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EDF group

2017 MANAGEMENT REPORT

GROUP RESULTS

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1 KEY FIGURES

Pursuant to European regulation no. 1606/2002 of 19 July 2002 on the adoption of international accounting standards, the EDF group's consolidated financial statements for the year ended 31 December 2017 are prepared under the international accounting standards published by the IASB and approved by the European Union for application at 31 December 2017. These international standards are IAS (International Accounting Standards), IFRS (International Financial Reporting Standards), and SIC and IFRIC interpretations.

The Group's accounting policies are presented in note 1 to the consolidated financial statements for the year ended 31 December 2017.

The figures presented in this document are taken from the EDF group's consolidated financial statements at 31 December 2017.

The Group's key figures for 2017 are shown in the following tables.

EXTRACT FROM THE CONSOLIDATED INCOME STATEMENT

(in millions of Euros)	2017	2016	Variation	Variation (%)	Organic growth (%)
Sales	69,632	71,203	(1,571)	-2.2	-1.0
Operating profit before depreciation and amortisation (EBITDA)	13,742	16,414	(2,672)	-16.3	-14.8
Operating profit (EBIT)	5,637	7,514	(1,877)	-25.0	-23.2
Income before taxes of consolidated companies	3,401	4,181	(780)	-18.7	-15.5
EDF net income	3,173	2,851	322	+11.3	+13.7
Net income excluding non-recurring items[1]	2,820	4,085	(1,265)	-31.0	-29.3

FROM EDF NET INCOME TO NET INCOME EXCLUDING NON-RECURRING ITEMS

(in millions of Euros)	2017	2016
EDF net income	3,173	2,851
Gain on sale of 49.9% of the Group's investment in CTE[(1)]	(1,289)	-
Other items, including net changes in fair value on energy and commodity derivatives, excluding trading activities	(94)	233
Impairment	1,030	1,001
NET INCOME EXCLUDING NON-RECURRING ITEMS[1]	2,820	4,085
Payments to bearers of perpetual subordinated bonds	(565)	(582)
NET INCOME EXCLUDING NON-RECURRING ITEMS, ADJUSTED FOR PAYMENTS ON HYBRID BONDS	2,255	3,503

(1) The company that holds 100% of RTE (an independent EDF subsidiary as defined in the French Energy Code).

1. Net income excluding non-recurring items is not defined by IFRS, and is not directly visible in the consolidated income statement. It corresponds to the net income excluding non-recurring items and the net change in fair value on energy and commodity derivatives, excluding trading activities, net of tax (see section 5.1.4.9 "Net income excluding non-recurring items").

EXTRACT FROM THE CONSOLIDATED BALANCE SHEET

(in millions of Euros)	31/12/2017	31/12/2016
Non-current assets	156,899	147,626
Inventories and trade receivables	37,549	37,397
Other assets	63,649	66,238
Cash and cash equivalents, other liquid assets, and loans to joint ventures	22,655	25,159
Assets held for sale	-	5,220 (1)
TOTAL ASSETS	280,752	281,640
Equity (EDF's share)	41,357	34,438
Equity (non-controlling interests)	7,341	6,924
Special concession assets	46,323	45,692
Provisions	76,857	74,966
Loans and other financial liabilities	55,670	61,230
Other liabilities	53,204	56,281
Liabilities related to assets classified as held for sale	-	2,109 (2)
TOTAL EQUITY AND LIABILITIES	280,752	281,640

(1) Including €104 million of financial assets impacting net indebtedness (see below).

(2) Including €1,458 million of financial liabilities impacting net indebtedness (see below).

GROUP CASH FLOW

(in millions of Euros)	2017	2016	Variation	Variation (%)
Group cash flow (1)	(209)	(1,565)	1,356	+86.6

(1) Group cash flow is not an aggregate defined by IFRS as a measure of financial performance, and is not comparable with indicators of the same name reported by other companies. It is equivalent to the operating cash flow after net change in working capital, net investments, allocations and withdrawals from dedicated assets, and dividends.

DETAILS OF NET INDEBTEDNESS

(in millions of Euros)	31/12/2017	31/12/2016	Variation	Variation (%)
Loans and other financial liabilities	56,846	65,195	(8,349)	-12.8
Derivatives used to hedge liabilities	(1,176)	(3,965)	2,789	-70.3
Financial liabilities reclassified as liabilities related to assets held for sale (1)	-	1,458	(1,458)	-100.0
Cash and cash equivalents	(3,692)	(2,893)	(799)	+27.6
Available-for-sale financial assets – Liquid assets	(18,963)	(22,266)	3,303	-14.8
Financial assets reclassified as assets held for sale (1)	-	(104)	104	-100.0
NET INDEBTEDNESS (2)	33,015	37,425	(4,410)	-11.8

(1) Net indebtedness of assets held for sale in 2016 principally concerned CTE (the company that holds 100% of RTE[1]) and Polish companies.

(2) Net indebtedness is not defined in the accounting standards and is not directly visible in the Group's consolidated balance sheet. It comprises total loans and financial liabilities, less cash and cash equivalents and liquid assets. Liquid assets are financial assets consisting of funds or securities with initial maturity of over three months that are readily convertible into cash and are managed according to a liquidity-oriented policy.

1. An independent EDF subsidiary as defined in the French Energy Code.

2 ECONOMIC ENVIRONNEMENT

2.1 Trend in market prices for electricity and the principal energy sources

In an interconnected European market, analysis of market prices in France and the rest of Europe provides important context.

Spot electricity prices in Europe were higher overall in 2017 than 2016. This increase in prices is notably explained by rising coal and CO_2 prices. 2017 also saw a substantial decline in water levels and a wave of severe cold weather in January, with temperatures 5-6°C below normal in most European countries.

2.1.1 Spot electricity prices in Europe[1]

	France	United Kingdom	Italy	Germany	Belgium
Average baseload price for 2017 *(€/MWh)*	45.0	51.7	53.9	34.2	44.6
Variation in average baseload prices, 2017/2016	22.4%	5.3%	26.1%	18.0%	21.8%
Average peakload price for 2017 *(€/MWh)*	53.7	56.7	61.4	42.7	54.8
Variation in average peakload prices, 2017/2016	17.4%	-1.3%	27.9%	21.2%	17.2%

The comments below concern baseload prices.

