MANAGEMENT REPORT

2012

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 2012 are prepared under the international accounting standards published by the IASB and approved by the European Union for application at 31 December 2012. 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 2012.

The figures presented in this document are taken from the EDF group's consolidated financial statements at 31 December 2012.

The comparative figures for 2011 have been restated for the impact of the change in accounting method for actuarial gains and losses on post-employment benefits under the options offered by IAS 19 (see note 2 to the consolidated financial statements). In the tables in this management report, these figures are reported as "2011 restated".

One notable event of 2012 was the takeover of the Edison group on 24 May 2012 (for details of the operation see section 1.2.2.1.1). Edison is fully consolidated as of that date, since the EDF group holds 97.40% of the capital and 99.48% of the voting rights in Edison.

The Group's key figures for 2012 are shown in the following table. Variations in value and percentage are calculated with reference to the restated 2011 figures.

Extract from the consolidated income statements

In millions of Euros	2012	2011 restated	Variation	Variation (%)	Organic growth (%)
Sales	72,729	65,307	7,422	+11.4	+5.8
Operating profit before depreciation and amortisation (EBITDA)	16,084	14,939	1,145	+7.7	+4.6
Operating profit (EBIT)	8,245	8,452	(207)	-2.4	
Income before taxes of consolidated companies	4,883	4,672	211	+4.5	
EDF net income	3,316	3,148	168	+5.3	
Net income excluding non-recurring items [(1)]	4,216	3,607	609	+16.9	

[(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 2012	31 December 2011 restated
Non-current assets	140,279	128,318
Inventories and trade receivables	36,710	34,489
Other assets	55,328	52,287
Cash and cash equivalents, other liquid assets, loans to RTE and joint ventures [1]	17,560	16,184
Assets held for sale (excluding cash)	241	684
Total assets	**250,118**	**231,962**
Equity (EDF share)	25,858	28,483
Non-controlling interests	4,854	4,189
Special concession liabilities	42,551	41,769
Provisions	65,582	58,018
Loans and other financial liabilities [2]	59,135	49,469
Other liabilities	52,089	49,897
Liabilities related to assets classified as held for sale (excluding loans and other financial liabilities)	49	137
Total equity and liabilities	**250,118**	**231,962**

[1] Including cash and cash equivalents of discontinued operations.
[2] Including hedging derivatives and the financial liabilities of discontinued operations.

Operating cash flow

In millions of Euros	2012	2011 restated	Variation	Variation (%)
Operating cash flow [1]	12,314	10,281	2,033	+19.8

[1] Operating cash flow is not an aggregate defined by IFRS as a measure of financial performance, and is not necessarily 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, adjusted for the impact of non-recurring items, less net financial expenses disbursed and income taxes paid.

Details of net indebtedness

In millions of Euros	31 December 2012	31 December 2011	Variation	Variation (%)
Loans and financial liabilities	59,932	50,034	9,898	+19.8
Derivatives used to hedge liabilities	(797)	(834)	37	-4.4
Cash and cash equivalents	(5,874)	(5,743)	(131)	+2.3
Liquid assets	(10,289)	(9,024)	(1,265)	+14.0
Loans to RTE and joint ventures	(1,397)	(1,400)	3	-0.2
Net indebtedness of discontinued operations	-	252	(252)	
Net indebtedness[1]	**41,575**	**33,285**	**8,290**	**+24.9**

[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. The definition of net indebtedness was revised in 2012 and now includes the Group's loans to RTE and joint ventures.

1.2. ECONOMIC ENVIRONMENT AND SIGNIFICANT EVENTS OF 2012

1.2.1. ECONOMIC ENVIRONMENT

1.2.1.1. TRENDS IN MARKET PRICES FOR ELECTRICITY AND THE PRINCIPAL ENERGY SOURCES

European energy prices were affected in 2012 by the fall in prices for coal and CO_2 emission rights, and a substantial rise in energy generation from renewable sources in Germany.

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 2012 (€/MWh)	46.9	55.2	75.5	42.6
Variation in average baseload prices, 2012/2011	-4.1%	+0.3%	+4.6%	-16.6%
Average peakload price for 2012 (€/MWh)	59.4	63.3	85.2	53.4
Variation in average baseload prices 2012/2011	-2.1%	+2.9%	+3.5%	-12.6%

The comments below concern baseload prices.

In **France**, spot electricity prices stood at an average €46.9/MWh, €2.0 MW/h lower than in 2011. The decline is partly attributable to the significant fall in the price of CO_2 emission rights and coal. The increase in imports from Germany, where there was a substantial output of cheap energy from renewable sources, also drive prices downwards. Pr
+ices also showed much higher volatility this year. The spell of cold weather in February caused significant peaks in prices, while the mild temperatures and high output of harnessable energy[2] in the last third of December led to low prices at the end of the year as the supply-demand balance was extremely relaxed, and negative prices were even observed at certain hours. Given this context and the state of its fleet, the EDF group was a purchaser in all negative price hours.

In **Germany**, prices fell markedly to an average €42.6/MWh, down by €8.5 MWh from 2011. Even more than in France, this change is explained by the lower prices for coal and CO_2 emission rights, and most importantly the substantial growth in wind power and photovoltaic power generation, both extensively subsidised by end-users. Consequently, German prices were lower than French prices during most hours of the year.

In the **United Kingdom**, spot electricity prices were stable overall compared to 2011 despite the rise in spot gas prices, at an average €55.2/MWh. The UK's energy mix generally includes a large contribution from Combined Cycle Gas (CCG) plants, but the downturn in prices for coal and CO_2 emission rights resulted in more extensive use of coal-fired plants, to the detriment of CCG plants.

In **Italy**, spot electricity prices rose by 4.6%, principally due to the increase in Italian gas prices.

[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.
[2] Harnessable power is power generated by any technology affected by weather conditions: wind power, hydropower, and photovoltaic power.

1.2.1.1.2. Forward electricity prices in France, the United Kingdom, Italy and Germany[3]

	France	United Kingdom	Italy	Germany
Average baseload price for 2012 (€/MWh)	50.6	61.6	73.3	49.3
Variation in average baseload prices, 2012/2011	-9.6%	-1.1%	-1.2%	-12.0%
Forward baseload price at 21 December 2012	47.3	63.2	70.4	45.1
Average peakload price for 2012 (€/MWh)	64.0	69.9	80.8	60.9
Variation in average peakload prices, 2012/2011	-9.2%	-0.6%	-3.7%	-11.7%
Forward peakload price at 21 December 2012	60.3	71.5	78.1	57.0

The comments below concern baseload prices.

European annual contract baseload prices were on average lower than in 2011, due to downward price trends for CO_2 emission rights and coal.

In **France**, the 2012 annual contract baseload price amounted to an average €50.6/MWh, down by 9.6% from 2011. The main factor in this decrease was the lower prices for coal and CO_2 emission rights, and anticipation of moderate consumption levels.

In **Germany**, the baseload annual contract price registered a bigger decline than the French annual contract, to €49.3/MWh. As well as the change in fuel prices, forward contract prices were influenced by the increasing importance in the energy mix of renewable energies, which have zero variable operating costs and are indirectly borne by consumers, thus bringing prices down from the spring onwards. 2012 German annual contract prices were higher than French prices in the first two months of the year, following the trend of the last six months of 2011 after Germany's political decision to withdraw from nuclear power. High photovoltaic power output in March reversed the trend, and the German contract price returned to a lower level than French prices.

In the **United Kingdom**, the 2012 April Ahead contract baseload price, running from 1 April Y+1 to 31 March Y+2, stood at €61.6 MWh, a 1.1% decline caused by falling forward gas prices. However, the decrease in electricity prices was limited by a change in CO_2 regulations: from 1 April 2013 the cost of electricity generation will include a share for CO_2 emissions specific to the UK. This will raise prices by approximately €3/MWh and is already included in the 2013 April Ahead price.

In **Italy**, the baseload annual contract stood at €73.3/MWh, down slightly from 2011, largely due to shrinking demand as a result of the crisis.

1.2.1.1.3. CO_2 emission rights prices[4]

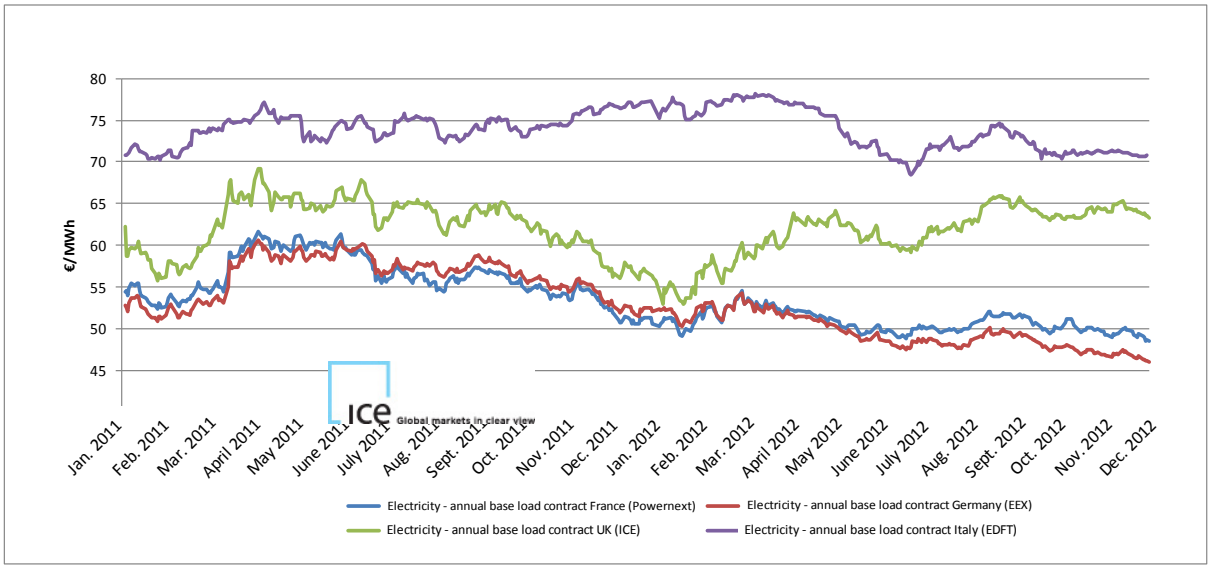
During 2012, the price of CO_2 emission rights under Phase II (2008-2012) stood at an average €7.5/t for delivery in December 2012, down by €5.8/t from 2011. The price per tonne for CO_2 remained between €6 and €9 throughout the year.

Movements in CO_2 emission rights prices mainly reflected European Commission decisions made to regulate the excess supply of rights, and the economic outlook in Europe. The first negotiations to absorb excess emissions rights, and the wave of cold weather in February, kept the price at €9.5/t at the end of the first quarter. But negotiations aiming to raise prices were unsuccessful, largely because they were blocked by Eastern countries, and as a result the price returned to €6/t. In July, the Commission began further negotiations, this time with the sole aim of changing the timetable for emission rights auctions

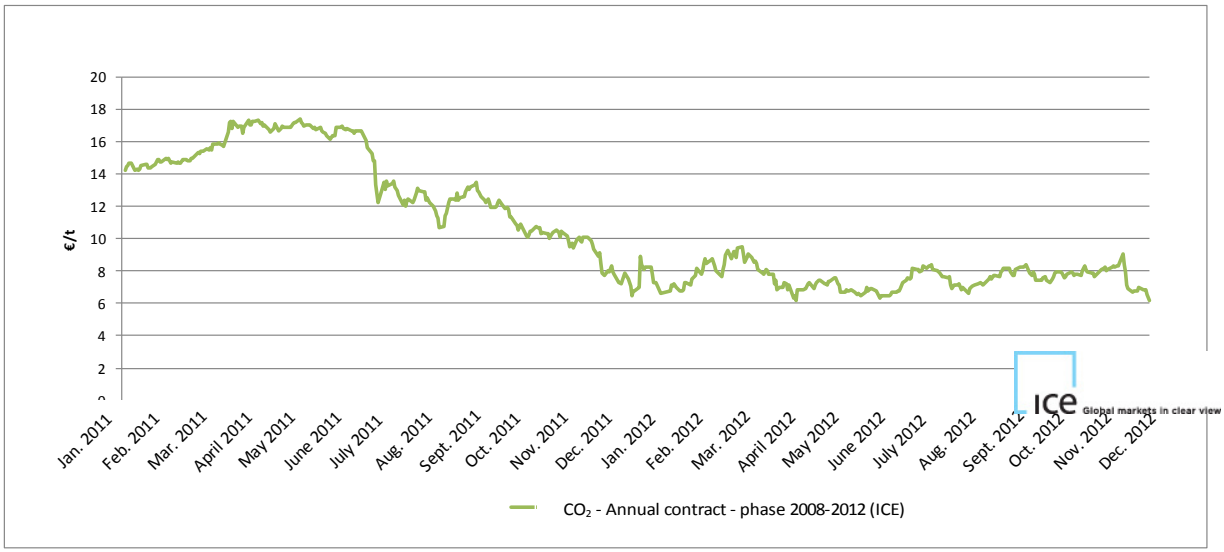
[3] France and Germany: Average year-ahead EPD price; the last quotations of 2012 were issued on 21 December
Italy: average year-ahead EDFT price;
United Kingdom: Average ICE annual contract prices, April 2012 then April 2013 (in the UK, annual contract deliveries take place from1 April to 31 March).
[4] Average ICE prices for the annual contract, Phase II (2008-2012).

over the period 2013-2020, so as to limit inflows of rights onto the market in the short term and support prices. A deferral was proposed in November 2012 that would only apply to 900 million tonnes and would not come into force until 2013 after validation by European Commission bodies. These two very cautious decisions were considered disappointing by market actors, as reflected in a continuing decline in CO_2 emission rights prices.

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



CO_2 emission rights prices (Phase II, 2008-2012)



1.2.1.1.4. Fossil fuel prices[5]

	Coal ($/t)	Oil ($/bl)	Natural gas (p/th)
Average price for 2012	103.1	111.7	64.6
Average price variation, 2012/2011	-16.7%	+0.6%	-2.7%
Highest price in 2012	118.2	126.2	70.0
Lowest price in 2012	92.7	89.2	59.5
Closing price, 2011	111.9	107.4	63.1
Closing price, 2012	94.1	111.1	65.8

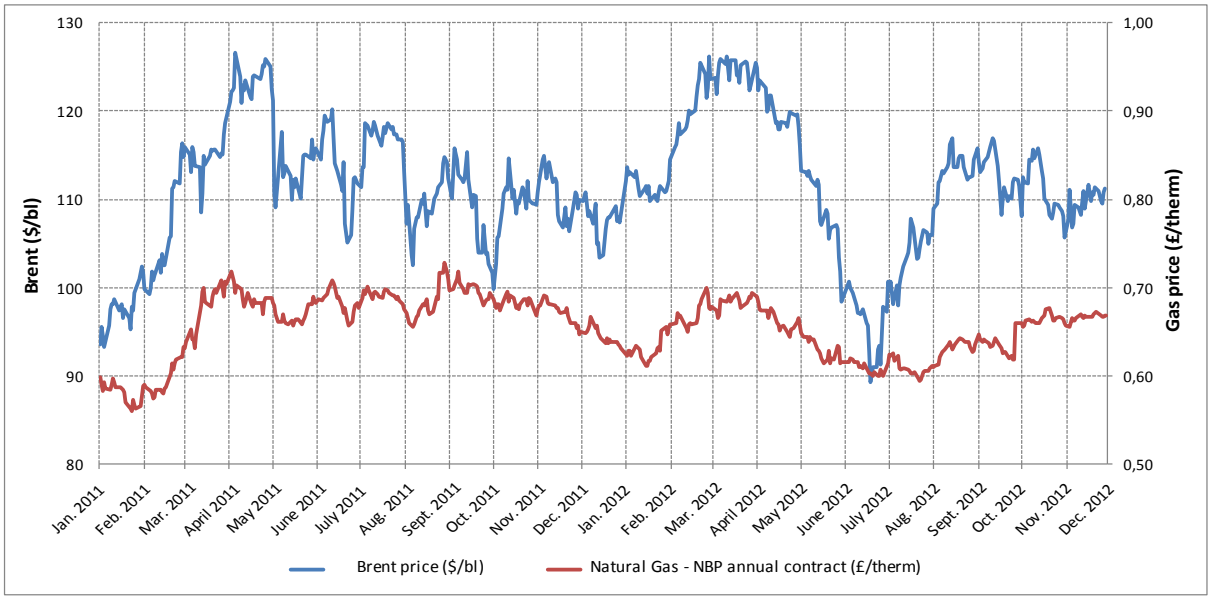
For **coal**, the short term supply-demand balance was very relaxed, largely because of cheap coal imports from Colombia, the US and Russia, and low demand from electricity operators. This situation, combined with a gloomy economic outlook in Europe, was reflected in a fall of nearly 17% in average forward coal prices in Europe between 2011 and 2012. The price per tonne of coal for delivery in 2013 averaged $103.1/t in 2012 and ended the year below $100.

The average European crude **oil** price was comparable to the 2011 level at close to $112/bl, although it showed great volatility over the year. The price per barrel began the year on an upward trend due to fears over supplies, given the threat of potential conflict with Iran, problems in South Sudan and the strike at oil sites in Yemen. In the second quarter, the price per barrel dropped sharply, broadly cancelling out the rise of the first quarter. This drop was mainly driven by concerns about demand following publication of consistently poor macro-economic indicators for Europe, the United States and China. In the summer, the price per barrel increased again following production problems in the North Sea and growing tension with Iran, and it remained at around $110/bl for the rest of the year.

Natural gas prices under the United Kingdom's annual contract were down slightly from 2011 to 64.6p/th, particularly as a result of the relaxed short-term situation. Despite the wave of cold weather in February and the diversion of most LNG towards Asia, gas stocks were replenished rapidly as domestic consumption in the UK was well below normal in the second quarter. Subsequently, prices remained relatively low until early autumn as the outlook for winter was relaxed. Forward gas prices rose significantly when the new annual contract came in at 1 October, since forward prices for 2013-2014 are not greatly affected by the short-term supply-demand balance.

[5] 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) (p/therm).

Natural gas and oil prices



1.2.1.2. ELECTRICITY[6] AND NATURAL GAS[7] CONSUMPTION

Gross electricity consumption in **France** in 2012 amounted to 489.5 TWh, 2.1% higher than in 2011. This difference is mostly explained by the fact that temperatures were below normal in some months (February particularly, plus April and November) and 0.8°C below 2011 averages, resulting in a 13.7 TWh increase in electricity consumption.

After adjustment for weather effects, the fact that 2012 was a leap year (impact of +1.5 TWh) and the 4.9 TWh decrease in consumption by Eurodif following the permanent closure of this uranium enhancement plant run by Areva in June 2012, electricity consumption in France was stable overall from 2011 to 2012. Lower consumption by industrial and large business customers was offset by higher consumption by small business and residential customers.

Natural gas consumption in **France** rose by 4.5% in 2012 compared to 2011. This rise is attributable to the intensely cold weather of February 2012, and to a lesser extent, below-normal temperatures in April 2012. After adjustment for weather effects, consumption was down by 4.8%.

Domestic electricity consumption in the **United Kingdom** in 2012 was estimated at 317.8 TWh, stable since 2011. Gas consumption was estimated at 549.4 TWh, up by 9.7% from 2011, essentially as a result of colder weather conditions than in 2011.

In **Italy**, estimated domestic electricity and gas consumption was down by 2.8% and 4% respectively from 2011).

[6] Sources:
France: RTE, raw and adjusted for weather effects.
United Kingdom: Department of Energy and Climate Change for the first 3 quarters, local subsidiary estimation for the final quarter.
Italy: local subsidiary estimation.
[7] Sources:
France: Pégase database, source SOeS (*Service de l'Observation et des Statistiques*) for the first 11 months.
United Kingdom: Department of Energy and Climate Change for the first 3 quarters, local subsidiary estimation for the final quarter.
Italy: local subsidiary estimation.

1.2.1.3. ELECTRICITY AND NATURAL GAS TARIFFS

In **France**, the Finance Minister and the Minister for Ecology, Sustainable Development and Energy issued a decision on 20 July 2012 raising regulated electricity sale tariffs by 2.0% for the "blue" tariff (for residential and small business customers) and the "yellow" and "green" tariffs (for industrial and large business customers). This rise took effect on 23 July 2012.

In application of current laws and regulations, these tariffs must at least cover the costs incurred by historical operators, which the French market regulator CRE considers as accounting costs.
After discussion of the proposal for the above decision on 19 July 2012, the CRE issued the following opinions:

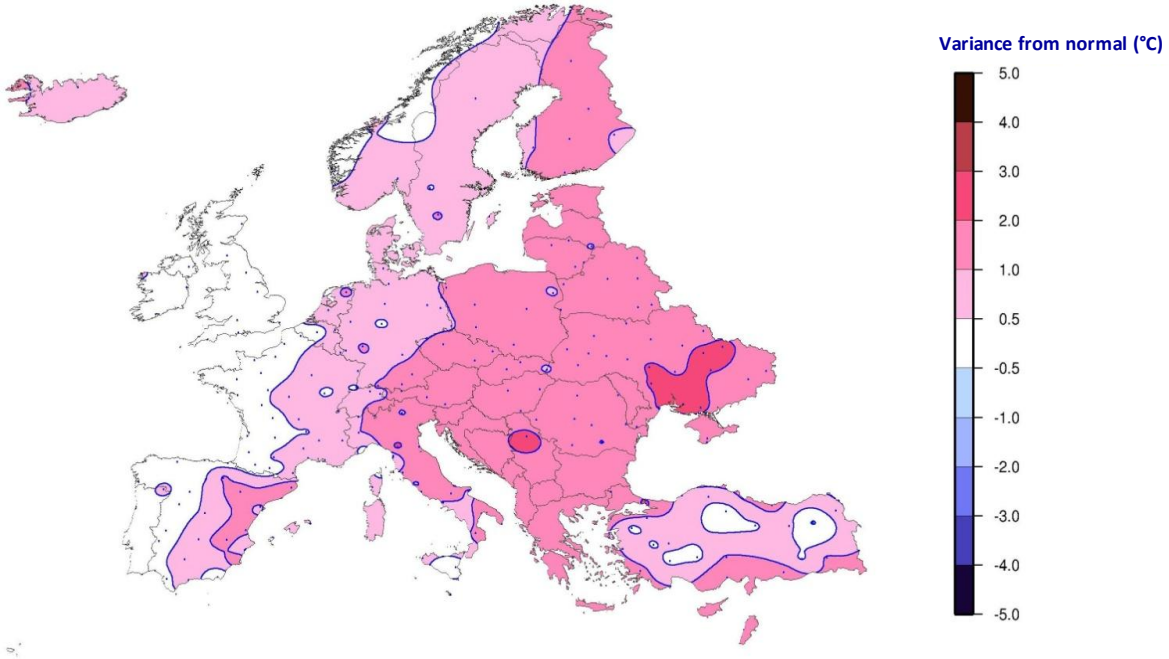
- It was in favour of the proposed decision regarding the green tariffs, which covered costs recorded in 2011 and forecast for 2012;
- It was not in favour of the proposal for the yellow tariffs, as although costs recorded in 2011 were covered, forecast costs for 2012 were not;
- It was not in favour of the proposal for the blue tariffs, which covered neither costs recorded in 2011 nor forecast costs for 2012.

The decisions made by the French Council of State in October and November 2012 on regulated sales tariffs and the TURPE 3 network access are described in section 1.2.2.4.1.4.

In the **United Kingdom**, EDF Energy reduced its gas tariffs for residential customers by 5% on 7 February 2012 and raised electricity and gas tariffs by 10.8% on 7 December 2012.
In 2011, it had raised its electricity and gas tariffs by 7.5% and 6.5% respectively in March, then again by 4.5% and 15.4% respectively in November.

1.2.1.4. WEATHER CONDITIONS: TEMPERATURES AND RAINFALL

Average temperatures: variance from normal levels, January to December 2012[8]

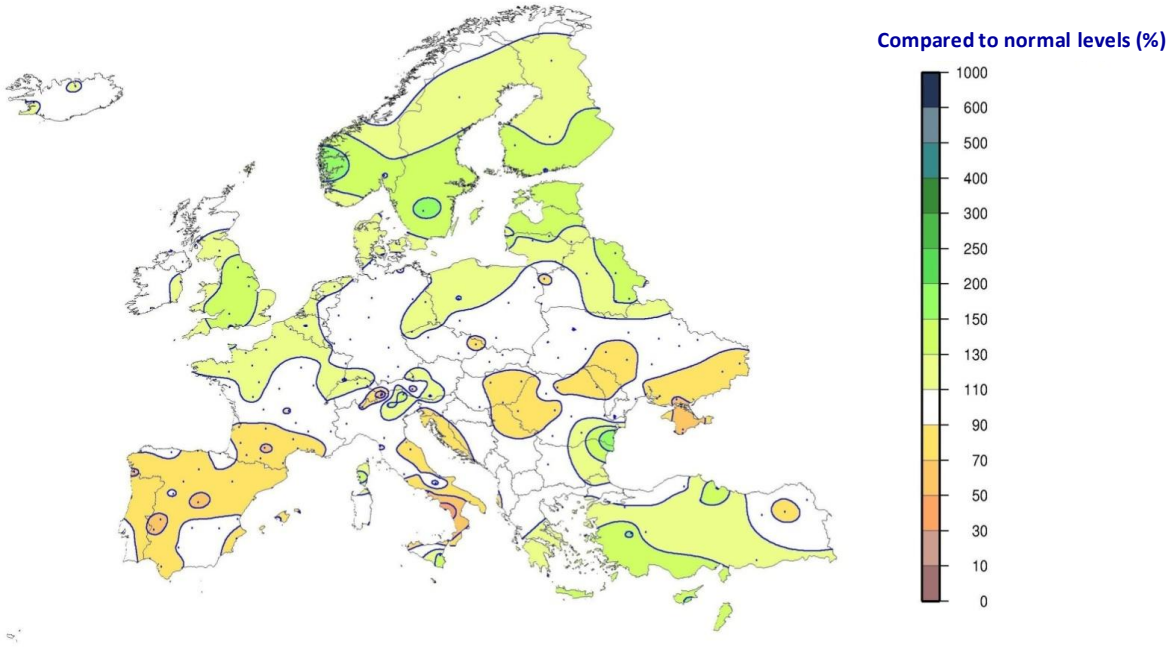


[8] Map comparing average temperatures with normal levels measured over 30 years (1971-2000 for Western Europe and 1961-1990 for Eastern Europe). Source: Base de Données Climatologiques, Météo France

After a mostly mild, dry month of January, there was a wave of significantly cold weather in the first fortnight of February with temperatures 4.6°C lower than normal over the whole month. A mild March followed, then a second quarter with close to normal temperatures. The early summer was cool and overcast across the whole of France, but there was a brief spell of hot weather in August. Finally, December started out cold before registering particularly mild temperatures all over the country.

The average temperatures for 2012 were higher than normal in the eastern half of France and close to normal in the rest of the country, and markedly higher than normal in southern and central Europe.

Rainfall: variance from normal annual levels, January to December 2012[9]



2012 saw contrasting rainfall patterns in Europe; the weather was rather dry in the southern half (excluding Turkey), but normal and surplus rainfall levels were recorded in the northern half, particularly Scandinavia.
In France, the cumulative rainfall was also very different between the north and south: close to normal in the Alps (slightly above normal in the north Alps), with a slight shortfall in the north Massif Central and the south-west quarter of France (southern part of the Massif Central and Pyrenees). Significant variability was observed between:

- February, March and August, which were very dry
- April, May, October and November (in the eastern half of the country), which were very wet.

Hydropower capacity levels in France were therefore very variable:

- low in February and March and then July, August and September
- close to normal in May, June and October
- above average at the end of the year.

It remained approximately 10% below normal over the whole year.

[9] Map comparing average rainfall with normal levels between January and December 2012.
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.

1.2.2. SIGNIFICANT EVENTS[10/11]

1.2.2.1. NEW INVESTMENTS AND PARTNERSHIPS

1.2.2.1.1. Finalisation of the takeover of Edison

Following fulfilment of the conditions for the operation, on 24 May 2012 the EDF group and its Italian partners finalised the takeover of the energy group Edison. The principles of the final agreement are consistent with the preliminary agreement signed by the parties on 26 December 2011.
The Group thus took control of Edison by purchasing Delmi's entire investment in TdE (50%) for a total of €784 million, corresponding to the negotiated price of €0.89 per Edison share.
Following this acquisition the Group held 78.96% of the capital and 80.64% of the voting rights in Edison.

At the same time as the Group took control of Edison, Delmi took control of Edipower by purchasing the investments in Edipower held by Edison (50%) and Alpiq (20%) for the total sum of €884 million.
Edison and Edipower also signed a long-term (6-year) gas supply contract to cover 50% of Edipower's gas requirements.

In compliance with Italian stock market regulations, on 2 July 2012 the EDF Group launched a mandatory tender offer for the remaining Edison shares, at the price of €0.89 per ordinary share. No offer was made for non-voting shares.
976,306,145 ordinary shares, corresponding to a total of €869 million, were tendered to the offer by minority shareholders by the closing date of 6 September 2012. The additional cost of raising this offer price from the €0.84 envisaged in the preliminary agreement of 26 December 2011 – a total increase of €48 million - was borne in equal shares by the EDF group and Delmi.

Between 2 and 30 November 2012, an offer was also made to Edison minority shareholders to convert their "saving shares", which carry no voting rights, into ordinary shares. As a result of this offer, 437,573 non-voting shares were converted into ordinary shares.

After the mandatory tender offer and the conversion offer for non-voting shares, the EDF group holds 97.40% of the capital and 99.48% of the voting rights of Edison at 31 December 2012.

1.2.2.1.2. Takeover of Photowatt's business and PV Alliance

On 27 February 2012, the Vienne Commercial Court in France accepted the EDF group's offer for the activities of Photowatt. This operation and the concurrent operation involving the CEA (French atomic energy commission), enabled the Group, via its subsidiary EDF Energies Nouvelles Réparties, to take over Photowatt's assets and 100% of its subsidiary PV Alliance, and to obtain a world exclusivity licence for the heterojunction technology currently in development.

1.2.2.1.3. Acquisition of Enerest

On 1 April 2012, Electricité de Strasbourg acquired 100% of Enerest, owner of the Gaz de Strasbourg brand and the longstanding gas supplier to the economic region of Strasbourg. The acquisition price was €139 million.

[10] Significant events related to litigation are described in section 1.9.
[11] The reference document and a full list of press releases are available from the EDF website: www.edf.com.

1.2.2.1.4. Renegotiation of gas supply contracts by Edison

During the second half of 2012, the Court of Arbitration of the ICC (International Chamber of Commerce) ruled in favour of Edison in the litigations over price revisions for the long-term natural gas supply contracts with Rasgas (Qatar) and ENI (Libya). This generated a positive impact of €680 million, which is included in the EDF group's EBITDA for 2012.

An arbitration procedure is still in progress concerning the natural gas supply contract with Sonatrach (Algeria). The ruling is expected in 2013.

1.2.2.1.5. Termination of the industrial nuclear partnership between EDF and ENEL

In November 2007, EDF and ENEL entered into a series of agreements governing a partnership for nuclear activities, with Enel taking a 12.5% investment in the Flamanville 3 EPR.

Given the changes in the economic environment and the project itself, as well as the discontinuation of the Italian nuclear revival programme following the June 2011 referendum, EDF and Enel announced on 4 December 2012 that they were ending their partnership. They consequently waived their respective options in each other's programmes, and Enel withdrew from the Flamanville EPR project with effect from 19 December 2012. EDF has reimbursed Enel's investment in the project totalling €658 million (principal plus penalties) and in return, has recovered full rights to the electricity generated by Flamanville 3.

1.2.2.1.6. Partial acquisition by EDF Energies Nouvelles of Iberdrola's wind farms

On 31 December 2012 EDF Energies Nouvelles undertook a commitment to acquire 20% of Iberdrola's 32 onshore wind farms in operation in France, for total installed power of 321.4 MW. On 2 January 2013 these infrastructures were sold for the total sum of €350 million to a consortium that also includes General Electric and the German financial group Re, each holding a 40% share.

1.2.2.1.7. Sale of some of EDF Energies Nouvelles wind farms

The principal sales by EDF Energies Nouvelles in 2012 as part of its Development and Sale of Structured Assets business were of 50% of the Lakefield wind farm (totalling 205 MW) and the Spearville wind farm (100 MW) in the United States, and the Lac Alfred and Massif du Sud wind farms (each 75 MW) in Canada.

1.2.2.1.8. Sale of the investment in Exelon

On 11 January 2013 EDF announced that it had sold its entire non-strategic 1.6% investment in NYSE-listed company Exelon (EXC.N) at the end of 2012. This transaction took place for an amount of approximately $470 million, corresponding to an average selling price of $34.70 per share i.e. an 18.6% premium on Exelon's latest closing share price at 10 January 2013.

1.2.2.2. INVESTMENT PROJECTS

1.2.2.2.1. France

1.2.2.2.1.1. Flamanville 3

In December 2012 EDF announced a revised cost for constructing the Flamanville EPR, adjusted upwards by €2 billion from the cost announced in July 2011 (approximately €6 billion$_{2008}$). Output of the first KWhs for the market is scheduled for 2016.

In addition to the "lead unit" effect, certain factors have also affected the full cost of construction, including changes in the boiler design, additional engineering studies, incorporation of new regulatory requirements and the lessons learned in the wake of Fukushima. The revised cost also reflects the additional expenditure associated with industrial contingencies, such as replacement of the supports for the reactor building polar crane and its effect on the work schedule, with the financial impact of extending construction deadlines.

Significant milestones were reached at the Flamanville EPR site in 2012:

- construction of the north diesel building
- installation of the brackets for steam generators and primary pumps in the reactor building
- completion of principal civil engineering work for the four safeguard buildings
- the intake canal for the pumping station came on stream
- § start of installation of the filter drums for the pumping station to filter cooling water.

At 31 December 2012 the civil engineering work was 94% complete, and 39% of the electro-mechanical equipment was in place.

