**	21,270	20,246	LA 13
Male managers	Number	**21,650**	20,884	19,944	LA 13
Female managers	Number	**7,945**	7,346	6,700	LA 13
Hiring / departures					
Recruitments	Number	**4,433**	4,452	4,021	LA 2
Integration & rehiring	Number	**249**	261	251	LA 2
Other arrivals[1]	Number	**3,598**	3,194	2,818	LA 2
Retirements	Number	**2,134**	2,061	1,990	LA 2
Resignations	Number	**109**	114	123	LA 2
Redundancies and dismissals	Number	**16**	6	14	LA 2
Deaths	Number	**81**	82	89	LA 2
Other departures[1]	Number	**3,725**	3,709	3,285	LA 2
Overtime					
Number of hours of overtime	thousands	**2,847**	2,831	2,791	
Outside contractors					
Monthly average number of temporary staff[2]	Number	**n.a.**	1,837	1,187	LA 1
Working time					
Full-time employees	Number	**62,990**	60,612	58,157	LA 1
Part-time employees	Number	**8,098**	8,510	9,027	LA 1
Employees on contracts allowing overtime	Number	**6,917**	6,882	6,808	LA 1
Absenteeism					
Absenteeism	%	**3.8**	3.8	3.9	LA 7
Hours of maternity or paternity leave/total working time	%	**0.8**	0.7	0.7	LA 7
Health and safety					
Number of industrial illness declared in the year to the French Social security[2]		**n.a.**	13	11	
Fatal accidents	Number	**0**	6	8	LA 7
Injury frequency rate		**2.7**	3.4	3.7	LA 7
Severity rate		**0.14**	0.15	0.14	LA 7
Work-related accidents (causing leave of 1 day or more)	Number	**273**	333	358	LA 7

1. Not including arrivals and departures of seasonal staff on fixed-term contracts.

2. 2013 figure unavailable at the reporting date.

n.a. : not available.

EDF	Unit	2013	2012	2011	GRI ref
Wages / social security contributions / profit share					
Principal monthly salaries					
Managers	€	**4,327**	4,308	4,248	EC 1
Technicians and supervisory staff	€	**2,615**	2,612	2,581	EC 1
Operatives	€	**1,870**	1,877	1,874	EC 1
Personnel expenses	€ million	**6,366**	6,113	5,784	EC 1
Average profit share per employee	€	**1,820**	1,820	1,583	EC 1
Management-employee relations					
Number of collective bargaining agreements signed (France)	Number	**8**	8	11	HR 5
Percentage of employees covered by collective bargaining agreements[1]	%	**93**	94	94	LA 4
Training					
Number of employees benefiting from training	Number	**62,074**	58,899	55,905	LA 10
Employment and integration of employees with disabilities					
Number of disabled employees	Number	**1,946**	1,842	1,698	LA 13
Number of disabled employees hired	Number	**110**	124	94	LA 13
Charitable works					
Committee budgets (1% requirement)	€ million	**205**	196	198	

1. *EDF staff are not covered by a collective bargaining agreement as defined by law, but are covered by the IEG (electricity and gas sector) statutes.*

2.5.4 Statutory Auditors' assurance report

This is a free translation into English of the Statutory Auditors' report issued in French, 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.

Statutory Auditors' assurance report as the designated independent body on the social, environmental and societal indicators disclosed in the Management Report

Year ended 31 December 2013

To the shareholders,

In our capacity as Statutory Auditors of EDF SA designated as an independent body, whose application for accreditation has been considered admissible by the French accreditation body COFRAC, we are presenting our report on the social, environmental and societal information disclosed in the management report (the "CSR information") for the year ended 31 December 2013, in application of article L. 225-102-1 of the French Commercial Code.

Responsibility of the Company

It is the responsibility of the Board of Directors to establish a management report including the CSR information required by article R. 225-105-1 of the French Commercial Code, in compliance with the reporting standards used (the "Standards") by the company, which are available on request from the company's head office, and are summarised in the management report in the section entitled "Methodological information on the environmental and social indicators for 2013".