In France, the increase in spot prices for electricity is explained by higher commodity prices compared to 2016. A very cold month of January, poor nuclear availability and drought affecting hydropower generation also helped to push spot prices upwards. Demand for electricity stood at an average 54.6GW (478.7TWh) for the year, relatively stable compared to 2016. Consumption for the first quarter showed marked contrasts depending on the month, as temperatures were very low in January while the month of March was one of the warmest since 1957, with temperatures on average 2°C above normal.
Nuclear power output amounted to an average 43.3GW (379.1TWh), down by 1% from 2016, which was a year of low production particularly in the final quarter. The first quarter of 2017 was marked by outages for additional tests concerning the carbon segregation issue, and in the final quarter the four Tricastin units were shut down at the request of the ASN.
Wind power and solar power output both increased (+0.4GW and +0.1GW respectively).
Power generation by fossil-fired thermal plants in France rose by 8TWh due to the cold weather of January, but also the low water levels. Annual production reached 53.4TWh, of which 16.1TWh were produced by EDF-owned plants. Gas-fired plants produced 41TWh, coal-fired plants close to 10TWh and oil-fired plants around 2TWh. Spot commodity prices for gas and coal registered year-on-year increases of 20% and 40% respectively, driving a significant rise in generation costs and therefore spot prices.

In the United Kingdom, average spot electricity prices rose by 5.3% from 2016 to €51.7/MWh. The increase was most marked in the first quarter due to the cold weather of January.

In Italy, average spot prices registered a year-on-year rise of 26.1% to reach €53.9/MWh for 2017.

In Germany, spot prices stood at an average €34.2/MWh (baseload) and €42.7/MWh (peakload), with respective increases of €5.2/MWh and €7.5/MWh from 2016. Prices in Germany were negative for 146 hours, compared to 97 hours in 2016. Negative prices generally occur when unavoidable renewable energy output is high, consumption relatively low and export channels saturated. Since some generation facilities have little room for manoeuvre to adjust output levels, some operators prefer to pay rather than shut their plants down. The average France-Germany spread was €10.8/MWh, up by €3.0/MWh from 2016. The greater spread is essentially due to high prices in January and the final quarter, notably due to the wave of cold weather in January, and lower nuclear output towards the end of the year.

In Belgium, spot prices were up by €8/MWh compared to 2016, with an average price of €44.6/MWh. This rise was boosted by first-quarter and second quarter prices which showed year-on-year increases of €23.3/MWh (+81.8%) and €8.6/MWh (+31.7%) respectively, while third-quarter and fourth-quarter prices were generally stable (+€1.6/MWh and -€1.3/MWh respectively).

1. France and Germany: average previous day EPEXSPOT price for same-day delivery;
Belgium: average previous day Belpex price for same-day delivery;
United Kingdom: average previous day EDF Trading OTC price for same-day delivery;
Italy: average previous day GME price for same-day delivery.

2.1.2 Forward electricity prices in Europe[1]

	France	United Kingdom	Italy	Germany	Belgium
Average forward baseload price under the 2018 annual contract for 2017 *(€/MWh)*	38.2	49.8	46.6	32.4	37.2
Variation in average forward baseload price under the annual contracts, 2017/2016	14.6%	3.9%	13.2%	21.7%	11.6%
Forward baseload price under the 2018 annual contract at 27 December 2017 *(€/MWh)*	43.9	52.9	54.2	37.7	44.3
Average forward peakload price under the 2018 annual contract for 2017 *(€/MWh)*	50.0	55.6	52.8	40.5	47.9
Variation in average forward peakload price under the annual contracts, 2017/2016	11.8%	1.1%	12.1%	20.7%	10.1%
Forward peakload price under the 2018 annual contract at 27 December 2017 *(€/MWh)*	55.3	57.8	61.4	46.9	55.3

Average annual contract prices for baseload and peakload electricity in Europe were higher in 2017 than 2016. The increase was mainly attributable to the rise in coal and CO_2 prices. After a dip in the first half-year, prices recovered in the second half-year, with particularly marked movements in the autumn.

In France, the average annual year-ahead contract baseload price was €38.2/MWh, up by 14.6% from 2016, principally due to the rise in commodity prices. Prices remained higher than in 2016 overall except in November, due to the sudden price leap of November 2016. 2018 annual contract prices were fairly steady until mid-August, then saw a steep rise due to the ASN's announcements about the French nuclear fleet and the increase in commodity prices, mainly concerning coal and CO_2. As the November round of ARENH applications approached, prices settled at around €42/MWh. The annual contract price for delivery in 2018 ended the year 2017 at €43.9/MWh (baseload), €6.4/MWh higher than at the start of the year.

To guarantee secure electricity supply, a capacity mechanism was set up from 1 January 2017. This system remunerates producers and demand response managers for availability in periods of particular demand. Suppliers must acquire capacities to cover their customers' needs at such peak demand periods. After the 2016 auction for 2017 deliveries, which provided the market reference price of €10/kW, a second auction took place in April for 2017 deliveries, resulting in a price of €10.42/kW. The first EPEX auctions of capacities for 2018 took place on 9 November and 14 December 2017, leading to a market reference price of €9.34/kW for capacity for 2018. The first capacity certificates for 2019 were traded at the December auction at the price of €13/kW.

In the United Kingdom, the April Ahead contract baseload price in Euros for 1 April Y+1 to 31 March Y+2 was an average 3.9% higher than in 2016. Prices reflected the fluctuations in natural gas prices, as gas-fired facilities make a significant contribution to the formation of British electricity prices. This increase was accentuated by the pound sterling's decline of almost 4% against the euro in the context of Brexit negotiations, which had an impact of close to €2/MWh on the UK's annual contract. In late June, the operator Centrica announced the permanent closure of the Rough storage site, the largest in the United Kingdom, after several technical problems. The site had already been declared unavailable for injections for a one-year period from April 2017. The annual contract price ended the year at €52.9/MWh, down by €1.2/MWh from 2016 when tensions over supply temporarily pushed prices up.