1.2.2.2.1.2. Successful bid for French offshore wind farms

On 6 April 2012, the European consortium headed by the EDF group won the tender for French offshore projects at Saint-Nazaire, Courseulles-sur-Mer and Fécamp. These projects total around 1,500 MW in new capacities to be installed after 2015. They are accompanied by an ambitious industrial project that will create some 7,500 direct and indirect jobs, notably for production of Alstom's Haliade 150 wind turbine in France.

1.2.2.2.1.3. Inauguration of the Martigues Combined Cycle Gas (CCG) plant

On 12 November 2012, EDF inaugurated the first CCG facility at the Martigues site. The Combined Cycle Gas turbine (CCGT) is an excellent solution to problems posed by fluctuating demand, and is environmentally friendly and energy-efficient. The generation unit runs on natural gas and is now capable of delivering up to 465 MW of electricity at full capacity to the electricity grid of France's Provence-Alpes-Côte-d'Azur region. The Martigues CCG facility is the second of its kind to be operated by the EDF Group in France and the first to be built by "repowering", i.e. transforming parts of an existing facility, like the steam turbine, to combine it with a new unit comprising a combustion turbine and an exhaust-recovery boiler. A second CCGT with the same capacity is currently under construction at the Martigues site and will be commissioned during 2013.

1.2.2.2.2. United Kingdom

1.2.2.2.2.1. Extension of operating lifetimes of nuclear plants in the United Kingdom

EDF Energy expects to extend the operating lifetimes for all its Advanced Gas-cooled Reactor (AGR) nuclear plants, by an average seven years more than the period forecast when the Group took over British Energy in January 2009. This extension has a direct impact on the depreciation period for these reactors. EDF Energy announced on 4 December 2012 that it was extending the operating life of two of its nuclear power stations, Hunterston B and Hinkley Point B, by seven years. These two plants will remain in operation until at least 2023.

1.2.2.2.2.2. Key advances in the Hinkley Point C project

On 26 November 2012, the Office for Nuclear Regulation (ONR) announced that it had granted a nuclear site licence to NNB Generation Company, the entity set up by EDF Energy, to build a new double EPR power plant at Hinkley Point C in Somerset.

On 13 December 2012, the UK authorities approved EDF and Areva's design for the EPR. The ONR and the Environment Agency considered that the reactor met the vital criteria as regards security and environmental impact.

The final investment decision (FID) regarding construction of the double reactor at Hinkley Point is not expected before the first quarter of 2013.

1.2.2.2.3. Other international

1.2.2.2.3.1. Installation of the EPR Unit 1 reactor pressure vessel and Unit 2 dome at Taishan

Construction of the two EPRs at Taishan in China, coordinated by teams from EDF, CGNPC (China Guangdong Nuclear Power Company) and Areva, reached further key milestone in 2012.
In early June 2012 the pressure vessel was lowered into the Unit 1 reactor, then installed in its final position in the reactor pit. This operation marked the start of work to install the nuclear steam supply system, alongside installation of auxiliary equipment and systems.
In September 2012, the site's owner and future operator, Taishan Nuclear Power Joint Venture Company (TNPJVC), successfully installed the dome of the Unit 2 reactor building.

1.2.2.2.4. Other activités

1.2.2.2.4.1. EDF Energies Nouvelles gains positions on the Moroccan and South African markets

On 16 April 2012, the consortium headed by EDF Energies Nouvelles, in partnership with the Japanese group Mitsui & Co, was selected as the "preferred bidder" for the 150 MW Taza wind power project by Morocco's National Electricity Office. EDF Energies Nouvelles also announced that it was to form a local subsidiary, EDF EN Maroc, to lead its development in Morocco.

On 31 May 2012, EDF Energies Nouvelles was also named the "preferred bidder" by the South African energy department for three wind power projects allocated as part of the second round of renewable energy tenders in South Africa, which was launched in August 2011. Representing total power of 104 MW, the projects at Chaba (20.6 MW), Waainek (23.3 MW) and Grassridge (59.8 MW) are located in the Eastern Cape province of South Africa. They will be equipped with Vesta turbines, each with 3 MW unit capacity. Construction is due to start in 2013, with commissioning by the end of 2014.

1.2.2.2.4.2. Commissioning of wind farms in North America

In 2012, EDF Energies Nouvelles consolidated its positions in North America, where several wind farms started operation during the second half-year: Spearville 3 (100.8 MW) in Kansas, Spinning Spur (161 MW) then Bobcat Bluff (150 MW) in Texas, Pacific Wind (140 MW) and Shiloh IV (102.5 MW) in California. In Canada, a first wind farm was also opened in October 2012 in Quebec province with installed power of 80 MW.

1.2.2.2.4.3. Commissioning of 3 new solar power plants in France

During the second half of 2012, EDF Energies Nouvelles commissioned 3 new solar power plants in France: Crucey, in the Centre region, in September 2012, Massangis in Burgundy in October 2012 and Toul-Rosières in Lorraine in November 2012.

These plants have been developed and created by EDF Energies Nouvelles France. They are equipped with new-generation "thin layer" solar panels and have installed power of 60MWp, 56MWp and 115 MWp respectively.

1.2.2.2.4.4. Launch of Electranova Capital

On 15 May 2012, EDF announced that it had joined forces with Idinvest Partners, a reputed specialist in small business funding, to create a venture capital fund called Electranova Capital, endowed with a minimum investment capacity of €60 million, including €30 million contributed by EDF and €10 million by Allianz. The fund will finance innovative young companies in the energy sector, in France and throughout Europe, by taking minority shareholdings in order to rise to the challenge of a low-carbon energy model. Electranova Capital made its first two investments in October 2012, in the following companies:

- the French company Actility, specialising in intelligent networks
- the Norwegian company Seatower, which specialises in foundation for offshore wind turbines that respect the marine ecosystem.

1.2.2.2.4.5. Foundation stone laid for the Dunkirk LNG terminal

Construction of the Dunkirk LNG terminal is managed by the subsidiary Dunkerque LNG, with the work contracted out to three consortiums. Technical progress is on schedule and the following has already been completed:

- civil engineering work for the tunnel connecting the Gravelines plant to the terminal has begun; ultimately the plant's tepid water will be used for regasification of the LNG
- work has started on construction of the concrete casing for the three LNG tanks.

The site was inaugurated on 5 October 2012 by Henri Proglio.

The two operators of the Belgian and French natural gas network also began to build a new interconnection between France and Belgium.

1.2.2.2.4.6. Start of construction of the Southstream gas pipeline

On 7 December 2012, Gazprom launched construction work for the Southstream gas pipeline, which will bring Russian gas to the European Union from 2015. The pipeline is 3600 km long and should carry 63 billion m3 of gas (700 TWh) a year through the Black Sea and the Balkans. EDF is a 15% stakeholder in the undersea section, along with Gazprom (50%), Eni (20%) and Wintershall (15%).

1.2.2.3. ACCREDITATIONS

1.2.2.3.1. New accreditation for EDF: the FTSE4Good Index

On 12 March 2012, following an in-depth independent analysis and examination of social, environmental and nuclear safety criteria, the FTSE4Good Policy Committee approved the EDF group's admission to the prestigious FTSE4Good index. EDF is now one of five nuclear operators worldwide that meet the stringent criteria developed and monitored by the FTSE4Good Policy Committee. These criteria are designed to identify and measure the performance of companies that work for sustainable environmental protection, develop positive relations with all stakeholders and strive to promote human rights and their enforcement.

1.2.2.3.2. Two distinctions for the Group's expertise in training

The EDF Corporate University for Management, which caters for the Group's 12,000 managers, has won the 13th Corporate University Xchange Prize for Excellence and Innovation, a global benchmark in terms of corporate learning. This distinction was awarded for a training programme carried out with the Toulouse School of Economics' Institute of Industrial Economics for the leaders of ERDF, a subsidiary of the EDF Group. The programme focused on the economics of local concession mechanisms in the electricity distribution industry.

A few weeks earlier, the Group's training expertise had already received the international Corporate Learning Improvement Process accreditation.

1.2.2.4. REGULATORY ENVIRONMENT

1.2.2.4.1. France

1.2.2.4.1.1. The NOME law and the ARENH system

On 12 June 2012, the European Commission announced that subject to conditions, it approved the State aid contained in the regulated electricity tariffs in France. In 2007, the Commission had opened an investigation into the regulated tariffs for sales to business customers (the "yellow" and "green" tariffs and the TaRTAM transition tariff). Since then, France's NOME law on the new electricity market organisation modified the French legislative and regulatory context by discontinuing the TaRTAM transition tariff, programming the end of the yellow and green tariffs for the end of 2015 and setting up a scheme for regulated access to nuclear power (named ARENH, for *Accès Régulé à l'Electricité Nucléaire Historique*) for all suppliers of customers located in France from 1 July 2011, at the price of €42/MWh for 2012.

The first ARENH supplies to EDF's competitors represent an annual volume of some 61 TWh. 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 technical losses, according to a timetable set by government decision.

The ARENH price, currently set at €42/MWh, will later represent the economic conditions of generation by the existing nuclear fleet, in application of a decree stipulating the costs making up the ARENH price that is to be published no later than 7 December 2013.

1.2.2.4.1.2. 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 particular12. The CSPE is based on electricity consumption and collected directly from the end-user. The amended Finance Law of July 2011 departed from the schedule for CSPE rises, splitting the €3/MWh increase for 1 January 2012 so that it applied half from 31 July 2011 and half from 1 July 2012. A €1.5/MWh rise was thus introduced on 1 July 2012, bringing the CSPE to €10.5/MWh.
Since then it has been increased be €3/MWh to €13.5/MW.

A decree of 6 March 2012 introduced automatic attribution of social electricity tariffs (financed by the CSPE). 1,083,000 French households benefited from social tariffs in 2012, compared to only 600,000 households in 2011.

In June 2012, the French Court of Accounts remitted a report on the CSPE to the Senate investigative committee examining the true cost of electricity. The Court observed the current and future increase in

[12] Local distribution companies and Electricité de Mayotte also make contribute small contributions to the system.

public service expenses. It noted that the expenses borne by EDF (cost of bearing the shortfall and managing purchase obligations) are not covered by the system and acknowledged that the request for formal recognition of these costs was "not economically unfounded". It identified areas for reflection to limit the impact of future rises in the CSPE for electricity consumers: for example, broadening financing of the system to other energies, use of other sources of electricity-generated income, and revision of the current exemption rules.

Since 2007, CSPE income has been unable to cover EDF's public electricity service expenses, which have been steadily rising, primarily due to the higher volumes of wind power and solar power purchased under the purchase obligation scheme. As the costs borne by local distribution companies and Electricité de Mayotte are fully compensated, the shortfall is borne solely by EDF, leading to recognition of a €5.2 billion receivable in its 2012 financial statements (an increase of €1.4 billion from the €3.8 billion recorded in 2011).

EDF's expenses to be compensated by the CSPE rose from €3.6 billion in 2011 to €4.7 billion in 2012, while the CSPE collected amounted to €2.5 billion in 2011 and €3.3 billion in 2012.
The expenses for 2012 comprise €3.2 billion in excess costs for purchase obligations in mainland France, €1.4 billion for non-interconnected zones, and €0.1 billion in solidarity charges.

The rise in these expenses for EDF is explained by a higher level of excess costs for purchase obligations in mainland France (€0.8 billion) and an increase in costs for the non-interconnected zones (€0.2 billion).
Purchase obligations mainly rose as a result of volume effects: wind power output was up by 3 TWh from 2011 causing a rise of €0.1 billion, and photovoltaic power output was up by 2 TWh causing a rise of €0.8 billion.

On 14 January 2013 EDF announced that it had reached an agreement with the French authorities for reimbursement of the receivable resulting from the shortfall in CSPE income at 31 December 2012 (around €4.3 billion; the final figure will be set by the CRE in late 2013) and the costs of bearing this shortfall for the Group (€0.6 billion). The agreement sets a progressive payment schedule such that the total receivable of some €4.9 billion plus interest at market rates will be totally reimbursed by 31 December 2018.

As a result of this agreement, the Group recorded financial income of €0.6 billion at 31 December 2012, corresponding to the past cumulative costs of bearing the deficit at that date.

1.2.2.4.1.3. Electricity sales tariffs

The French Council of State issued a decision on 22 October 2012 at the request of SIPPEREC, cancelling its decision of 13 August 2009 setting regulated electricity sales tariffs. The Council of State required the ministers of energy and the economy to issue a new decision within three months to set regulated sales tariffs for the period 15 August 2009 to 13 August 2010. At the date of publication of this report, a proposed decision had been sent to the CRE for examination.

1.2.2.4.1.4. TURPE 3 network access tariffs

In a decision of 28 November 2012, the Council of State cancelled the TURPE 3 network access tariff *(Tarifs d'Utilisation des Réseaux Publics d'Electricité)* which had been approved on 5 May 2009 by the ministers of energy and the economy, after a proposal from the CRE. This decision requires a new version of the TURPE 3 to be set by 1 June 2013, does not change the regulated tariffs for sales to customers. The new version of the TURPE 3 – which will apply retroactively to the period 2009-2013 and will replace the cancelled tariff – will be proposed by the CRE to the competent ministers. The new tariff decision is currently in preparation (see section 1.9.2.1).

1.2.2.4.1.5. Application decree for article 225 of the "Grenelle 2" law

The French government published the application decree for article 225 of the "Grenelle 2" law on 26 April 2012, making reporting of labour, environmental and social information in the management report mandatory for companies with a workforce of over 500 and a balance sheet total or total net sales of more than €100 million. A decision defining requirements for auditing of this nonfinancial reporting by an independent organisation should be issued in 2013. This audit requirement will complement the Group's voluntary decision to have a selection of quantitative indicators verified, applied since 2007.

The EDF group has assessed the impact of this decree and decision for its overall organisation, but also for the French subsidiaries concerned (Electricité de Strasbourg and ERDF). This analysis, in addition to the assessments carried out in 2011, provided an opportunity for the Group to check the compliance of its existing system, set up several years ago, and make any necessary improvements starting with the 2012 management report.

1.2.2.4.1.6. Compliance with ASN recommendations concerning the nuclear fleet

Following the recommendations put forward by the French nuclear safety authority ASN on 28 June 2012 as part of its additional safety assessments, EDF confirms its commitment to carrying out work to reinforce the safety level at its nuclear facilities. This work on its nuclear fleet is part of the Group's overall investment programme for the period to 2015.

EDF has already begun an action plan in accordance with the ASN's technical recommendations, including for example:

- Introduction of the rapid response nuclear task force (*Force d'Action Rapide du Nucléaire* - FARN) capable of intervening in an emergency. At 31 December 2012, this task force can take action at any French nuclear reactor in difficulty, and by the end of 2015 up to 6 simultaneous interventions will be possible.
- Development of local crisis centres to manage extreme events
- the tender process for production of emergency diesel generators.

1.2.2.4.2. Belgium

The regulatory environment changed substantially in Belgium in 2012, affecting EDF Luminus in several ways.

The nuclear tax levied on nuclear operators in Belgium increased from €250 million in 2011 to €550 million in 2012, resulting in a €15 million increase in EDF Luminus' share.

The Belgian government brought in a new energy market regulation through the law of 29 March 2012, freezing indexed rises in variable parameters contained in gas and electricity contracts for 9 months from 1 April 2012. This regulation affected EDF Luminus in 2012, particularly in the second half-year.

The royal decision of 29 March 2012 reduced the State contribution to the costs of energy sellers by applying social tariffs for electricity to their customers.
The national regulator CREG[13] approved the new tariffs for Elia, the electricity transmission network operator, for the period 2012-2015. These include an grid injection tariff that is now borne by generators.

On 4 July 2012, the Belgian government decided to shut down the Doel 1 and Doel 2 nuclear plants (in which EDF has no investments) in 2015, and to extend operation of the Tihange 1 plant until 2025, under the plan for secure electricity supplies presented by the Belgian Secretary of State for Energy. The Belgian Council of Ministers has also planned to make 1,000 MW of nuclear power available on the market, to increase competition between suppliers and achieve the lowest possible prices for consumers and business users.

[13] CREG: *Commission de Régulation de l'Electricité et du Gaz en Belgique.*

Also, during the summer of 2012, inspections of the core tanks at Doel 3 and Tihange 2 detected micro-cracks and were shut down while awaiting additional analyses by the Federal Nuclear Control Agency (AFCN) and Electrabel. Once the AFCN has issued its conclusions, the Belgian government will decide whether to bring these power plants back online during the first half of 2013.

1.2.2.4.3. United Kingdom

On 22 May 2012, British minister for Energy and Climate Change, presented a draft bill for a law on electricity market reform intended to attract around £110 billion (€136 billion) of investments in nuclear power and renewable energies over ten years. The chief innovation in this reform is the introduction of "contracts for difference" (CFD), a contractual mechanism intended to guarantee an economic balance between new low-carbon electricity generation methods, comprising renewable energies (wind power, solar power, biomass, etc) and nuclear power plants. If it decided to invest in the Hinkley Point C project, EDF would be compensated for selling electricity generated by the new reactors below an agreed price, and conversely would repay the surplus if it sold electricity at a higher price.

This bill was presented to the Chamber of Commons on 29 November 2012.

1.2.2.4. Hungary

An amendment to the law on electricity adopted on 16 March 2011 ended all support for cogeneration in Hungary from July 2011, and stipulated that heat tariffs would now be regulated. The price must now be set by the Hungarian government after proposal by the regulator, and is no longer freely negotiated between suppliers and their customers. This amendment particularly affected BE ZRt.

After a transitional period in the final quarter of 2011, new more favourable heat tariffs were published from 1 January 2012. These tariffs are sufficient to cover the associated costs. On 31 October 2012, a new decree was published, introducing an average rise in heat tariffs with a positive impact for BE ZRt in 2012.

1.3. ANALYSIS OF THE BUSINESS AND THE CONSOLIDATED INCOME STATEMENTS FOR 2012 AND 2011

Presentation and analysis of the consolidated income statements for 2011 and 2012 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.

Edison figures are fully consolidated from the takeover of Edison.

The comments below are based on comparisons with the figures for 2011 after restatement for the impact of the change in accounting method for actuarial gains and losses on post-employment benefits.

(In millions of Euros)	2012	2011 restated
Sales	**72,729**	**65,307**
Fuel and energy purchases	(37,098)	(30,195)
Other external expenses	(10,087)	(9,931)
Personnel expenses	(11,624)	(10,802)
Taxes other than income taxes	(3,287)	(3,101)
Other operating income and expenses	5,451	3,661
Operating profit before depreciation and amortisation (EBITDA)	**16,084**	**14,939**
Net changes in fair value on Energy and Commodity derivatives, excluding trading activities	(69)	(116)
Net depreciation and amortisation	(6,849)	(6,285)
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(164)	(221)
(Impairment) / Reversals	(752)	(640)
Other income and expenses	(5)	775
Operating profit (EBIT)	**8,245**	**8,452**
Financial result	**(3,362)**	**(3,780)**
Income before taxes of consolidated companies	**4,883**	**4,672**
Income taxes	(1,586)	(1,336)
Share in income of associates	260	51
Group net income	**3,557**	**3,387**
Net income attributable to non-controlling interests	241	239
EDF net income	**3,316**	**3,148**
Earnings per share (in Euros)	**1.80**	**1.70**
Diluted earnings per share (in Euros)	**1.80**	**1.70**

1.3.1. SALES

Consolidated sales rose by 11.4%, with organic growth of 5.8%.

1.3.1.1. CHANGE IN GROUP SALES

(In millions of Euros)	2012	2011 restated	Variation	Variation (%)	Organic growth (%)
Sales	72,729	65,307	7,422	+11.4	+5.8

Sales amounted to €72,729 million in 2012, an increase of €7,422 million (+11.4%) from 2011. Excluding the effects of exchange rates (€674 million), principally reflecting the pound sterling's rise against the Euro, and excluding changes in the scope of consolidation (€2,983 million) essentially relating to the takeover of Edison, organic growth stood at +5.8%.

1.3.1.2. CHANGE IN SALES BY SEGMENT

(In millions of Euros)	2012	2011 restated	Variation	Variation (%)	Organic growth (%)
France	**39,120**	**37,171**	**1,949**	**+5.2**	**+5.2**
United Kingdom	9,739	8,568	1,171	+13.7	+6.4
Italy	10,098	6,552	3,546	+54.1	+10.8
Other International	7,976	7,501	475	+6.3	+5.5
Other activities	5,796	5,515	281	+5.1	+2.8
Total excluding France	**33,609**	**28,136**	**5,473**	**+19.5**	**+6.5**
Group sales	**72,729**	**65,307**	**7,422**	**+11.4**	**+5.8**

Sales outside France represented 46.2% of total consolidated sales in 2012, compared to 43.1% in 2011.

1.3.1.2.1. France

Change in sales in the "France" segment

France's contribution to Group sales amounted to €39,120 million, corresponding to an organic rise of 5.2% compared to 2011.

This sales growth mainly results from the higher volumes sold of both electricity (+7.2 TWh) and gas (+2.9 TWh) generating an additional €1 billion, and the increase in prices and tariffs for electricity (in July 2011 and July 2012) and gas, which had an impact of €670 million. The progression in electricity sales volumes was driven by residential customers, due to the colder weather (+13 TWh compared to 2011), whereas consumption by industrial customers was down.

At 31 December 2012, EDF's share of the electricity market for all final customers was 80.0%, 0.2 points lower than at 31 December 2011. EDF's share of the natural gas market was 4.3%, up by 0.7 points from 2011.

Breakdown of sales for the "France" segment between deregulated activities[14], network activities[15] and island activities[16]

(In millions of Euros)	2012	2011 restated	Variation	Variation (%)
Sales	39,120	37,171	1,949	+5.2
Deregulated activities	37,001	35,270	1,731	+4.9
Network activities	13,309	12,254	1,055	+8.6
Island activities	907	862	45	+5.2
Eliminations	(12,097)	(11,215)	(882)	

The 4.9% increase in sales by the deregulated activities is primarily attributable to the favourable impact of the increase in volumes, chiefly resulting from weather conditions.

Sales by the network activities rose by 8.6% due to the combined effect of the rise in tariffs and the higher volumes sold since the winter weather was harsher in 2012 than 2011.

Electricity generation

Nuclear generation produced 404.9 TWh in 2012, compared to 421.1 TWh for 2011, down by 16.2 TWh. This contraction is explained by extended scheduled shutdowns in 2012 due to technical reasons, inspections and additional work during the outages and exceptionally low demand at the end of the year when the weather was particularly mild. The availability coefficient was 79.7% in 2012, 1 point lower than in 2011.

Hydropower output stood at 34.5 TWh, an improvement from 2011 (+7.7 TWh) due to the much less unfavourable water availability levels (for a description of weather conditions see section 1.2.1.4).

Fossil-fired generation produced 14.9 TWh, 3.1 TWh more than in 2011. This rise is mainly attributable to the differential between electricity and fossil fuel prices which was more favourable for fossil-fired generation, especially during the wave of cold weather in February 2012.

Sales volumes to final customers (a market segment that includes Eurodif and local distribution companies) were up by +7.2 TWh, including +13 TWh attributable to temperature differentials. A volume of 60.8 TWh of electricity was supplied under the NOME law.

EDF was a net purchaser of 25.4 TWh on the wholesale markets in 2012, corresponding to a 18.1 TWh increase in net volumes purchased.

[14] Generation, supply and optimisation in mainland France, and sales of engineering and consulting services.
[15] Network activities only include Distribution from 2011, 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.
[16] EDF's generation and distribution activities in the island energy systems (IES).

1.3.1.2.2. United Kingdom

The United Kingdom's contribution to Group sales amounted to €9,739 million in 2012, up by 13.7% from 2011 with organic growth of 6.4%. Compared to 2011 sales, this includes a favourable exchange effect of €626 million.

Business benefited from favourable price effects driven by rising wholesale prices in all segments.

However, UK sales incorporate unfavourable volume effects resulting from lower sales to business customers against aggressive competition, and structured sales following expiry of the legacy contracts transferred from British Energy. This downturn was partly counterbalanced by a rise in gas and electricity volumes sold to domestic customers, especially due to growth in the number of customer accounts, and favourable weather effects.

1.3.1.2.3. Italy

Italy[17] contributed €10,098 million to consolidated sales, up by 54.1% with organic growth of 10.8%.

Sales by Edison registered organic growth of €721 million.

In the electricity business, sales benefited from an increase in electricity prices that was partly counterbalanced by a negative volume effect for sales to final customers and on the wholesale markets.

In the hydrocarbon business, sales grew as a result of higher commodity prices and an overall volume effect, with larger sales volumes to wholesalers, industrial customers and residential customers, and higher generation volumes in Exploration-Production due to commissioning of new facilities during 2011.

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 €7,976 million to Group sales in 2012, €475 million or +6.3% more than in 2011.

Foreign exchange effects between 2011 and 2012 amounted to +€15 million. The effect of changes in the scope of consolidation in this segment essentially reflects changes in the consolidation method for the Polish subsidiaries Zielona Gora and Kogeneracja[18]. Without these scope and exchange effects, sales would show organic growth of 5.5% compared to 2011.

Most of this increase concerns Austria, and to a smaller extent Belgium and Poland. However, sales showed a slight downturn in Hungary and the USA.

In **Austria**, sales stood at €625 million, registering organic growth of 49.9%, essentially explained by development in the optimisation business. This had no significant impact on the margin.

[17] Edison and Fenice groups.
[18] From proportional consolidation to full consolidation on 16 February 2012 after acquisition of EnBW's investments in these companies.

In **Belgium**, sales amounted to €3,771 million, corresponding to organic growth of +4.9%. This growth chiefly results from the rise in gas volumes sold as a result of favourable weather effects.

Poland registered 8.6% organic growth in sales, due to higher electricity sales volumes, the favourable impact of optimisation, and higher sales of green and yellow certificates (for renewable energies and gas) than in 2011.

1.3.1.2.5. Other activities

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

The contribution by the **Other activities** segment to Group sales in 2012 was €5,796 million, up by €281 million or 5.1%, with organic growth of 2.8% compared to 2011.

EDF Energies Nouvelles' contribution to Group sales showed organic growth of 13.8% from 2011. This growth resulted primarily from the greater operating capacities for Generation. It also reflects the higher sales by the Development-Sales of Structured Assets activity.

EDF Trading's[19] sales saw an organic decline of 13.9% from 2011, particularly due to difficult market conditions in North America.

Dalkia's contribution to sales registered organic growth of €78 million (3.3%), mainly in continental Europe.

[19] EDF Trading sales consist of its trading margins.

1.3.2. OPERATING PROFIT BEFORE DEPRECIATION AND AMORTISATION (EBITDA)

EBITDA rose by 7.7%, with organic growth of 4.6%.

(In millions of Euros)	2012	2011 restated	Variation	Variation (%)	Organic growth (%)
Sales	**72,729**	**65,307**	**7,422**	**+11.4**	**+5.8**
Fuel and energy purchases	(37,098)	(30,195)	(6,903)	+22.9	+13.3
Other external expenses	(10,087)	(9,931)	(156)	+1.6	-0.4
Personnel expenses	(11,624)	(10,802)	(822)	+7.6	+6.3
Taxes other than income taxes	(3,287)	(3,101)	(186)	+6.0	+5.7
Other operating income and expenses	5,451	3,661	1,790	+48.9	+47.9
EBITDA	**16,084**	**14,939**	**1,145**	**+7.7**	**+4.6**

1.3.2.1. CHANGE IN CONSOLIDATED EBITDA AND ANALYSIS

Consolidated EBITDA for 2012 amounted to €16,084 million, up by 7.7% from 2011, corresponding to organic growth of 4.6%. Changes in the scope of consolidation had a positive effect of €309 million, principally concerning Edison. The favourable foreign exchange effect of €154 million mostly resulted from the rise of the pound sterling against the Euro.

The Group's **fuel and energy purchases** amounted to €37,098 million in 2012, an increase of €6,903 million (+22.9%) compared to 2011, with organic growth at 13.3%. **France** registered an organic rise of 16.1% essentially explained by the increase in purchase obligations (€1 billion, offset by the CSPE recorded in Other operating income and expenses). In the **United Kingdom**, the organic growth of €169 million (+3.5%) is essentially explained by the higher cost of energy, and transmission and distribution tariffs. In **Italy**, the organic growth of 16.2% was mainly driven by a rise in gas sourcing costs. In the **Other International** segment, the 10.1% organic growth was mainly associated with the higher volumes concerned by optimisation activities in Belgium and Austria.

The Group's **other external expenses** amounted to €10,087 million, up by €156 million (+1.6%) from 2011, corresponding to slightly negative organic growth of -0.4%. The unfavourable organic variations in the **United Kingdom** (-€93 million) and **Italy** (-€50 million) is more than offset by the lower decrease in France, 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 €11,624 million, €822 million higher than in 2011, with organic growth of 6.3%. This change essentially related to **France**, where personnel expenses totalled €8,676 million, corresponding to organic growth of 7.6% since 2011, as a result of the increase in the workforce, the effect of pay measures, and the rise in employer's social charges (now calculated on a broader basis).

Taxes other than income taxes stood at €3,287 million for 2012, up by €186 million from 2011 (+6.0%, or 5.7% 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 €5,451 million for 2012, €1,790 million higher than in 2011, or an organic variation of +47.9%. In **France**, the organic rise of €1,613 million is attributable to the €1,131 million increase in the CSPE associated with the higher compensation for purchase obligations, and the positive effect of the end of the TaRTAM transition tariff system in July 2011. In **Italy**, Edison's other operating income and expenses showed an organic rise of €347 million due to the favourable effect of prior-year shares of the results of renegotiation of long-term natural gas supply contracts. In the **United Kingdom**, in contrast, other operating income and expenses showed an organic decline of €227 million due mainly to the unfavourable effect of the fair value adjustment of electricity sale contracts at the time of EDF's acquisition of British Energy.

1.3.2.2. CONSOLIDATED EBITDA AND ANALYSIS BY SEGMENT

(In millions of Euros)	2012	2011 restated	Variation	Variation (%)	Organic growth (%)
France	**9,930**	**9,196**	**734**	**+8.0**	**+8.0**
United Kingdom	2,054	1,942	112	+5.8	-1.5
Italy	1,019	592	427	+72.1	+23.1
Other International	1,067	1,280	(213)	-16.6	-19.5
Other activities	2,014	1,929	85	+4.4	+4.7
Total excluding France	**6,154**	**5,743**	**411**	**+7.2**	**-0.9**
Group EBITDA	**16,084**	**14,939**	**1,145**	**+7.7**	**+4.6**

1.3.2.2.1. France

Change in EBITDA for the "France" segment

France contributed €9,930 million of consolidated EBITDA for 2012, 8.0% higher than in 2011 both at face value and in terms of organic growth. This contribution accounted for 61.7% of Group EBITDA, identical to 2011.

Breakdown[20] of EBITDA for the "France" segment between deregulated activities, network activities and island activities

(In millions of Euros)	2012	2011 restated	Variation	Variation (%)
EBITDA	**9,930**	**9,196**	**734**	**+8.0**
Deregulated activities	**6,209**	**6,116**	**93**	**+1.5**
Network activities	**3,451**	**2,820**	**631**	**+22.4**
Island activities	**270**	**260**	**10**	**+3.8**

[20] Further details of this breakdown can be found in section 1.3.1.2.1.

EBITDA for the deregulated activities rose slightly by 1.5%.
This essentially reflects:

- Volumes: the effect of lower nuclear generation (-€635 million), partly counterbalanced by the improved hydropower output (+€357 million), and an unfavourable weather effect (-€208 million) mainly due to the wave of cold weather in February 2012 which caused a peak in demand that was met at high cost, and a €177 million increase in operating expenses.
- Prices: the favourable effect of long-term contracts and Eurodif contract (+€238 million), the end of the TaRTAM transition tariff system (+€225 million) and the slight rise in the portion of regulated sale tariffs concerning energy (excluding delivery) (+€188 million).

EBITDA for the network activities registered a 22.4% increase resulting from the tariff increase for energy delivery, the favourable weather effect and the negative impact of correction of the rate of prior year network losses recorded in 2011, which had no equivalent in 2012

EBITDA for the island activities was up by €10 million (+3.8%), principally due to the tariff increase.

1.3.2.2.2. United Kingdom

The **United Kingdom's** contribution to Group EBITDA for 2012, including the impact of fair value adjustment of British Energy's initial balance sheet, was €2,054 million, up by 5.8% from 2011, with an organic change of -1.5%. The favourable foreign exchange effect, amounting to €142 million, relates to the pound sterling's rise against the Euro between 2011 and 2012.

Excluding the unfavourable impact of fair value adjustment of British Energy's initial balance sheet (particularly electricity sale contracts), EBITDA showed organic growth of 7.5%.

The operating performance was marked by a rise of 4.2 TWh (+7.5%) in nuclear power output to 60.0 TWh and a rise of 6.5 TWh in coal-fired generation output achieved by good availability in the generation fleet. This factor and the higher wholesale prices had a favourable effect on margins.

1.3.2.2.3. Italy

The **Italy** segment contributed €1,019 million to the Group's consolidated EBITDA, an increase of 72.1% from 2011 (organic increase of +23.1%).

Edison contributed €918 million to consolidated EBITDA in 2012 against €480 million in 2011, corresponding to organic growth of €148 million or 30.8%.

The hydrocarbon activities' contribution to EBITDA rose significantly from 2011 (+€294 million). The arbitration rulings[21] in Edison's favour in September and October 2012 regarding long-term gas supply contracts with Rasgas (Qatar) and ENI (Libya) generated a €680 million increase in EBITDA (including €347 million for previous years). Exploration-Production also registered good results. Nonetheless, these activities are still adversely affected by falling margins on gas sales to end customers, which resulted from lower demand combined with high availability on spot markets at European gas hubs, causing decorrelation between spot gas prices and the cost of long-term contracts. A new phase of price reviews with gas suppliers began in the fourth quarter of 2012, to restore the profitability of these contracts.

[21] Concerning gas years from October 2010 to September 2012.

Arbitration proceedings concerning the Algerian gas import contract are currently in process, with a ruling expected in 2013.

EBITDA for the electricity activities declined, primarily due to shrinking unit margins on the final customer market and lower profits on the balancing market than in 2011.

1.3.2.2.4. Other international

EBITDA for the **Other international** segment stood at €1,067 million in 2012, down by 16.6%, corresponding to an organic decline of 19.5%.