Independence and quality control

Our independence is defined by the rules and regulations, the code of ethics of the profession and the provisions of article L. 822-11 of the French Commercial Code. We have also a comprehensive system of quality control including documented policies and procedures intended to ensure compliance with the professional ethics, professional standards and the applicable rules and regulations.

Responsibility of the Statutory Auditors

It is our responsibility, on the basis on our work:

- to attest that the required CSR information is presented in the management report, or that its omission is explained in application of the third paragraph of article R. 225-105 of the French Commercial Code (Attestation of presence of CSR information);
- to express a conclusion of limited assurance that the CSR information as a whole is fairly presented, in all material respects, in compliance with the Standards (Opinion on the fair presentation of CSR information);
- at the request of the company, to express a conclusion of reasonable assurance that the information selected by the Group and identified by the sign * in section 2.5.3 of the management report is fairly presented, in all material respects, in compliance with the Standards.

We were assisted by our CSR experts in performing our audit, which was carried out between October 2013 and February 2014.

The work described below was conducted in accordance with professional auditing standards applicable in France, the decision of 13 May 2013 determining the conditions in which the independent body conducts its engagement, and international standard ISAE 3000[1] regarding the opinion and reasonable assurance.

1.Attestation of presence of CSR information

Based on interviews with the directors of the divisions concerned, we were informed of the sustainable development orientations, depending on the social and environmental consequences related to the company's business and its societal commitment, and the resulting actions and programmes where applicable.

We compared the CSR information presented in the management report with the list required by article R. 225-105-1 of the French Commercial Code.

When certain information was absent, we verified that explanations were provided in compliance with the provisions of article R. 225-105, paragraph 3 of the French Commercial Code.

We verified that the CSR information covered the scope of consolidation, i.e. the company and its subsidiaries as defined in article L. 233-1 and controlled companies as defined in article L. 233-3 of the French Commercial Code, with the limit stated in the methodology note presented in section 2.5.5 of the management report.

On the basis of this work, in view of the limits stated above, we attest that the required CSR information is present in the management report.

2. Opinion on the fair presentation of CSR information

Nature and scope of audit

We conducted the interviews we considered necessary with some fifty people responsible for preparing CSR information in the divisions in charge of collecting the information, and where necessary, with the heads of internal control and risk management procedures, in order to:

- assess the suitability of the Standards regarding their relevance, completeness, reliability neutrality, and understandability, taking into consideration best practices in the sector if necessary;
- verify the implementation of a collection, consolidation, processing and control process aiming to ensure completeness and consistency in the information, and examine the internal control and risk management procedures related to preparation of the CSR information.

We determined the nature and scope of tests and controls based on the nature and importance of CSR information in view of the company's characteristics, the key social and environmental factors of its business, its sustainable development orientations and good practices in the sector.

1. *ISAE 3000 – Assurance engagements other than audits or reviews of historical information.*

For the CSR information shown in the table below, which we considered the most important:

- for the consolidating entity, we consulted documentary sources and conducted interviews to corroborate qualitative information (organisation, policies, actions), we applied analytical procedures to quantitative information, and through sampling verified the calculations and consolidation of the data, and their consistency and agreement with other information contained in the management report;
- for a representative sample of entities and divisions[1] selected on the basis of their business, their contribution to consolidated indicators, their location and a risk analysis, we conducted interviews to verify that procedures are correctly applied, and implemented detail tests through sampling, consisting of verifying the calculations made and comparing data with the supporting documentation. The sample selected represented 63% of the workforce and between 14% and 100% of the quantitative environmental information.