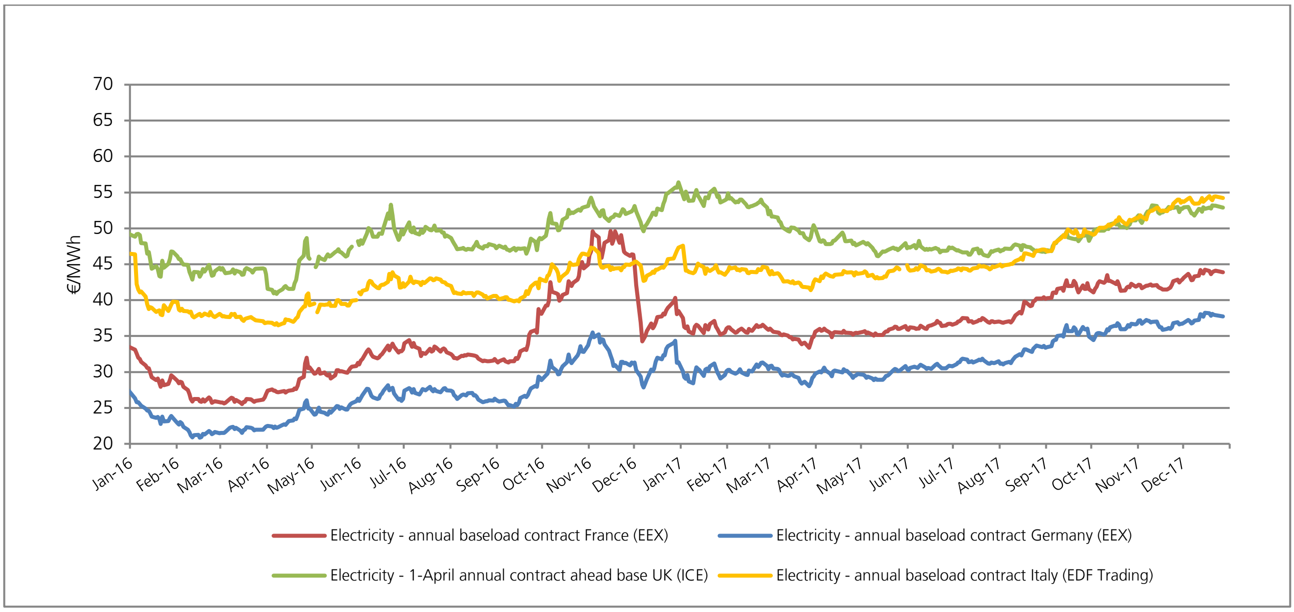
In Germany, the average annual contract baseload price registered rise of 21.7%, rising from €30.1/MWh at the start of the year to €37.7/MWh at the end of the year. German prices generally followed the same pattern as French prices over the year, but were more affected by the higher commodity prices, particularly the significant increase late in the year in coal prices, which play a large role in the German energy mix, and CO_2 prices. The German “calendar” became uncoupled from the French “calendar” during tensions concerning the French nuclear fleet, but the France-Germany spread then narrowed. The renewable energy capacities in Germany (wind power and photovoltaic power) expanded further to reach almost 98GW.

In Italy, the average annual contract baseload price rose by 13.2% to €46.6/MWh in 2017, ending the year at €54.3/MWh, up by €10.2/MWh from the start of the year. This increase is explained by the rise in gas prices, which are a major factor in electricity prices in Italy.

In Belgium, the average annual contract baseload price was 11.6% higher than in 2016, following the same trend as commodity prices to reach €37.2/MWh, despite the resumption of operations by the Doel 1, Doel 3 and Tihange 1 nuclear reactors in Belgium, which were taken offline during the first half of 2016.

1. *France and Germany: average year-ahead EEX price;*
Belgium and Italy: average year-ahead EDF Trading price;
United Kingdom: average ICE annual contract prices, April 2016 then April 2017 (in the UK, annual contract deliveries take place from 1 April to 31 March).

PRINCIPAL FORWARD ELECTRICITY PRICES IN EUROPE (BASELOAD, YEAR AHEAD)



2.1.3 CO_2 emission rights prices[1]

The price of CO_2 emission rights for delivery in December 2018 ended the year at €8.2/t, up by €1.6/t compared to 2016. After a drop in the early days of January in reaction to the significant rise of late December 2016, then a slow decline sustained by low demand until mid-May, the price of CO_2 emission quotas showed an upturn when a lower-than-expected decrease in CO_2 emissions for 2016 was announced (-2.6% compared to 2015) and political signals supporting higher carbon prices. From August onwards, the rise in these prices was mainly driven by France and Germany's declaration that they intended to work together on a reform to balance the emission quotas market; other factors were the agreement reached to protect the market from being flooded by British quotas in the event of Brexit, and announcements by the ASN stoking fears that part of the French nuclear fleet would be unavailable and greater use of fossil-fired plants would be needed. In late December, issuance of quotas was halted on the primary market, and this limited the supply and pushed prices upwards.

After two years of discussions, the Council of the European Union and the European Parliament reached an agreement on 9 November 2017 for a reform of the EU-ETS system for the period 2021-2030. The proposed reform, which is still awaiting formal approval by these bodies, expected in the second quarter of 2018, notably includes:

- a measure aiming to reduce the emissions ceiling over that period;
- doubling the Market Stability Reserve's absorption rate of surplus quotas between 2019 and 2023 to 24%.

CO_2 EMISSION RIGHTS PRICES

1. *Average ICE prices for the annual contract, Phase III (2013-2020).*

2.1.4 Fossil fuel prices[1]

	Coal *(US$/t)*	Oil *(US$/bbl)*	Natural gas *(€/MWhg)*
Average price for 2017	73.7	54.8	17.1
Average price variation, 2017/2016	37.2%	21.3%	10.7%
Highest price in 2017	90.3	67.0	18.9
Lowest price in 2017	60.8	44.8	15.7
Closing price, 2016	70.3	56.8	18.9
Closing price, 2017	90.3	66.9	18.2

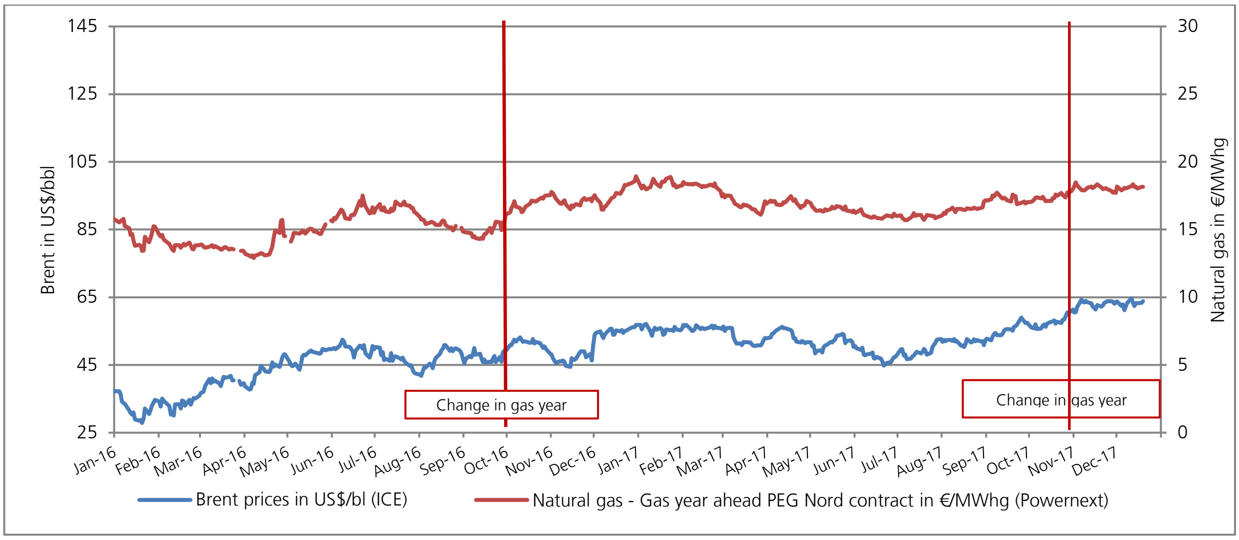
Oil prices averaged US$54.8/bbl, 21.3% (+US$9.6/bbl) higher than in 2016, and ended the year at US$66.9/bbl, up by US$10.1/bbl (+17.7%) from 2016. During the first two months of the year prices fluctuated around US$55.5/bbl. Initial efforts to limit oil production by countries that were signatories to the Vienna agreement (including OPEC countries and Russia) were countered by higher production and a rise in the number of drilling wells in operation in the United States. The high level of American oil stocks also put downward pressure on prices. Subsequently, an increase in US oil production due to a reduction in fracking costs became the dominant trend, and a decline in prices was observed. Then in late June, the price of Brent began an upward movement from US$44.8/bbl, its lowest point of the year, to reach US$66.9/bbl, its highest level since May 2015. This recovery is mainly explained by the declarations – especially by Saudi Arabia - in favour of broadening the Vienna agreement and prolonging it to 2018. Other factors (political tensions in Saudi Arabia, military operations in Iraqi Kurdistan, hurricane Harvey, and higher IEA forecasts for 2017 demand) also played a role in the rise in Brent prices.