EBITDA in **Poland** registered an organic decline of €113 million, including the effect of contracting margins caused by a rise in biomass fuel prices and a fall in the price of green certificates (for renewable energies).

Brazil recorded an organic decline of €53 million in EBITDA, largely attributable to two major scheduled shutdowns at the Norte Fluminense plant in the first half of 2012 and the exceptionally high level of exports in 2011.

EBITDA in the **United States** also showed an organic decline (-€27 million), explained by the lower margin achieved by CENG due to falling market prices for electricity, and the higher number of days of scheduled and unscheduled shutdowns in 2012 compared to 2011. This decline is partly offset by limitation of expenditure on UniStar's Calvert Cliffs 3 project with a view to obtaining the NRC construction and operating licence, and optimisation of structural costs in the holding company EDF Inc.

EBITDA in **Belgium** registered an organic decline of €16 million, reflecting the unfavourable effects of new regulation mechanisms that came into force in 2012 (presented in section 1.2.2.4.2), and the shutdown of the Doel 3 and Tihange 2 power plants.

1.3.2.2.5. Other activities

Other activities contributed €2,014 million to Group EBITDA for 2012, €85 million more than in 2011, with organic growth of +4.7%.

EDF Energies Nouvelles' contribution to consolidated EBITDA stood at €642 million. The organic increase of 20.6% compared to 2011 was driven by development of Generation (with higher wind and solar power output in Europe and North America due to the large number of facilities commissioned in 2011 and 2012, and favourable weather conditions), and by a good level of business in Development-Sales of Structured Assets activities.

EBITDA at **EDF Trading** was down by 20.1% compared to 2011, reflecting changes in the trading margin (for details see section 1.3.1.2.5).

Dalkia's EBITDA saw an organic decline of €22 million (-8.9%), due to the sluggish business environment in Italy.

EBITDA for this segment also benefited from the favourable effect of real estate operations, and renegotiations of insurance contracts.

1.3.3. OPERATING PROFIT (EBIT)

EBIT declined by 2.4%.

(In millions of Euros)	2012	2011 restated	Variation	Variation (%)
EBITDA	16,084	14,939	1,145	+7.7
Net changes in fair value on Energy and Commodity derivatives, excluding trading activities	(69)	(116)	47	-40.5
Net depreciation and amortisation	(6,849)	(6,285)	(564)	+9.0
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(164)	(221)	57	-25.8
(Impairment)/reversals	(752)	(640)	(112)	+17.5
Other income and expenses	(5)	775	(780)	-100.6
Operating profit (EBIT)	**8,245**	**8,452**	**(207)**	**-2.4**

The Group's consolidated **EBIT** amounted to €8,245 million for 2012, €207 million lower than in 2011. The main factors in this change were the lower level of other income and expenses, and higher net depreciation and amortisation, which were partly offset by the positive development in EBITDA.

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 -€116 million in 2011 to -€69 million in 2012. Positive changes were mainly located in the **Other International** segment (Belgium) and the **Other activities**.

1.3.3.2. NET DEPRECIATION AND AMORTISATION

Net depreciation and amortisation was up by 9.0% from 2011.

France recorded higher net depreciation and amortisation (+€287 million) as major nuclear plant components were replaced and new investments were made for plants in operation, despite the favourable effect of the change in estimate concerning the operating lifetime of certain distribution assets.

In the **United Kingdom**, net depreciation and amortisation for 2012 benefited from a favourable €225 million effect related to the longer operating lifetimes of AGR[22] nuclear plants, which were extended by 5 years and 7 years compared to the expected operating lifetimes when EDF took over British Energy in January 2009.

In **Italy,** the higher hydrocarbon generation volumes at Edison led to a rise in amortisation and depreciation expenses. In the Exploration-Production sector, Edison continued exploring in Norway and the Falkland Islands, and made two discoveries in Norway covering an estimated 18 billion m^3 of gas reserves (in which Edison holds a 20% share). The related exploration costs were charged to expenses for the year.

[22] Advanced gas-cooled reactors.

At **EDF Energies Nouvelles**, commissioning of new generation facilities caused a €58 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 €57 million decrease in **net increases in provisions for renewal of property, plant and equipment operated under concessions** between 2011 and 2012 is essentially attributable to ERDF.

1.3.3.4. IMPAIRMENT / REVERSALS

In 2011, impairment of €640 million was recorded, concerning Edison in **Italy** (€320 million, including €280 million for Edipower), the **Other activities** segment (€267 million), and the **Other International** segment with BE ZRt in Hungary (€53 million).

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).

1.3.3.5. OTHER INCOME AND EXPENSES

Other income and expenses totalled a net expense of €5 million in 2012 compared to net income of €775 million in 2011. In 2011, other income and expenses comprised the positive €414 million impact of changes in the estimated useful lives of certain French public distribution facilities on the provision for renewal, and the €327 million gain on sale of EnBW.

In 2011, 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.

1.3.4. FINANCIAL RESULT

(In millions of Euros)	2012	2011 restated	Variation	Variation (%)
Cost of gross financial indebtedness	(2,443)	(2,271)	(172)	+7.6
Discount effect	(3,285)	(3,064)	(221)	+7.2
Other financial income and expenses	2,366	1,555	811	+52.2
Financial result	**(3,362)**	**(3,780)**	**418**	**-11.1**

The financial result for 2012 is a financial expense of €3,362 million, down by €418 million from 2011 as a result of the following:

- cost of gross financial indebtedness: the 7.6% increase is related to the rise in the Group's average gross debt
- discount effect: the €221 million rise in discount expenses is mainly explained by revision of the discount rate used for nuclear provisions in France, partly counterbalanced by a reversal of discount expenses on partner advances reimbursed by EDF to Enel in late 2012 after Enel withdrew from the Flamanville 3 project (€101 million)
- other financial income and expenses: the favourable change derives from the financial income of €629 million in compensation for the cost of bearing the accumulated shortfall in the CSPE system, and optimisation of cash and liquid assets.

1.3.5. INCOME TAXES

Income taxes amounted to €1,586 million in 2012, corresponding to an effective tax rate of 32.5%. The effective tax rate was 28.6% in 2011.

The main causes of the rise in the effective tax rate between 2011 and 2012 are the new finance laws in France, and the favourable effect of low taxation of the gain on sale of the Group's investment in EnBW in 2011, which had no equivalent in 2012.

1.3.6. SHARE IN INCOME OF ASSOCIATES

The Group's share in income of associates was a positive €260 million in 2012, compared to €51 million for 2011. This increase is mainly due to growth in RTE's net income compared to 2011, and recognition of impairment on Alpiq in 2012, which was lower than the corresponding impairment booked in 2011.

1.3.7. NET INCOME ATTRIBUTABLE TO NON-CONTROLLING INTERESTS

Net income attributable to non-controlling interests amounted to €241 million for 2012, stable compared to 2011.

1.3.8. EDF NET INCOME

EDF net income for 2012 was €3,316 million, up by €168 million or 5.3% compared to 2011.

1.3.9. NET INCOME EXCLUDING NON-RECURRING ITEMS

The Group's net income excluding non-recurring items[23] stood at €4,216 million for 2012, €609 million (16.9%) higher than 2011.

[21] 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 2012 (-€900 million) mainly comprised:

- -€856 million for impairment and updating of provisions (especially nuclear provisions),
- -€44 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 2011 amounted to -€459 million, mostly comprising impairment and the gain on disposal of EnBW.

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. The definition of net indebtedness was revised in 2012 and now includes the Group's loans to RTE and joint ventures.
Changes in the Group's net indebtedness were as follows

In millions of Euros	2012	2011 restated [4]	Variation	Variation (%)
Operating profit before depreciation and amortisation (EBITDA)	**16,084**	**14,939**	**1,145**	**+7.7**
Cancellation of non-monetary items included in EBITDA	(715)	(2,040)	1,325	
Net financial expenses disbursed	(1,634)	(1,623)	(11)	
Income taxes paid	(1,586)	(1,331)	(255)	
Other items	165	336	(171)	
Net cash flow from operations [1]	**12,314**	**10,281**	**2,033**	**+ 19.8**
Change in working capital	(2,390)	(1,121)	(1,269)	
Net operating investments (gross CAPEX less disposals)	(12,638)	(10,637)	(2,001)	
Free cash flow	**(2,714)**	**(1,477)**	**(1,237)**	
Allocation to dedicated assets, France	(737)	(315)	(422)	
Net financial investments	(1,021)	3,277	(4,298)	
Dividends paid	(2,355)	(2,383)	28	
Other changes [2]	365	8	357	
(Increase)/ decrease in net indebtedness, excluding the impact of changes in scope of consolidation and exchange rates	**(6,462)**	**(890)**	**(5,572)**	
Effect of change in scope of consolidation	(1,870)	2,607	(4,477)	
Effect of change in exchange rates	(137)	(516)	379	
Effect of other non-monetary changes [3]	179	(97)	276	
(Increase)/Decrease in net indebtedness	**(8,290)**	**1,104**	**(9,394)**	
Net indebtedness at beginning of period	**33,285**	**34,389**		
Net indebtedness at end of period	**41,575**	**33,285**		

[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] Principally capital increases subscribed by minority shareholders, changes in accrued interest on debt, contributions received on assets operated under concession, investment subsidies and the full and final payment to Areva for dismantling La Hague (the last payment was made in June 2011 and amounted to €664 million plus taxes).
[3] Mainly corresponds to changes in fair value and accounting reclassifications affecting net indebtedness.
[4] Figures for 2011 have been restated for the impact of the change in accounting method for actuarial gains and losses on post-employment benefits: the restatements to "EBITDA" and "Cancellation of non-monetary items included in EBITDA" amount to +€115 million and -€115 million respectively.

The change in net indebtedness over 2012 incorporates all the impacts of the Edison operation (+€3,259 million), principally:

- Takeover via acquisition of Transalpina di Energia (+€784 million)
- Acquisition of minority shareholdings (+€869 million)
- Acquisition by Delmi of the investment in Edipower (-€684 million)
- The effect of changes in the scope of consolidation, mainly related to 100% inclusion of the net indebtedness of Edison and TdE, partially offset by the fact that Edipower is no longer included in the net financial indebtedness (+€2,290 million).

1.4.1. OPERATING CASH FLOW

The operating cash flow amounted to €12,314 million at 31 December 2012 compared to €10,281 million in 2011, an increase of €2,033 million (+19.8%).

This change principally reflects the rise in EBITDA (+€1,145 million), and the decrease in non-monetary items (+€1,325 million), primarily relating to fair value adjustments of financial derivatives. These positive effects were partly counterbalanced by the rise in income taxes paid (-€255 million), particularly in France, mainly as a result of the higher profits reported by the French tax consolidated group and the impact of new finance laws.

1.4.2. CHANGE IN WORKING CAPITAL

Working capital increased by €2,390 million over 2012. This rise was caused by:

- an increase in the CSPE receivable, including income related to energy invoiced (-€1,426 million)
- reimbursement to Enel of its investment in the Flamanville 3 EPR after the nuclear cooperation with EDF was ended (-€586 million)
- higher inventories (-€508 million), mainly concerning France (-€754 million) and the United Kingdom (-€226 million), essentially for nuclear fuels, partly mitigated by lower inventories at EDF Energies Nouvelles (+€394 million) associated with its Development and Sale of Structured Assets business.

1.4.3. OPERATING INVESTMENTS (GROSS CAPEX)

Operating investments (gross capital expenditure) amounted to €13,386 million for 2012, €2,252 million (+20.2%) higher than for 2011. Changes over the year in the Group's gross capital expenditure were as follows:

In millions of Euros	2012	2011 restated	Variation	Variation (%)
Deregulated activities	4,384	3,896	488	+12.5
Network activities	3,073	2,754	319	+11.6
Island activities	779	728	51	+7.0
France	**8,235**	**7,378**	**857**	**+11.6**
United Kingdom	1,643	1,179	464	+39.4
Italy	438	318	120	+37.7
Other International	490	436	54	+12.4
Total International	**2,571**	**1,933**	**638**	**+33.0**
Other activities	**2,580**	**1,823**	**757**	**+41.5**
Operating investments	**13,386**	**11,134**	**2,252**	**+20.2**

Capital expenditure in **France** increased by €857 million or +11.6%. For the deregulated activities, the increase was concentrated in nuclear maintenance (€570 million), mainly for asset maintenance operations. Expenditure to improve the nuclear units' performance led to an increase in the amounts capitalised. The reinforced management plan also enhanced monitoring of general maintenance expenditure and scheduled checks carried out at regular intervals. These checks qualify as major inspections and the related costs are capitalised.

The increase in the network activities is largely explained by ERDF's investments in customer connections (€125 million) and network coverage quality (€106 million). In the island activities, the increase concerned investments in new generation capacities currently under construction in Upper Corsica and Guadeloupe (Pointe Jarry).

In the **United Kingdom**, gross capital expenditure rose by €464 million or 39.4% in 2012, largely due to a higher level of investment in developing New Nuclear facilities and renewable energies.

In **Italy**, capital expenditure for the 2012 was up by €120 million or 37.7%. The rise mainly concerned Edison and essentially reflects the scope effect resulting from the takeover of Edison in May 2012. Excluding this effect (amounting to approximately €192 million), Edison's operating investments were down by €77 million, due to substantially lower capital expenditure in the electricity activities (-€89 million).

In the **Other international** segment, capital expenditure for 2012 rose by €54 million compared to 2011, principally in Poland.

Capital expenditure in the **Other activities** was up by €757 million (41.5%). This variation is primarily due to the increase in operating investments undertaken by EDF Energies Nouvelles (€714 million), enabling the company to expand its generation fleet and subsequently sell part of the fleet on in the form of structured assets.

1.4.4. FREE CASH FLOW

The Group's free cash flow in 2012 was negative at -€2,714 million (against -€1,477 million in 2011). The main factors were:

- operating cash flow of €12,314 million (see section 1.4.1)
- a decrease in working capital over 2012 (-€2,390 million, see section 1.4.2)
- gross capital expenditure of €13,386 million (see section 1.4.3).

The -€1,237 million difference from 2011 results mainly from the lower working capital (-€1,269 million), while the rise in gross capex (-€2,252 million) was almost fully offset by the increase in operating cash flow (+€2,033 million).

1.4.5. ALLOCATION TO DEDICATED ASSETS

In compliance with the French Law of 28 June 2006 on the sustainable management of radioactive materials and waste, EDF is continuing to build up a portfolio of dedicated assets for secure financing of its long-term nuclear obligations.
The cash allocation to dedicated assets in France amounted to €737 million for 2012. This is €422 million higher than in 2011 because allocations to the dedicated asset portfolio were suspended with the approval of the Board of Directors from September 2011, due to market conditions. Allocations resumed at the start of 2012, at a slightly faster pace in view of the dedicated asset portfolio's lower value at 31 December 2011.

1.4.6. NET FINANCIAL INVESTMENTS (EXCLUDING THE ALLOCATION TO DEDICATED ASSETS)

In 2012 net financial investments (excluding allocations to dedicated assets) amounted to €1,021 million, mainly relating to:

- the takeover of Edison (-€969 million)
- purchase of the shares in ERSA and Kogeneracja held by EnBW (-€301 million)
- sale of all the shares in Exelon (+€361 million)
- receipt of the sale price of the Eggborough coal-fired plant (+€261 million)
- the takeover of Enerest by Electricité de Strasbourg (-€139 million).

1.4.7. DIVIDENDS

Dividends paid in cash (€2,355 million) comprise the balance of the 2011 dividends (€1,072 million), the interim dividend for 2012 (€1,053 million) and the dividends paid by Group subsidiaries to their minority shareholders (€230 million), principally Centrica in the UK (€117 million). In 2011, dividends paid in cash amounted to €2,383 million.

1.4.8. SCOPE AND FOREIGN EXCHANGE EFFECTS

In 2012, the scope effect (effect of changes in the scope of consolidation) mainly reflects the Edison operations (-€2,290 million) and the exclusion from net indebtedness of companies sold by EDF Energies as part of its Development and Sale of Structured Assets business.
The 2011 scope effect essentially resulted from deconsolidation of EnBW's financial debt (€2,591 million).
Foreign exchange effects (essentially the rise of the pound sterling and the fall of the US dollar against the Euro[24]) had an unfavourable -€137 million impact on the Group's net indebtedness in 2012.

1.4.9. NET FINANCIAL INDEBTEDNESS

The Group's net indebtedness stood at €41,575 million at 31 December 2012 compared to €33,285 million at 31 December 2011, an increase of €8,290 million over 2012.

This rise is mainly due to the impacts of the Edison operation (€3,259 million), the negative free cash flow (-€2,714 million, see section 1.4.4), and payment of dividends (-€2,355 million, see section 1.4.7).

[24] The US dollar fell by 1.9% against the Euro, from €0.7729/$1 at 31 December 2011 to €0.7579/$1 at 31 December 2012.
The pound sterling rose by 2.4% against the Euro, from €1.1972/£1 at 31 December 2011 to €1.2253/£1 at 31 December 2012.

1.4.10. FINANCIAL RATIOS

	2012 proforma [1]	2012	2011 restated
Net financial debt /EBITDA	**2.4** [2]	**2.6** [2]	2.2
Net financial debt /(Financial debt + equity) [3]	**56%**	**58%**	50%

[1] The 2012 proforma ratios are restated to reflect allocation of the CSPE receivable to dedicated assets on 13 February 2013 and withdrawal of €2.4 billions of assets, such that 100% of EDF's nuclear liabilities eligible for coverage by the dedicated assets are covered.
[2] The 2012 ratios include 100% of Edison's restated EBITDA in the denominator.
[3] Equity including non-controlling interests.

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 2012, the Group's total R&D expenses amounted to €527 million (compared to €518 million in 2011), 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, and other environmental issues such as biodiversity, water quality, and reduction of harmful effects. Investments in dedicated innovation funds are also part of this strategy.

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 2012 on seven sites (three in the Paris area, one in Germany, one in the UK, one in Poland and one in China).

R&D aims to incorporate innovations into the Group's industrial processes, in an approach that focuses on two actions:

(i) to capitalise on internal innovation, and accelerate the "time to business" through joint action with the business lines in order to speed up and/or encourage the industrialisation phase;

(ii) to become more open to external innovation, and where relevant, adopt 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.

In November 2010, EDF's Board of Directors validated the plan to establish EDF's principal R&D centre on the Paris-Saclay Campus. Planning permission has been obtained and all possible recourse procedures have been exhausted. Up to 1,500 people will work at this centre, including Group researchers and PhD students. EDF is thus giving its R&D a new ambition, and placing innovation and scientific and industrial research at the heart of its priorities. This strategy positions EDF as a leading actor on the Paris-Saclay Campus, and the Group will benefit from 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. 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. 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.

In the field of renewable energies, R&D seeks to identify technological breakthroughs with significant competitive value, and helps to bring the most promising technologies into industrial existence to benefit the Group, particularly in solar and marine energy, but also in wind power, biomass and geothermal technologies. R&D is also working on raising performance for EDF as a developer and operator of renewable energy-based electricity generation incorporated into electricity systems, in order to:

- reduce the risks on investments
- improve operating performance
- control the technical and economic impact on the electric system
- guarantee balance in the electric system while including renewable energies
- identify and develop business models for energy offers containing renewable energies, that meet the needs and demands of customers and local authorities.

For carbon capture and storage, the role of R&D is to evaluate processes in order to take a long-term position in coal-fired generation. 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 Le Havre power plant reactors.

In the second priority area, R&D is innovating with new uses for electricity: mobile electricity, heat pumps, and energy-saving buildings for different market segments. The R&D teams also contribute to preparation of new offers for customers who are actors in the energy markets, and propose tools and methods to develop customer knowledge, design benchmark energy solutions and improve sales management. To advance sustainable development, EDF R&D is investing in several experiments in Europe to assist future "smart cities" with local-scale infrastructure optimisation, and is also involved in other innovations, notably concerning mobile electricity.

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, and 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. In 2012 EDF's UK R&D centre became an independent legal entity, EDF Energy R&D UK Centre Ltd, a subsidiary of EDF Energy.

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 fields.

In France, R&D has some 12 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. 2012 saw four important initiatives 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), formation of two joint laboratories: one with electrical engineering school Supelec concerning smart grids (RiseGrid), the other with telecom engineering school Telecom ParisTech, concerning the Internet of Things and cybersecurity (SEIDO), and finally an earthquake research institute with the CEA, ENS Cachan and Ecole Centrale de Paris (SEISM). R&D also supports specific chairs of techning and research, particularly through its Foundation for Tomorrow's Energies (*Fondation pour les Energies de Demain*). In Europe, EDF's 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

EDF R&D 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 five of the winning projects announced by the government in March 2012: *Institut Photovoltaïque Ile-de-France* (IPVF) for photovoltaic power, *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, and *Vedecom* for electric mobility.

In other investments with a future, EDF is also contributing to the *Paris-Saclay Efficacité Energétique* project on energy efficiency in industry, and was the instigator of the *Connexion* project launched in 2012, for research on future digital nuclear control systems.

EDF 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 cities, storage, and renewable energies. In 2012 EDF 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 2012, EDF had a portfolio of 483 patented inventions protected by 1,531 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 (i.e. entities other than RTE and 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 Division (*Département Contrôle des Risques Financiers et Investissements* - DCRFI) - to control financial risks at Group level by ensuring correct application of the principles of the Financial Management Framework. This body also has the task of carrying out a second-level check (methodology and organisation) of EDF entities and operationally controlled group subsidiaries (excluding RTE and ERDF, and a first-level check of financing activities at parent company level, including Trading room activities.

The DCRFI 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 2012, the Group's liquidities, consisting of liquid assets, cash and cash equivalents, totalled €16,613 million and available credit lines amounted to €8,598 million.

For 2013, the Group's scheduled debt repayments (principal and interest) are forecast at €15,139 million at 31 December 2012, including €5,989 million for bonds.

At 31 December 2012, no Group company was in default on any borrowing.

1.6.1.1.2. Management of liquidity risks

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 2012 (for details see note 38.2.1 to the consolidated financial statements at 31 December 2012, "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 €5,204 million and £750 million.

The average maturity of gross consolidated debt was thus 8.5 years at 31 December 2012 compared to 9.2 years at 31 December 2011, and EDF SA debt now has average maturity of 9.6 years compared to 10.4 years at 31 December 2011.

At 31 December 2012, 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 2012):

In millions of Euros	Debt	Hedging instruments[1] Interest rate swaps	Currency swaps	Guarantees given on bonds
2013	15,139	(145)	64	11
2014 - 2017	20,449	(609)	109	40
2018 and later	50,572	(1,748)	(49)	167
TOTAL	**86,160**	**(2,501)**	**124**	**218**
▪ Debt repayment	58,592			
▪ Interest expense	27,568			

(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. Edison is now part of the Group's cash pooling
- 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 2012 the amount of commercial paper outstanding was €1,620 million for French commercial paper, and $4,493 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 €20 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 2012:

Entity	Issue date [1]	Maturity	Nominal amount (in millions of currency units)	Currency	Rate
EDF	11/2008	01/2013	2,000	EUR	5.6%
EDF	12/2008	12/2013	1,350	CHF	3.4%
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	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.

EDF and Edison have credit facilities at 31 December 2012 that can be used in the event of liquidity problems, with the following characteristics:

- EDF has an overall amount of €7,950 million in available credit faciliities (syndicated credit and bilateral lines). Credit lines represent an available amount of €3,950 million, with expiry dates between January 2015 and June 2017; syndicated credit facilities amount to €4,000 million for maturities ranging from November 2015 to November 2017. The level of these facilities is very

regularly reviewed to ensure that the Group has sufficient back-up facilities. No drawings had been made on syndicated credit facilities at 31 December 2012.
EDF also has a €500 million credit line with the European Investment Bank, which was totally drawn at 31 December 2012 (drawings of €100 million in 2010, €350 million in 2011, and €50 million in 2012)

- Edison has a syndicated credit facility for €1,500 million (valid until 14 April 2013), drawn to the extent of €1,150 million at 31 December 2012. The €700 million "Club deal" previously available expired at the end of 2012.

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 December 31, 2012:

Company	Agency	Long-term rating	Short-term rating
EDF	Standard & Poor's Moody's Fitch Ratings	A+, stable outlook Aa3, creditwatch negative(1) A+, stable outlook	A-1 P-1 F1
RTE	Standard & Poor's	A+, stable outlook	A-1
EDF Trading	Moody's	A3, creditwatch negative (2)	n.a.
EDF Energy	Standard & Poor's Moody's Fitch Ratings	A, negative outlook A3, negative outlook (3) n.a	A-1 P-2 n.a.
Edison SpA	Standard & Poor's Moody's Fitch Ratings	BBB, positive outlook (4) Baa3, creditwatch negative BB, positive outlook (5)	A-2 n.a. B

n.a = not applicable
(1) Moody's downgraded the outlook for EDF from stable to negative on 5 December 2012 after the Council of State's decision to cancel the 2009 decision on electricity tariffs. The negative outlook also reflects the rise in Group indebtedness and uncertainty over profitability for 2013.
(2) Downgraded by Moody's on 5 December 2012, along with the EDF group.
(3) Downgraded by Moody's on 5 December 2012, along with the EDF group.
(4) S&P upgraded Edison's rating from BB+ to BBB on 20 December 2012 following EDF's takeover of Edison, renegotiation of gas contracts and sale of an investment in Edipower, which all improved Edison's cash flow and credit ratios.
(5) Fitch upgraded Edison's rating from BB- to BB on 13 August 2012 following EDF's takeover of the Edison group.

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 73% to 92% 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 calculations.

- Hedging of operating cash flows in foreign currencies: In general, the operating cash flows of EDF and its subsidiaries are in the relevant local currencies, with the exception of flows related to fuel purchases which are primarily in US dollars, and certain flows related to purchases of equipment, which concern lower amounts. Under the principles of the financial management framework, EDF and the main subsidiaries concerned by foreign exchange risks (EDF Energy, EDF Trading, Edison, EDF Energies 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 2012 breaks down as follows by currency after hedging:

Gross debt structure at 31 December 2012, by currency, before and after hedging

31 December 2012 *(In millions of Euros)*	Initial debt structure	Impact of hedging instruments[(1)]	Debt structure after hedges	% of debt
EUR	35,709	1,485	37,194	62%
USD	11,621	(6,240)	5,381	9%
GBP	7,927	5,773	13,700	23%
Other currencies	4,675	(1,018)	3,657	6%
TOTAL	**59,932**	**-**	**59,932**	**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 2012

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

31 December 2012 *(In millions of Euros)*	Debt after hedging instruments converted into Euros	Impact of a 10% unfavourable variation in exchange rates	Debt after a 10% unfavourable variation in exchange rates
EUR	37,194	-	37,194
USD	5,381	538	5,919
GBP	13,700	1,370	15,070
Other currencies	3,657	366	4,023
TOTAL	**59,932**	**2,274**	**62,206**

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 risks.

The table below sets forth the foreign exchange position relating to net non-operating investments in foreign currency of the Group's principal subsidiaries at 31 December 2012.

Net asset position

31 December 2012 *(In millions of Euros)*	Assets	Bonds	Derivatives	US CP	Net position after management (Assets)
USD	5,186	4,000	756	-	430
CHF (Switzerland)	1,779	1,306			473
HUF (Hungary)	130,053		95,295		34,758
PLN (Poland)	3,517		2,648		869
GBP (United Kingdom)	14,139	6,035	4,915		3,189
BRL (Brazil)	626				626
CNY (China)	5,870				5,870

The assets in the above table are the net assets of the Group's foreign subsidiaries in foreign currencies at 30 September 2012, 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 at 31 December 2012. The hedges shown above are bonds, derivatives and commercial paper issues in foreign currencies outstanding at 31 December 2012.

The following table sets forth the risk of foreign exchange loss in equity on the overall net position relating to the net non-operating investments in foreign currencies of the Group's principal subsidiaries at 31 December 2012, assuming unfavourable, uniform exchange rate variations of 10% against the Euro. Net positions are converted at the closing rate and impacts are reported in absolute value.

Sensitivity of net assets to exchange rate risks

	31 December 2012			31 December 2011		
En millions	Net position after management, in currency	Net position after management, converted into Euros	Impact on equity of a 10% variation in exchange rates	Net position after management, in currency	Net position after management, converted into Euros	Impact on equity of a 10% variation in exchange rates
USD	430	326	32	548	424	42
CHF (Switzerland)	473	392	39	495	407	40
HUF (Hungary)	34,758	119	12	33,659	107	12
PLN (Poland)	869	213	21	767	172	17
GBP (United Kingdom)	3,189	3,908	391	2,853	3,416	341
BRL (Brazil)	626	232	23	692	286	29
CNY (China)	5,870	714	71	5,790	710	71

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 2012.

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 2012 comprised 79.2% of debt bearing interest at fixed rates and 20.8% at floating rates.

A 1% uniform annual rise in interest rates would generate an approximate €125 million increase in financial expenses at 31 December 2012, based on gross floating-rate debt after hedging.

The average cost of Group debt (weighted interest rate on outstanding amounts) was 3.7% in 2012.

The table below sets forth the structure of Group debt and the impact of a 1% variation in interest rates at 31 December 2012. The impact of interest rate fluctuations remains stable compared to 2011.

Group debt structure and sensitivity to interest rates

31 December 2012 *(In millions of Euros)*	Initial debt structure	Impact of hedging instruments	Debt structure after hedges	Impact on income of a 1% variation in interest rates
Fixed rate	52,306	(4,844)	47,462	-
Floating rate	7,626	4,844	12,470	125
TOTAL	**59,932**	**-**	**59,932**	**125**

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 2012 *(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	1,633	(16)	1,617

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, EDF Energy and British Energy

Assets covering EDF's employee benefit liabilities are partly invested on the international and European equities markets. Market trends therefore affect the value of these assets, and a downturn in equity prices would lead to a rise in balance sheet provisions.
29% of the assets covering EDF's employee benefit liabilities were invested in equities at 31 December 2012, amounting to €2.4 billion.

At 31 December 2012, 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 35.6% in equities, representing an amount of £286 million of equities.
At 31 December 2012, the British Energy pension funds were invested to the extent of 32.4% in equities, representing an amount of £1,260 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 is continuing its strategy to reduce the portion of equity-correlated investments. At 31 December 2012 these investments amounted to a residual amount of approximately €3 million.

Direct investments

At 31 December 2012, EDF's investment in Veolia Environnement amounted to €202 million, with estimated volatility of 37.3% (annualised volatility of monthly returns observed over three years).

At 31 December 2012, EDF's investment in AREVA amounted to €110 million, with estimated volatility of 37.6% (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 cover future decommissioning expenses for the nuclear plants currently in operation, and the long-term storage of radioactive waste.

This dedicated asset portfolio, for which guiding principles were redefined in the law of June 28, 2006 on sustainable management of radioactive materials and waste, is managed under the supervision of the Board of Directors and its 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 when it updated its internal rules on January 25, 2007, in anticipation of the provisions of article 9 of the decree of February 23, 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.

In 2012, **dedicated assets** received cash allocations of €737 million, compared to €315 million in 2011 (see note 48 to the consolidated financial statements at 31 December 2012).

Disbursements for decommissioning expenses incurred in 2012 were financed by the dedicated asset portfolio to the extent of €350 million, compared to €378 million in 2011.

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 funds.

Strategic asset allocation is based on asset/liability reviews carried out to define the most appropriate portfolio model for financing nuclear expenses. A benchmark index is also set for performance monitoring and risk control regarding the financial portfolio (excluding RTE and tangible assets). Strategic allocation is reviewed every three years unless circumstances require otherwise. In 2012, assets are allocated as follows: 50% to RTE shares, and the rest to a financial portfolio (half international equities and half bonds).

The financial portfolio contains two sub-portfolios, "equities" and "bonds", themselves divided into "secondary asset classes" that correspond to specific markets. A third sub-portfolio, "cash", is used to prepare and supply the disbursements related to utilisation of provisions for plants currently being decommissioned; this portfolio may be tactically reinforced as a precaution in case of a market crisis.

Tactical asset management is organised around four main themes:

- supervision of exposure between the "equities", "bonds" and "cash" sub-portfolios
- within each sub-portfolio, allocation by "class"
- choice of exposure by geographical area
- 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 established by the Operational Management Committee[25] was developed on the basis of economic and financial prospects for each market and geographical area, and a review of market appreciation in different markets and market segments.

Content and performance of EDF's dedicated asset portfolio

At 31 December 2012, the total value of the portfolio was €17,626 million compared to €15,601 million in 2011 (pro forma figures for RTE share valuations following the change in accounting method for actuarial gains and losses on employee benefits).

[25] A permanent internal committee for evaluation, consultation and operational decision-making for management of dedicated assets.