1. *CENG: Ginna Nuclear Electricity Generation Centre (US) and head office of CENG (US)*

   EDF Énergies Nouvelles: EDF ENR Photowatt (FR)

   EDF Energy: Sizewell Nuclear Electricity Generation Centre (UK), Hinkley Point B Nuclear Electricity Generation Centre (UK), Cottam fossil-fired power plant (UK), Nuclear Generation consolidation, Crawley HR centre (UK) and head office of EDF Energy

   EDF Polska: Rybnik fossil-fired power plant (PL) and head office of EDF Polska (PL), ECW fossil-fired power plant (PL)

   EDF SA: Cordemais fossil-fired power plant (FR), Blénod fossil-fired power plant (FR), Porcheville fossil-fired power plant (FR), La Maxe fossil-fired power plant (FR) Blayais Nuclear Electricity Generation Centre (FR), Paluel Nuclear Electricity Generation Centre (FR), Tricastin Nuclear Electricity Generation Centre (FR) Creys Malville plant in decommissioning (FR), Deputy HR director, Ile de France region (FR), Deputy HR director, Rhône Alpes region (FR), Generation-Engineering Training Unit (FR).

   Edison: Torviscosa fossil-fired power plant (IT)

   ERDF: Limousin electricity network unit (FR), Est IDF electricity network unit (FR), Provence electricity network unit (FR), Agence Ouest (FR), Agence Auvergne (FR)

   FIGLEC: Figlec fossil-fired power plant (CN)

   Fenice: Mirafiori power plant (IT), head office of Fenice (IT)

   TIRU: Cydel Perpignan (FR)

   UTE Norte Fluminense: UTE Norte Fluminense fossil-fired power plant (BR)

   EDF Luminus: Ringvaart power plant (BE), head office of EDF Luminus (BE)

   Dalkia International and Dalkia Investissement.

Scope	Social indicators	Level of assurance
EDF Group	Total EDF group workforce at 31 December 2013	Reasonable
	Employee breakdown by age	
	Male workforce, female workforce	
	Male managers	Limited
	Female managers	
	Recruitments	
	Other arrivals	
	Retirements	
	Resignations	
	Redundancies and dismissals	
	Other departures	
	Fatal accidents (employees)	
	Fatal accidents (subcontractors)	
	Work-related accidents (causing leave of one day or more)	
	Frequency rate	
	Severity rate	
	Absenteeism: Average number of days' absence (illness + accident)	
	Number of employees benefiting from training	
	Total hours of training	
	Number of disabled employees	

Scope	Environmental indicators	Level of assurance
EDF Group	Total CO_2 emissions (including installations not subject to quotas)	Reasonable
	Renewable energies: quantity of electricity and heat generated using renewable energy sources (other than hydro)	Limited
	SO_2 emissions	
	Cooling water drawn, and share of fresh water	
	Cooling water returned, and share of fresh water	
	Coal	
	Dangerous waste	
	Non-dangerous waste	
	Non-nuclear industrial waste recycled or removed for recycling	
	SF_6 emissions	
	NO_x emissions	
EDF S.A.	Low and medium level short-life solid radioactive waste	Limited
	High and medium level long-life solid radioactive waste	
	Very low level radioactive waste from decommissioning	
EDF Energy	Uranium sent off site	Limited
	Low level radioactive waste sent off site	
	Medium level radioactive waste generated	
CENG	Nuclear fuel delivered	Limited
	Low and medium level radioactive waste sent off site	

Qualitative information	
Social themes	Health and safety at work
Environmental themes	Resources devoted to preventing environmental risks and pollution Adaptation to the consequences of climate change Measures taken to preserve or develop biodiversity
Societal themes	Importance of subcontracting and consideration of social and environmental responsibility into relations with suppliers and subcontractors Action taken against corruption

The coherence of other consolidated CSR information was assessed by reference to our knowledge of the company.

Finally, we assessed the relevance of the explanations provided for total or partial absence of certain information.

We consider that the sampling methods and sample sizes used in application of our professional judgement enables us to express a conclusion of limited assurance. For a higher level of assurance, a more extensive audit would have been necessary. Given the use of sampling techniques and other limitations inherent to any information and internal control system, the risk of non-detection of a material anomaly in the CSR information cannot be totally ruled out.