European year-ahead **coal** prices stood at an average US$73.7/t in 2017, up by 37.2% from 2016, and ended the year at US$90.3/t compared to US$70.3/t at 31 December 2016 (+28.4%). After staying between US$60/t and US$70/t during the first five months of 2017, coal prices began to rise. The year-ahead coal price increased from US$66.6/t at the end of May to US$90.3/t at the end of the year, its highest level since May 2013. A number of factors contributed to this increase. Australian production was down due to strikes at some mines. Coal production also declined in Indonesia and Colombia due to bad weather. Meanwhile on the demand side, high summer temperatures in China, where coal is the largest element of the energy mix, pushed up demand for electricity and therefore for coal. Late in the year, after a slight drop in November, coal prices saw another upturn driven by the demand crisis as China built up reserves.

The **annual gas contract** for the French PEG Nord hub traded at an average €17.1/MWh in 2017, 10.7% (+€1.7/MWh) more than the previous year, and ended the year €0.8/MWh below its year-end 2016 level. The average rise in prices is explained by the recovery in oil prices (+21.3% on average), since long-term contracts are partly indexed on oil prices. The price variation over the year was smaller than in 2016, remaining within a band of €3.2/MWh as opposed to €6.0/MWh in 2016. Natural gas prices moved downwards until July, following oil prices and reflecting good LNG supplies. The lowest price of the year (€15.7/MWh) was registered In July, then prices began to rise from mid-summer onwards. In August, prices were boosted by further unavailability at various Norwegian facilities.

September saw the highest monthly increase: prices soared by €1/MWh to €17.5/MWh by the end of the month. The price rose significantly in the first two weeks of the months, in the wake of Brent prices, due to indexing of long-term contracts on oil prices. The increase in coal and CO_2 prices was also influential as those prices affected the forecast competitivity of coal-fired power plants and opened up prospects for greater use of gas-fired plants, thus causing higher demand for gas. The ASN's announcements during the summer about French nuclear units also put pressure on forward demand for gas, and helped to drive prices upwards. In October and November, forward gas prices were essentially driven by rising Brent prices. They remained stable overall in December despite short-term tensions due to several incidents arising on 12 December, including the methane terminal explosion in Austria.

NATURAL GAS AND OIL PRICES



1. *Coal: average ICE prices for delivery in Europe (CIF ARA) for the next calendar year (US$/t);*
Oil: brent first reference crude oil barrel, IPE index (front month) (US$/barrel);
Natural gas: average ICE OTC prices, for delivery starting from October of the following year in France (PEG Nord) (€/MWhg).

2.2 Electricity[1] and gas[2] consumption

Electricity consumption in France reached 480.9TWh in 2017, slightly less (-0.5%) than in 2016 (which was a leap year). Notable developments included consumption levels in January, which showed a strong year-on-year increase (+14.4%) as temperatures were substantially colder than the previous year. March, in contrast, was warmer than in 2016, resulting in a -9.6% decrease in consumption. After correction for weather effects and the number of days in February, electricity consumption in France was stable compared to 2016.

In the United Kingdom, estimated electricity consumption was down by 1.9% compared to 2016 across all sectors, especially the residential customer segment. In Italy, electricity consumption was 1.6% higher than in 2016 due to exceptional temperatures in June and August.

Estimated natural gas consumption in France rose by 0.4% during 2017 to 493.3TWh. Demand in January leapt by almost 30% year-on-year, as the average January temperature was 3.8°C lower in 2017 than 2016. The rise in demand for heating and the greater drawing on gas-fired plants for electricity generation led to an overall 18.5TWh increase for this month. However, this rise in January was counterbalanced by marked declines in consumption in the months of March, April and October compared to the same months of 2016 (-8.4TWh, -3.1TWh and -5.0TWh respectively), due to average temperatures that were higher by 3.1°C, 0.7°C and 2.3°C respectively. Demand for gas in September was up by 2.2TWh (+9.4%) between 2016 and 2017, as temperatures for the month were 3.4°C lower in 2017 than 2016.

Estimated natural gas consumption in the United Kingdom was down by 2.6% from 2016 thanks to warmer weather in 2017. In Italy, domestic demand for natural gas increased by 6.1% due to higher consumption levels, covered by larger imports.

2.3 Electricity and natural gas sales tariffs

In France, the “blue” regulated sales tariffs for residential and non-residential customers increased by 1.7% from 1 August 2017 (see note 4.1 to the 2017 consolidated financial statements).