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

	31 December 2012		31 December 2011	
Categories (in millions of Euros)	Book value[26]	Realisable value	Book value	Realisable value
1° Bonds, receivables and other securities issued or guaranteed by an EU member state or OECD country	4,205	4,564	4,168	4,448
2° Bonds, negotiable bills, etc issued by private sector entities	550	642	1,099	1,155
3° Equities, shares and other securities traded on a recognised market, giving access to the capital of companies whose head office is located in the territory of a EU member state or OECD country	60	60	65	65
4° Shares or units in funds investing in assets referred to in 1 to 3	8,051	8,761	6,541	6,865
5° Shares or units in funds investing principally in assets other than those referred to in 1 to 3	998	1 191	658	777
6° Real estate shares (shares in unlisted real estate companies)	Néant	Néant	Néant	Néant
7° Deposits with BNP Paribas Securities Services	0.076	0.076	0.055	0.055
Other payables and receivables (dividends receivable, management fees, currency hedges, etc)	15	15	(19)	(19)
TOTAL FINANCIAL PORTFOLIO	**13,879**	**15,233**	**12,514**	**13,291**
RTE shares allocated to dedicated assets	2,015	2,393	2,015	2,310
TOTAL DEDICATED ASSETS, excluding miscellaneous receivables and payables	15,879	17,611	14,548	15,620
TOTAL DEDICATED ASSETS	**15,893**	**17,626**	**14,529**	**15,601**

[26] See EDF SA's financial statements at 31 December 2012, note 19

Breakdown by sub-portfolio and performance in 2011

The breakdown of EDF's dedicated asset portfolio at 31 December 2012 and 2011 is as follows:

	31 December 2012	31 December 2011
Equities sub-portfolio	41.6%	37.1 %
Bonds sub-portfolio	39.4%	42.4 %
Cash sub-portfolio	5.4%	5.7 %
RTE shares allocated to dedicated assets	1.6%	14.8 %
TOTAL	**100 %**	**100 %**

The table below shows the performance by sub-portfolio at 31 December 2012 and at 31 December 2011:

In millions of Euros	31/12/2012 Stock market or realizable value	Performance for 2012		31/12/2011 Stock market or realizable value	Performance for 2011	
		Portfolio	Benchmark index[1]		Portfolio	Benchmark index[1]
Equities sub-portfolio	7,343	+13.8%	+14.4%	5,783	-7.0%	-4.0%
Bonds sub-portfolio	6,937	+10.3%	+10.6%	6,615	+3.9%	+3.4%
Total equities and bonds portfolio	**14,280**	**+12.0%**	**+12.6%**	**12,398**	**-1.6%**	**-0.1%**
Cash sub-portfolio	953	+1.1%	+0.2%	893	+1.1%	+0.9%
Total financial portfolio	**15,233**	**+11.1%**	**+12.6%**	**13,291**	**-1.6%**	**-0.1%**
RTE shares allocated to dedicated assets	2,393	-	-	2,310	-	-
TOTAL DEDICATED ASSETS	**17,626**	**+10.4 %**		**15,601**	**-0.9%**	

[1] Benchmark index: 50% MSCI World DN EUR hedged for the equities sub-portfolio, Citigroup EGBI for the bonds sub-portfolio, Capitalised Eonia for the cash portfolio, 50% MSCI World DN EUR hedged + 50% Citigroup EGBI for the financial portfolio.

At the beginning of 2012 the Euro was in crisis, and this affected bond and equities markets in the Euro zone. When European countries and the Central European Bank showed their determination, including a willingness to provide support for countries in difficulty where necessary (support commitment to Spanish banks and the Greek state; announcement of Outright Monetary Translations by the central bank), the tense Euro zone bond markets saw significant improvements in liquidity and prices. Against this background, the investment policy consisted of regularly reinvesting in equities and bonds over the year. Reinvestment in the bond "class" focused particularly on credit, but also Italian sovereign debt instruments, with investments in certain sovereign debt instruments (Spain, Greece, Ireland, Portugal) remaining negligible. The effect of this approach was partly masked by reclassification of short-term credit instruments nearing maturity, previously included in the bonds sub-portfolio, as a component of the cash sub-portfolio. Reinvestment in the equities sub-portfolio also played a substantial role (this sub-portfolio accounted for 48.2% of the financial portfolio at 31 December 2012, compared to 43.5% in 2011).

In 2012 dedicated assets achieved a performance of +10.4%, with the financial portfolio (excluding RTE) registering +11.1%. The difference compared to the benchmark index performance (+12.6%) is explained by the prudent management approach, reflected in the large cash "class" and the underweighting in equities early in the year, together with a broader diversification of assets than in the benchmark index. Fund selection was also oriented to ensure that the volatility of the equities and bonds sub-portfolios was below the benchmark index volatility. The RTE shares have fulfilled their role as performance stabilisers both in times of market rises (2012) and falls (2011).

Against this background, the overall after-tax performance of dedicated assets (impact on reserves and net income) was +€1,101.4 million: +€948.1 million on the financial portfolio (+1,483.7 million before tax) and +€153.3 million for the RTE shares allocated to dedicated assets).

The distribution of the portfolio between reserved funds and other financial instruments is also presented in note 48 to the consolidated financial statements at 31 December 2012.

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 €7,343 million at 31 December 2012. The volatility of the "equities" sub-portfolio can be estimated on the basis of the volatility of its benchmark index, the MSCI World index, which at 31 December 2012 was 10.2% based on 52 weekly performances, compared to 19.1% at 31 December 2011. 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 €749 million. This volatility is likely to affect the Group's equity.

At 31 December 2012, the sensitivity of the "bonds" sub-portfolio (€6,937 million) was 5.06, i.e. a uniform 100 base point rise in interest rates would result in a €351 million decline in market value which would be recorded in consolidated equity. While this sensitivity was higher than in 2011 (4.81), it remained well below the sensitivity of the benchmark index (6.43).

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 financial crisis, when the Group moved to a more frequent (quarterly) consolidation of all counterparty risks. In late 2012 a consolidation system was introduced to make the process more reliable and more flexible.

The table below gives details, by rating, of the EDF group's consolidated exposure at the end of September 2012. 83% of the main counterparties for the Group's business qualify as "investment grade", a stable proportion overall compared to the consolidated risk at 30 September 2011.

	AAA	AA	A	BBB	BB	B	CCC/C	Unrated	Total
30/9/2012	7%	23%	39%	14%	2%	1%	1%	13%	**100%**
30/9/2011	9%	20%	45%	11%	2%	0%	0%	13%	**100%**

The exposure to counterparty risk by nature of activity is distributed as follows:

	Purchases	Insurance	Distribution and sales	Cash and asset management	Fuel purchases and energy trading	Total
30/9/2012	4%	38%	7%	39%	12%	**100%**
30/9/2011	4%	34%	7%	40%	15%	**100%**

Exposure in the energy trading activities is concentrated at EDF Trading. Counterparty risk management for this subsidiary has explicit limits for each counterparty according to 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.

Particularly for counterparties dealing with EDF's Trading room, the Financial Risk Control team 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 (EDF and cash pooling), particularly regarding countries such as Italy and Spain. Transactions are only authorised for "investment grade" Spanish and Italian banking counterparties considered systemic by the Financial Stability Council, meaning they have low risk of default, and the amounts and maturities of such transactions must be limited (no maturities beyond April 2013). EDF holds no direct investment in these countries' sovereign debt.

1.6.2. MANAGEMENT AND CONTROL OF ENERGY MARKET RISKS

1.6.2.1. FRAMEWORK FOR MANAGEMENT AND CONTROL OF ENERGY MARKET RISKS

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 have a significant impact on its financial statements.

Consequently, the Group has an "energy markets" risk policy (for electricity, gas, coal, oil products and CO_2 emission rights) applicable to EDF and entities in which it has operational control.

This policy aims to:

- define the general framework in which the various Group entities carry out their operational activities (energy generation, optimisation and distribution), and their interaction with EDF Trading
- consolidate the exposure of the various entities controlled by the Group on the structured energy-related markets
- implement a coordinated hedging policy at Group level.

At Edison, which is now operationally controlled by EDF, the energy market risk policy and associated control process will be introduced as part of Edison's integration into the EDF group. CENG, which was not operationally controlled by EDF at 31 December 2012, partly applies the EDF group's policy for energy market risks.

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 3-year market horizon

- a specific control process, 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 monthly basis. The control processes are regularly evaluated and audited

1.6.2.3. PRINCIPLES FOR OPERATIONAL MANAGEMENT AND CONTROL OF ENERGY MARKET RISKS

The principles for operational management and control of energy market risks for operationally controlled entities and CENG 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 their financial statements (the accounting classifications of these hedges are described in note 41 to the 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. As such, EDF Trading is subject to a strict governance and control framework in line with current practices in 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 entity 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. 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 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 2012, EDF Trading's commitment on the markets was subject to a daily VaR limit of €45 million[27] (with a daily confidence interval of 97.5%), and a stop-loss limit of €225 million[28]. VaR fluctuated between €2.6 million and €19.1 million over the year.

[27] The VaR takes into account diversification of risks between the activities of EDF Trading and the activities of EDF Trading North America. This limit does not take into account the diversification associated with the joint venture Chubu, whose VaR limit of €2 million is added to EDF Trading's VaR limit of €43 million.
[28] Five times the VaR, i.e. €225 million.

The table below shows the VaR and stop-loss limits for 2012 and 2011:

In millions of Euros	H2 2012	H1 2012	H2 2011	H1 2011
VaR limit (97.5% 1-day)	45	45	45	45
Stop-loss limit	225	225	225	225
Minimum VaR	2.6	5.9	4.3	4.7
Average VaR	7.1	10.1	6.9	10.4
Maximum VaR	11.4	19.1	10.4	18.7

The VaR and stop-loss limits were not exceeded in 2012, even when market volatility was high in February, 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, the governance model[29] separates risk management and control from operational trading activities. For operational purposes, Edison calculates its net exposure[30] based on its entire portfolio of assets and contracts (industrial portfolio), other than those related to trading 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)[31], is then determined using this net exposure.

To meet obligations under IFRS 7, Edison measures the maximum potential decrease in the fair value of financial contracts hedging the risks on its industrial portfolio using a PaR with a confidence interval of 97.5%. For trading activities, which concern a separate portfolio distinct from the industrial portfolio, Edison sets a daily limit of 95% VaR. Like the industrial portfolio, Edison's trading portfolio was allocated an amount of economic capital[32]. This allocation takes account of the risks related to the portfolio's VaR and the risks estimated through stress tests on any non-liquid structured positions[33].

For an analysis of the fair value of the Group's commodity hedging derivatives, see notes 41.4.3 and 41.5 to the consolidated financial statements for the year ended 31 December 2012. 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 RISKS

The EDF group has an extensive insurance programme that covers EDF SA and controlled subsidiaries as they are integrated, including ERDF and RTE. 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 OIL[34]. Additional insurance coverage is provided by EDF's captive insurance subsidiary Wagram Insurance Company Ltd[35], other insurers and reinsurers: RTE has taken out a conventional damages insurance programme specific to its own property (substations, buildings and technical premises).

- damage to merchandise transported

[29] This model is being brought into line with the EDF group's policy.
[30] Net exposure is the residual exposure after using all natural hedging options provided by vertical and horizontal integration of the various techniques.
[31] 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.
[32] Economic capital is the capital allocated to deal with market risks.
[33] Figures will be available when Edison has published its annual results.
[34] Oil Insurance Limited Mutual Insurance Company.
[35] An Irish insurance company fully-owned by EDF.

- **damage to the EDF group's nuclear facilities**: In addition to coverage through EDF's membership of OIL, physical damage (including following a nuclear accident) to EDF's nuclear installations in France and EDF Energy's nuclear facilities in the United Kingdom, and nuclear decontamination costs are covered by a Group insurance policy involving the French nuclear pool (Assuratome), the British aromic 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).

- **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.
  EDF Energy operates nuclear plants in the United Kingdom, where the liability scheme applicable to operators of nuclear facilities is similar to that in France. EDF Energy is insured with Nuclear Risk Insurers Limited (NRI), the British nuclear insurance pool, to the extent of £140 million, the current limit for civil liability applicable to nuclear plant operators in the United Kingdom

- **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, amounting to €11 million, is recorded as an investment in the EDF SA financial statements.

- On 11 August 2011 ERDF took out a policy with Natixis/Swiss-Re for **coverage of ERDF's aerial 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 arrangements for setting up damage insurance for the Island Energy Systems' aerial distribution networks are still under examination.

The total value of premiums for all types of coverage provided by EDF's insurance programmes and Group programmes managed by EDF Assurances was €111 million in 2012, 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 2012.

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 2012 reference document.

The EDF group policies for risk management and control are described in section 4.2 of the 2012 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 2012 reference document. This chapter reports on litigations which have seen significant developments since the release of the 2011 reference document and the half-year financial report of 2012.

1.9.1. PROCEEDINGS CONCERNING EDF

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, Mr 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 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. In the civil proceedings, the same employee was ordered to pay compensation to Greenpeace and Yannick Jadot for the moral prejudice caused. The employee concerned, Greenpeace and Yannick Jadot have all lodged an appeal.

Verdesis

In June 2008, Euro Power Technology filed a complaint and a request for protective measures with the the French Competition Authority (*Autorité de la Concurrence*) against EDF and its subsidiary, Verdesis, concerning the two companies' biofuel activities. On 16 April 2010, the complaint was dismissed by the Competition Authority.

On 26 April 2010, Euro Power Technology lodged an appeal against this decision before the Paris Court of Appeal, which was rejected on 2 December 2010. Euro Power Technology then lodged a further appeal with the *Cour de Cassation* on 28 December 2010. On 9 October 2012, this court rejected the appeal. By virtue of this ruling, the Competition Authority's decision of 16 April 2010 dismissing Euro Power Technology's appeal is final and the dispute is closed.

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. 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. As of the date of the filing of this report, the investigation is still pending with the French Council of State. A third petition for cancellation of the decree was filed in April 2012 before the Council of State by the city of Geneva.

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.

The town of Saint Vulbas initiated a review of its local zoning plan together with stakeholders, and EDF filed a new building permit application.

Roozen applied for an emergency injunction to suspend the zoning plan. The Judge at the Lyon Administrative Court dismissed this application on 14 January 2013 on the grounds that there was no urgency.

Flamanville

On 15 November 2006 EDF applied to France's Nuclear Safety Authority (ASN) for authorisation to draw and discharge liquid and gas effluents for the Flamanville nuclear power plant in north-west France. This application covered drawings and discharge by the two existing reactors on the site (Flamanville 1 and 2), and the future EPR-type reactor (Flamanville 3) currently under construction.

The ASN set the limits for discharge of liquid and gas effluents into the environment for operation of the three reactors in a decision of 7 July 2010, approved by the ministers in charge of nuclear safety on 15 September 2010.

A local association CRILAN filed a petition for cancellation of this decision with the Caen Administrative Court on 23 March 2011.

In an order of 20 July 2012, the President of the Caen Administrative Court referred the case to the Council of State. The Court considered that CRILAN's petition did not concern the ministerial approval but the ASN's decision of 7 July 2010, and under article R.351-2 of the French code of Administrative Justice, the Council of State is competent for appeals against ASN decisions. EDF and the State are required to file their defence statements by June 2013.

Labour litigation

EDF is party to a number of labour lawsuits with employees and employment inspectors, primarily regarding the calculation and implementation of the legislation on working hours. EDF estimates that none of these lawsuits, individually, is likely to have a significant impact on its profits and financial position. However, because they concern situations likely to involve a large number of EDF's employees in France, any increase in such litigations could present a risk with a potentially significant, negative impact on the Group's financial results.

The number of litigation cases relating to application of French employment law is currently small, but there is a noticeable development in cases brought before the criminal courts, although so far this has been limited to a few nuclear power plants.

The Group is also party to a number of litigations with social security bodies. The main such dispute is between EDF and the URSSAF (which collects French social security contributions) and concerns inclusion of certain bonuses, indemnities and other benefits in kind in the bases for calculation of social security charges.

European Commission investigation into a price rise on the wholesale electricity market

In March 2009 the European Commission conducted unannounced inspections at EDF premises, as part of an investigation into price movements on the French wholesale electricity market.

The Commission closed the case in September 2012.

Arbitration following termination of a gas supply contract

On 1 August 2012 EDF received a demand for arbitration filed with the International Chamber of Commerce by one of its gas suppliers, who is challenging EDF's termination of a 4-year natural gas supply contract that still had one year to run. It values its claim at €100 million. EDF considers that the conditions for terminating the contract were fulfilled, and consequently that this claim is unfounded. The arbitration tribunal heard the case in January 2013 and its decision will be issued in the second half of 2014.

Nest-Energie

In a decision of 12 November 2009 authorising EDF's takeover of EDF Luminus (named SPE at the time), the European Commission made it a requirement that EDF should continue developing a CCG plant project through the company Nest-Energie, and divest the project if no final investment decision was made by the deadline of 30 June 2012.

On 14 May 2012 EDF filed an application for extension of this deadline, in view of the significant, long-term changes in the economic, political and regulatory situation specific to the energy markets in Belgium since the authorisation decision was issued in 2009. The Commission rejected this application on 28 June 2012 and granted a very short extension, considering it unnecessary to take changes in the Belgian market environment into consideration.

EDF lodged an appeal with the European General Court against this decision on 5 September 2012, together with an application for accelerated processing of the proceedings and for protective measures. On 30 November 2012 it filed an appeal before the Court of Justice of the European Union against the European General Court's order of 16 October 2012 rejecting the application for protective measures. The appeal for cancellation is also still pending before the court, and rulings should be given on both appeals during the first half of 2013.

Also on September 2012, EDF filed a request with the European Commission to have its commitment regarding Nest-Energie waived, on the grounds of the significant, long-term changes in the economic, political and regulatory situation specific to the energy markets in Belgium. This request is under examination and a decision should be issued during the first half of 2013.

In keeping with its commitment, EDF initiated the divestment process of Nest-Energie on 16 October 2012. The outcomes of the proceedings described above could have an effect on the divestment process.

SUN' R

On 21 June 2012, solar power electricity company Sun'R filed a complaint and an application for protective measures with France's Competition Authority (*Autorité de la Concurrence*), alleging that ERDF was responsible for delays in the procedure for connecting to its photovoltaic facilities, and EDF was responsible for delays in execution of purchase obligation contracts and settlement of the associated bills. Sun'R also alleges that EDF ENR was given special treatment by ERDF for the connection of its facilities, and by EDF regarding settlement of bills. The *inter partes* proceeding began on 16 November 2012. The discussion before the Competition Authority concerning the admissibility of the case and the possibility of granting protective measures took place on 23 January 2013. EDF and ERDF are formally contesting these allegations.

Meanwhile, Sun'R made an emergency application before the Paris Administrative Court on 29 August 2012 for an independent expert assessment and advance on indemnity, claiming provisional indemnities of €1 million from EDF and €2.5 million from ERDF. This application was refused in an order of 27 November 2012 by the Judge of the Paris Administrative Tribunal.

Litigation with photovoltaic producers

The announcement by the French authorities in autumn 2009 of a coming downward adjustment to the photovoltaic electricity purchase prices set by the order of 10 July 2006, triggered an enormous increase in requests for purchase contracts, likely to generate a very significant increase in costs to be compensated by the CSPE. A series of ministerial decisions was issued after this announcement, changing both the tariffs and terms of purchase obligations for electricity generated from photovoltaic sources. Through a decree of 9 December 2010, the French government suspended these purchase obligations for a three-month period, and a decision of 4 March 2011 set new terms to apply after the end of the moratorium. Several producers then decided to bring proceedings with the aim of benefiting from the more favourable tariff set by the previous order of 10 July 2006, or seeking exemption from the suspension.

The most significant dispute concerned the Green Yellow companies, some twenty subsidiaries of the Casino group, which gave rise to two rulings by the Conflicts Tribunal and two by the Commercial Court on 11 July 2011 and 29 June 2012. This last ruling is now final and the litigation is terminated.

In Corsica and French overseas territories where EDF is also the network operator, around twenty producers have also filed claims for indemnities, in compensation for the income they claim was lost due to delays in connection procedures that allegedly resulted in them being subject to the suspension of purchase obligations.

Tax disputes

In 2008 and 2009 EDF underwent a tax inspection covering the tax years 2004, 2005 and 2006.

One of the 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 Electricité de Strasbourg. The Group is contesting the tax authorities' position on the deductibility of this provision. In late 2011 the National Commission of direct taxes and sales taxes issued an opinion supporting EDF's position on the principal grounds for reassessment arising from the inspection of the years 2004 to 2006, notably confirming the deductibility of the provision for annuities following work-related accidents and illness. 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.

The reassessment demand was sent to the Company in late 2011. A complaint applying for suspension of this demand was sent to the tax administration in 2012 to initiate the formal dispute procedure, but no answer had been received by the end of the year.

During 2010, a further inspection was begun of the years 2007 and 2008, and in late 2011 EDF was notified of a proposed rectification for 2008. EDF is contesting most of the tax reassessments, amounting to approximately €900 million, concerning deductibility of certain long-term liabilities. The administration confirmed these reassessments in 2012. The Company considers it is likely to win this dispute, and no provision has been established for the principal grounds for tax reassessment.

The tax administration has also proposed a reassessment following inspections of 2008 and 2009, 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.

Finally, 2012 saw the start of another inspection of the accounts for 2009 and 2010. Late in the year the Company received a proposed rectification, of a non-significant amount, for 2009. EDF is contesting this proposal.

1.9.2. PROCEEDINGS CONCERNING EDF SUBSIDIARIES AND INVESTMENTS

1.9.2.1 ERDF

Cancellation of the TURPE 3 decision

On 28 November 2012, the Council of State announced the cancellation of the decisions of 5 May and 5 June 2009 concerning the TURPE 3 distribution network access tariff.

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 will be effective from 1 June 2013. In the meantime, the CRE (French energy regulator) must propose new distribution tariffs for approval by the French ministers of the economy and energy, taking into account the decision of the Council of State, and these tariffs will replace the cancelled tariffs retroactively. The new tariff decision is currently in preparation.

Litigations with photovoltaic producers

Photovoltaic installations benefit from an obligation incumbent on EDF (or local distribution companies) to purchase the electricity they generate on terms defined by public regulations that have so far provided an incentive for photovoltaic energy. This system encouraged early development of photovoltaic power in France, but the resulting pace of growth in the sector was considered too fast, and the French government followed up a series of decisions lowering the purchase tariffs (12 January, 16 March, and 31 August 2010) by a "moratorium decree" on 9 December 2010: this decree suspended conclusion of new contracts for a three-month period and stipulated that applications for which the technical and financial proposals had not been adopted by 2 December 2010 would have to be resubmitted after that three-month period, based on a photovoltaic power purchase tariff set in a new decision. This decision was issued on 4 March 2011 and significantly reduced the purchase price for photovoltaic electricity.

In anticipation of the coming tariff changes, there was an upsurge in the number of applications from photovoltaic operators for connection received by ERDF's units, particularly in August 2010. Despite the significant measures taken to process these applications, ERDF was not always able to issue technical and financial proposals in time for the power generators to benefit from the pre-4 March 2011 tariffs.

A Council of State decision of 16 November 2011 rejecting appeals against the moratorium decree of December 2010 generated a large volume of legal proceedings against ERDF in November and December 2011, and also, although at a slower pace, throughout 2012. Most actions were initiated by generators who found themselves forced to abandon their projects because the new electricity purchase tariffs made operating conditions less favourable; they consider ERDF responsible for this situation since it did not issue the technical and financial connection proposals in time for them to benefit from more advantageous electricity purchase terms. ERDF considers that it cannot be held liable, and has lodged appeals against the small number of first instance rulings against it issued in 2011 and 2012.

1.9.2.2 EDF INTERNATIONAL

Tax dispute

The tax inspection of EDF International for the years 2008 and 2009 led to a proposed rectification received in late 2011. Two main reassessments amounting to some €135 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.

1.9.2.3 EDF ENERGIES NOUVELLES

Silpro

Silpro (Silicium de Provence) entered court-ordered liquidation on 4 August 2009. The 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. After examining the situation, the Group does not consider it necessary to recognise a provision.

1.9.2.4 EDISON

Carlo Tassara

Carlo Tassara, a company that is Edison's largest minority shareholder, initiated action on 12 July 2012 before the Lazio (Rome) Regional Administrative Court, seeking an increase in the price of the mandatory tender offer for Edison shares launched by EDF's subsidiary Transalpina di Energia (TdE) after the takeover of Edison on 24 May 2012. This action was brought against the Italian financial market authority CONSOB, EDF and its Italian subsidiaries (MNTC, WGRM4 and TdE), Edison, Delmi and A2A. No date has yet been set for the court hearing, and any ruling would be open to appeal before the Italian Council of State.

In parallel, in May 2012 Carlo Tassara submitted an application to the CONSOB for an increase in the price of the mandatory tender offer, based on practically identical arguments to those used in the proceedings on the substance of the matter before the Administrative Court. The CONSOB rejected this application on 25 July 2012, and no appeal was made.

EDF considers that Carlo Tassara has not provided any evidence to challenge the offer price as confirmed by the CONSOB, and that these proceedings are unfounded.

1.9.3. PROCEEDINGS AFTER THE YEAR-END

No other significant litigation has arisen since 31 December 2012.

1.10. SUBSEQUENT EVENTS

Details of post balance sheet events can be found in note 51 to the consolidated financial statements at 31 December 2012.

1.11. FINANCIAL OUTLOOK

In view of the less favourable economic environment, the Group has set itself the following financial objectives for 2013:

- Growth in EBITDA[36] of between 0% and 3% (excluding Edison)
- For Edison, the timetable for renegotiation of gas supply contracts should generate high volatility in results between 2013 and 2014, but EBITDA excluding non-recurring items should remain in line with EBITDA for 2012
- Net indebtedness/EBITDA ratio of between 2x and 2.5x
- A dividend distribution rate for the period of between 55% and 65% of net income excluding non-recurring items.

These financial objectives are mainly founded on:

- A new purchase optimisation plan, which will have an effect on operating expenses as well as investments, achieving savings of €1 billion as soon as 2013
- Stable net investments at €12 billion.

The EDF group is continuing action to address a certain number of issues in 2013 that are key factors for the Group's financial equilibrium.

The Group will carry out a detailed review of its medium-term financial trajectory by the end of 2013.

[36] Growth based on constant scope of consolidation and exchange rates.

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 €924,433,331 divided into 1,848,866,662 fully subscribed and paid-up shares with nominal value of €0.50 each.

The Company has not issued or authorised any preference shares.

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 2012, EDF's shareholding structure was as follows:

- French State: 84.44%
- Institutional and private investors: 13.59%
- Employees: 1.85%
  - incl: employee investment fund[37]: 1.57%
- Treasury shares: approximately 0.12%
- Total number of shares: 1,848,866,662

1.12.1.4. TREASURY SHARES

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

[37] Company investment fund invested in EDF shares.

Liquidity contract

With effect from 24 July 2012, EDF terminated its liquidity contract with Crédit Agricole Cheuvreux signed on 1 June 2006 and renewed by tacit agreement every year since. The initial sum of €35 million was allocated to execution of the liquidity contract. At the contract termination date, the liquidity account contained 1,350,000 EDF shares and €4,408,111.48 in cash.

From 25 July 2012, EDF engaged Oddo Corporate Finance to implement a new liquidity agreement that complies with the Charter of Ethics of the *Association Française des Marchés Financiers* (AMAFI) as approved by the French market authority AMF. The following assets were allocated to this liquidity contract: 1,350,000 EDF shares transferred from the former liquidity contract and €50 million in cash.

In 2012, EDF paid the following commissions on its liquidity contracts:

- €92,852 to Crédit Agricole Cheuvreux
- €34,849.32 to Oddo Corporate Finance.

Information on transactions undertaken by the company on its own shares in 2012 under a share repurchase programme (repurchase programmes authorised by the shareholders at the General Meeting of 24 May 2012):

Number of shares purchased and sold in 2012

During the year 2012, EDF purchased 8,398,898 of its own shares and sold 7,413,159 shares under its liquidity contract. The average purchase price was €15.94 per share, and the average sale price was €15.95 per share.

Value of the portfolio of treasury shares at 31 December 2012

2,161,333 shares were registered in the company's name at 31 December 2012.

These shares represented approximately 0.12% of the share capital at 31 December 2012.

The book value of these shares at 31 December 2012 (based on purchase price) was €33,068,975 and their nominal value was €1,080,667.

The market value of the portfolio at that date (based on the closing market price of €13.98 at 31 December 2012) was €30,215,435.34.

Allocation of the portfolio at 31 December 2012

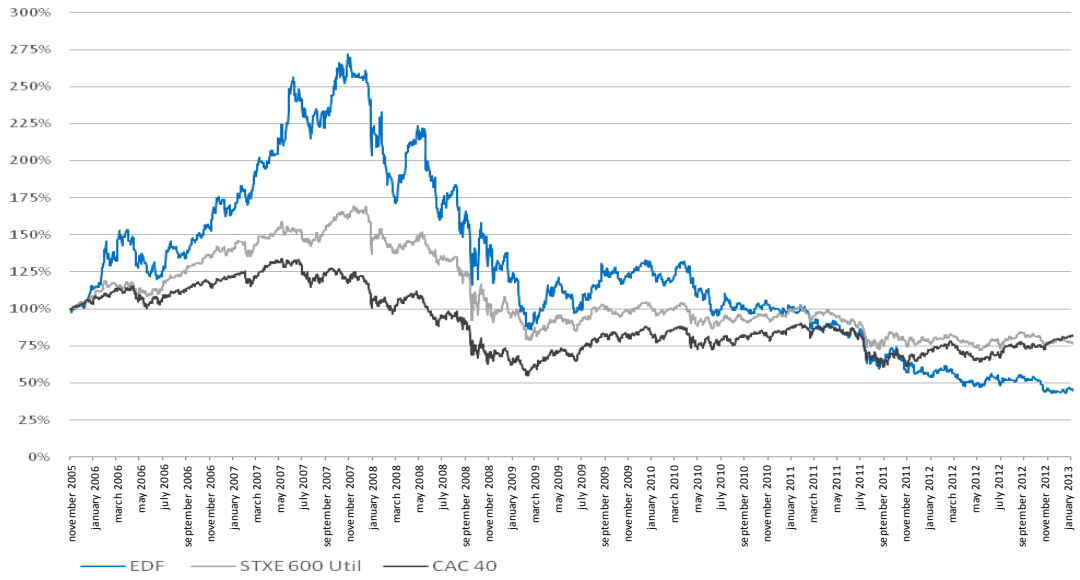
At 31 December 2012, the portfolio consists of 2,110,739 shares held for the purposes of the liquidity contract (0.1142% of the share capital) and the balance of 50,594 shares (0.0027% of the share capital) acquired on the market for attribution to employees under the "ACT 2007" free share plan, but not attributed to employees.

No shares were reallocated to other repurchase programme purposes in 2012.

1.12.1.5. SHARE PRICE[38]

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 2013:

EDF share price from the IPO to 31 January 2013



From 2 January 2012 to 31 January 2013, the EDF share price declined by 24.8%, the Euro Stoxx Utility index declined by 3.4%, and the CAC 40 rose by 18.1%.

At 31 January 2013, the EDF share price at close of business was €14.145 (€19.240 at 2 January 2012). Its lowest closing price during the period was €13.66 on 6 December 2012, and the highest closing price was €19.60 on 2 March 2012.

EDF's market capitalisation at 31 January 2013 was €26.152 billion.

[38] 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 2012 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 value of the capital increase (in millions of Euros)	Utilisation of authorisations (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	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 the notes to the 2012 consolidated financial statements.

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 2012 Reference Document.

1.13.1. BOARD OF DIRECTORS

During 2012 the Board of Directors met 9 times, and the Committees held 27 preparatory meetings. The Board also met once for a strategic seminar.

The attendance rate at meetings of the Board of Directors was 89.5% on average in 2012.

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 now 4 women among the 18 members of the Board of Directors, or 22.2% for all categories of director.

At 31 December 2012, the Board of Directors consisted of the following Directors[39], 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 Boards of Directors of Edison and EDF Energy Holdings
President of the governing boards of Fondation EDF and Electra association

Director of EDF Energies Nouvelles
Director of EDF International (SAS)

Director of CNP Assurances, Dassault Aviation, Fomento di Construcciones y Contratas, Natixis, South Stream Transport BV (Netherlands) and South Stream Transport AG (Switzerland)

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 the European Foundation for the Energies of Tomorrow

Director of EDF since September 2004

Philippe Crouzet
Date of birth: 18 October 1956
Chairman of the Supervisory Board of Vallourec
Director of EDF since November 2009

Mireille Faugère
Date of birth: 12 August 1956

[39] Section 14.1 of the 2012 reference document.

General Manager of Assistance Publique – Hôpitaux de Paris
Director of Essilor International and Fondation L'Oréal
Vice-President of the Association HEC committee
Director of EDF since November 2009

Michael Jay
Date of birth: 19 June 1946
Crossbench member of the British House of Lords, Chairman of the House of Lords Appointments Commission and member of its EU Sub-Committee on foreign, defence and development policy
Director of Associated British Foods, Candover Investments and Valeo
Chairman of Merlin (International medical NGO)
Director of EDF since November 2009

Bruno Lafont
Date of birth: 8 June 1956
Chairman and CEO of Lafarge
Director of Arcelor-Mittal and Lafarge Shui On Cement
Member of business school HEC's Advisory Board
Advisor to the Mayor of Chongqing (China)
Director of EDF since May 2008

Pierre Mariani
Date of birth: 6 April 1956
Member of the Board of Directors of Dexia Asset Management
Managing Director and Chief Executive Officer of Pierre Mariani Consulting
Director of Etablissement 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:**

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 Air France-KLM, Fonds Stratégique d'Investissement and Renault
Member of the Supervisory Board of AREVA
Member of the Scientific committee of La Fabrique de la Cité
Director of EDF since 9 November 2012

Julien Dubertret
Date of birth: 9 June 1966
Director of the National Budget for the Ministry of the Budget, Public Accounts and State reform
Director of SNCF
Director of EDF since June 2011

Yannick d'Escatha
Date of birth: 18 March 1948
Chairman of the government space policy agency Centre National d'Etudes Spatiales (CNES)
Chairman of the Board of Directors of Troyes University of Technology
Permanent representative of the CNES on the Board of Arianespace SA and Arianespace Participation
Director of Thalès
Member of the Academy of Technologies
Director of EDF since November 2004

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 7 May 2012

François Loos
Date of birth: 24 December 1953
Chairman and CEO of ADEME
Member of the Supervisory Board of Euler Hermes
Director of Atesys, Caisse du Crédit Mutuel de Zinsel du Nord, Alsace Amorçage, Alsace Création, Agence de l'Investissement International, GSE and Oseo Région
Director of EDF since 13 February 2012

Pierre Sellal
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 Ecole Nationale d'Administration, Audiovisuel extérieur de France, Institut Français, Agence nationale des titres sécurisés, Commission de récolement des dépôts d'oeuvres d'art and Etablissement 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

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

Philippe Maïssa
Date of birth: 21 November 1949
Engineer at EDF's Fossil-fired engineering center
Director of EDF since November 2009, sponsored by the CGT union

Marie-Hélène Meyling
Date of birth: 30 October 1960
Attachée at EDF's Upstream/Downstream Optimisation and Trading division
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 the Finance and Industrial relations mission, Tricastin nuclear electricity generation centre
Director of EDF since December 2006, sponsored by the CGT union

The following directors were appointed during the year:

By a decree of 13 February 2012, **François Loos**, Chairman of the French Environment and Energy Management Agency (ADEME – *Agence de l'Environnement et de la Maîtrise de l'Energie*) was appointed as a director of EDF representing the French State, replacing Philippe Van de Maele.