Conclusion

Based on our audit, we did not identify any material anomalies likely to call into question the fact that the overall CSR information is fairly presented in compliance with the Standards.

3. Reasonable assurance regarding a selection of CSR information

Nature and scope of audit

For the information selected by the Group and identified by the sign *, our audit consisted of work of the same nature as described in paragraph 2 above for the CSR information considered the most important, but in more depth, particularly regarding the number of tests.

The sample selected represented 63% of the workforce and 51% of environmental information identified by the sign *.

We consider that this work enables us to express a conclusion of reasonable assurance for the information selected by the Group and identified by the sign *.

Conclusion

In our opinion, the information selected by the Group and identified by the sign * is fairly presented, in all material aspects, in compliance with the Standards.

Paris La Défense and Neuilly-sur-Seine, February 12, 2014

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2.5.5 Methodological information on the environmental and social indicators for 2013

2.5.5.1 Reporting scope

The scope covered by the reporting process for economic, environmental and social indicators corresponds to the EDF group as defined by the financial consolidation. This scope includes the parent company EDF, and its fully consolidated subsidiaries (100% of their social and environmental indicators) and proportionally consolidated entities (inclusion based on the percentage ownership). Companies accounted for under the equity method are not included.

The reporting process scope is defined on the basis of:

- the scope of consolidation established by the Finance Division;
- criteria of relevance regarding the environmental and social impacts of the subsidiaries' businesses.

Social and environmental indicators are consolidated under the rules for accounting consolidation, and with reference to relevance criteria for human resources and environmental impact.

Environmental information relates to:

- industrial activities (generation, distribution and transmission) that are significant in terms of environmental impact;
- entities acquired more than one year ago;
- entities still included in the scope of consolidation at 31 December 2013.

Social information relates to:

- companies with a significant workforce (more than 50 employees);
- companies acquired more than 6 months ago.

Consequently, differences between the reporting scopes for social and environmental indicators are as follows:

- subsidiaries included in reporting scope for environmental indicators but not the reporting scope for social indicators: Dalkia Investissement (France), Figlec (China), Sloe Centrale (Netherlands);
- subsidiaries included in reporting scope for social indicators but not the reporting scope for environmental indicators: CHAM (France), EDF Optimal Solutions (France), EDF Paliwa (Poland).

Due to difficulties in collecting data, the reporting scope may vary for different indicators. For example, EDF Belgium and EDF Fenice are not yet able to apply the environmental reporting in all their operating sites; the estimated impact is not significant, and work is in process to reinforce the fullness of reporting in the medium term.

The main changes in the scope in 2013 are:

- deconsolidation of SSE;
- inclusion of EDF Trading and EDF Island Energy Production (IEP) in the environmental reporting;
- inclusion of Dalkia International for the whole of 2013 (deconsolidated for financial reporting as of 28 October 2013).

2.5.5.2 Social data

Since 2011, the population concerned by data collection comprises all employees who have a non-suspended employment contract with a Group company.

Calculation of workforce and movements

The workforce reported includes employees who are co-employed by EDF and GDF Suez. An employee working 50% for EDF counts as 0.5 in the published workforce.

Changes in the consolidated Group are not entirely reflected in arrivals and departures recorded by Group subsidiaries, and this is the main reason for the variance between the 2012 workforce as reported and as recalculated based on 2011 workforce and arrivals/departures.

Changes in IEG status workforce numbers are considered as transfers and not included in new arrivals, resignations or redundancies, in application of a sector-specific agreement (IEG statutes).

Staff movements between ERDF and EDF are included in "Other arrivals" and "Other departures".

The "Other arrivals" indicator for 2013 includes the workforce of the Polish subsidiaries that merged during the year to form EDF Polska.

The age groups used for Dalkia International employees are slightly different from EDF group age groups: "24 and under"; "25-34"; "35-44"; "45-54"; "55 and over". Figures are consequently extrapolated.