In the United Kingdom, EDF Energy introduced two tariff changes:

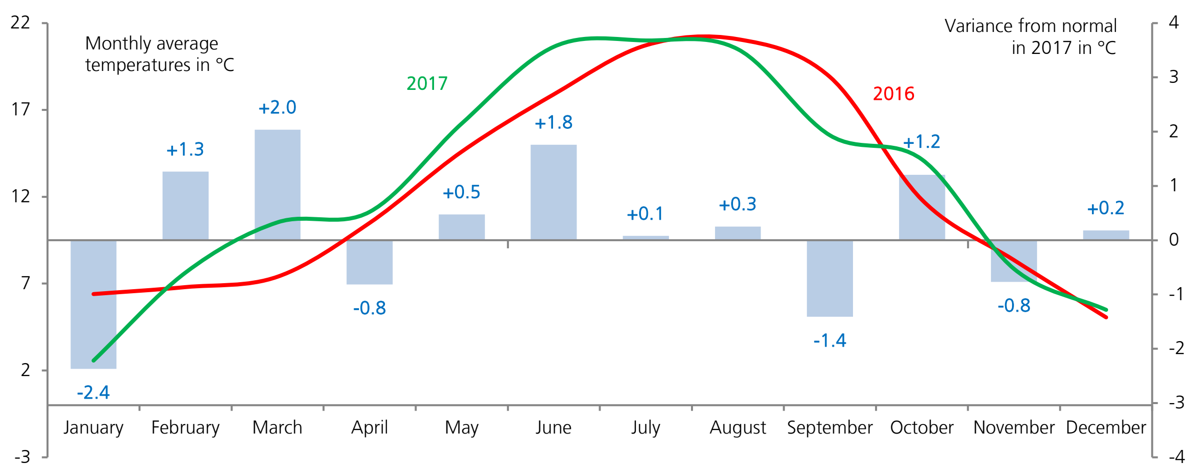
- a 5.2% reduction in gas tariffs from 5 January 2017 and an 8.4% increase in electricity tariffs from 1 March 2017;
- then a 5.5% increase for gas and a second increase of 9% for electricity on 21 June 2017.

The five other principal energy suppliers also increased their tariffs. These increases are mainly explained by the rise in wholesale market prices and non-energy costs.

2.4 Weather conditions: temperatures and rainfall

2017 was a warmer year than 2016, and average temperatures in France were +0.2°C above normal. The temperatures in January and September 2017 were well below normal (-2.4°C and -1.4°C respectively), but March and June 2017 were predominantly warm months.

TEMPERATURES (1) (2) IN FRANCE IN 2017 AND 2016

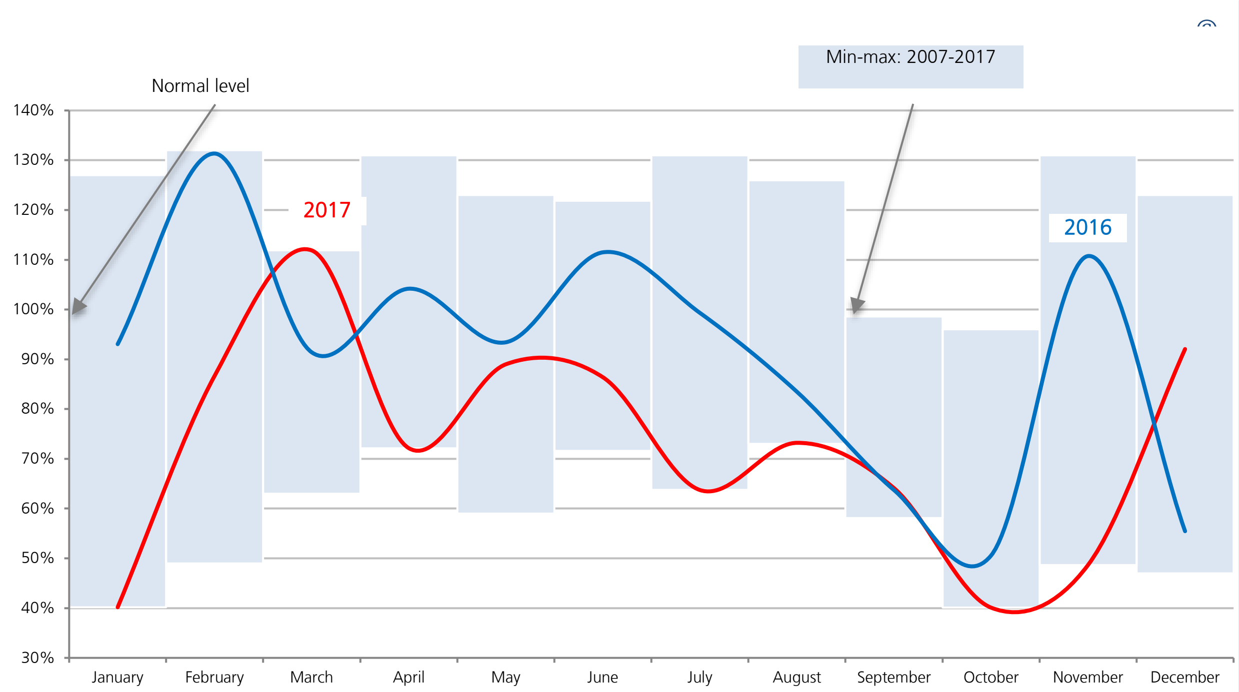


(1) Average temperatures recorded in 32 cities weighted by electricity consumption.
(2) Source: Miréor (data from Météo-France).

2017 was marked by a shortfall of rain in the extended south-west third of Europe (Spain, France, and Italy in particular) while Scandinavia and North Europe saw more precipitation. Air temperatures were higher than normal throughout Europe, especially in the east.

1. *Sources: France: unadjusted data and data adjusted for weather effects provided by RTE.*
United Kingdom: Department of Energy and Climate Change for the first three quarters, local subsidiary estimation for the final quarter.
Italy: unadjusted data and data provided by Terna, the Italian national grid operator and adjusted by Edison.
2. *Sources: France: unadjusted data from Smart GRTgaz.*
United Kingdom: Department of Energy and Climate Change data for the first three quarters, local subsidiary estimation for the final quarter.
Italy: Ministry for Economic Development (MSE), Snam Rete Gas data adjusted by Edison on the basis of 1Bcm = 10.76TWh.

WATER FLOW COEFFICIENTS IN FRANCE IN 2017 AND 2016 [(1)]



(1) Weekly monitoring by EDF's OSGE energy observatory of French reservoir levels (Miréor project) as far as the coast.

In France, there was a shortage of precipitation (and snowfall on most mountain ranges), particularly in January and April and above all in the autumn.

As a result of this unusual situation, water flow coefficients in France were too low in almost every month, and the shortfall gradually increased during the second half of 2017. December saw the return of heavy rainfall.

2017 water flow coefficients in France were among the lowest since 2011.

3 SIGNIFICANT EVENTS OF 2017

3.1 Major events

Nuclear industry

- EDF completed the cold functional test phase for the Flamanville EPR (see press release of 8 January 2018).
- On 31 December 2017, EDF finalised the acquisition of a 75.5% stake in New NP capital (see press release of 2 January 2018). On 4 January 2018, New NP was renamed Framatome (see press release of 4 January 2018 on the website: www.framatome.com).
- Temporary shutdown of the four generation units of the Tricastin nuclear power plant (see press release of 28 September 2017).
- Clarifications were made to the Hinkley Point C project (see press release of 3 July 2017): review of the costs and timetable of the HPC project.
- Approval of the Flamanville 3 EPR's vessel: draft opinion of the French Nuclear Safety Authority specifying that the composition of the steel of the vessel head and bottom is not likely to call into question its commissioning under certain conditions and in particular the replacement of the vessel head by the end of 2024 (see press release of 29 June 2017).
- EDF's Board of Directors approved the creation of Edvance, a significant milestone in the reconstruction of the French nuclear industry (see press release of 17 May 2017).
- Board of Directors' meeting held on 6 April 2017: compensation arrangements for the closure of the Fessenheim power plant (see press release of 6 April 2017 and note 3.7.5 to the 2017 consolidated financial statements).