By a decree of 7 May 2012, **Marie-Christine Lepetit**, Head of the General Inspectorate of Finances, was appointed as a director of EDF representing the French State, replacing Pierre-Marie Abadie. At the Board of Directors' meeting held on 24 May 2012, Mme Lepetit was made a member of the Strategy Committee, the Nuclear Commitments monitoring committee and the Ethics Committee

By a decree of 9 November 2012, **David Azéma**, Equity investments Commissioner, was appointed as a director of EDF representing the French State, replacing Jean-Dominique Comolli. At the Board of Directors' meeting held on 22 November 2012, Mr Azéma was made a member of the Audit Committee, the Strategy Committee, and the Appointments and Remunerations Committee.

The French decree 2012-406 of 23 March 2012 introduced a Government commissioner for EDF's Board of Directors. The Government commissioner attends meetings of the Board and its Committees in a consultative capacity, and may present observations at Shareholders' Meetings.
By a decision of 15 June 2012 **Pierre-Marie Abadie**, Director of Energy at the General division for Energy and Climate for the French Minister of Ecology, Sustainable development and energy, was appointed Government commissioner to EDF.

The directors whose term of office ended during 2012 were:

Pierre-Marie Abadie
Director of EDF from August 2007 to May 2012, replaced by Marie-Christine Lepetit on 7 May 2012

Jean-Dominique Comolli
Director of EDF from September 2010 to November 2012, replaced by David Azéma on 9 November 2012

Philippe Van de Maele
Director of EDF from November 2009 to February 2012, replaced by François Loos on 13 February 2012

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 Yannick d'Escatha, 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 Yannick d'Escatha, 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 discussions.

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, Marie-Hélène Meyling, Philippe Maïssa and Alexandre Grillat.

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.

1.13.2. CHAIRMAN AND CEO AND DIRECTORS' REMUNERATION

The tables below show the remuneration and various benefits paid during 2012 to EDF's directors and the chairman and CEO by EDF and its controlled companies at 31 December 2012.

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 the Chairman and Chief Executive Officer are set by the 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 set an annual limit of €450,000 for the remuneration paid to the chairman and CEO. In a letter of December 2012, the Minister for the Economy required EDF to apply this decree with retroactive effect from 1 October 2012.

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 2012, and no options were exercised by him during the year. Similarly, no performance shares were attributed to the Chairman and CEO in 2011, 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 2012.

In view of the provisions of the decree of 26 July 2012 and the Minister's letter referred to above, the Appointments and Remuneration Committee will submit the proposed terms for implementation of the new rules, and the associated adjustments to 2012 remuneration, to the Ministers concerned for approval and/or amendment, and subsequently to the Board of Directors.

2012	Paid during 2012 (in Euros)
Henri Proglio, Chairman and CEO	
Fixed salary	1,000,000
Variable salary	588,000 [1]
Exceptional salary	none
Directors' fees	n.a
Benefits in kind [2]	5,007
TOTAL	**1,593,007**

[1] Variable salary for 2011, paid in 2012.
[2] Company car and benefits in kind in the form of energy
n.a: non applicable

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. Since 2005, the amount of directors' fees paid depends on attendance at Board and Committee meetings.

The General Shareholders' meeting of 24 May 2011 approved the amount of €200,000 as the annual budget for directors' fees, and decided that from 2011, this total budget will be allocated as follows:

- The fixed portion of €100,000 is shared equally between all directors, 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	2012[1]	2011[2]
Philippe Crouzet	39,355	32,000
Mireille Faugère	46,452	34,000
Michael Jay	36,129	29,000
Bruno Lafont	41,290	20,000
Pierre Mariani	36,774	32,000
Henri Proglio	-	-
TOTAL (in Euros)	**200,000**	**147,000**

[1] For the second half of 2011 and the first half of 2012.
[2] For the second half of 2010 and the first half of 2011.

1.13.2.3. EDF SHARE OWNERSHIP BY DIRECTORS

At 31 December 2012, the members of the Board of Directors hold a total of 1,213 shares. The table below shows the number of EDF shares held by indiviual directors:

	Number of EDF shares
Henri Proglio [1]	51
Christine Chabauty [2]	55
Philippe Crouzet [1]	200
Mireille Faugère [1]	106
Alexandre Grillat [2]	355
Michael Jay [1]	200
Bruno Lafont [1]	150
Philippe Maïssa [1]	39
Pierre Mariani [1]	1
Marie-Hélène Meyling [1]	28
Maxime Villota [2]	28

[1] Shares held directly.
[2] Shares held through an employee investment fund - FCPE.

Ms Lepetit and Messrs Azéma, Dubertret, d'Escatha, Loos, Rignac and Sellal held no shares in EDF at 31 December 2012.

1.13.3. GOVERNANCE BODIES

1.13.3.1. EXECUTIVE COMMITTEE

The members of the Group's Executive Committee (COMEX) at 31 December 2012 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 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 Energies Nouvelles, Catherine Gros, Senior Group Executive Vice President, Communications, Philippe Huet, Senior Group Executive Vice President, Risks and Audit, 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, Gérard Wolf, Director in charge of relations with financial institutions in Washington. 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 2012 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 CORPORATE FINANCIAL STATEMENTS OF EDF S.A. AT 31 DECEMBER 2012

In millions of Euros	2012	2011
Sales excluding taxes	44,106	41,950
Operating profit	3,843	3,957
Profit before exceptional items and tax	3,830	1,277
Net exceptional profit (loss)	196	197
Net income	3,566	1,118

1.14.2. NET INCOME

The 2012 income statement is marked by growth of more than 5% in sales and an increase of 3% in operating profit.

Sales growth mainly concerned electricity sales in France, and reflects weather effects and the increases in regulated tariffs of July 2011 and July 2012.

The €2.5 billion increase in net profits is mostly attributable to the financial result, which showed an improvement of €2.7 billion essentially resulting from higher dividends received and net reversals of impairment on financial assets, particularly dedicated assets, and income of €629 million in 2012 for the costs of bearing the cumulative charges associated with the CSPE systems.

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[1]	Total dividends paid (after deduction of treasury shares)
2009	1,848,866,662	1.15 €	€2,111,146,365.85 [2]
2010	1,848,866,662	1.15 €	€2,122,291,972.68 [3]
2011	1,848,866,662	1.15 €	€2,124,757,978.20 [4]

[1] After deduction of treasury shares
[2] including 2009 interim dividend paid on 17 December 2009: €1,002,006,770.05 (including €937,815,444.36 paid in the form of new shares)
[3] including 2010 interim dividend paid on 17 December 2010: €1,053,574,334.82
[4] including 2011 interim dividend paid on 16 December 2011: €1,053,169, 658.76

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

1.14.4 FIVE-YEAR SUMMARY OF EDF RESULTS

	2012	2011	2010	2009	2008
Capital at year-end					
Capital (M€)	924	924	924	924	911
Capital contributions (M€)	-	-	-	-	-
Number of ordinary shares in existence	1,848,866,662	1,848,866,662	1,848,866,662	1,848,866,662	1,822,171,090
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	44,106	41,950	40,906	38,895	39,003
Earnings before taxes, employee profit sharing, depreciation and provisions	7,978	5,417	4,906	4,531	3,842
Income taxes	460	356	660	402	(346)
Employee profit share for the year					
Earnings after taxes, employee profit sharing, depreciation and provisions	3,566	1,118	1,492	4,580	867
Earnings distributed		2,125[(1)]	2,122[(1)]	2,111[(1)]	2,328[(1)]
Interim dividend distributed	1,053	1,053	1,054	1,002	1,164
Earnings per share (€/share)					
Earnings after taxes and employee profit sharing, before depreciation and provisions	4.07	2.74	2.30	2.23	2.30
Earnings after taxes, employee profit sharing, depreciation and provisions	1.93	0.60	0.81	2.48	0.48
Dividend per share		1.15[(1)]	1.15[(1)]	1.15[(1)]	1.28[(1)]
Interim dividend per share	0.57	0.57	0.57	0.55	0.64
Personnel					
Average number of employees over the year	64,303	62,479	60,,380	59,837	59,131
Total payroll expense for the year (M€)	3,687	3,600	3,377	3,265	3,178
Amounts paid for employee benefits and similar (social security, company benefit schemes, etc) (M€)	2,551	2,161	2,125	2,025	1,917

[(1)] including the interim dividend paid out.

1.14.5. PAYMENTS TO SUPPLIERS

Since 1 December 2008, the Company 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 €3,134 million, distributed as follows:

- Invoices due: €29 million (less than 1%)
- Invoices payable within 60 days: €3,034 million (97%)
- Invoices payable after 60 days: €71 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 85-104)
Section 2.3	➲	Societal information (pages 105-115)
Section 2.4	➲	Social information (pages 116-140)

This information must be read in conjunction with the summary report of the EDF group's sustainable development indicators published on pages 131-141.

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 and the security of its industrial facilities, 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 Group companies in 2009, itself comprising environmental, societal and governance policies
- A global approach to Human Resources and social matters called « Vision RH », consisting of group policies on diversity, career equality, accessibility, etc through a worldwide Corporate Social Responsibility agreement signed with the union organisations of 16 Group companies
- A Group charter of ethics, currently being rolled out to replace EDF SA's Ethics Guide introduced in 2007.

2.1. SUSTAINABLE DEVELOPMENT

The EDF group's environmental and societal policy draws on the principles of the United Nations Global Compact, which the Group joined in 2001. The Group has formally defined its action in a sustainable development policy that addresses the relevant key issues, guided by EDF's ethical approach. This is reflected in an environmental policy focusing on climate change prevention and protection of biodiversity, and a societal policy promoting access to energy, local responsibility and contributions to education on energy issues

2.1.1. GOVERNANCE OF SUSTAINABLE DEVELOPMENT

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

- A **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 defined four major areas for action: dialogue with stakeholders, the inclusive green economy (financing the economic model and integrating sustainable development aspects into all lines of activity), sustainable development in projects and management of sustainable development (led by the Group).
- An **environmental management system** (EMS) that is used in all entities (see 2.2.1.1).
- A **Group Sustainable Development Committee** formed in late 2008, made up of the heads of sustainable development from the principal Group subsidiaries, affiliates 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 2012 to monitor progress on the charter of ethics at Group level, examine the conditions for stronger dialogue between Group companies and their stakeholders, assess the acceptability of these entities' industrial facilities, study the relevance of the Group's current sustainable development policy in the light of new worldwide environmental and societal situations, initiate reflection on the introduction of common corporate social responsibility commitments for all Group subsidiaries, affiliates and divisions, and discuss the issues raised by a biomass policy.

- **Project screening** through 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 commitments".

2.1.2. TRAINING IN SUSTAINABLE DEVELOPMENT FOR MANAGERS AND EMPLOYEES

EDF has embarked on a programme to raise managers' and employees' awareness and consideration of sustainable development issues, via:

- A system to incorporate sustainable development issues into project management. Since April 2012 the project management standards has been updated, to incorporate the sustainable development dimension and investment monitoring more comprehensively. All aspects of sustainable development and economic performance are now covered: analysis of the project's economic lifecycle, contribution to local economic development, investment monitoring, inclusion of social clauses in procurement contracts, compliance with regulatory consultation measures, etc. The updated standards were prepared in conjunction with the companies and divisions, and will be rolled out to the whole Group in 2013. This is backed up by a system to help local diagnosis, appropriate training sessions, and mapping of the stakeholders and the Durabilis methodology, all to help managers develop action plans for sustainable development, and encourage them to identify the stakeholders concerned by their project, the project's consequences for local employment, value creation in the local area, secure working conditions, reasonable use of local resources, biodiversity impacts, etc. The Durabilis methodology was rolled out in 2012 by EDF's business line management divisions as part of the "improving project success" programme. A project management community is currently being created to lead a network of project managers.
- Introduction of a compulsory 2-day training module in "Customer Division fundamentals" for everyone joining EDF; this module covers the new regulatory environments, the issues of energy efficiency and the dangers of electricity as a product;

- A "Core knowledge" academy which provides training for all new arrivals at the Nuclear fleet division in ISO 14001 certification, industrial and nuclear waste management and ethics
- Specific Academies for the generation business lines, including environmental modules (e.g. amoebae and legionella, and environmental regulations for engineers)
- Theme days (the Society Workshop in January 2012 that gave 80 project managers better awareness of the importance of taking stakeholder expectations into consideration; Eco-design day for engineering sustainable development delegates, for stronger incorporation of eco-design into industrial projects)
- Publication of methodological guides on attention to biodiversity in operational business lines (hydropower and property management in 2011, nuclear power and networks in 2012)
- Introduction, over the last three years, of a "responsible purchasing" component in the training of purchasers followed by all new arrivals concerned (1,435 hours of training given in 2012), and introduction of a specific 2-day course on "Purchasing and sustainable development" (1,000 hours of training given since 2010)
- Organisation of "Sustainable City" conferences where the teams in charge of strategy, relations with local authorities, research and sustainable development can share the experiences of town planners, architects, local development and planning agencies, mayors, ministerial experts and research institutes. Four conferences took place in 2012, focusing on initiatives taken by the Swedish city of Malmö, social diversity in towns and cities, urban change and urban biodiversity
- The launch in May 2012 of a "Sustainable Development community" on EDF's intranet site, to encourage sharing of good practices instigated by the business line divisions and make employees more aware of changes in their environment (40,000 pages have been visited)
- The "Wattitude" system offering EDF employees products and services at special rates to reduce their energy consumption and carbon footprint, and an associated campaign to educate users and promote environmentally responsible behaviour in everyday life
- Inclusion of sustainable development criteria in calculation of employee profit share. This concerns two of the total five criteria: the recycling rate for waste managed by EDF, and the proportion of employees who followed at least one training course during the year. 40% of employee profit share is linked to achievement of these objectives.

Training for nuclear service providers also includes an "environment" module.

In 2012, EDF and ERDF focused on raising employee awareness of reducing industrial waste, by launching an inter-business line competition named *Ça déborde, à vous de jouer*. The objective is to identify innovative practices that generate less waste at source, and share them with a view to industrial application. This operation is one of the 35 corporate initiatives to gain official recognition by the French environment and energy management agency ADEME as part of the 4th European Waste Reduction week (November 17-25, 2012). More than 130 teams submitted initiatives on four themes: reducing the quantity of waste, reducing its danger level, optimising site waste management and reducing office waste. The competition was accompanied by a multi-business line day dedicated to prevention and optimisation of non-nuclear waste.

In the United Kingdom, all EDF Energy employees now follow a compulsory e-learning course called Sustainable Steps, which presents the company's sustainable development commitments. More than 6,400 employees (41% of the workforce) have already followed this course. In the "Coaching for performance" career plan, each person must define an action associated with sustainable development, and each action is subject to managerial monitoring. In 2012, 76% of employees drew up an action. The management training initiated in 2011 to foster inclusion of sustainable development in decision-making criteria and assessment of the opportunities offered by sustainable development in their business model has now been extended to employees in charge of programmes related to corporate responsibility. Finally, EDF Energy has set up a Company Incentive Plan (CIP) that includes profit share criteria based on the degree to which economic, environmental and social performance commitments are kept.

2.2. ENVIRONMENTAL INFORMATION

2.2.1. GENERAL ENVIRONMENTAL POLICY

2.2.1.1. ORGANISATION AND ISO 14001 CERTIFICATION

The Group's entities use an environmental management system (EMS). Initiatives, objectives and indicators are coordinated through the system at Group level according to the environmental commitments in the Group's development policy, overseen by a Supervisory Board and groups focusing on specific themes.

In 2011 the AFNOR issued its third 3-year renewal for the Group's ISO 14001 certification, originally gained in 2002.
Some ISO 14001 certified Group companies are aiming to join this Group certificate in 2013. In 2012, EDF and its subsidiaries and affiliates representing 98% of consolidated sales had ISO 14001 certification.

In France, as part of the operation of its EMS, EDF has structured its approach in an environmental management programme (EMP).
The programme, which was validated when the SME was reviewed by the environmental Supervisory Board on March 21, 2012, 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 CO2 emissions by improving nuclear fleet availability and adjusting the energy mix (developing renewable energies and commissioning new generation units, particularly combined cycle gas units)
- Limiting environmental impacts, especially on biodiversity
- Improving management and recycling of non-nuclear waste
- Screening sustainable development criteria for investment, development and maintenance projects for industrial installations
- Maintaining the good level of employment and management awareness
- Demonstrating continuous improvement and performance
- Giving greater recognition to employees' efforts to achieve targets
- Improving organisation further, ensuring that activities are in compliance with regulations.

At International level, at the annual review of the EMS on June 29, 2012, the members of the Sustainable Development Committee defined the following major orientations:

- Ongoing introduction of action plans for adjustment to climate change, as decided by each entity;
- Continued integration of certified companies into the Group's ISO 14001 certificate
- Implementation of Group commitments regarding water (see 2.2.4.2)
- Sharing the methodological components of a Group carbon footprint (greenhouse gas review).

2.2.1.2. OVERSIGHT OF ENVIRONMENTAL RISKS

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

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
- Management of water resources
- Greenhouse gas emissions.

These risks are fully integrated into EDF's environmental management 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:

- inspections and audits of generation sites (see 2.2.2.1 "Nuclear safety" and 2.2.2.2 "Hydropower safety")
- crisis drill exercises; In 2012, 195 exercises (incuding 12 national drills together with the French authorities) took place at 19 of the French nuclear power plants
- an active investment policy
- a personnel training programme to raise awareness of all parties involved.

There were no major significant environmental events[40] in 2012.

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

[40] 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.

2.2.1.4. ENVIRONMENTAL RESEARCH AND DEVELOPMENT

With its forward–looking action for the medium and long term, EDF's R&D is preparing for the Group's future by responding to the environmental issues it faces.

Its research areas focus on three major priorities (see 1.5.2):

- Consolidation of a carbon-free energy mix
- Development of a flexible demand for low-carbon energy
- Adaptation of the electricity system to meet new challenges

The main areas for sustainable development-themed research in 2012 are:

- Controlling the nuclear facilities' impact on the environment: i) intensifying research on safety, the environment (external events) and operating lifetime, ii) new topics such as rehabilitation of an inhabited area evacuated after a nuclear incident.
- Improving the competitivity and availability of nuclear power plants, with the objective of generating the same amount of electricity for lower fuel consumption. Innovative instruments were developed during 2012 to identify energy losses and performance in the plants' major circuits, and to assess the additional power margins that could be achieved without compromising safety.
- Reinforcing investments in new test resources to support energy efficient offers, with two new laboratories opened in 2012 of (one to work on Low Energy Buildings and the other on new lighting techniques).
- Participation in five Institute of Excellence carbon-free energy projects under the *Investissements d'avenir* project for investments with a future: i) the *Institut Photovoltaïque Ile de France* (IPVF), which focuses on technological innovation to bring competitive photovoltaic energy on the market, ii) *France Energies Marines*, working on marine and offshore wind power, iii) *SuperGrid* on the theme of major transmission networks connecting remote renewable energy generation sites, iv) *Efficacity*, on the sustainable city, and v) *Vedecom*, on electric mobility.

EDF is also the lead investor in Electranova Capital: for details see section 1.2.2.2.4.4.

2.2.2. SAFETY OF INDUSTRIAL FACILITIES, AND PERSONAL SAFETY FOR EMPLOYEES AND THIRD PARTIES

2.2.2.1. NUCLEAR SAFETY

Plant safety during 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.
In 2012, EDF published its nuclear safety measures and commitments in a single document containing the Group's nuclear safety policy. This has been incorporated into training applicable to 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[41] member firms and OSART[42] audits conducted by experts from the IAEA[43]).

[41] World Association of Nuclear Operators
[42] Operational Safety Review Team
[43] International Atomic Energy Agency

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.
In 2012 four operational FARN teams (Civau, Paluel, Dampierre and Bugey) were in existence and simulation exercises were conducted (restoring water, air and electricity supplies).

To ensure the nuclear fleet remains effective and safe after 40 years of operation, EDF is implementing the Major Refit programme involving replacement of major components on nuclear installations. A key aim of this programme 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 2012

There was no serious safety event or above-limit discharge in 2012.

The number of significant safety events declared in France to the Nuclear Safety Authority in 2012 (11.9 per reactor) rose noticeably (+16%) compared to 2011, as did the number of events classified as INES level 1 (1.55 per reactor). Transparency at EDF is good, and this rise, which was mainly due to an increase in events of the kind that arise in general maintenance activities (+40%), requires in-depth analysis and immediate corrective action. Also to be noted is the declaration of one INES level 2 significant safety event with no immediate safety consequences: nonconformities were detected in early 2012 that had affected the "siphon breakers" of certain fuel storage pools from the outset. The number of automatic reactor trips (ARTs) is encouraging, being comparable at 0.55 to 2011 when the fleet registered its best ever performance. This confirms the progress made in previous years and the attainment of the best international standards. In 2012, 36 reactors had no ART all year. The consolidation in 2012 of achievements in fire safety measures (prevention, organisation, training) w as another key achievement. Few fires started and there was no major fire incident.

At EDF Energy, in the UK where differences in declaration procedures reflect different reporting requirements, the number of significant safety events was down slightly in 2012 (to 4.6 per reactor from 4.7 in 2011). More comparable is the number of events classified under the INES: the number of events declared, all limited to level 1 in 2012, was lower than in 2011 and than in the French fleet (0.80 per reactor).

In the United States, which also has different declaration procedures, the number of significant safety events declared in 2012 by CENG remained stable at close to 11 per unit. The number of events classified under the INES rose slightly (0.8 per reactor after 0.6 in 2011), and all were limited to level 1 in 2012.

Detailed results on nuclear safety for 2012 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 April 2013).

2.2.2.2. HYDROPOWER SAFETY

In France, EDF operates 435 hydropower plants and manages the water reservoirs held by its 239 large dams. The average age of French hydropower facilities is 69 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 2012 despite three important hydropower safety incidents classified as "orange" that resulted in two penstock pipes and one turbine shroud breaking, confirming the need to continue asset maintenance efforts and renewal of skills. The key indicators are still progressing:

- good detection of significant (non-serious) events (level 0) by local teams (2,950 detected in 2012, 2,472 in 2011
- the number of events with external effects (level 1 or below) was substantially lower (39 in 2012, 32 in 2010 and 34 in 2009 after a total of 22 in 2011 when water levels were low)
- the number of sites with a risk of "high criticality" as regards variations in water flow downstream of installations continued to decline: it has fallen from from 114 in 2005 to 16 in 2012 (19 in 2011).

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 for fleet safety and efficiency is 73% complete. This programme involves €888 million of expenditure on safety between 2007 and 2017, covering 446 operations, including 367 directly concerning safety. 269 safety operations had been carried out by 31 December 2012.
The recurring maintenance programme *IPHE-S*, covering the safety aspects of hydropower engineering for plants in operation, provides a long-term complement to 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. At the end of 2012, 664 specific actions were in process and monitored in 5 priority groups of facilities: galleries, pipes, dams, penstocks and floodgates.

Both these programmes are backed up by the *RenouvEau* programme to improve the safety, performance and competitivity of the hydropower fleet. The solutions developed aim to generate more hydropower at the optimum time, reduce fleet unavailability and raise profitability while guaranteeing operational and workplace safety. This programme will be rolled out in 2013, after last year's test phase on pilot sites.

Owners or operators of dams are required by law to carry out safety reviews and danger assessments, and EDF expects to complete 242 danger assessments by 2014 and 152 safety reviews by 2017. By the end of 2012, 67 safety reviews and 175 danger assessments had been carried out, as required by the decree of 11 December 2007, covering all class A facilities (dams at least 20m high, i.e. 149 EDF dams).

For further details, see the 2012 report by the Inspector of Hydropower Safety, available from EDF's sustainable development report website (http://rapport-dd.edf.com, to be released in April 2013).

2.2.3. WASTE POLICY AND MANAGEMENT

2.2.3.1. NUCLEAR WASTE

In France, radioactive waste is classified by activity level and lifetime, following the classification used by the French national agency for radioactive waste management ANDRA (*Agence nationale pour la gestion des déchets radioactifs*). Waste is listed in an inventory stating its location, and the data are 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	2012	2011	2010
Very low-level radioactive waste from decommissioning	t	2,528	634	1,369
Low and medium-level short-life solid radioactive waste	m^3/TWh	20.7	15.6	12.4
High and medium-level long-life solid radioactive waste	m^3/TWh	0.88	0.87	0.88
Transported spent nuclear fuel	t	1,075	1,199	1,140

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

EDF's research programmes on nuclear waste also cover:

- classification of nuclear waste, reprocessing where relevant, conditioning into packages, and its subsequent long-term behaviour in storage
- thermal-hydro-mechanical and chemical behaviour of geological storage for long-life medium ad high-level waste, and the long-term safety of such facilities
- development of a long-term view in keeping with the prospects for developing 4th generation reactors.

In 2012, EDF's R&D joined forces with other European nuclear actors to form the association Nugenia, which has 60 members from 18 countries. EDF is the president of this association, formed to facilitate synergies and joint projects with national R&D programmes in the following areas: safety and risk analysis, serious accidents, reactor cores and performances, component integrity and ageing, fuels, waste and decommissioning, the Generation III design innovator, and more general issues of harmonising practices (principally in the field of safety) and non-destructive inspections and evaluations.

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 2012 are established in compliance with the law of 28 June 2006 and its implementing decrees, which were issued in 2007.

At 31 December 2012, provisions for decommissioning and last cores amounted to €20,979 million, and provisions for the back-end nuclear cycle totalled €19,525 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.

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 (FZJ), the CEA, Manchester University and ANDRA. This 4-year project starts in 2013.

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	2012	2011	2010
Transported uranium	t	216	210.7	131
Transported low level radioactive waste	m^3	698	608	498
Generated medium level radioactive waste	m^3	161	161	162

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	2012	2011	2010
Nuclear fuel delivered	t	46	48	34
Transported low and medium level solid radioactive waste	m^3	2,419	1,287	735

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, reaffirmed in the Group's environmental policy. 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 "minimum" level for several years, after reducing them by a factor of 100 in 15 years. This achievement results from the efforts made regarding capture, sorting and orientation of effluents at source, increasing evaporation treatments, implementing demineralisation processes and optimising recycling of effluents. Cutting discharge has not caused an increase in waste, because waste also declined over the same period. The same applies for tritium, carbon-14 and other chemical substances.

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 impact in the long term.

In the United Kingdom, radioactive effluents remained stable and within regulatory limits.

The result of atmospheric emissions and radioactive discharge is reported for EDF, EDF Energy et CENG in the summary of environmental indicators reported in appendix 1.

2.2.3.3. INDUSTRIAL WASTE

In its sustainable development policy, the EDF group takes proactive measures to limit 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 and upstream use of products designed and produced in environmentally-friendly ways. A permanent progress approach is applied, founded on the conviction thar the "best waste" is waste that is never produced.

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

In **France**, 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. Of the 16 major projects identified in 2012 for the nuclear fleet, 10 are already covered by a plan of this kind and 100% of nuclear engineering projects use them.

When reassessed in March 2012, EDF's sustainable development policy strengthened the target of recycling all suitable waste, raising it from 75% in 2011 to 85% in 2012. For 2009, 2010, 2011 and 2012 the actual recycling rate for all non-nuclear waste produced by generation and engineering work (excluding fly ash and gypsum, which are fully recycled) was 73.6%, 79.6%, 85.1% and 86.8% respectively.

In the overseas French territories, where recycling of certain types of waste is hindered by isolation and the lack of local facilities, an 84.5% recycling rate was achieved. For Saint-Pierre and Miquelon, 2012 saw completion of a waste elimination system (under the Veolia Canada contract).

The waste management group associated with the EMS, which includes ERDF, held a second multi-business line day on industrial waste prevention and optimisation, preceded by a competition to encourage local initiatives, share good practices and develop synergies between business lines and purchasing. One major example of the practical achievements of 2012 is the centrifuge system linked to a balance tank to clear fuel reservoirs (which reduces fuel losses without having to process and remove hydrocarbonated water), installed at the Dirinon fossil-fired plant. This will be assessed with a view to more extensive industrial use.

Internationally, EDF Energy made a commitment this year 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%).
In Poland, EDF Wybrzeże set up ash silos, which have enabled the company to sell its fly ash and limit the volumes transferred to disposal sites.

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 MOx 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).

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 offerings 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 CO2–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 CO2 emissions, or partly carbon-offset offers.

2.2.4.1. DEVELOPMENT OF RENEWABLE ENERGIES

In a world where the 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, giving priority for hydropower, wind power and solar power, with support from EDF Energies Nouvelles and its large European subsidiaries including EDF Energy and Edison. In 2012, Edison devoted 50% of its electricity generation investments to developing new onshore wind farms. In Belgium, EDF Luminus has set itself the target of doubling its installed capacity in onshore wind farms by the end of 2014, and having 10% of renewable energies in its energy mix by 2020.

For EDF Energies Nouvelles, the year 2012 was marked by five major events:

- in **France**, successful developments in offshore wind power: three of the French government's four wind power projects were awarded to the consortium headed by the company in the first tenders for offshore wind power launched in 2011. These three projects will provide a total of 1.5 GW in new capacities, and are associated with an ambitious industrial plan to create more than 7,000 jobs directly and indirectly
- Business expansion in three new countries, **South Africa, Morocco** and **Poland**. In South Africa, EDF Energies and its local partners were the successful bidders for three wind power projects (totalling 104 MW) in the Cape region. Construction will start in 2013, with commissioning by the end of 2014. In Morocco, the consortium headed by EDF Energies Nouvelles, in partnership with the Japanese group Mitsui & Co, was the selected bidder for the Taza wind power project (150 MW) near the city of Fez. In December, the same consortium was shortlisted for a second Moroccan wind power project (85 MW). In Poland, the development company Starke Wind and the Linowo wind farm project were acquired in September 2012
- A wind power project for more than 1 GW was launched in **Canada** with commissioning of the Saint-Robert Bellarmin plant in October. This programme covers 6 other projects in a schedule that runs till 2015
- In **France**, 3 major solar power projects with total installed power of 231 MWp were commissioned in 2012
- In December, through an international consortium, 32 French existing wind farms at Inberdrola were acquired: these facilities have total installed power of 321 MW or close to 5% of France's connected wind power plants.

Main developments in 2012

Hydropower	▪ The reservoir was filled at the Rizzanese dam (55 MW) in Corsica, for commissioning of the plant in 2013 ▪ Preparation of the hydroelectric development project at Romanche Gavet (93 MW), Isère, France ▪ Increase in the capacity of the dams at Serre-Ponçon (+55 MW) and La Bathie (+ 45 MW) in France
Onshore wind power	▪ Commissioning of three major wind farms in the United States: Shiloh III (102.5 MW) and Pacific Wind (140 MW) in California, and Spearville 3 (100.8 MW) in Kansas by EDF Energies Nouvelles ▪ Commissioning of EDF Energies Nouvelles' first Canadian wind farm (80 MW) ▪ Commissioning of the Linowo plant (48 MW), Poland, by EDF Energies Nouvelles ▪ Start of operation for the Green Rigg wind farm in the United Kingdom, by EDF Energy Renewables (36 MW) ▪ Acquisition by EDF Luminus of the Ciney wind farm (10 MW) in Belgium.
Offshore wind power	▪ Onsite testing of the hydropower demonstrator off the coast at Paimpol-Bréhat in France (October 2011- January 2012); subsequent technical adjustments were tested and validated in a second immersion
Solar power	▪ in 2012, EDF Energies Nouvelles commissioned three major solar projects in France: Toul-Rosières (115 MWp) in Meurthe-et-Moselle, Crucey (60 MWp) in Eure-et-Loir, and Massangis (56 MWp) in Yonne.

Capacities under construction

Onshore wind power	▪ the Fallago Rig (144 MW), Boundary Lane (6 MW), Glassmoor and the Glassmore extension (12MW) wind farms in the United Kingdom by EDF Energy Renewables ▪ the Massif du Sud (150 MW) and Lac Alfred (300 MW) facilities in Canada, by EDF Energies Nouvelles
Offshore wind power	▪ the Teesside offshore wind farm (62 MW) off the British coast by EDF Energy Renewables, due to be commissioned in 2013
Solar power	▪ construction has begun on the Catalina plant in the United States (140 MW in California) by EDF Energies Nouvelles.

Other developments

Offshore wind power	▪ creation of a 50/50 joint venture in April 2012 by EDF Energy and Eneco Wind UK Limited, covering exclusive development rights to phase 3 of the Navitus Bay offshore wind farm to the west of the Isle of Wight. This development could supply between 900 MW and 1,200 MW wind power capacity. The building permit is expected to be issued in 2015 and the first phase of construction work should start in 2017. ▪ Start of operating phase for the river hydropower project in Guyana by EDF Systèmes Energétiques Insulaires.
Marine energies	▪ Progress on the marine STEPs (pumped storage power stations) in Guadeloupe and La Réunion by EDF Systèmes Energétiques Insulaires ▪ Two pilot projects headed by EDF Energies Nouvelles: o Houles Australes, off the coast of Réunion Island, trying out a system to convert waves into energy; a new milestone was reached in 2012 with work to immerse a full-scale prototype. o the VertiMed project for a floating wind farm, involving joint work by the industrial firm Technip and the start-up company Nénuphar to make an innovative turbine: paddles turning on a vertical axis and a floating system that can work independently of the seabed depth. A pilot site will be developed off the coast near Marseille.

Solar power	▪ Continuation of the Millener project in French overseas territories. This project was launched in 2011 and aims to install rooftop solar power systems in homes, with individual energy storage and computerised consumption management facilities.
Geothermal projects	▪ A geothermal project by EDF Systèmes Energétiques Insulaires in Dominique, which will also supply energy for Guadeloupe and Martinique

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 tomorrow" (EDF must meet the demands of society 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.

2012, like 2011, was a very dry year with water shortages in **France**, EDF managed its reservoirs so as to preserve electricity output, support water flows for fossil-fired and nuclear power plants, and share water resources with local users (farmers, other industrial users, fishermen, and green tourism promoters), including in south-west France where rainfall and reservoir water levels were the most sensitive.