Absenteeism

To calculation the absenteeism rate EDF includes the following categories of absence: absences for sickness, absences due to work-related accidents, including on the journey between home and work, and miscellaneous absences (unpaid leave, unexplained absences, etc). Absences relative to company and union activities, early retirement leave and maternal absences are not included. The absenteeism rate is calculated based on the theoretical number of hours worked.

At Group level, the indicator "Number of days' absence per employee present at 31 December" is the sum of the absences for illness, measured in working days prorata to the employees' working time, and absences due to work-related accidents, which are measured in calendar days.

Accidents

For EDF and ERDF, data on the number of accidents during the year and the number of days' leave for work-related accident is supplied by the HR information system (Sprint), or the Safety information system (Ariane Web). If the two systems contain different figures, the Group reports the less favourable figure.

The frequency rate for work-related accidents does not include accidents on the home-work journey. Road accidents may be taken into account when local legislation considers them as work-related accidents. The number of fatal accidents includes work-related accidents and accidents on the home-work journey, but does not include fatal accidents for subcontractors.

Training

Training is not included when no supporting documentation has been received at the reporting date.

Data on training under professionalisation contracts is not always included.

In countries where there is no regulatory requirement to declare the number of disabled employees, the reported figure is based on voluntary declarations by employees.

2.5.5.3 Environmental indicators

The accounting data on provisions for decommissioning and last cores, and for the back-end nuclear cycle, are consolidated Group data taken from the Group's consolidated accounts.

Indicators for water drawn and returned

Indicators on cooling water include water drawn from and returned to rivers, sea and ground water, and may also include water drawn from distribution networks and returned to waste water networks. For nuclear plants in coastal locations and fossil-fired plants, the quantities of cooling water drawn / returned are calculated based on the operating time and nominal debit from pumps.

This indicator is not collected by Dalkia, Estag and certain EDF Fenice sites.

Air emissions

CO_2, SO_2, N_2O, NO_x and CH_4 emissions by EDF's fossil-fired power plants are measured or calculated based on fuel analysis or standard emission factors, and cover all phases of electricity generation, including plant start-up and shutdown. CO_2, SO_2, N_2O, NO_x and CH_4 emissions by EDF's fossil-fired power plants are measured or calculated based on fuel analysis or standard emission factors, and cover all phases of electricity generation, including plant start-up and shutdown. CO_2 and CH_4 emissions by the dams are not included in calculating this indicator.

EDF SA's SF_6 emissions are calculated based on the mass balance of SF_6 bottles or a nominal annual leakage rate of 2% of the volume of SF_6 contained in facilities.

The subsidiaries Dalkia, Meco, Estag and EDF Énergies Nouvelles do not collect all their air emissions. These exclusions are potentially non-significant at the level of the Group, which is working on broadening its scope in the short term.

Non-nuclear waste

Data on non-nuclear waste are taken from information available at the year-end concerning the quantities removed and the elimination channels. The reported data do not include:

- Non-nuclear industrial waste of Dalkia, Estag, EDF Énergies Nouvelles and certain EDF Fenice operating sites,
- The portion of non-nuclear industrial waste recycled at the subsidiaries in Poland and the the Asia-Pacific region.

Waste from construction and decommissioning sites is included in the figures reported when the EDF group is responsible for its management, but waste managed by subcontractors is excluded. On a construction site, for example, the builder is generally in charge of dealing with waste (packaging, product leftovers, paintpots, etc).

For ERDF, the reporting on waste concerns a rolling 12-month period, and wooden posts are now included. Concrete posts are excluded, because the current reporting arrangements cannot provide satisfactory monitoring figures.

Also, ERDF's recycled waste is underestimated as it does not systematically include recycling of the unpolluted metal parts of certain transformers. An action plan is in process to reinforce full data collection.