Disposal plan

- Edison sold its Milan headquarters (see Edison press release of 21 November 2017 on the website: www.edison.it).
- EDF finalised the disposal of EDF Polska's assets to PGE (see press release of 14 November 2017 and note 3.4.2 to the 2017 consolidated financial statements).
- EDF sold a portfolio of around 200 office real estate and business assets to Tikehau Capital (see press release of 31 October 2017).
- Edison announced the sale of ITG (Infrastrutture Trasporto Gas) and a 7.3% interest in Adriatic LNG to Snam (see Edison press release of 13 October 2017 on the website: www.edison.it).
- EDF finalised the indirect sale of 49.9% of CTE[1] to Caisse des Dépôts and CNP Assurances (see press release of 31 March 2017 and note 3.4.1 to the 2017 consolidated financial statements).

1. The company that holds 100% of RTE (an independent EDF subsidiary as defined in the French Energy Code).

- EDF Trading and JERA: sale of the coal trading business (see note 3.4.4 to the 2017 consolidated financial statements).
- EDF and ENKSZ completed the transaction for the sale of 100% of EDF Démász Zrt. (see press release of 1 February 2017 and note 3.4.3 to the 2017 consolidated financial statements).

Financial structure

- EDF announced the success of its capital increase with preferential subscription rights for an amount of approximately €4 billion (see press release of 28 March 2017 and note 3.1 to the 2017 consolidated financial statements).
- EDF raised JPY111 billion with the largest "Samurai" bond issue with 10-year and longer maturity (see press release of 20 January 2017 and section 5.1.6.1.1.2 "Management of liquidity risks").

Sustainable development

- The EDF Group launched the "Solar Power Plan" with a view to developing 30GW of solar capacity in France by 2035 (see press release of 11 December 2017).
- EDF signed an innovative bilateral Revolving Credit Facility with an interest rate that depends on its sustainability rating (see press release of 22 May 2017).
- EDF raised JPY26 billion through two green bonds on the Japanese "Samourai bonds" market (see press release of 20 January 2017 and note 5.1.6.1.1.2 "Management of liquidity risks").

3.2 New investments, partnerships and investment projects

EDF Énergies Nouvelles[1]

- In 2017, EDF Énergies Nouvelles commissioned new facilities, signed electricity purchase agreements and undertook new projects.
- On 20 July 2017, EDF Énergies Nouvelles announced that its simplified tender offer for Futuren had been successful (see note 5.1. to the 2017 consolidated financial statements).
- On 5 July 2017, EDF Énergies Nouvelles acquired the offshore wind farm operations and maintenance specialist OWS.

Edison

- Edison signed a binding agreement with Gas Natural Fenosa for the acquisition of Gas Natural Vendita Italia and the Shah Deniz II gas contract (see press release of 13 October 2017 and note 44.1.2.2. to the 2017 consolidated financial statements).

Energy services

- On 6 July 2017, EDF Energy Services completed its purchase of Imtech. Imtech is a leading engineering services company and provider of technical services to construction, industrial, commercial and public sector clients in the United Kingdom and Ireland.

3.3 Regulatory environment

Regulatory changes are detailed in the following notes to the 2017 consolidated financial statements:

- note 4.1 "Regulated electricity sales tariffs in France";
- note 4.2 "TURPE network access tariffs";
- note 4.3 "CSPE compensation mechanism for public energy service charges"(CSPE);
- note 4.4 "French capacity mechanism";
- note 4.5 "Regulated gas sales tariffs in France";
- note 4.6 "Energy savings certificates: preparation for the fourth period (2018-2020);
- note 4.7 "ARENH".

3.4 Other significant events

- Interim dividend distribution for fiscal year 2017 (see press release of 7 November 2017 and note 27.3 to the 2017 consolidated financial statements).
- New Leadership roles announced at EDF Energy (see press release of 27 July 2017).
- Results of the option for payment of the balance of the dividend in respect of the 2016 financial year (see press release of 28 June 2017 and note 27.3 to the 2017 consolidated financial statements).
- Appointments to the EDF group Executive Committee (see press release of 12 June 2017).
- EDF's Board of Directors considered the strategic plan for the first period of the French multiannual energy program (see press release of 6 April 2017).

4 SUBSEQUENT EVENTS

- Confirmation of the European Commission decision on the tax treatment of provisions established between 1987 and 1996 for renewal of the General Network (see press release of 16 January 2018 and note 50.1 to the 2017 consolidated financial statements).

1. *A full list of press releases is available from the EDF Énergies Nouvelles website: www.edf-energies-nouvelles.com*

5 ANALYSIS OF THE BUSINESS AND THE CONSOLIDATED INCOME STATEMENTS FOR 2016 AND 2017

Presentation and analysis of the consolidated income statements for 2016 and 2017 is shown at two levels of analysis for Sales and EBITDA: a first focusing on the Group, then a second reporting on the different business segments (France - Generation and supply activities, France - Regulated activities, United Kingdom, Italy, Other international and Other activities). EBIT (operating profit) and net income are analysed from a more general standpoint.

(in millions of Euros)	2017	2016
Sales	**69,632**	**71,203**
Fuel and energy purchases	(37,641)	(36,050)
Other external purchases	(8,739)	(8,902)
Personnel expenses	(12,456)	(12,543)
Taxes other than income taxes	(3,541)	(3,656)
Other operating income and expenses	6,487	6,362
Operating profit before depreciation and amortisation (EBITDA)	**13,742**	**16,414**
Net changes in fair value on Energy and Commodity derivatives, excluding trading activities	(355)	(262)
Net depreciation and amortisation	(8,537)	(7,966)
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(58)	(41)
(Impairment)/reversals	(518)	(639)
Other income and expenses	1,363	8
Operating profit (EBIT)	**5,637**	**7,514**
Cost of gross financial indebtedness	(1,778)	(1,827)
Discount effect	(2,959)	(3,417)
Other financial income and expenses	2,501	1,911
Financial result	**(2,236)**	**(3,333)**
Income before taxes of consolidated companies	**3,401**	**4,181**
Income taxes	(147)	(1,388)
Share in net income of associates and joint ventures	35	218
GROUP NET INCOME	3,289	3,011
EDF net income	3,173	2,851
Net income attributable to non-controlling interests	116	160
EARNINGS PER SHARE (EDF SHARE) IN EUROS		
Earnings per share	0.98	1.15
Diluted earnings per share	0.98	1.15

5.1 Sales

Consolidated sales were down by 2.2% while showing an organic decline of 1.0%.