The Group is seeking to optimise water use by industrial facilities, especially fossil-fired plants. In **Italy**, a rainwater recovery system has been installed at the Torviscosa plant to redirect water back into the operating process, and at the Marghera Levante plant waste water is sent to a treatment centre so it can be reused in other industrial processes.
In **Poland**, modernisation of the water demineralisation and decarbonisation station was completed in 2012 and water consumption is now at minimum levels.

Group figures, in billions of m3	2012	2011	2010
Cooling water drawn	54.8	55.2	53.9
- fresh water (including brackish water)	28.0	26.8	NR
Cooling water returned	54.2	54.6	53.3
- fresh water (including brackish water)	27.5	26.3	NR

NR – not reported

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

EDF is increasingly active on the international scene, through the World Business Council for Sustainable Development (WBCSD) Water working group (EDF joined the Water Leader Group in 2010), and through the World Water Forum.
At the sixth Forum (WWF6) held in Marseille in March 2012, EDF promised to invest the resources required for development with the scientific community of methods and tools to assess the water footprint of its electricity generation activities in its installations' local areas, in order to extend its knowledge of action synergies between water and electricity.

The EDF group made commitments to:

- Control the water footprint of its electricity generation activities, and more particularly:
  - to continue improving performances in terms of water drawings and water consumption by existing and future power plants
  - to seek the most efficient use of the water possible, at the level of local administrative areas and water catchment basins
- Create some value locally, and incorporate the aim of minimising its water footprint from the design phase whenever an electricity generation project is in development, in line with its CSR

commitments. In particular, the EDF group has undertaken to use the IHA's Hydropower Sustainability Assessment Protocol for its hydro-electricity projects

- Carry on the work begun for preparation of the WWF6 on the linkages between water, energy and food, in particular with the CGIAR (Consultative Group on International Agricultural Research) and the IHA. Wetlands International[44] decided to join this commitment by pursuing research into water-food-energy interactions.

2.2.4.3. GROUND MANAGEMENT

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

- identification of real estate 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.

Askarel transformers

European directive 96/59/EC of 16 September 1996 requires an inventory of equipment containing PCBs and PCTs[45], 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. 10,000 such transformers were treated in 2012.

Phytosanitary products

The Group's Real Estate division launched an inventory of phytosanitary product consumption in 2010 across all property sites managed in France. This brought results: in 2012, consumption was reduced by 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 firmly intends to remain the leading energy 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 installed generation capacity of 160 GW (net) by 2020, 75% of which do not emit any CO_2.

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.

[44] Wetlands International: an international nonprofit organisation for conservation and restoration of wetlands.
[45] Polychlorinated biphenyls (PCBs) and polychlorinated terphenyls (PCTs).

2.2.5.1. REDUCING CO_2 EMISSIONS BY INDUSTRIAL FACILITIES, PARTICULARLY IN GENERATION

In 2012, the Group produced 79.803 million tonnes of CO_2 emissions worldwide. In France, EDF produced 16.409 million tonnes of CO_2 even though close to 96% of electricity generation emits no CO_2, bringing its specific emission rate to 35.2g CO_2/kWh.

CO2 emissions by electricity and heat generation, in g/kWh

	2012	2011	2010
EDF group	117.0	99.6	108.9
EDF	35.2	30.4	40.1

EDF has several levers to reduce its greenhouse gas emissions:

- 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.

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 DeNox systems to reduce nitrogen oxide were put into operation in 2007 and 2008, atmospheric emissions have fallen considerably. In **France**, EDF is continuing its "BasNOx" emission-cutting projects at reactor 3 of the Porcheville and Cordemais plants. With the exception of the Martigues site which is governed by specific regulations, all oil-fired facilities now use oil with very very low sulphur content (0.55% sulphur). With R&D, EDF is continuing studies on reducing NOx emissions through the Sperone Q600 project (low-NOx configuration studies to optimise boiler operation).

In **Italy**, Edison's fossil-fired fleet consists entirely of high-efficiency, low-carbon CCG plants.

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-NOx burners. In preparation for application from January 1, 2016 of the EU's Industrial Emissions directive that will limit sulphur dioxide (SO2) and nitrogen oxide (NOx) emissions to 200 mg/Nm^3, EDF Polska issued a call for tenders in late 2011 concerning installation of desulphurisation systems in the EC Krakow, Kogeneracja and EC Wybrzeze cogeneration units.

The Group is pursuing its renovation and modernisation programmes for existing fleets. In **France**, two CCGTs were commissioned during 2011 and 2012, at the Blénod (430 MW) and Martigues (465 MW) sites. The programme will continue in 2013 with commissioning of Martigues' second CCGT (also 465 MW), and the start of excavation work for the CCGT at Bouchain (250 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 performances (CO_2 emissions cut by 10%). Commissioning is currently scheduled for late 2015.
From 2013, these three CCGs will replace nine 250 MW coal-fired plants and one 600 MW unit, eliminating SO_2 emissions, halving CO_2 emissions and cutting NOx emissions by two thirds.

In the **United Kingdom**, construction of the new combined cycle gas plant at West Burton (3 units with combined power of 1,300 MW) was finalised in 2012. The first unit came on line in 2012 and commercial output begins in early January 2013, followed by the other two units also in the early part of 2013.

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%.

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. A carbon capture demonstrator is currently being built at Le Havre in conjunction with Alstom and Veolia Environnement, with the support of the French environment and energy management agency ADEME.

2.2.5.2. DIFFUSE GREENHOUSE GAS EMISSIONS

A plan to cut emissions from EDF's buildings and vehicle fleets has been in application since 2010. 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 promote a DSM 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.

The targets for reduction of diffuse emissions by the service buildings owned and leased by the Group draw on the following levers:

- DSM actions through adjustment of the way installations are operated
- optimisation of surface occupation
- renewal of the portfolio of owned buildings
- use of the best available technology
- application of energy performance contracts for all office locations under subcontracted management.

To support this plan, EDF joined the International Sustainability Alliance (ISA) in 2010. The ISA's 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. Environmental data are translated into key performance indicators on energy and water consumption, CO_2 emissions, and waste production, in line with the indicators prepared in other international initiatives (including the Global Reporting Initiative).

Company Commuter Plans have already been introduced in most of France and are being rolled out progressively to all Group companies.

Each Group company now has its own specific strategy adapted from the Group strategy, as appropriate to its business and the energy environment in which it operates.

2.2.5.3. DEMAND SIDE MANAGEMENT

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. Regular communication and feedback is developed between EDF, EDF Energy, Edison, and EDF Luminus to optimise both customer relations and the efficiency of product offerings designed to control energy consumption.

In **France**, in connection with the Environment Round Tables known as the *Grenelle de l'Environnement*, EDF is actively involved in developing offers that encourage customers to control their demand for energy and give priority to the lowest-carbon generation methods.

This commitment to energy control is guided by the energy saving certificate system, which assigns every supplier obligations to save energy with customers. A three-year target saving is defined and allocated between operators based on their sales volumes:

- 54 TWhp for the first period, from 1 July 2006 to 30 June 2009
- 345 TWhp for the second period, from 1 January 2011 to 31 December 2013.

In its sustainable development policy, which was adjusted in March 2012, EDF has set itself the goal of accompanying all customers in the move towards a cumulative reduction of 2 million tonnes in CO_2 emissions between mid-2009 and 2013, by stepping up promotion of energy efficiency in its marketing campaigns. The company takes action by marketing offerings that give customers better control over their energy consumption, or by recommending qualified partners to them. One essential aspect of its work concerns improving insulation in the homes of people with low financial security (see 2.3.3.1).

DSM action by EDF with residential customers in 2012

Mainland France

Promotion of energy saving	▪ Launch of eight commitments entitled "EDF & me" to residential customers; the 5th concerns helping customers to consume the necessary energy better ▪ Online promotion of environmentally-friendly behaviours and free advice on efficient insulation and heating for residential customers ▪ Approximately 70% of the advertising budget is devoted to promoting energy saving in the residential customer segment ▪ Ongoing funding of training in saving energy, for employees and people in the building sector (50,000 professionals trained since 2008); the course is being opened up to materials suppliers and project managers.
Awareness-raising/information	▪ Trials with free "Energy Label" advice, that shows residential customers the heat efficiency of their home. This will be adopted for all customers in 2013. ▪ Online availability of self-diagnosis services accessible to all business and local authority customers, so they can compare their energy consumption with standard ratios and contact an adviser if they wish ▪ Introduction of a Network for Energy Efficiency: around ten businesses and authorities from the same employment area meet over three years to share ideas for more efficient energy use ▪ 5th low-carbon architectural competition, intended to encourage firms, architects and project commissioners to design innovative homes that meet the most advanced energy and environmental efficiency criteria
Energy-efficient offers and advice	▪ Development of the "energy and fluid optimisation" service, which enables industrial companies to measure their consumption in real time for each production line, site, period and product, and receive advice on areas for optimisation that can cut consumption levels ▪ Development of the Energy Productivity Plan with large firms: 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 City Energy Prospects offering to assist local authorities with their energy policies (local energy generation systems, electric mobility, energy efficiency in buildings)
Heat surveys of buildings	▪ Reinforcement of the home assessment offer named Objectifs Travaux which attracted 13,000 new customers in 2012 (100,000 in all since the initial launch) ▪ General rollout in EDF stores of the heat diagnosis service that enables customers to identify heat losses from their homes (2,000 customers)

Financing solutions	▪ Prêt Habitat Neuf loans for buyers of newly-built homes and Prêt Rénovation Bleu Ciel® for buyers of existing homes, provided by EDF via its subsidiary Domofinance ▪ Introduction of a loan for energy renovation of collectively-owned housing ▪ Partnership with Oseo to promote a loan for environmental and energy efficiency to business customers and local authorities

Corsica and overseas French territories

Awareness-raising/information	▪ In Corsica, introduction of Jour'Eco, an online alert system that encourages moderate energy use in peak periods and conveys the ADEME's recommendations for lower consumption ▪ Organisation of the first Energy saving festival village in Guadeloupe, to raise awareness of energy efficiency among operators in refrigeration and solar power, planners and architects ▪ In Guadeloupe, joint launch with the ADEME and the NGO Prioriterre of the "Positive energy family" challenge, to encourage individuals to cut energy consumption by at least 8%
Management of consumption	▪ Development of sustainable development agreements with local authorities, in which EDF undertakes to contribute to their investments in energy control; signature of a heat renovation convention on Réunion island ▪ Launch of the Energy Box in Corsica, to reduce energy consumption and foster incorporation of renewable energies ▪ Opening of a Business Club in Martinique, bringing together the principal firms on the energy efficiency issue (this generated more than a hundred energy assessments) ▪ Launch of Citeco, a scheme reserved for local authorities in Réunion Island, offering grants for investment in a range of energy-efficient solutions (e.g. €100 per streetlight up to a maximum 20% of the total investment)

2012 action by Group companies

EDF Energy, United Kingdom

Management of consumption	▪ Regulatory contribution to the government's Community Energy Saving Programme for the period 2010-2012 ▪ Continuation of the EcoManager energy monitor for residential customers, showing energy consumption by electric appliances in order to help people cut energy use; 257 customers signed up in 2012.
Energy efficiency	▪ Introduction of online self-diagnoses of energy use (more than 19,000 since the launch in mid-2011) ▪ Promotions of energy efficiency measures on the back of all customer invoices.

Edison, Italy

Awareness-raising/information	▪ Sponsorship of the TV programme "Mr Green is coming", which promotes lower energy consumption through learning environmentally friendly habits.
Energy efficiency	▪ Independent electricity generation for industrial customers (installation of solar facilities for the Mapei and Roche groups) ▪ Design of an energy-efficient offering for the tertiary sector.

Electricité de Strasbourg, France

Monitoring consumption	▪ Roll-out of three new services for small business customers (Energy Control Advice, Consumption measurement and Thermal Imaging) to help them monitor consumption levels and control energy use.

EDF Luminus, Belgium

Management of consumption	▪ Continuation of the "Luminus Bonus" offer, a bonus paid to individual customers whose energy consumption was lower than in the previous year; promotion of this offer to 75,000 customers ▪ Online consumption monitoring service (the Mijn Verbruik/My Consumption programme)

Electric mobility

In France, EDF has invested in research and development of solutions to promote electric mobility. Together with several different manufacturers, public research institutes and local authorities, it participates in development of new vehicles (buses, delivery trucks, "cherry picker" vans), works on improving battery discharge time and overall battery life, and contributes to the improvement of recharging infrastructures (communication capacities with all types of vehicles, geolocalisation, monitoring to avoid spikes in consumption, etc). The company has become involved in commercial activity as an electric mobility operator, launching electric vehicle rentals and conducting experiments in self-service shared electric cars via its subsidiary Sodetrel.

In Belgium, EDF Luminus and The New Drive are helping businesses and public authorities to progressively convert their car fleets to electric cars, through the GreenDrive Business Pack. Together with Renault, the company is marketing ThePluginCompany service to some twenty business customers, offering the chance to test drive an electric car for one week.

Smart grids

The European Commission has made modernisation of electricity meters a legal requirement: under a 2009 directive, by 2020 80% of meters must be "smart meters" which enable users to control their consumption.

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. Along with other European distributors ERDF took part in the launch of the "EDSO for smart grids" association created 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.

To meet this requirement in France, ERDF and the French energy regulator CRE launched the **Linky** project to modernize the 35 million electricity meters all over France. More than 250,000 Linky smart meters have been installed in the Lyons and Indre-et-Loire areas of the country in an initial experiment.

ERDF coordinates the GRID4EU project

ERDF is to coordinate this major initiative, 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 will involve 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.

2.2.5.4. ADAPTING THE GROUP'S BUSINESSES TO CLIMATE CHANGE

As climate change directly affects energy demand and the physical environment in which generation, distribution and transmission are carried out, the EDF group has a strategy for adaptation to climate change, adopted by the Sustainable Development Committee in June 2010. 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 in operation 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.

2.2.6. PRESERVING BIODIVERSITY

Like the struggle against climate change, preserving biodiversity is a major priority for the EDF group, as the owner of large reserves of land, mostly located in France in or immediately next to protected natural areas. The Group constantly monitors the environmental impacts of its industrial activities in order to better control and reduce them.

The Group takes environmental offset measures in application of European and national regulations. Most cases concern applications for permission to destroy protected species due to work on construction or maintenance of industrial installations (around 15 applications in France and the UK since 2008).

In France, EDF is testing various environmental offset methods and ways of assessing the eco-systemic services it uses (e.g. current testing at the Cordemais fossil-fired plant of the Ecosystem Service Review) and represents the Eurelectric association in the European Commission's "No net loss" working party. After the French Ministry for Ecology, Sustainable Development and Energy launched a call in 2011 for projects to study feasibility of environmental offset mechanisms, EDF was selected to conduct an experimental operation of ecological offset offers in the Rhone-Alpes region of France. The project involves rehabilitation of 120 hectares of Alpine land in the Belledonne mountains to create a favourable habitat for flora and fauna; in particular, introducing measures to reintroduce the black grouse, which is an endangered species. The restored land will be used both to offset EDF's work on hydropower facilities, and to meet offset needs for other projects specific to the region: development of winter sports stations, town planning projects, railway projects, etc. The operation is scheduled to last 8 years. Afterwards, the land will remain the property of EDF, but will be incorporated into a National reserve for hunting and wildlife.

The managements of industrial installations have implemented biodiversity strategies. The hydropower fleet applied the action plan for its new 2010-2012 strategy. One key action was adapting site management for maintenance of the Sarrans dam, which is located in the Natura 2000 protected zone: to preserve the red kite and the peregrine falcon, low-noise machines (electric cranes) were chosen to reduce unnecessary noise in the reproduction period. In 2012 the management of EDF's fossil-fired fleet began a strategic biodiversity plan to take a detailed census of local regulations for each of its industrial sites, and identify protected areas and biodiversity preservation areas for each plant. In a similar vein, steps are being taken to list the available land at the nuclear power plants, in order to map out the natural areas.

The research and development aspect of the framework agreement for protection and restoration of water environments signed in 2011 by France's national water office (ONEMA) and EDF gave rise to the following operations in 2012:

- Report on behavioural studies of eels, and how river obstacles affect their migration and mortality (previously the "Eels and industrial facilities" R&D programme launched in 2008 by the national eel committee); EDF has made a significant contribution to this research by testing a bristle brush eel pass at the high dam at Golfech (Garonne), preparation and testing of an automatic photoelectric counter for small eels, on-site evaluation of mortality in large turbines, studying how eels move past hydroelectric facilities along the Gave de Pau river and a series of obstacles along the Rhine, testing the Migromat® biomonitor in the river Shannon in Ireland, testing an ultrasound repellent system near two hydropower plants on the river Gave de Pau, and developing a working turbine management model on the river Loire
- Heat and hydrobiology research programme (approved by the Ministry of Ecology and the ASN) examining the preferences and heat tolerances of the main species of fish, the behaviour of fish in varying temperatures, the role played by temperature in the spatial distribution of species, and the influence of temperature on the behaviour of bacteria and algae (results to be reported in 2013).

The Group is pursuing a policy of biodiversity partnerships to encourage exchanges of technical knowledge, support projects led by associations and implement practical technical projects. 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, New orientation for the sustainable development partnership strategy).

Other measures to protect and restore biodiversity in 2012

Edison (Italy)	▪ Introduction of biodiversity mapping of the areas around all the company's generation sites, to prioritise action on sites affected by Italy's national strategy for biodiversity. Work on setting up operational and technical partnerships with environmental NGOs active in the sensitive areas concerned.
EDF Energy (United Kingdom)	▪ £120,000 contribution to the development fund for the Suffolk Coast and Heaths Area of Outstanding Natural Beauty, as part of the project to extend the dry fuel store at the Sizewell B plant. The contribution is for restoration of natural habitats, creation of footpaths, improvement of disabled access and tourist information campaigns.
EDF Energies Nouvelles	▪ Commitment to regular biological and ecological monitoring of all new generation sites; introduction of eco-management plans for these sites, with differentiated mowing of the covering vegetation and no chemical fertiliser or pesticide; ▪ Continuation of the biodiversity preservation programme on the photovoltaic site at Toul (Meurthe-et-Moselle), with installation of shelters to protect bats, integration of landscaped woods and hedges, and planting melliferous flowers plants for bees.
UTE Norte Fluminense (Brazil)	▪ Reinforcement of management instruments for the Macaé de Cima environmental protection zone and the Três Picos state park to preserve the primary Atlantic forest, in partnership with the State institute for the environment (environmental offset programme); ▪ Funding through the Ramsar Convention of a study on the wetlands of north Rio state, which are currently under threat.
ERDF (France)	▪ Continuation of the action plan to save the Bonelli's eagle; ▪ Introduction of a differentiated pruning policy along grid lines, according to the species of vegetation encountered; ▪ Partnerships with France Nature Environnement and the Bird

	Protection League (Ligue pour la Protection des Oiseaux), to reduce the risks of electrocution for birds.
EDF Guadeloupe	▪ Signature in May 2012 of a partnership with the association Kap'Natirel, to protect sea turtles (study of behaviour and protection in the laying period); ▪ Implementation of the partnership signed in 2011 with Port Autonome de Guadeloupe and the Comité des pêches to rebuild a coral environment using recycled concrete electricity poles. The poles are dropped offshore where they provide sealife with similar protection to coral reefs.
EDF Guyane	▪ Ongoing work by the Scientific Committee on water quality in the Petit-Saut reservoir, particularly changes in the way immersed vegetation decomposes. The results of these observations are used in UNESCO-sponsored research into hydropower in the tropical environment.
EDF Luminus (Belgium)	▪ Pursuit of a study on mortality and migration of salmon and eels; this is a prerequisite for the Lixhe hydropower plant to be authorised to operate. ▪ Calculation of the ecological footprint of the companies' industrial activities (scopes 1, 2 and 3 of the Greenhouse Gas Protocol).
EDF Real Estate division	▪ Campaign to reduce use of chemical weedkillers and fertilisers on all sites (cut by 8% a year on average in the hydropower fleet), or eliminate it completely in favour of manual weeding, thermal steam weeding, late mowing and fallow land including native wild flowers.
EDF hydropower generation and engineering division (France)	▪ Inauguration of the fish pass at Jons sur le Rhône in November after 10 months of work; ▪ Continuation of operations under national action plans, particularly in favour of protection of the Pyrenean desman and bearded vulture (organising maintenance work for high dams according to the nesting periods).

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. The principles of the policy comply with the United Nations Global Compact and are part of the EDF group's sustainable development policy, its CSR agreement and the public service contract.

2.3.1 ETHICS AND TRANSPARENCY TO STAKEHOLDERS

The Group Management's decision to renew and adjust its ethical guidelines (the 2007 Ethics Guide) led to concerted elaboration of a new Group charter of ethics was during 2011. This Charter was adopted by the EDF group's Management Committee in September 2012 and approved in October by the Board of Directors' Ethics Committee. It complements the laws, regulations and national and international conventions that apply to each company and each employee of the Group. Its straightforward, common-sense commitments are intended to encourage every employee, whatever his or her country or position, to behave in an exemplary way in line with the EDF group's values of respect, responsibility and solidarity. These ethical commitments translate the public-interest mission of a worldwide energy operator into the Group's core businesses. They were drawn up in conjunction with Group companies and divisions; test groups were formed involving employees and managers to ensure that good adherence to the subjects proposed, with respect for the specific culture of each country where EDF operates. The Group's new standards will be in general application by the end of 2013.

The Chairman and CEO's decision of 14 September 2010 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.

On the issue of corruption, procedures for validation of intermediaries' contracts have been reinforced following application of the Chairman's decision of 31 May 2010 on consultancy and agency agreements.
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, reactivated in 2008) and the UK (the Anti-Bribery Act, effective from 1 July 2011): due to the extraterritorial aspect of these laws, international anticorruption regulations are taking shape.
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

All these ethical actions are subject to the Group's internal control, which was broadened in 2011 to 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.

The scope and practicalities of EDF's ethical alert procedure, which also receives employees' calls requesting intervention by the company on the free "life at work" number, were validated by the French data protection agency CNIL on 24 November 2011. EDF's ethical delegate examined 136 alerts in 2012, 132 of which were given through the alert system and 4 through the free number by a person who then

waived anonymity. The delegate dealt with 48 ethical alerts directly. They related to declarations of harassment (17), complaints about discrimination (9), problems to do with professional recognition (8), environmental questions (4), cases of fraud (8) and matters of social distress (2). 39 cases of disputes with customers were transferred to the Mediator, and 49 external alerts were transferred to the Information System's internal security service as hoax messages.

In 2011, EDF, DONG Energy, Enel/Endesa, E.ON, GDF-Suez/Electrabel, RWE and Vattenfall/Nuon, later joined by Fortum, all worked together on the *Bettercoal* initiative to improve responsible commitment by businesses belonging to the coal supply chain, with particular emphasis on respect of fundamental rights at mining sites. The aim is to guarantee respects of those rights, i.e. human rights, working conditions, workers and community life, and environmental protection. European energy operators and North American mining companies are frequently criticised for failing to respect rights, as was the case in 2010 for certain companies in connection with coal imports from Colombia, forcing North European companies to limit their sourcing at very short notice. EDF Trading, a fully-owned Group subsidiary and vital actor in the European coal industry, supplies approximately 10 million tonnes of coal a year to plants belonging both to the EDF group and other firms. Through its CEO, the EDF group signed up to the *Bettercoal* charter in January 2012, to support EDF Trading's activities in coal sourcing, keep EDF's position in socially responsible investment funds, and control the risks to its image and reputation. During the first half of 2012, a code (common standards) of social, environmental and ethical principles was formally defined, 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). Audits and auto-evaluations of suppliers under this code will cover suppliers, including mining sites, and audit results will be recorded in a dedicated database managed by *Bettercoal* and shared by its members in compliance with antitrust rules.

2.3.2 DIALOGUE WITH STAKEHOLDERS

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 customer relations, 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 to provide Group managers with external critical analysis
- 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

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. At the 2nd Industry Days held on 6 and 7 October 2012, more than 15,400 people visited EDF's generation sites (45% came to nuclear plants, 38% to hydropower plants and 17% to fossil-fired plants). In line with the past two years, EDF's image with local populations remained broadly positive, with 86% declaring it has a good image (83% in 2011).

In hydropower, EDF pursued its permanent information and safety campaigns to warn water users of the risks of variable water flow in the rivers, including installation of boards with photographs showing the "before and after" situation. Hydroguides were again employed in the summer season, and were able to put forward useful proposals for additions or changes to the information boards, or repositioning of lifebuoys.

For new industrial projects, Group companies are reinforcing their consultation and information approaches based on tried-and-tested models used by NTPC for the Nam Theun dam in Laos, Edison for the Rovigo regasification terminal and the ITGI (Interconnector Turkey-Greece-Italy) gas pipeline in Italy, and EDF for installation of the marine turbine demonstrator at Paimpol-Bréhat in France.

In **France**, for the preparation of construction of the CCG plant at Bouchain scheduled for commissioning in 2015, discussions took place with the various stakeholders concerned: local authorities, the regional environmental, planning and housing authority, the Nord-Pas-De-Calais regional council and several associations. The public inquiry then opened in autumn 2012 and the conclusions are expected for early 2013.

In the **United Kingdom**, EDF Energy organises regular meetings with local stakeholders (quarterly or three to four times a year depending on requirements) covering matters related to its business activities and impacts.
In 2012, EDF Energy opened four of its new visitor centres providing information on nuclear power, electricity generation and the company's businesses through exhibitions, films and interactive displays. Three more centres are due to be opened in 2013.
Also, an independent study of the populations living close to generated sites showed some improvements since 2011, with a 3% rise in favourable opinions of nuclear power.

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.

The Group 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, as well as the Chairman of EDF Energy's Stakeholder Advisory Panel (created in 2006). The Group Sustainable development panel provides advice and a critical assessment of the Group's commitments to sustainable development and their implementation. It meets once or twice per year with the Group's executives. In 2012, it met to discuss the theme of the EDF group's CO_2 strategy.

On 13 December 2012 a new body, the **Sustainable development council**, was formed with Group stakeholders by merging the previous Environmental and Social Councils. The members of this new Council are representatives of the issues associated with the sustainable development impact of the Grou's installations and businesses. One of its main aims is to challenge managers and experts at EDF over the company's proposed options regarding sustainable development. The Council's first meeting, on the subject of energy poverty in France, took place on 13 December 2012.

The EDF Scientific Council is a consultative body that gives the company well-known senior scientists' opinions and advice on long and medium-term research activities. It meets three times a year to discuss specific themes, with detailed reports and recommendations to EDF's Chairman prepared before the meeting. The subjects covered in 2012 were the future of electricity transmission networks and the back-end of the nuclear fuel cycle. A special meeting was also held for the Council members and CEO to discuss subjects of their choice relating to changes in the company's environment, and scientific and technological developments.

The EDF Medical Council, composed of leading personalities from the medical world, and university professors with a particular interest in public health, biophysics, ethics, workplace and environmental

health, epidemiology and toxicology, is a body for reflection and advice on a number of current topics connected to EDF's activities. Its Chairman is Prof. André Aurengo of the French Academy of Medicine. The Medical Council held three plenary meetings in 2012.
The subjects discussed by the Council covered the essential health issues of current relevance – workplace health and environmental health. They included the health consequences of the Fukushima accident, plans for studies of infant leukaemia and residential exposure to magnetic fields, the reform of occupational medicine in France, the modalities of toxicological studies with the arrival of nano-materials, incorporation of recommendations on medical/professional monitoring of shift workers.

2.3.2.3. NEW ORIENTATION FOR THE SUSTAINABLE DEVELOPMENT PARTNERSHIP STRATEGY

Each of the Group's partnership projects is now studied by the Partnership Committee. Sustainable development partnerships cover two aspects: biodiversity, and action against energy poverty and exclusion (on this second theme, see section 2.3.3.1).
Against the two developments of reinforced regulations and the new environmental governance resulting from France's *Grenelle de l'Environnement* Round Table, biodiversity is 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 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*. These longstanding partnerships have been established to foster sharing of technical knowledge and dialogue, support for the associations' projects and implementation of practical technical measures overseen by EDF's business lines and companies.

Achievements in 2012:

Bird Protection League *(Ligue pour la Protection des Oiseaux)*	▪ EDF employees were involved in science programmes (the "Wetlands" inventories of migrating birds, the Observatory for garden birds) ▪ assistance with management of the natural areas around 5 generation plants: Aramon (fossil-fired), Penly (nuclear), Plobsheim, La Vanelle and Caradache (hydro) ▪ support in organising the first Birdfair festival in Paimboeuf.
Coastal Protection Agency *(Conservatoire du Littoral)*	▪ the "Large Lakes" programme (symposium on the function of large lakes, working parties on definition of the environmental issues associated with large lakes, publication of a book on large French lakes) ▪ restoration of a former industrial site around the Etang de Berre.
French Nature Reserves *(Réserves naturelles de France)*	▪ development of an environmentally-friendly footpath in the Petite Camargue Alsacienne nature reserve ▪ restoration of plant species in the Pyrenees national park ▪ training for EDF employees in management plans for natural areas.

Meanwhile, as the debate on the energy transition continues, the Sustainable Development division has continued its action with strategic partners in the form of think tanks and research chairs, for instance at Paris-Dauphine University. 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 finding new ideas and proposals to govern the ecological transition, and making them known to the general public.
EDF still supports the *Institut du développement durable et des relations internationales*, a think tank set up by the *Institut des études politiques*, to develop its international dimension. EDF is providing support in three programmes that are closely related to its sustainable development activities and commitments: climate, biodiversity and the urban fabric. Through the Institute's Club Villes, EDF contributed its own experience to the "Emergent" project (under a French ecology ministry programme), which aims to analyse household energy consumption and identify the emergence of new behaviours in eco-districts.

Through the partnership with R20-Regions of Climate Action, a NGO covering 37 regions of countries from the north and south, businesses and financing institutions, EDF has continued the action for energy-efficient buildings begun with the East Morocco region in 2011: assistance with the regional energy efficient plan, formal definition of a charter of good practices for building professionals, preparation of training for public decision-makers.

2.3.2.4 INFORMATION ON ENERGY AND SUSTAINABLE DEVELOPMENT ISSUES

In 2012 the Group's companies stepped up their programmes to raise awareness in the general public and young people of energy control and sustainable development issues, via internet or through events and conferences held in schools. These programmes are founded on partnerships with associations and the world of education.

Principal actions of 2012

EDF (France)	▪ A public pavilion presenting energy issues at the 2012 London Olympic Games ▪ Joint organisation of the exhibition entitled «Living in tomorrow, reinventing our habitats » with the *Cité des sciences et de l'industrie* museum in Paris, to raise awareness of campaigns for lower, efficient energy consumption ▪ Distribution of 5,000 copies of a brochure ("What can you do with 1 KWh?") at public events where EDF was a participant ▪ Reinforcement of the educational content on EDF's website for young people (http://jeunes.edf.com; more than 197,000 visits in 2012), with the online game *Mission économie énergie*, tests of environmentally friendly consumption, and the national launch of the Electis trophy for electricity and sustainable development, intended for secondary school students ▪ 1,957 talks on sustainable development issues given in senior schools at the request of teachers, in connection with the school curricula ▪ 2,900 talks on safety given in primary schools, including a section on saving energy in the home
EDF Energy (UK)	▪ Online educational programme The Pod, in partnership with the European Eco-School programme and the British NGO Eden Project, with the participation of 14,600 schools and 8 million children since its launch ▪ Further involvement in the partnership with the Cheltenham Science Festival to promote careers in science to school students, and support the apprenticeship scheme ▪ Support for the travelling Generation Science exhibition in Scotland.
Edison (Italy)	▪ Continuation of the *Eco Generation. Schools is the climate's friend* campaign conducted with the NGO Legambiente in pilot schools (15 schools in 15 Italian towns), teaching pupils to assess their school's energy efficiency and helping them to look for ways to control energy consumption. It should develop into a permanent energy efficiency programme available to all schools, local authorities and the Ministry of Education ▪ Participation in an interactive exhibition at Milan science and technology museum. 400 secondary school students took part in a "Science and Technology of Energy Generation" workshop, an interactive journey of exploration through energy generation and consumption ▪ Sponsorship of the popular TV programme "Mr Green is coming", which teaches families how to cut electricity and gas consumption and provides advice on recycling.
BE ZRt (Hungary)	▪ Information on energy issues for 1,000 young school pupils invited to visit the Hungarian company's co-generation plants.

Groupe Electricité de Strasbourg (France)	▪ Advice on controlled use of resources and introduction of web pages on environmentally-friendly habits (http://ecocitoyens.es-energies.fr).
EDF Asia Pacific	▪ Publication 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 the Group's sustainable development policy, in compliance with the UN Global Compact. Like the principles of the environmental and ethical policies, the principles of the societal policy are included in the corporate social responsibility (CSR) agreement.

The three main strategies of the societal policy 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

2.3.3.1. CONTRIBUTING TO ACTION AGAINST ENERGY POVERTY

The issue of energy poverty is growing across Europe, although the associated definitions, public responses and energy operator involvement vary widely from one country to the next. According to the latest statistics in France, some 3.4 million households (13 %) were in a precarious situation regarding energy; in the United Kingdom the number is estimated at 5.5 million or 21% of the population[46].

Against this background, the EDF group is reinforcing its involvement in action against energy poverty, going further than the regulatory obligations and working with Governments, local authorities, non-governmental organisations and other stakeholders to promote the most efficient possible energy use, in order to reduce consumption costs and develop country-specific solutions and programmes to provide support for vulnerable households.

In France, in addition to operations conducted as part of public programmes[47], EDF's action has three focuses:
- help with paying bills
- assistance to customers in difficulty
- preventive action.

Help with paying bills: in 2012 EDF contributed €23 million to the *Fonds de solidarité pour le logement* (FSL) housing solidarity fund which helps customers in difficulty to clear their arrears; close to 190,000 households benefited have been helped by the fund. To avoid electricity supplies being cut off to any person defined as disadvantaged, EDF prolonged its "winter truce" period from 15 March (a legal requirement) to 1 April, and extended it to apply to all customers on social tariffs, not only households that received FSL aid the previous year.

[46] Department of Energy and Climate Change: Annual report on fuel poverty statistics 2011.
[47] 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. Following a change in the regulations in March 2012 simplifying the terms for access to social energy tariffs and allowing qualifying persons identified as EDF customers to apply for those tariffs, more than one million households in mainland France, Corsica and the French overseas territories were able to benefit from the Basic Necessity tariff in 2012 (635,000 in 2011).