Nuclear waste

EDF

The indicator for "Very low level radioactive waste from decommissioning" comprises:

- the actual tonnage of waste sent directly to the very low level storage centre;
- the tonnage of waste sent to the Centraco fusion unit, weighted by an estimated ratio, calculated annually based on 3-year reports from the processing subsidiary Socodei, to arrive at the share of very low level radioactive waste ultimately sent to the appropriate storage centre.

In 2013, 2012 and 2011, all very low level radioactive waste from decommissioning was sent directly to the storage centre.

The "Low and medium level short-life solid radioactive waste produced by reactors in operation" indicator does not include waste resulting from occasional maintenance (vessel lids, steam generators). The volume of waste calculated corresponds to the volume of waste stored at the Aube centre (after compacting, incineration and fusion). The volume of waste resulting from reconditioning of waste produced and conditioned in previous years is not included.

The "High and medium level, long-life solid radioactive waste" indicator includes waste conditioning in the calculation.

In view of the technical constraints associated with processing operations, the packages will be produced around 10 years after the fuel actually generates the waste. Consequently, this indicator is an estimate based on ongoing application of current practices for conditioning long-life waste which projects the current conditioning ratio into the near future (number of packages actually made after processing one tonne of fuel). This ratio essentially depends on the blends used to optimise operations, and is a combination of the following:

- for waste deriving directly from spent fuel: factors drawn from the national inventory of radioactive materials and waste undertaken by the French agency for radioactive waste management ANDRA (*Agence nationale pour la gestion des déchets radioactifs*);
- for waste not deriving directly from spent fuel (such as control rods) and assuming an average life of 10 years: experience-based assessment.

EDF Energy

Data for the "Medium level radioactive waste" reported by Existing Nuclear, EDF Energy's nuclear division, are based on the inventory of nuclear waste in the UK drawn up by the Nuclear Decommissioning Authority. The figure is an estimate of the annual volume of waste that will be considered and classified as medium level radioactive waste when the nuclear generation sites are shut down, and includes the volume of conditioning required to transport the waste from the sites. All medium level radioactive waste is stored at the nuclear generation sites to await a national decision on its final treatment.

"Low level radioactive waste" includes desiccants sent for processing in the form of medium level radioactive waste, in compliance with applicable regulations.

Constellation Energy Nuclear Group

The "Solid low and medium level radioactive waste" of Constellation Energy Nuclear Group (CENG) covers radioactive waste that is not high level. The Nuclear Regulatory Commission (NRC) draws a distinction in the US between three types of solid low and medium level radioactive waste: types A, B and C, depending on the activity (A being the lowest activity). Data reported by CENG are volumes of conditioned waste removed from sites declared to the NRC.

The "Nuclear fuel delivered" indicator reported by Constellation Energy Nuclear Group is the quantity of fuel delivered to generation sites. These quantities are expressed in grammes of uranium, and are reported by suppliers and declared to the NRC.

Quantity of electricity and heat produced from renewable energies

Data on Dalkia International's electricity and heat generation from renewable energies have been included in the consolidated figure since 2012. The proportions of electricity and heat generated from renewable energies are estimated as a prorata of the quantities of electricity and heat output.

Environmental expenses

Environmental protection expenses are expenses declared by the various entities of EDF.

The definition of environmental protection expenses used by the Group is derived from the CNC recommendation of 21 October 2003 (itself inspired by the European recommendation of 30 May 2001). Environmental expenses are identifiable, additional 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 business.

They relate, for example, to:

- waste elimination and waste limitation efforts;
- anti-pollution measures for the ground, surface water and underground water;
- protection of air and climate quality;
- reduction of noise emissions;
- protection of biodiversity and the landscape;
- plant decommissioning.

The amount of these expenses is assessed on their cost excluding taxes, allocated between three main categories:

- operating expenses (including studies that qualify as operating expenses), not including expenses covered by a provision;
- investment expenditure (including the related studies);
- amounts allocated to provisions, including discount expenses.

JUILLET 2014

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