5.1.1 Change in Group sales

(in millions of Euros)	2017	2016	Variation	Variation (%)	Organic growth (%)	Organic growth (%) *(excluding the sales tariff adjustment)*
Sales	69,632	71,203	(1,571)	-2.2	-1.0	+0.4

Sales amounted to €69,632 million in 2017, down by €1,571 million (-2.2%) from 2016.

Excluding the effects of exchange rates (-€567 million), principally the pound sterling's decline against the Euro and changes in the scope of consolidation (-€279 million), and eliminating the impact of the regulated sales tariff adjustment for the period 1 August 2014 to 31 July 2015 which took place in 2016, sales show an organic increase of +0.4%.

5.1.2 Change in sales by segment

The following table shows sales by segment, excluding inter-segment eliminations.

(in millions of Euros)	2017	2016	Variation	Variation (%)	Organic growth (%)	Organic growth (%) *(excluding the sales tariff adjustment)*
France - Generation and supply activities[1]	35,606	35,191	415	+1.2	+1.2	+4.1
France - Regulated activities[2]	15,896	15,728	168	+1.1	+1.1	+1.3
United Kingdom	8,688	9,267	(579)	-6.2	-0.8	-0.8
Italy	9,940	11,125	(1,185)	-10.7	-10.6	-10.6
Other international	4,822	5,286	(464)	-8.8	+0.5	+0.5
Other activities	7,813	7,734	79	+1.0	-1.0	-1.0
Eliminations	(13,133)	(13,128)	(5)	-	-	-
GROUP SALES	69,632	71,203	(1,571)	-2.2	-1.0	+0.4

(1) *Generation, supply and optimisation in mainland France, and sales of engineering and consulting services.*

(2) *Regulated activities comprise distribution in mainland France, which is carried out by Enedis[1], transmission, EDF's island activities and the activities of Électricité de Strasbourg. In mainland France, distribution network activities are regulated via the network access tariff TURPE* (Tarifs d'Utilisation des Réseaux Publics d'Électricité). *Sales of Enedis include the share of delivery costs for customers of alternative suppliers in mainland France.*

5.1.2.1 France - Generation and supply activities

Sales by the France - Generation and supply activities segment amounted to €35,606 million, an organic increase of €415 million (+1.2%) from 2016. Without the €988 million impact of regulated sales tariff adjustment for the period 1 August 2014 to 31 July 2015 which took place in 2016, sales showed organic growth of €1,403 million (+4.1%).

2017 was marked by 82.1TWH of subscriptions to the ARENH scheme (for regulated access to historical nuclear electricity), whereas no applications for ARENH were made in 2016. This favourable effect on sales (€3,448 million) was largely offset by the lower level of net sales on the market, which were down by €2,060 million[2].

The changes of 1 August 2016 and 2017 in regulated sale tariffs for electricity, excluding capacity remuneration, led to a €194 million decrease in sales.

Weather-related impacts (-0.5TWh) and the "leap year effect" of 2016 (-1.1TWh) had an adverse effect of €251 million.

In an intensely competitive environment, there was a -8.6TWh decrease in volumes supplied in 2017 due to losses of customers, with an estimated unfavourable impact of €505 million on sales. Price effects on market-price offers and changes in demand had a negative impact of €194 million.

The introduction of a capacity mechanism from 1 January 2017 affected tariffs, purchases and sales on the wholesale markets and market-price offers, and led to a €758 million increase in sales.

Finally, the higher resale volumes of renewable electricity subject to purchase obligations increased sales by €262 million.

Electricity generation

Nuclear output stood at 379.1TWh in 2017, a decrease of 4.9TWh from 2016.

There was a -8.0TWh (-3.9%) year-on-year decrease for the first half-year, essentially explained by the fact that Gravelines 5 and Fessenheim 2 were offline for the entire six-month period in 2017 for checks in connection with the Creusot Forge manufacturing records, and also by completion of tests of steam generators concerned by the carbon segregation issue. Unplanned reactor outages at Flamanville 1 and Cattenom 1 were largely counterbalanced by higher utilisation of the reactors in operation.

For the 2017 second half-year, nuclear output registered a year-on-year increase of +3.1TWh compared to 2016 second half-year, that was marked by additional tests of steam generators that led to extended or further outages at several reactors. However, in view of the provisional shutdown of four generation units at the Tricastin plant following the ASN's decision of 28 September 2017, and extensions of outages, the Group revised its nuclear output target for 2017 from the initial 390-400TWh to 383-387TWh[3]. The Group subsequently announced on 13 November 2017 that final production would be slightly below this target.

Due to mild weather at the end of the year, there was less dispatch from reactors in operation.

Hydropower output stood at 37.1TWh[4], down by 5.3TWh from 2016 due to particularly unfavourable hydrological conditions in 2017 (see section 2.4 "Weather conditions: temperatures and rainfall").

Dispatch of thermal generation facilities increased in relation with lower nuclear and hydro output. Their output, up 4.1TWh compared to 2016, reached 16.1TWh.

Sales volumes to final customers (a market segment that includes local distribution firms and excludes foreign operators) were down by 10.3TWh, including 8.6TWh resulting from loss of customers.

EDF was a net seller on the wholesale markets to the extent of 52.5TWh. The -70TWh decrease in net wholesale market sales compared to

1. *Enedis is an independent EDF subsidiary as defined in the French Energy Code.*
2. *Excluding necessary additional energy purchases on the markets.*
3. *See the press release of 27 October 2017.*
4. *After deduction of pumped volumes, hydropower production stood at 30.0TWh for 2017 (35.8TWh for 2016).*

2016 is principally explained by ARENH subscriptions, which were partly offset by a decrease in volumes sold to final customers.

5.1.2.2 France - Regulated activities

Sales by the **France - Regulated activities** segment amounted to €15,896 million, an organic rise of €168 million (+1.1%) from 2016. Without the €42 million impact of regulated sales tariff adjustment for the period 1 August 2014 to 31 July 2015 which took place in 2016, sales showed organic growth of €210 million (+1.3%).

Sales benefited from the positive movement in the TURPE's adjustment index at 1 August 2017, which had an impact of €238 million. However, weather factors and the fact that 2016 was a leap year, both effects with no equivalent in 2017, contributed to a decrease in sales estimated at €55 million.

Excluding these weather effects and the "leap year effect" of 2016, the volumes delivered in mainland France were down slightly by -0.1TWh, including -0.4TWh (-0.2%) caused by lower demand.