Assistance: EDF increased the number of customers helped under its « Energy Assistance » system from 210,000 in 2011 to 324,000 in 2012, working with them to find appropriate solutions to their situations: deadline extensions, putting them in touch with social services, providing advice on making energy savings. EDF also became more involved in social mediation centres (Multiservice and Information points, National Agency for housing information) that bring it into closer contact with its customers, with opportunities to advise them about their rights and energy usage, and facilitate payment of their bills. In 2012, EDF was a partner in 170 mediation and contact points across France (150 in 2011).

EDF also supports campaigns to raise energy awareness with public social action centres, the charities *Secours catholique*, *Secours populaire*, *SOS Familles/Emmaüs France*, and *Unis-cités*, part of the Médiaterre programme.

In Corsica and French overseas territories, for the last three years SEI has distributed low-energy lamp kits and multisocket standby savers (*Packécos*) to disadvantaged customers, to help them control their electricity consumption. In 2012, EDF gave out *HydroEko* domestic water regulation kits that can cut energy consumption by electric boilers by up to 10%: 70,000 were distributed on Réunion Island, 15,000 in French Guyana, 20,000 in Martinique, 20,000 in Guadeloupe and 16,000 in Corsica.
In Guadeloupe, EDF has developed a partnership with a mixed-economy company for development to promote efficient energy facilities in social housing, and joined forces with the family allowance agencies to offer the most modest beneficiaries €100 aid to purchase low-energy household appliances.

Prevention: in partnership with other organisations, EDF develops campaigns against energy poverty by improving the energy efficiency of the most financially insecure households. EDF is a major participant in the *Habiter mieux* (Better living) programme headed by the ANAH agency for home improvement subsidies, through an agreement signed in 2011. EDF is committed to a financial contribution that could reach €49 million, and participating in identifying the households concerned. This programme aims to modernize heating in 58,000 homes occupied by low-income families over the period 2011-2013. It was launched by the Government in 2010, to help the most modest householders owning the least energy-efficient homes by financing and overseeing insulation and heating renovation work that should cut energy consumption by at least 25%. 13,000 renovations were begun in 2012. The programme is currently for owner-occupiers but is change significantly in 2013 when it opens up to tenants, with reinforced action for collectively-owned buildings.

This commitment adds to EDF's voluntary contributions, for instance to the *Toits d'abord* operation in a partnership with the *Fondation Abbé Pierre* concluded in December 2012, to build 2,000 homes for disadvantaged sections of the population. This follows the « 2,000 homes, 2,000 families operation » which since 2009 has built and renovated energy-efficient social housing for 2,025 very vulnerable families.

EDF is also developing the *Montant de charges* offer intended to improve home insulation and cut CO_2 emissions. This offer covers existing and new buildings for the social housing market. The aim is to assist financial backers undertaking renovation or building work for buildings that qualifies for energy savings certificates. After assessment, EDF and the project backers agree on a rehabilitation programme and performance target. 151,000 social housing units were renovated in this way in 2012.

In other Group companies:

In addition to regulatory requirements and sponsorship operations, the Electricité de Strasbourg (ES) group's approach is based on the following commitments:

- voluntary reinforced contribution to the Housing solidarity fund (€100,000), which in 2012 provided assistance to more than 1,000 customers in financial insecurity
- prevention of payment difficulties by training social actors and informing the populations concerned about how to manage consumption better
- personally-tailored assistance to each customer in difficulty, keeping the energy supply at the contractual level while the customer takes the necessary administrative action with the social services
- remittal of energy cheques via eight associations, under a convention to help customers in difficulty.

ERDF works to detect customers in a situation of energy poverty and prevent cut-offs of electricity supplies regardless of the supplier concerned. In 2012, ERDF also signed two agreements with the National Committee of local systems and the national union of Multiservice and Information points so that households in difficulty can be better informed of the aid available to them.

In the United Kingdom, the government's Warm Home Discount Regulations (April 2011) introduced an obligation incumbent for 4 years 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. This regulation replaced the action previously taken under suppliers' voluntary commitments. The combined amount of the obligation was £250 million in 2011/2012, then £310 million by 2014. EDF Energy estimates its expenditure at approximately £26 million in the first year.

EDF Energy applied the "Energy Assist" tariff to 145,000 customers in 2012. This tariff was discontinued for new customers in July and replaced by discounts on electricity bills under the "Warm House Discount" plan. 136,800 discounts of £120 were given in winter 2011/2012, and EDF Energy estimates that 190,000 discounts will be given in winter 2012/2013.

EDF Energy automatically applies the cheapest tariff on the market to all senior citizens identified by the Department of Work and Pensions. In April 2012, the company, which offers some of the cheapest standard prices for gas and electricity, launched "Blue+Price Promise", a package that informs all UK customers of the possibility of saving more than one pound a week on standard consumption, regardless of the supplier used. Every customer subscribing to this offer benefits from a frozen tariff until September 2013, and is not charged switching costs if they decide to change suppliers.

The UK government's "Community Energy Saving programme" (CESP) ended in 2012. It lasted three years and its objective was to upgrade home insulation in underprivileged areas (concerning over 100,000 homes). By 31 December 2012, EDF Energy had contributed £89 million to help 30,000 very vulnerable households. The CESP has now been replaced by a new obligation for suppliers (ECO), which incorporates the objectives of the CERT, a previous government programme to reduce CO_2 emissions. ECO is broader, and targets total renovation of residential buildings (full insulation plus heating), setting suppliers targets for reducing heating costs and CO_2 emissions for low-income families. EDF Energy's obligations for the period January 2013 – March 2015 are to save £500 million on heating and cut CO_2 emissions by 3.5 million tonnes.

EDF Energy continued:

- its donations to the independent charitable trust EDF Energy Trust Fund (£1.9 million in 2012 for 2,493 households), which allocates aid to help families in serious debt after economic difficulties (serious illnesses, bereavement) and also gives personal advice on managing debt to local populations in the areas where it has establishments
- its support for the London Warm Zone, contributing to a study of 10,000 homes in the most disadvantaged areas of London, to identify possible beneficiates of grants for more efficient insulation and heating.

It also entered into new partnerships:

- Funding the National Energy Action to increase knowledge of energy efficiency and energy poverty, not only in staff who are in direct contact with low-income families, but also the volunteers working for credit cooperatives.
- Funding the Impetus Consulting initiative to help small social housing associations to support tenants experiencing energy poverty.

In **Poland**, Group companies that produce electricity and heat but have no dealings with residential customers are pursuing the agreements signed with towns, distributors and NGOs to help fragile populations, either by direct financial aid and energy cheques (EC Zielona Góra, Kogeneracja, EDF Wybrzeze, EDF Torun) or by supplying heat free of charge to organisations and establishments associated with local authorities (EDF Krakow).

In **Hungary**, in February 2012, EDF Démász set up an aid programme, in a partnership with the Hungarian branch of the Order of Malta, intended for the most vulnerable families who have unpaid energy bills.

2.3.3.2 CONTRIBUTING TO ECONOMIC AND SOCIAL DEVELOPMENT OF THE AREAS COVERED BY EDF

The EDF group wishes to live in harmony with the areas where it does business, and accordingly the impacts of its facilities and activities on local areas are identified and addressed. Opportunities for long-term contribution to economic and social development in the local area are sought from the outset, such that EDF makes a particular contribution to integration of vulnerable people. EDF is proud to be an actor in local social cohesion.

Contributing to local development and integration of vulnerable people

EDF is particularly attentive to its contribution to local economic development, and gives priority to local employment as far as possible

Economic development and local job creation

In **France**

- Launch in 2012 of the "One river, one area for development" programme to provide expertise, support and funding for local actors and contribute to value and job creation, by developing local skills together with beneficiaries, and also by encouraging the emergence of innovative projects and economic activities of the future relating to water, energy and the environment.
  This requires financial resources, with funds set aside for the programme and local contacts for implementation. In the areas covered by the programme's offices, EDF hydropower embassies will progressively be installed in the heart of the valleys to support local development.
  The first economic development agency opened at Rodez in 2012, for development in the Lot, Truyèrte and Tarn valleys, with an annual budget of €3 million.
- More than 7,000 jobs were created directly and indirectly by the development of 1.5 GW in offshore wind power capacity in France, in association with Alstom.
- Promotion of inclusive purchases through different channels:
  - A three-year agreement for inclusion of disabled workers (in the section on purchases from the protected sector and organisations where the majority of the workforce is disabled – the annual objective of €6 million was exceeded as €7.6 million of purchases were made from these protected and special sectors for EDF in 2012)
  - Socially responsible subcontracting agreement: EDF is stepping up purchases from organisations that foster social integration through employment (more than €1.5 million in 2012)

In **Morocco**

- Commitment by EDF Energies Nouvelles and its partners Mitsui and Alstom to

use Moroccan firms for at least 30% of the construction work of the Taza wind power project.

Social integration of vulnerable people and young people

In jobseeking support in France, by the end of 2012 EDF and ERDF had exceeded their objective of offering 1,000 disadvantaged unemployed people the opportunity to gain experience and qualifications through block-release training in a business line "with a future".

In **France**

- EDF has special programmes to train young people, particularly those finding it difficult to join work-study schemes. Examples are its *Trait d'Union* campaign set up by the Sales Division in the Paris region and the south of France, which actively helps young people to gain work and qualifications in customer service positions, *Tremplin* in south-west France and Académie Bleu Ciel in the north-west. In 2012, 200 people benefited from these schemes.
- In Flamanville, almost 490 jobless people, identified under criteria proposed by EDF and adapted by employment workers at local job centres, were hired to work through an organisation that fosters social integration via employment.

Contributing to local cohesion

On 28 September 2010, the French government and nine major public service operators including EDF signed a partnership agreement for more public service entitled *+ de services*, designed to develop access to a range of services for France's rural populations. The aim of this partnership is to provide inhabitants of rural areas with a range of services in a single place. 60 new contact offices are to be opened with EDF participation, in addition to the sites already in existence. This experiment is being conducted in 22 areas of France and covers new Multiservice and Information points, and public service points mostly hosted by local authorities. The purpose is to simplify access for all types of user, by collaboration between signatories to the partnership and complementarities between traditional services, new technologies and physical multi-service offices. 21 of the 22 area contracts had been signed by the end of 2012, and the remaining contract for the Cher area is due to be signed in early 2013.

2.3.3.3. SUBCONTRACTING AND RESPONSIBLE PURCHASING

EDF's socially responsible subcontracting agreement signed in October 2006 is one expression of the Group's CSR agreement, and has been renewed indefinitely, highlighting the intent to maintain industrial and service collaboration in the long term. This approach enables service providers to reinforce their activities and extend their capacity for sustainable development, rather than merely signing short-term or one-off contracts.
For subcontractors and their employees this agreement is a guarantee that their work for EDF will take place in optimum employment, qualification, working and health and safety conditions, and in full knowledge of the risks inherent to the activities exercised. The agreement's monitoring committee was set up in 2007. It holds three meetings a year, attended by signatories and representatives of EDF's various businesses, to examine progress on the action taken under the agreement.

Several types of action have been implemented across all EDF's business lines, for example:

- improving reception and working conditions for subcontractors on the nuclear and fossil-fired generation sites,
- concerted action with outsourcers in the nuclear business, to increase the sector's appeal and develop appropriate training,
- gaining the social responsibility label for the "integrated customer service relations" category, under the new and substantially more demanding label system,
- a sustainable development charter between EDF and its suppliers. Environmental, social and corporate criteria are also incorporated into purchasing strategies (assessment of supplier skills and feedback), starting from the initial preparation of specifications developed in close

collaboration with the business activities requiring the outsourcers' services. The charter is integrated into the general terms and conditions and must be signed by all suppliers doing business with EDF. It sets out reciprocal commitments including:

- conduction of "sustainable development/corporate social responsibility" audits at the premises of suppliers and service providers to ensure these commitments are respected;
- integration of social responsibility criteria in forming the panel of suppliers and collecting feedback after completion of services;
- inclusion of modules on socially responsible subcontracting in training for purchasers, sponsors and actors in the purchasing process.

In 2012 as in 2011, a programme of 57 sustainable development audits was executed at EDF suppliers established all over the world, based on the standards contained in SA 8000 and ISO 14001 and a criticality analysis. Detailed analysis of the audits conducted in 2011 shows that 93% of audits reported a rating of "satisfactory" or "acceptable with comments".
The 2012 audits are currently under analysis.

2.3.3.4. CONSUMER HEALTH AND SAFETY

In **France,** EDF offers residential *Bleu Ciel* brand customers an electricity safety survey service proposed in partnership with the Consuel[48] (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, along with general advice on remedial action which should ideally be carried out by a professional electrician. 1,776 electricity safety surveys were sold in 2012.

2.3.4 REPORTING

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.

Non-financial 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.

The Group has also begun a progressive process to have the quality of these non-financial indicators verified by the Statutory Auditors.

[48] 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.

For 2011, the Statutory Auditors issued a report expressing "reasonable assurance" on the "CO_2 emissions (for electricity and heat generation) and "total workforce at year-end" indicators and "moderate assurance" on a selection of environmental and social indicators.
The EDF group is aiming to achieve the same mixed assurance results for 2012.

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.

A summary of environmental and social indicators is available in appendix 1.

Accreditations

In March 2012, EDF was admitted to the FTSE4Good index (see 1.2.2.3.1).
Since 2005, EDF has been included in the ASPI index, an "ethical" index comprising 120 firms assessed on the basis of their sustainable development performance by the French CSR rating agency Vigeo. In 2012 EDF was also a member of the Vigeo France 20, Vigeo Europe 120 and Video World 120 indexes. It was given an overall score of 55 out of 100 in 2012.

EDF is also participating in the Carbon Disclosure Project (CDP).
In 2012, 81% (405) of Global 500 companies answered the CDP questionnaire; in France, 97% of CAC40 companies responded, showing the significant commitment by the largest French firms to transparency and reducing CO_2 emissions.
EDF's transparency score was 87 in 2012 (+25 points compared to 2011) and its performance was graded B.

The companies of the EDF group prepare their non-financial reporting in the form of an annual sustainable development report (Edison in Italy, ERDF, Electricité de Strasbourg), by including sustainable development issues in their annual report (UTE Norte Fluminense in Brazil), or by publishing commitments and indicators on their website (EDF Energy in the United Kingdom, CENG in the United States).

2.4. SOCIAL INFORMATION

2.4.1. THE CORPORATE SOCIAL RESPONSIBILITY POLICY

Background and objectives

EDF has clearly expressed its human resources ambition in a dual social/economic project, reaffirming its Human resources strategy in three major priorities shared by all of the Group's business lines and companies:

- To develop skills and stimulate social mobility
- To make recognition of each individual's importance, quality of life in the workplace and constant concern for health and safety drivers of a general commitment to sustainable performance
- To introduce greater diversity and strengthen the Group's shared culture, particularly at management and expert level.

These priorities lie at the heart of the social dialogue that continued in 2012: 8 agreements were signed by EDF, on its own behalf or for the Group

Implementation of the Corporate Social Responsibility (CSR) Agreement

The EDF group's CSR agreement signed in 2005 was renewed in January 2009 for a 4-year period. This second agreement strengthens the Group's commitments, especially regarding subcontracting, the battle against climate change, and biodiversity. In 2011, the agreement monitoring committee elected a new secretary and new officers. When the review took place, it was also decided to focus specifically on one of the agreement's 20 articles each year for more emphatic communication throughout the year, and a more in-depth assessment at the following review.

EDF's social responsibility label was renewed in 2012 for management of its customer relations centres, incorporating actions in fields as varied as human resource management, social dialogue, societal commitments, sales practices, respect of the environment and governance methods. This brings it closer to the ISO 26000 guidelines on corporate social responsibility.

Respect of human rights

The current measures to ensure that human rights are respected appear to be sufficient in 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 delegates, ombudsman, ethics committee, toll-free numbers, etc).
At Electricité de Strasbourg (ES) for example, Group companies' internal regulations have contained a "Charter for joint action against harassment and violence at work" appendix since 2011. This charter covers the risks for anyone breaching the relevant laws but also defined the mediation procedure introduced in the ES group for cases of unacceptable behaviour.

A new Group charter of ethics was defined in 2012, and is currently being rolled out to all Group company employees in all locations and business lines.
Certain companies also took further measures in 2012. Edison, for example, has drawn up a new human rights assessment and control procedure applicable across all the company's sites. EDF Energy reinforced its code of ethics in 2012, especially on themes associated with action against discrimination, harassment and employee health.

Social responsibility policy towards suppliers and subcontractors

EDF's subcontracting agreement covers three major areas:

- first of all, particularly in view of the industrial stakes and the characteristics of its generation facilities, EDF wants to give its subcontractors good visibility in the medium term, and work with its suppliers as partners
- EDF also wishes to take its subcontracting practices forward by capitalising on operational experiences and transferring best practices between business lines
- Finally, EDF confirms its commitment to development of socially responsible subcontracting (SRS) by signing or extending SRS agreements with unions.

The major subcontracting issues at EDF SA in 2012 concerned both industrial and sales activities.

Workforce numbers on the Flamanville 3 site reached their peak in 2011, and the number of jobs for the civil engineering work began to drop significantly in 2012. The workforce was adjusted during the year, mostly through departure of employees seconded to the site and action plans that are part of the commitment to develop employment and skills, providing support for local employees and offering further career solutions (including funding 75 training courses).
The Flamanville workforce was stable for most of 2012 at 3,000, and stood at around 2,650 subcontractors' employees in the final quarter of the year. Since the unit attached to the local employment office was opened in late 2007, 2,980 job offers have been posted and 95% of posts were filled.
At December 31, 2012, approximately 92,000 hours of training had been funded over the year for local jobseekers to give them access to jobs created by site subcontractors, mostly in the electro-mechanical field.

The activities subcontracted for maintenance of the existing generation fleet mainly require highly specialised or rare skills that only specialist companies working for other industrial customers are in a position to develop and maintain on a permanent basis.
The highly seasonal pattern of outages in generation facilities leads to peaks that must be absorbed, and this too results in a certain amount of subcontracting.
EDF also uses subcontractors when it needs specialised labour.

Subcontracting thus corresponds to an industrial policy intended to guarantee the best performance in all areas at all times, as regards both skills and organisation

For nuclear generation facilities currently in operation, after submission in September 2011 of the additional safety assessments following the Fukushima accident, 2012 was marked by the Strategic Nuclear Committee (CSFN[49])'s "social specifications" applicable to services and work carried out at a Basic Nuclear Facility in France. These social specifications are the same for all nuclear operators and will be included in EDF's calls for tender from early 2013. From 1 July 2012, EDF also limited the number of subcontracting levels for nuclear maintenance activities: each contractholder is now only authorised for two levels of subcontracting, included for contracts already in execution.

Customer relations require subcontractors too, notably to cope with the extended business hours offered to customers and changes in workload. Priority is given to complex work or tasks that are less strategic for the customer. Subcontracting is also used to absorb the additional workload generated when major changes are introduced, for instance new IT systems.

Several different operational topics were explored or put into action in 2012:
- EDF SA's Sales division gained the social responsibility label as commissioner of outsourced telephone services. The SRS agreement was signed at ERDF in 2011
- Under the sustainable development charter between EDF and its suppliers introduced in 2007, the Group's Purchasing Division continued its sustainable development/social responsibility audits of suppliers, based on the standards contained in SA 8000 and ISO 14001 (57 audits took place in 2012)
- Edison joined the "responsible subcontracting" project with 10 other companies to work on a self-diagnosis tool for subcontractors based on Global Compact principles

[49] *Comité stratégique de filière nucléaire*

- EDF Energy also asks all its suppliers to fill in an assessment questionnaire regarding compliance with the Global Compact principles.

2.4.2. HR AMBITION: PRIORITIES

2.4.2.1. DEVELOPING SKILLS

Jobs and skills

EDF is facing new challenges today:

- Its businesses are evolving along with technological, economic, and environmental stakes in the energy sector, and the group's ambitions for development in France and internationally
- Human resource and skills requirements have also intensified with the resumption of industrial investments and expansion in nuclear engineering activities, particularly the relaunch of nuclear operations
- More than 16% of the workforce at EDF and ERDF could retire in France between 2013 and 2016, many of them from the maintenance and operative workforce for generation, engineering and distribution.

Recruitment and mobility in the Group are essential drivers for skill renewal and providing support for the Group's development projects in France and internationally.

The job website edfjoinus.com began to include EDF Energy offers in 2011, EDF Luminus offers in 2012 and will soon be extended to include Edison offers. EDF and ERDF took on more than 6,500 new employees in 2012. All the Group's technical business lines hired new staff, chiefly in electricity generation and distribution, but also in sales and R&D. Proportions were comparable for each of the three employee categories (management, supervisory and operative). Most of the new employees are newly-qualified, but EDF also recruits more experienced profiles.

New arrivals greatly outnumbered retirements in 2012.

Developing skills in sufficient numbers and quality after the Fukushima accident was included in the medium-term plan for 2011-2014 as a major area for attention. 2012 saw a significant increase in the resources of the Nuclear generation division and Nuclear engineering division, and this is due to continue from 2013 to 2015. These two divisions have stepped up the pace of recruitment (2,055 new staff hired, 1,570 for generation and 485 for engineering) and growth is forecast for 2013.
Detailed measures were taken in 2012 (logistics, support site designation) to set up the FARN task force. Ultimately this should lead to an increase of 400 employees as crisis teams are enlarged.
A final essential question, already incorporated into the nuclear skill renewal model, concerns the creation and management of EDF's own skill transfer centres where experienced staff can hand on their knowledge to the younger generation (involving close to 3,000 people in the Nuclear generation division between 2012 and 2014). This is a key component of this action programme, at a time when a large wave of retirements is anticipated and transmission of skills has become very important.
The Nuclear generation division pays particular attention to enhancing the skills of all new arrivals. To this end, it has reviewed and industrialised employee professionalisation arrangements for the 12 major skill areas identified. It has also developed new tools (e.g. echecing, WilkipeDIN) to facilitate transmission of knowledge through employee communities.
An experimental system for forward-looking management of jobs and skills (GPEC) was constructed in 2012 to build up a process methodology for EDF SA's business lines, elaborate a GPEC policy and prepare to apply it in all business lines. This system takes the form of projects, in association with pilot entities.

The methodological tools constructed include:

- A glossary
- Standard processes (activities spread over time so as to be compatible with the management cycle)
- A standard GPEC report format (guide to support execution of the system and formal reporting of results)
- Methodological notes (workforce planning, skill mapping, projections of personnel expenses, etc).

Regarding mobility, EDF and ERDF have introduced systems to encourage career planning for employees. In early 2011 an intranet system went online to make information on career developments more easily accessible. Employees are directed to useful information from the EDF intranet, the business line sites or the ERDF website. A community of career path advisors has been set up to complement the website.

Implementation of an international mobility policy is a vector for locating and supplying the skills necessary for projects taking place in some thirty countries. An extranet accessible to all of the Group's employees exists specifically for international information: employees interested in working in other countries can register on the system and recruiters can use it to find candidates to join the skill bank formed in each business line.

Training

The Group has always devoted a significant budget to employee training. Group-wide, EDF spent more than 7.3% of its total payroll on training. 82% of employees received training in 2012, equivalent to 48 hours per year per employee.

At EDF, the rate of access to training and the volume of training per employee is also high: 85% of employees followed at least one training course in 2012, with an average duration of 66 hours (per employee per year).

The Group's managers in France benefit from this reinforced focus on training through the courses offered by the *Université Groupe du Management* (UGM). Three courses exist to support them as their responsibilities increase: 741 managers attended these courses in 2011 and 1,294 in 2012. The UGM held 40 courses comprising 87 modules during the year.
Also, the Group's managers in France are now offered training support not only when they take up their post, but also throughout the time they occupy their functions. 1,800 managers followed at least one "in-post manager's course" under this new programme.

More than 11,000 managers both in and outside France have access to a distance training platform, allowing them to follow online e-learning modules in the basics of management: the annual interview, delegation, employee development, and time management. In 2012 this platform was made available in Polish for Polish managers and English for Hungarian and Slovakian managers. Access will be extended to Chinese managers in 2013, and then to Belgian, Italian and British managers as appropriate for companies in those countries.
The e-learning platform registered 25,604 connections between its launch and December 31, 2012. 6,548 managers at all levels logged in at least once to ecampusmanagers and 2,744 hours of distance training were given.

Finally, the UGM pursued its internationalisation in 2012, bringing in a new introductory course to discover the Group and its issues intended for managers, high performers and new arrivals in the Chinese division, and a managerial training session for managers in Belgium and Poland.

In France, the "Training Challenge" *(Défi Formation)* agreement signed on 10 September 2010 by all unions representing EDF SA, ERDF, and RTE employees breathed new life into the Group's training policy: boosting social mobility (through restimulation of training leading to promotions, and work-study programmes) and creating 13 business line Academies, including for cross-functional business areas, all of which were awarded quality labels in 2011; this was confirmed for six of them in 2012 (nuclear production, nuclear engineering, fossil-fired power, hydropower, distribution, legal affairs). A network of

training sites (35 in all) exists in France including a Group Campus open to all divisions and subsidiaries, and business line campuses for electricity generation and distribution.

This approach is gradually being extended to Group companies worldwide, with:

- Continuing internationalisation of business line Academies with testing of new international training modules (HR, finance, communication, legal affairs, purchasing) and consolidation of partnerships in generation business line academies: professionalisation agreement with EDF Energy's *Nuclear New Build* branch, measures taken by EDF's nuclear engineering divisions to facilitate personnel intermobility
- A new Campus planned for the Bridgewater site in the United Kingdom (decision made in 2011),
- the "People Development Programme" validated by the Group's Management Committee in September 2011, intended to implement 6 commitments to employees in all Group companies in the world from 2012. These commitments concern:
    - The annual interview, which should cover both performance and career development
    - Support from a HR contact at key stages in the employee's career
    - Access to appropriate training to gain qualifications for current and future posts
    - Visibility of job and mobility opportunities at company/country level and Group/world level
    - Information on changes in the employee's business line
    - Transfer of skills though work-study schemes and placements.

Most companies carry out annual interviews to assess employee performance. Specific e-learning modules to prepare for this annual milestone have been developed in France for managers, and in some cases for more junior employees. The annual interview guides have been enhanced by addition of a development/qualifications section and a career planning section (currently being rolled out).

For training, companies have begun to take steps for systematic identification of employees who have not had any training in at least three years, and take corrective action where relevant.

Work-study schemes are the best vector for training, qualifications and employment for young people and others finding it difficult to enter the world of work, and a key element in the identity of EDF. In the autumn of 2012, more than 3,600 work-study trainees from school-leaving to postgraduate level joined EDF and ERDF on apprenticeship or training contracts leading to all types of qualifications and professional titles. This brought the number of such employees close to 5,700 at 31 December 2011, more than 5% of the combined EDF and ERDF workforce.

Students trained by the Group on work-study schemes are given a key place in recruitment: in 2012, these candidates accounted for 9.5% of the people hired for management jobs and 24.9% of people hired for supervisory and operative jobs at EDF and ERDF.

More than 4,000 mentors provide guidance and support for these trainee employees. Work-study schemes also build on quality partnerships with several training bodies. At the initiative of EDF, ERDF and RTE, a new apprentice training centre for careers in the energy sector was opened in the Paris region in September 2011. A total of 6,717 work-study trainees were hired by the Group.

Remuneration

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 amounts 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 includes 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.

Starting salary policy

At 1 January 2012, the statutory starting salaries for EDF employees were as follows (gross amount, paid in 13 months, 25% residence weighting - no previous experience):

- annual salary for people holding a CAP/BEP: €20,296 (€19,153 for a person with no qualifications)
- annual salary for people with the Baccalauréat: €21,111
- annual salary for people with a qualification involving 2 years studies after the Baccalauréat (BTS): €24,791
- annual salary for people with managerial status: between €34,755 and €42,204

The starting salary offered by EDF for the least-qualified staff was thus 19% higher than France's national minimum wage, which was €17,708 gross (12 months) at 1 January 2012.

Since 2008, EDF SA has offered each of its employees a full individual review of his/her annual pay and its components. An information booklet on employee savings has also been distributed to all employees of EDF SA and ERDF.

2.4.2.2. WORKPLACE HEALTH POLICY

Health and safety

The EDF group operates in a high-technology sector where workplace risks are also high, and the health and safety of its employees and contractors are a key concern for the company.

EDF's health and safety policy, signed by the CEO in March 2009, takes account of changes in the work environment, new forms of jobs and longer working lives, all factors that brought out new concerns requiring policy reorientation. The policy results from cross-disciplinary dialogue between the actors concerned (management, experts, doctors, employee representatives). It is underpinned by respect for the individual, a value it places at the core of organisations.

In application of the collective agreement on social dialogue for health and safety at work signed in November 2010, eight doctors were designated by their peers to participate in the National Group for Health at Work, which met four times in 2012. This multidisciplinary group set up four working parties (WPs) devoted to the reform of occupational medicine and its impact on the organisation of workplace health and safety (WP 1), Service providers' health (WP 2), Addictive practices (WP 3) and the Link between health and longer working lives (WP 4). The work done by these groups will be translated into recommendations for the operational divisions.
Under the terms of the agreement, meetings for all CHSCT (health, safety and working conditions commission) secretaries were held in February and December 2012. These meetings facilitate sharing of experiences in running CHSCTs, expression of needs for training, legal aspects and topics of current relevance such as psychosocial risks in 2012. After an installation phase, these meetings will now be held annually.

Social dialogue in Group companies on health and safety at work is governed by each country's own regulations.

French laws emphasise the need for a specialist representative body, the CHCST, which controls and analyses information and proposals for action. The Divisions of the Group's French companies refer to this body to present occupational risk assessment documents and the annual reports by doctors from the occupational health system. However, social dialogue in this field also takes place through other bodies.

November 2011 saw the Central Works Council's first meeting devoted entirely to the subject of health and safety, putting the company's multidisciplinary approach to health issues into practical application. This action continued in 2012. At Group level, all safety measures are presented annually to the Health and Safety Commission of the European Works Council.

Industrial accidents

Action has been taken to reinforce accident prevention through a focus on the core risks of the company's businesses.

Regarding industrial accidents, EDF has undertaken wide-scale prevention and training efforts for more than ten years, achieving a very significant reduction in the rate of industrial accidents causing sick leave. The Group has achieved 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): 3.9 in 2011, 4.5 in 2010 and 2009. The 2012 rate is 3.8, confirming this trend.
EDF's severity rate (number of calendar days' sick leave during the year for work-related accidents, including accidents arising in previous years, per thousand hours worked) is 0.15 for 2012 (0.14 for 2011 and 0.16 for 2010). For the Group as a whole, the rate is 0.16 for 2012.

In response to an observed rise in 2010 and 2011 in the number of fatal falls in the Group, in 2011 EDF introduced a system to share information on the causes of significant events in the Group. It is currenly being generalised and should foster progress in this area, especially for control of core business risks such as falls from heights, electric risks and road risks.
The lower number of fatalities related to core business risks (1 death due to these risks in 2012 compared to 3 in 2011) is masked by the number of deaths from other causes (collapses, road accidents between home and work) which increased. A total of 14 Group employees dies in 2012, compared to 13 in 2011.

Industrial illness

EDF's 2011 survey of employment and working conditions reports the following information on industrial illnesses for 2011:

Number of cases of industrial illness declared to the Social Security during the year	2011 2010 2009	11 12 12

In 2011 54 employees were concerned; in 2010, 53 employees were concerned.

The declared illnesses were:
- silica-related (pneumoconiosis)
- asbestos-related (pleurisy, pleural plaques)
- asbestos-related (primary lung cancer)
- noise-related lesions (deafness)
- posture and movement-related (shoulder problems)
- posture and movement-related (tendinitis, carpal tunnel)
- problems caused by ionising radiation.

These social security statistics are considered confirmed after three years.

Occupational dosimetry (radioprotection)

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 2012, the average collective dose was 0.67 mansieverts (mSv) per reactor, lower than in 2011 (0.71 mSv per reactor, comparable to the average values recorded by operators of PWRs. EDF is actively continuing the ALARA (As Low as Reasonably Achievable) approach to control the collective dose, in anticipation of major refits and the resulting volumes of work.

In the United Kingdom, in 2012 the average collective dose was 0.037 mSv for the PWR and 0.063 mSv for reactor for the AGRs.
The EDF Energy sites are achieving ongoing performance improvement regarding radioprotection and exposure to radiation, principally through optimised governance of maintenance and repair work.

EDF is continuing its efforts to bring individual doses from exposure to radiation below the regulatory limit of 20 mSv. In France in 2012, no-one employed by EDF or subcontractors registered an individual dose above 16 mSv over a rolling 12-month period.

Given the achievements so far, efforts in future years will focus priority on plants with the least favourable dosimetry results. Purification of circuits will be a particularly important measure.

The constant improvement in radioprotection results involves raising the quality of radioprotection culture to the same level as the general safety culture.

In the United Kingdom, no individual dose exceeded the 10 mSv over the calendar year 2012. The highest dose recorded was 8.2 mSv.

2.4.2.3. Quality of life in the workplace

Quality of life in the workplace results from activation of several levers relating to work organisation, workplace relations, career development, the working environment, and the work-life balance. Promoting diversity and preventing discrimination also help to create a good environment for quality work.

In a move to take consideration of all these levers to a new level in the Group, in 2007 EDF set up a National Observatory of quality of life in the workplace, reinforced its ethical management and simplified its procedures to favour people-focused management.
The Observatory provides a setting for dialogue between doctors, managers, social partners and external experts. It monitors working conditions, commissions studies and issues recommendations.
In 2008, it recommended introducing an EVREST (Changes and Relations in Heath at Work) plan at EDF, which provide the company with crossed health/work indicators. This plan was implemented in 2009 by occupational doctors on a voluntary basis. In the IEG (gas and electricity) sector, by 107 doctors had registered and 87 of them had filled in 9,000 questionnaires by the end of 2012 (up from 4,808 at the end of 2011). The results for the period 2011-2012 were reported at the Observatory's meeting in January 2013.
Since it was first formed, the Observatory has issued other recommendations to promote a good work-life balance for its employees and intergenerational cooperation at work. These recommendations were sent to management, and an initial assessment of their application was made in 2011.
In 2012 and 2011, based on a presentation by the French National Agency for the Improvement of Working Conditions (ANACT – *Agence Nationale pour l'Amélioration des Conditions de Travail*) on the challenges of the longer working life, the Observatory drew up a recommendation on promotion of working environments that are favourable to career development for all ages. It is currently reflecting on how to make changes in the company.

Finally, the groupware space *Innovation for better* enables managers and HR staff to promote and share good practices, receive expert advice and build an 800-strong community on the theme.

At Group level, the priority assigned to improving health and quality of life in the workplace has resulted in sharing experiences, comparing data and observing practices in the business lines, and by invitation in the other companies. Exchanges of this kind are organised regularly in the health and safety community through "learning expeditions" of the kind that take place every year in 2011 in **France**, the **United Kingdom** and **Poland**.

Psychosocial risks

Each entity has designated an ethics correspondent and a national toll-free telephone number is available for all employees in case of serious difficulties at work.
Since 2008, the support of specialist doctors has been available to management 24 hours a day, 7 days a week in case of a traumatic event in their unit, to advise them and organise all necessary assistance for the relatives of the victims and the work teams.
The collective agreement on "Preventing psychosocial risks and improving quality of working life" signed at EDF in November 2010 provides for various multi-disciplinary dialogue projects closely focusing on situations at work and the training of participants.
The principal measures taken focused on:

- widespread introduction of multidisciplinary groups and joint training of the participants in these groups
- listing psychosocial risks in the single document required by the regulations (plus publication of a guide on how to take risks into consideration in work evaluation, and their transcription)
- the gradual integration of workplace life quality aspects into impact studies before any organisational changes are made.

The mid-term assessment of this agreement, undertaken jointly by the signatories, began in the second half of 2012.

EDF and ERDF have also developed multi-disciplinary analysis groups made up of different actors (managers, doctors, social workers, employee representatives, internal consultants), to discuss and present proposals for action to promote quality of life at work and prevent psychosocial risks. More than 50 such groups currently exist at the level of the parent company EDF. Their initial results are satisfactory: by renewing the conditions of social dialogue and broadening discussions to include more than social partners alone, they can address individual and collective groups, sometimes playing a role in change. This improves the connection between health matters and questions of economic performance.

Outside France, social dialogue results either from direct application of the law or an agreement between social partners.
In Hungary (EDF Demasz), a joint safety committee is responsible by law for social dialogue, and meets regularly to discuss the subject, similar to Italy. In 2012, BE ZRt and EDF Energy signed charters setting out the terms of social dialogue on health and safety. At Edison, a specific agreement was signed in April 2012 on training in health and safety for different target audiences (central functions, technical business lines, mobile workers, management). A new health and safety policy was also signed at SSE.

2.4.2.4. 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. 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 action in favour of equality and diversity.

The Group signed a Diversity charter in 2006 and undertakes many actions including:

- Organisation of an annual "Diversity Day" across the Group since 2008, comprising events to promote diversity, raise awareness of stereotypes and thus help to prevent all kinds of discrimination. These initiatives reached 40,000 Group employees in 2012. Several companies took this chance in 2012 to emphasise gender equality and promote a good gender mix.
- 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. Training modules have been added to the professional management training courses, and a one-day course for Group managers was introduced in 2012 and has so far been held four times. 400 EDF Energy managers also underwent training.

2012 saw the official launch of the Group's international diversity community, set up to facilitate implementation of action to promote diversity and sharing of good practices.

The partnership agreement signed in late 2011 with the association "L'Autre Cercle", which campaigns against discrimination based on sexual orientation and homophobia at work, conducted and reported its initial diagnosis of EDF. A booklet to raise awareness of homophobia and related discriminations was widely distributed at EDF and ERDF on 17 May 2012, the international day against homophobia.
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. They are particularly active and in 2012 increased 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, and the women's network Interp'Elles, which opened a branch in Asia in 2012.

Gender equality

Equality in the workplace is a basic lever of the Group's diversity policy.
EDF and ERDF renewed their agreements for gender equality at work, signed respectively on 8 February 2012 and 30 November 2012 by all union organisations.
These agreements extend and amplify previous commitments, now based on targets expressed in figures. The signatories undertake commitments on six themes: long-term change in mentalities, promotion of a gender mix in the workplace and in recruitment, equal career opportunities, equal training opportunities, consideration of working hours and conditions, and the work/life balance.
Pay equality for men and women has been broadly achieved in both companies 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.

EDF Energies Nouvelles has drawn up an action plan to promote gender equality, maintain equal pay between men and women for equal skills, and pay particular attention to working conditions. Edison monitors indicators on the gender mix and the wage gap between men and women holding equivalent responsibilities, which are published in its sustainable development report.

The Group also takes action ahead of recruitment to encourage a good gender mix. In 2012, EDF once again organised the Fem Energia Prize in partnership with the WIN (Women in Nuclear) association, which promotes and awards the careers of young female students or women working in the nuclear industry. EDF is also pursuing its partnership agreement with the "Elles Bougent" association, which works to encourage young female secondary school pupils and students to go into technical and scientific careers. Some fifty EDF "sponsors" volunteered to give occasional presentations at the meetings organised by "Elles Bougent". EDF was honorary president of the association in 2012. EDF Energy, meanwhile, has targeted recruitment campaigns to attract more young women engineers and apprentices.

Managing age in the workforce

The Group is committed to helping employees aged 55 and over to stay in work, and improving working conditions for older employees. Particular aims include changing current perceptions of work for older employees, encouraging career advancement throughout the employee's working life using milestones in the second half of a career (mid-career interviews are being progressively introduced), making access to training easier for older employees and preparing employees better for the transition from work to retirement (progressive introduction of career-end interviews began in late 2011).
The number of employees aged 56 and over is increasing; they currently represent 9.5% of the workforce (9% in 2011), while employees aged 50 and over represent 32% of EDF's workforce (33% in 2011) and there are now more than 1,000 employees aged 60 and over (slightly more than 800 in 2011).
In response to the presence of several different generations in the company, an age management project has been instigated in the Group in France, to update apprenticeship and skill transfer methods (learning organisations), create the conditions to sustain motivation and commitment by each employee throughout their career, manage parameters that affect health in the short, medium and long term and develop services to support and assist employees. This project began in 2012 and will continue in 2013; among other consequences, it led to negotiation of an agreement on generational contracts that replace the senior employee action plan of December 2009.

Disabled employment

EDF and ERDF each signed a new 4-year agreement in 2009 for the integration of disabled people. 124 disabled employees were recruited in 2012 by EDF and 66 by ERDF. In addition, both companies are leading a voluntary effort to welcome young disabled people each year under work-study programmes (apprenticeship or professional contracts): EDF and ERDF took on 79 staff in this way in 2012.

Partnerships are being developed with associations such as *Tremplin, Arpejeh,* and *FEDEEH*, to provide support for disabled people from their time at school to finding a job, and also work in research and technological innovation to the benefit of disabled employees.

To provide the best possible conditions for all, EDF is training its customer services staff in reception of disabled customers, and continues to refit certain branches to ensure "accessibility for all". 49 branches have been redesigned (access for reduced-mobility users, audioguide terminals and specially-adapted documents for the visually-impaired also, a system is being tested to enable deaf and hearing-impaired customers to use a workstation equipped with a webcam, unaided). These moves were presented and praised at the Paris Police office's accessibility forum in September 2012. In January 2012, a responsible subcontracting agreement was signed by ERDF and social partners, aiming to increase ERDF's purchase volumes from the protected sector and organisations that employ a majority of disabled people by 20% within 3 years.

Group companies are also making efforts to facilitate recruitment of discabled employees and appropriate workstation adaptation (Edison, SSE, EDF Demasz, EDF Energy, EDF Polska). In 2012 Fenice signed an agreement on employment of disabled people, including commitments in terms of numbers hired. Electricité de Strasbourg won an award at the *Tour de France de la Diversité* for its active commitment in favour of the disabled under its 2010/2012 agreement.

Sport for the disabled is a strong lever for internal awareness-raising, and was given a particularly high profile in 2012 through EDF's sponsorship of the London Olympic Games and Paralympics. Disabled sportsmen and women are regularly invited to special events to meet employees and managers.

2.4.2.5. SOCIAL DIALOGUE

Social dialogue with employee representatives and unions is a fundamental part of EDF's human resources ambition right across the Group. One of EDF's priorities is to uphold its long tradition of social dialogue and consultation, to serve the company's objectives and employee development.

In 2012, key developments were the introduction of broader consultation on corporate strategy, particularly through a special Works Council seminar and instigation of major negotiations on the themes of equality at work, forward-looking management of jobs and skills (GPEC) and age management. The following agreements had been signed by the end of November 2012:

- The collective agreement on gender equality at EDF for 2012-2014, signed on 8 February 2012 by the four representative unions (CFDT, CFE-CGC, CGT, CGT-FO); ERDF's agreement was signed on 30 November 2012
- The framework agreement on principles governing the initiation and conduction of experiments at EDF, signed on 20 February 2012 by the CFDT and CFE-CGC unions
- The agreement on configuration of the EDF group for renewal of the France Group Committee for 2012-2015, signed on 6 March 2012 by the CFDT, CGT and CGT-FO unions
- The 2012 amendment to EDF's profit share agreement for 2011-2013, signed on 7 May 2012 by the CFDT, CFE-CGC and CGT-FO unions
- The agreement on social measures applicable to the Island Energy Systems on the island dimension of its territories on 29 June 2012 signed by the CFDT, CFE-CGC and CGT-FO unions
- The collective agreement concerning the Action for Employment fund (*Fonds Agir Pour l'Emploi*) in the EDF group signed on 16 November 2012 by the four representative unions.

A collective agreement on patents and additional remuneration for employees who make inventions was signed on 17 December 2012 by the CFDT, CGT and CGT-FO unions.

Further themes were covered in social dialogue in certain EDF business lines: experimenting with teleworking, change projects, relocation, and subcontracting.

A notably dynamic collective negotiation at ERDF renewed the collective agreements on workplace equality, disability and profit sharing and concluded three new agreements (additional pension scheme, socially responsible subcontracting and forward-looking management of jobs and skills). Finally, the plan to merge Enerest with ES Energies Strasbourg (due to be finalised in 2013) and the employee share offer, on top of the current profit sharing agreement, were central focuses of social dialogue at Electricité de Strasbourg.

The main agreements for the employees of the IEG (electricity and gas industries) sector concern:

- Total remuneration: 2012 was covered by a wage agreement signed on 24 November 2011 by the CFDT, CFE-CGC and CFTC unions, setting the procedures for general pay rise applicable to employees in the sector.
- Meanwhile, after discussions it was decided to replace quarterly payment of IEG pensions by monthly payment from 1 April 2013, and in January 2013 to transfer management of all standard family benefits to the national organisation in charge of such benefits
- In early 2012, the discussions begun in 2011 on application of the decree of 23 September 2011 on classification of active service or health-risk jobs in the special pension plan were completed, and the new measures were applied in 2012
- In April 2012, an amendment to the agreement on in-service training was signed by the CFDT, CFE-CGC, CFTC and CGT-FO unions.

However, both attempts to renegotiate a protocol for electing the directors of EDF's social activities fund failed as no agreement could be reached between the unions.

Internationally, social dialogue mainly focused on:

- The first collective agreement signed in the China Division
- Restructuring and redundancy plans (Edison, Fenice, BE ZRt)
- Corporate responsibility (BE ZRt)
- Pay (BE ZRt, SSE)
- Incorporation of changes in legislation (SSE)
- Pensions and the "Supporting Excellence Programme" for better organisation of support functions (EDF Energy)
- Signature of an agreement between the unions at EDF Poland and management on the social conditions of the merger between EDF Rybnik, EDF Krakow, EDF Polska Centrala, and EDF Polska CUW.

An agreement relating to the France Group Committee was signed on 1 September 2008 by all unions. To renew this committee, an agreement on the configuration of the EDF group 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, Fahrenheit, etc) and is a place for discussions covering all of France. This Group Committee met four times in 2012.

The European Works Council, set up in 2001, now has 34 members and is kept informed of the Group's economic, financial and social strategies. At the end of the three-year period set by the 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 twice during 2012, this year including representatives of the Italian employees for the first time.

One significant event of 2012 was the launch of the Group's first worldwide internal opinion poll entitled "My EDF". This is a precious instrument for dialogue between management and employees, who were able to express their views and desires as regards the policies and resources applied in their company and the action necessary to move forward together. More than 82,000 Group employees have taken part in the poll.

2.4.3. SPECIAL PENSION SYSTEM FOR THE ELECTRICITY AND GAS INDUSTRIES (IEG) IN FRANCE

The special IEG pension system was reformed in 2008 and 2010: the first reform was part of the reform for special pension systems, and the second resulted from the law of 9 November 2010 reforming general pension systems and French public sector pensions.

Following enactment of this law, the regulations for the special pension system were amended by decree 2011-290 of 18 March 2011 raising the pensionable age progressively by two years, including for early retirement. This will only come into force in 2017 in view of the timetable for implementation of the 2008 reform. As in the ordinary French public sector, special early retirement arrangements based on the number of children will be phased out, and the period of service required to qualify for early retirement in the "active work" (i.e. non-sedentary) category will also be increased progressively by two years.

Decree 2011-289 of 18 March 2011 reflects the consequences of this change, introducing a phased rise in the age at which the employer can terminate the work contract; from 2017, the maximum age will be progressively raised from 65 to 67.

The way arduous working conditions are taken into account is changing. The 2008 pension reform discontinued certain special advantages for employees hired on or after 1 January 2009. A sector-specific Agreement of 16 April 2010 set up a system attributing paid leave entitlements, to be taken after qualifying for retirement, to employees hired on or after 1 January 2009 who would no longer benefit from the advantages of "active work" status. Decree 2011-1175 of 23 September 2011 also stipulated that criteria and procedures for granting "active work" status be updated. The standards for classification of jobs as "active work" were defined in a decision published in France's Official Journal on 29 March 2012. The new method has been in force since 1 June 2012 (transitional measures apply for employees hired before 17 April 2010).
The wider possibilities of retirement at 60 introduced by the decree of 2 July 2012 will apply to IEG pensions from 2017.

2.4.4. ADDITIONAL EMPLOYEE PROTECTION

Since 2008, IEG employees in French Group companies have benefited from additional social protection concerning:

- the additional invalidity benefit (sector-specific agreement of 24 April 2008), applicable since 1 July 2008
- welfare provision: life insurance and education allowance (under the sector-specific agreement of 27 November 2008), applicable since 1 January 2009
- the additional pension scheme (introduced by the sector-specific agreement of 21 February 2008 and a group agreement of 12 December 2008), plus company-specific measures applicable since 1 January 2009 (1 October 2010 for ERDF)
- additional healthcare coverage (sector-specific agreement of 4 June 2010), applicable since 1 January 2011.

These schemes are co-financed by the employer, and all employees are obliged to join.

To reflect the changes introduced by the law of 9 November 2010, an amendment to the Group agreement on supplementary pensions dated 10 October 2011 now allows employees of companies that are signatories of the agreement to make optional individual payments to their own supplementary pension account. The Group agreement applies to EDF SA, EDF PEI, Electricité de Strasbourg and Tiru.

EDF SA also signed an amendment to the company agreement on the time banking system on 10 October 2011, allowing employees to transfer their time banking rights to their individual supplementary pension account. The same change was made at EDF PEI, and Tiru signed an amendment for the same purpose pn 3 December 2011.

In February 2012, ERDF improved the supplementary pension scheme for its employees by introducing a collective agreement, an employee contribution and a higher employer contribution. ERDF now allows its employees to make optional individual payments to their own supplementary pension account either directly, or by transferring time banking rights that can be converted into a monetary value.

APPENDIX 1- SUMMARY OF ENVIRONMENTAL AND SOCIAL INDICATORS

Environmental indicators	Unit	2012	2011	2010[50]	Scope[51] 2012	Scope[51] 2011	Scope[51] 2010	GRI ref[52]
Fuels and raw materials – Fuel consumption								
Nuclear reactor fuel	t	**1,096**	1,205	1,138	1	1	1	EN 1
Coal	Kt	**24,277**	21,024	20,211	2	2	2	EN 1
Heavy fuel oil	Kt	**1,098**	1,170	1,625	2	2	2	EN 1
Domestic fuel oil	Kt	**317**	402	448	2	2	2	EN 1
Natural gas	10^6m^3	**9,290**	6,859	8,072	2	2	2	EN 1
Industrial gas	10^6m^3	**842**	3,555	3,707	2	2	2	EN 1
Water – consumption of raw materials from sources outside the company								
Cooling water drawn	10^9m^3	**54.8**	55.2	53.9	2	2	2	EN 8
▪ fresh water	10^9m^3	**28.0**	26.8	NC	2	2	NC	EN 8
Cooling water returned	10^9m^3	**54.2**	54.6	53.3	2	2	2	EN 21
▪ fresh water	10^9m^3	**27.5**	26.3	NC	2	2	NC	EN 21
Air – gas emissions								
Total CO_2 emissions (including installations not subject to quotas)	Mt	**79.8**	70.5	75.7	2	2	2	EN 16
SO_2 emissions	Kt	**137.8**	140.6	187.9	2	2	2	EN 20
NOx emissions	Kt	**182.2**	157.0	167.6	2	2	2	EN 20
Dusts	t	**6,968**	5,407	7,929	2	2	2	EN 20
CH_4 emissions	Kt eq. CO_2	**40.5**	32.2	41.6	2	2	2	EN 16
N_2O emissions	Kt eq. CO_2	**329.8**	254.7	287.9	2	2	2	EN 16
SF_6 emissions – EDF SA	Kt eq. CO_2	**83.8**	94.3	98.3	1	1	1	EN 16
SF_6 emissions – EDF SA + ERDF	Kt eq. CO_2	**93.3**	102.8	NC	1b	1b	NC	EN 16
SF_6 emissions – Group	Kt eq. CO_2	**109.8**	NC	NC	2	NC	NC	EN 16
Non-nuclear waste								
Dangerous waste[53]	t	**64,598**	60,956	40,679	2	2	1	EN 22
Non-dangerous waste[53]	t	**321,789**	302,251	198,422	2	2	1	EN 22
Non-nuclear industrial waste recycled or removed for recycling[53]	t	**253,412**	251,908	190,353	2	2	1	EN 22
Ash produced	Kt	**3,816**	3,617	3,581	2	2	2	EN 22
Energy								
Renewable energies: quantity of electricity and heat generated using renewable energy sources (other than hydro)	GWh	**15,583**	11,032	10,385	2	2	2	EN 6
Direct energy consumption by primary source								
Internal consumption, pumping electricity	TWh	**6.7**	6.9	6.6	1	1	1	EN 3
Internal consumption, electricity	TWh	**22.4**	22.8	22.6	1	1	1	EN 3
Management								
Environmental protection expenses *Including provisions*	€ million	**3,465** ***2,465***	2,800 *1,765*	2,579 *1,712*	1	1	1	EN 30
Environmental management (% of consolidated sales covered by ISO 14001 certification	%	**[98][54]**	79	NC	2	2	NC	

[50] Excluding EnBW, except for economic indicators.
[51] Scope 1: EDF
Scope 1b: EDF + ERDF
Scope 2: EDF group
NC: Not communicated
[52] GRI: Global Reporting Initiative.
[53] Extended to Group scope in 2011.
[54] Including companies not covered by the Group certificate.

Economic indicators	Unit	2012	2011	2010[50]	Scope 2012	Scope 2011	Scope 2010	GRI ref[52]
Provisions for decommissioning and last cores	€ million	**20,975**	19,843	19,684	2	2	2	
Provisions for back-end nuclear fuel cycle	€ million	**19,525**	18,830	18,020	2	2	2	
Indemnities paid or payable following a court ruling in an environmental matter	€ thousand	**6.9**	0	8	1	1	1	

NUCLEAR INDICATORS - EDF	Unit	2012	2011	2010	GRI ref
Radioactive emissions to water [55]					
Tritium	TBq/reac	NC	1807	191	EN 21
Carbon 14	GBq/reac	NC	1306	126	EN 21
Radioactive emissions to air[55]					
Carbon 14	TBq/reac	NC	017	017	EN 20
Tritium	TBq/reac	NC	065	055	EN 20
Nuclear waste					
Low and medium level short-life solid radioactive waste	m^3/TWh	20.7	156	124	EN 24
High and medium level long-life solid radioactive waste	m^3/TWh	0.88	087	088	EN 24
Transported spent nuclear fuel	t	1,075	1,199	1,140	EN 24

NUCLEAR INDICATORS – EDF ENERGY	Unit	2012	2011	2010	GRI ref
Radioactive emissions to water					
Tritium – AGR (Advanced Gas-cooled Reactor)	TBq/reac	135.7	124.5	107.8	EN 21
Tritium – PWR (Pressurised Water Reactor)	TBq/reac	44	46	25	EN 21
Radioactive emissions to air					
Carbon14 – AGR	TBq/reac	0.7	0.68	0.61	EN 20
Carbon14 – PWR	TBq/reac	0.3	0.3	0.13	EN 20
Tritium – AGR	TBq/reac	0.68	0.8	0.92	EN 20
Tritium – PWR	TBq/reac	0.8	0.7	0.74	EN 20
Nuclear waste					
Uranium sent off site	t	216	210.7	131	EN 24
Low level radioactive waste sent off site	m^3	698	608	498	EN 24
Medium level radioactive waste generated	m^3	161	161	162	EN 24

NUCLEAR INDICATORS – CONSTELLATION ENERGY NUCLEAR GROUP	Unit	2012	2011	2010	GRI ref
Radioactive emissions to water					
Tritium	TBq/reac	12.91	12	11.11	EN 21
Radioactive emissions to air					
Carbon 14	TBq/reac	0.33	0.34	0.69	EN 20
Tritium	TBq/reac	1.38	1.40	1.41	EN 20
Fuels[56]					
Nuclear fuel delivered	t	46	48	34	EN 24
Nuclear waste [56]					
Low and medium level radioactive waste sent off site	m^3	2,419	1,287	735	EN 24

[55] Radioactive emissions to water and air concern the previous year (N-1) and are therefore reported for 2011 but not communicated (n.c.) for 2012

[56] Data is consolidated according to the percentage ownership in the subsidiary

SOCIAL INDICATORS – EDF GROUP	Unit	2012 **	2011 *	2010 *	Scope 2012-2010	GRI ref
WORKFORCE NUMBERS AND BREAKDOWN AT 31 DEC 2012[57]						
EDF + ERDF	Number	**107,333**	103,954	96,571	1	LA 1
TOTAL EDF group	Number	**159,740**	156,168	158,842	2	LA 1
Employees by age						
Employees under 25	%	**8%**				
Employees aged 25-35	%	**23%**				
Employees aged 36-45	%	**25%**				
Employees aged 46-55	%	**34%**				
Employees aged 56 and over	%	**10%**				
Employees by geographical zone (based on head office location)						
France	Number	**129,328**				
- DALKIA	Number	**15,964**				
United Kingdom	Number	**16,178**				
Italy	Number	**5,210**				
Other European countries	Number	**7,503**				
Other international	Number	**1,521**				
Number of executives (as defined by French regulations)	Number	**40,355**	37,786	39,231		LA 1
Percentage of women executives	%	**25.0%**	23.9%	22.7%		LA 13
Number of non-executives	Number	**119,385**	118,382	119,611		LA 13
Gender equality						
- Male workforce	Number	**118,512**	117,023	121,009		LA 13
- Female workforce	Number	**41,228**	39,145	37,833		LA 13
- Male executives	Number	**30,286**	28,753	30,306		LA 13
- Female executives	Number	**10,069**	9,033	8,925		LA 13
HIRING / DEPARTURES						
Recruitments	Number	**12,577**	12,755	13,790		LA 2
Other arrivals[57]	Number	**7,499**	5,849	3,105		LA 2
Retirements	Number	**4,185**	4,200	4,708		LA 2
Resignations [58]	Number	**2,355**	2,761	2,929		LA 2
Redundancies and dismissals	Number	**1,739**	1,689	1,924		LA 2
Other departures[57]	Number	**9,304**	9,398	10,457		LA 2
REMUNERATION						
Total gross remuneration	€ million	**Cf MR note 10.1**				
Part-time employees	Number	**14,690**	15,296	17,719		LA 1
ABSENTEEISM						
Average number of days' absence (illness + accident)	Number	**9.0**				
HEALTH AND SAFETY						
Fatal accidents	Number	**14**	13	15		LA 7
Injury frequency rate		**3.8**	3.9	4.5		LA 7
Work-related accidents (causing leave of one day or more)	Number	**921**	933	1,145		LA 7
Severity rate		**0.16**				

[57] Companies joining or leaving the scope in the year are included in "Other arrivals" and "Other departures"
[58] 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".

SOCIAL INDICATORS – EDF GROUP	Unit	2012 **	2011 *	2010 *	Scope 2012-2010	GRI ref
MANAGEMENT-EMPLOYEE RELATIONS						
Percentage of employees covered by collective bargaining agreements[59]	%	**88%**	87%	94%		LA 4
TRAINING						
Total hours of training	Number	**7,631,618**				
Number of employees benefiting from training [60]	Number	**131,311**	118,930	127,332		LA 10
EMPLOYMENT AND INTEGRATION OF EMPLOYEES WITH DISABILITIES						
Number of disabled employees[61]	Number	**4,519**	4,601	3,078		LA 13

[59] Excluding Dalkia International in 2010.
[60] Excluding ESTAG in 2010 and 2011.
[61] Collected by declaration at EDF Energy.
For reasons of confidentiality, CENG does not report this information in 2010, 2011 or 2012.
The figure collected by Edison in 2011 and 2010 does not include the subsidiary Abu Qir, first consolidated during 2009.
* including RTE
** excluding RTE and new definition of workforce, including people on special contracts under various measures, doctors and personnel seconded from external organizations
Scope 1: EDF + ERDF
Scope 2: EDF group

SOCIAL INDICATORS - EDF	Unit	2012	2011	GRI ref
WORKFORCE NUMBERS AND BREAKDOWN AT 31 DEC 2012				
Total EDF staff covered by collective bargaining agreement (at 31 Dec 2012)	Number	**64,838**	63,002	LA 1
Other permanent EDF staff not covered by collective bargaining agreement	Number	**433**	409	LA 1
Other non-permanent EDF staff not covered by collective bargaining agreement	Number	**3,851**	3,773	LA 1
Total EDF SA staff not covered by collective bargaining agreement	Number	**4,284**	4,182	LA 1
Total EDF SA workforce	Number	**69,122**	67,184	LA 1
Number of executives (as defined by French regulations)	Number	**28,230**	26,644	LA 1
Percentage of women executives	%	**26.0%**	25.1%	LA 13
Number of non-executives	Number	**40,892**	40,540	LA 13
Technicians and supervisory staff	Number	**33,084**	32,871	LA 13
Operatives	Number	**7,808**	7,669	LA 13
GENDER EQUALITY				
Male workforce	Number	**47,852**	46,938	LA 13
Female workforce	Number	**21,270**	20,246	LA 13
Male executives	Number	**20,884**	19,944	LA 13
Female executives	Number	**7,346**	6,700	LA 13
HIRING/DEPARTURES				
Recruitments	Number	**4,452**	4,021	LA 2
Integration & rehiring	Number	**261**	251	LA 2
Other arrivals[62]	Number	**3,194**	2,818	LA 2
Retirements	Number	**2,061**	1,990	LA 2
Resignations	Number	**114**	123	LA 2
Redundancies and dismissals	Number	**6**	14	LA 2
Deaths	Number	**82**	89	LA 2
Other departures[62]	Number	**3,709**	3,285	LA 2
OVERTIME				
Number of hours of overtime	thousands	**2,831**	2,791	
OUTSIDE CONTRACTORS				
Monthly average number of temporary staff [63]	Number	**(2012) NR (2011) 1,187**	(2010) 1,087	LA 1
WORKING TIME				
Full-time employees	Number	**60,612**	58,157	LA 1
Part-time employees	Number	**8,510**	9,027	LA 1
Employees on contracts allowing overtime	Number	**6,882**	6,808	LA 1
ABSENTEEISM				
Absentéisme	%	**3.8%**	3.9%	LA 7
Hours of maternity or paternity leave/total working time	%	**0.7%**	0.7%	LA 7
HEALTH AND SAFETY				
Number of industrial illness declared in the year to the French Social security		**(2012) NR (2011) 11**		
Fatal accidents	Number	**6**	8	LA 7
Injury frequency rate		**3.4**	3.7	LA 7
Severity rate		**0.15**	0.14	LA 7
Work-related accidents (causing leave of 1 day or more)	Number	**333**	358	LA 7

[62] Not including arrivals and departures of seasonal staff on fixed-term contracts.
[63] 2012 figure unavailable at the reporting date.

SOCIAL INDICATORS - EDF	Unité	2012	2011	Réf. GRI
WAGES / SOCIAL SECURITY CONTRIBUTIONS / PROFIT SHARE				
Principal monthly salaries				
Executives	€	**4,308**	4,248	EC 1
Technicians and supervisory staff	€	**2,612**	2,581	EC 1
Operatives	€	**1,877**	1,874	EC 1
Personnel expenses	€ million	**6,113**	5,784	EC 1
Average profit share per employee	€	**1,820**	1,583	EC 1
MANAGEMENT-EMPLOYEE RELATIONS				
Number of collective bargaining agreements signed(France)	Number	**8**	11	HR 5
Percentage of employees covered by collective bargaining agreements [64]	%	**94%**	94%	LA 4
TRAINING				
Number of employees benefiting from training	Number	**58,899**	55,905	LA 10
EMPLYMENT AND INTEGRATION OF EMPLYEES WITH DISABILITIES				
Number of disabled employees	Number	**1,842**	1,698	LA 13
Number of disabled employees hired	Number	**124**	94	LA 13
CHARITABLE WORKS				
Committee budgets (1% requirement)	€ million	**196**	198	

[64] 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.

APPENDIX 2 - METHODOLOGICAL INFORMATION ON THE SOCIAL AND ENVIRONMENTAL INDICATORS FOR 2012

Data consolidation

The quantitative social and environmental data in this report was collected via the EDF group's consolidation reporting software packages.

Social and environmental indicators are consolidated under the rules for accounting consolidation, and with reference to relevance criteria for human resources and environmental impact.

Companies fully consolidated for accounting purposes are also fully consolidated for production of the social and environmental indicators.

Companies proportionally consolidated for accounting purposes are also proportionally consolidated for production of the social and environmental indicators.

Companies accounted for under the equity method are not included in the preparation of social and environmental indicators.

In addition to these rules, the Group's scope of consolidation for social data only includes companies with a significant workforce (more than 50 employees) acquired more than 6 months ago.

For environmental information, the criteria applied are based on subsidiaries' industrial activities (generation, distribution and transmission) that are significant in terms of environmental impact. Only companies that have been included in the scope of consolidation for longer than one year and were still in the scope of consolidation at 31 December 2012 are taken into account.

There was a change in consolidation method for three international subsidiaries (Zielona Gora, Kogeneracja and Edison), from proportional consolidation to full consolidation over the full year 2012.

For HR information, two new subsidiaries with more than 50 employees (EDF Optimal Solutions and EDF Paliwa) are included in the Group's scope of reporting for the first time in 2012.

The scope of environmental reporting has been extended to include Fenice's Polish and Spanish subsidiaries.

Social indicators

The social indicators are prepared for this report on the basis of a glossary of definitions that has been updated in 2012.

New indicators are now published, in compliance with article R 225-102-1 of the French Commercial Code (Grenelle 2 law). These new indictors are:

- distribution of the Group workforce by age group and subsidiary's head office location
- total gross remuneration for the Group
- the portion of employees eligible for performance-related remuneration
- the accident severity rate (number of days' leave for work-related accidents * 1000/number of hours worked)
- the average number of days' absence (sick leave + leave following work-related accident) per employee
- for EDF, the number of occupational illnesses declared to the Social Security organisation
- the number of hours of training.

Since 2011, the population concerned by data collection comprises all employees who have a non-suspended employment contract with a Group company.

EDF

Since 2007, calculation of the absenteeism rate has only included 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.

EDF and ERDF

The workforce reported includes employees who are co-employed by both EDF and GDF Suez. An employee working 50% for EDF counts as 0.5 in the published workforce.

Data on the number of accidents during the year and the number of days' leave for work-related accident at EDF 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.

Group data

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 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.

The age groups used for Dalkia 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.

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.

Environmental indicators

The environmental indicators are prepared for this report on the basis of a set of descriptions and methodologies that make up the EDF group reporting standards for 2012. All indicators on consumption and emissions relate to the electricity and heat generation process.

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 located on the coast and fossil-fired plants, the quantities of cooling water drawn/returned are calculated based on the operating time and nominal debit from pumps. "Fresh water" indicators (including brackish water where relevant) were added in 2010.

Air emissions

CO_2 and SO_2 emissions by EDF's power plants are measured or calculated based on fuel analysis or standard emission factors.
CO_2 and SO_2 emissions by EDF's fossil-fired plants cover all phases of electricity generation, including plant start-up and shutdown.

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.

2012 is the first year that the SF_6 indicator has been published for the Group as a whole.

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 International and Dalkia Investissement
- The portion of non-nuclear industrial waste recycled at certain subsidiaries such as certain Polish subsidiaries and certain subsidiaries in 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 2012 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.

In 2011, the scope of reporting for dangerous waste, non-dangerous waste and non-nuclear industrial waste that has been recycled or removed for recycling was extended to the EDF group, rather than simply EDF and ERDF.

Nuclear waste

EDF

The indicator for "Very low level radioactive waste from decommissioning" comprises:

- The actual tonnage of waste sent directly to the 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 2011 and 2012, 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 an uncertainty relating to the conditioning ratio (number of packages actually made after processing of one tonne of fuel), which

can only be observed after the event as this ratio essentially depends on the blends used to optimize operations. This indicator is an estimate based on ongoing application of current practices for conditioning long-life waste which projects the current conditioning into the near future.

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 (volumes of waste generated by the Ginna site in 2010).

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 are included in the consolidated figure in 2012. The proportions of electricity and heat generated from renewable energies are estimated as a prorata of the qualities 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.