5.1.2.3 United Kingdom

The **United Kingdom**'s contribution to Group sales amounted to €8,688 million in 2017, €579 million lower than in 2016. The pound sterling's decline against the euro in connection with the Brexit negociations had an unfavourable impact of €608 million. Excluding foreign exchange effects and changes in the scope of consolidation, the organic decrease in sales compared to 2016 was 0.8%.

This decline in UK sales is mainly explained by the lower realised prices for nuclear power, and to a lesser extent by the downturn in consumption by residential customers. Meanwhile, the number of residential customer accounts declined only slightly compared to 2016, indicating resilience in a highly competitive market.

5.1.2.4 Italy

Italy contributed €9,940 million to consolidated sales, down by €1,185 million (-10.7%) from 2016 (-10.6% in organic terms).

In the hydrocarbons business, the decrease in sales was particularly caused by the "derivatives" component of hedges, although the margin was not significantly affected. Exploration and production activities benefited from the rise in Brent oil prices. The volumes for gas sales on the wholesale markets declined following a rise in consumption levels by industrial customers and thermal power plants.

In the electricity business, sales were also penalised by the lower volumes sold, though this was partly counterbalanced by more favourable price effects.

5.1.2.5 Other international

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

This segment contributed €4,822 million to Group sales in 2017, €464 million or -8.8% less than in 2016. Excluding foreign exchange effects (+€55 million) and changes in the scope of consolidation (-€547 million), mainly relating to the sale of Démász and EDF Polska's assets, sales increased by 0.5% in organic terms.

This increase essentially comes from:

- **Belgium** (organic growth of +€149 million), mainly due to purchase and sale operations on the market undertaken to balance positions. A further notable factor in this growth was the steady expansion of service activities. There were unfavourable developments in price effects concerning electricity and gas activities, and volumes sold to residential customers; these effects were partly offset by an increase in electricity sales to business customers.

However, sales were down in:

- **Brazil** (organic decline of -€70 million), due to the annual revision of the Power Purchase Agreement (PPA) sales tariff. The recovery by spot prices largely made up for the lower sales of system services.
- **Asia** (organic decline of-€27 million), where the decrease in sales is essentially explained by lower generation output following the shutdown of the Meco plant in Vietnam in line with the maintenance programme.

5.1.2.6 Other activities

Other activities comprise, among other entities, EDF Énergies Nouvelles, EDF Trading, Dalkia and the gas activities.

The contribution by the **Other activities** segment to Group sales amounted to €7,813 million in 2017, an increase of €79 million from 2016. Excluding foreign exchange effects (-€14 million) and changes in the scope of consolidation (+€168 million), sales declined by -1.0% in organic terms.

Sales by **Dalkia** contributed €4,051 million to 2017 Group sales. This organic increase of €221 million (+6.1%) is mainly explained by the positive impact of business development, higher energy prices and favourable developments in the index for revising service prices.

EDF Énergies Nouvelles' contribution to Group sales was €1,280 million in 2017, an organic increase of 3.6% from 2016, driven mainly by production from new facilities first commissioned in 2016.

EDF Trading's sales[1] amounted to €590 million, an organic decline of €354 million (-35.1%) following an exceptional year in 2016 when electricity prices rose substantially and volatility in Europe was high at the end of the year. This change also reflects difficult market conditions in North America.

1. EDF Trading's sales consist of its trading margin.

5.2 Operating profit before depreciation and amortisation (EBITDA)

EBITDA decreased by 16.3% while the organic decline was -14.8%.

(in millions of Euros)	2017	2016	Variation	Variation (%)	Organic growth (%)	Organic growth (%) *(excluding the sales tariffs adjustment)*
Sales	69,632	71,203	(1,571)	-2.2	-1.0	+0.4
Fuel and energy purchases	(37,641)	(36,050)	(1,591)	+4.4	+6.2	
Other external expenses	(8,739)	(8,902)	163	-1.8	-3.1	
Personnel expenses	(12,456)	(12,543)	87	-0.7	-0.4	
Taxes other than income taxes	(3,541)	(3,656)	115	-3.1	-2.3	
Other operating income and expenses	6,487	6,362	125	+2.0	+2.1	
EBITDA	13,742	16,414	(2,672)	-16.3	-14.8	-10.0

5.2.1 Change in consolidated EBITDA and analysis

Consolidated EBITDA for 2017 amounted to €13,742 million, a decrease of 16.3% from 2016. Excluding foreign exchange effects (-€81 million), changes in the scope of consolidation (-€162 million), and after eliminating the impact of regulated sales tariff adjustment for the period 1 August 2014 to 31 July 2015 which took place in 2016, the organic change in EBITDA was a decline of -10.0%.

The Group's fuel and energy purchases amounted to €37,641 million in 2017, up by €1,591 million (+4.4%) from 2016, or an organic increase of €2,253 million (+6.2%):

- in the France - Generation and supply activities and France - Regulated activities segments, fuel and energy purchases registered an organic increase of €3,114 million (+19.3%) to €19,260 million, principally due to lower generation output and sourcing of ARENH subscriptions;
- the organic increase observed in the United Kingdom (+€415 million or +7.8%) principally relates to the rise in costs for coal and gas;
- in Italy, the organic decrease was €1,332 million (-14.0%), essentially due to the favourable impact of derivatives consistent with the evolution of sales.

Other external expenses amounted to €8,739 million, €163 million lower than in 2016 (-1.8%) corresponding to an organic decline of €274 million (-3.1%):

- in the France - Generation and supply activities and France - Regulated activities segments, other external expenses totalled €4,848 million. The organic decrease of €332 million (-6.5%) notably reflects cost-cutting actions implemented as part of performance improvement plans across all areas of business.

The Group's personnel expenses totalled €12,456 million, down by €87 million from 2016, corresponding to an organic decrease of €54 million (-0.4%):

- in the France - Generation and supply activities segment, personnel expenses totalled €6,134 million, €181 million less than in 2016. The average workforce shrank by 4.6% over 2017, with decreases in all areas of business;
- in the France - Regulated activities segment, personnel expenses totalled €3,158 million, up by €52 million from 2016. Average workforce numbers were down by 0.7% from 2016;
- in the United Kingdom, personnel expenses amounted to €1,129 million. The organic increase of €80 million (+7.4%) resulted from the impact of a lower discount rate for pensions, and to a lesser degree the favourable effect of pension renegotiations on pension costs in 2016, which had no equivalent in 2017. Excluding these factors, personnel expenses were down.

Taxes other than income taxes amounted to €3,541 million for 2017, €115 million or -3.1% less than in 2016 (-2.3% in organic terms):

- this decrease mainly concerns the France - Regulated activities segment, where these taxes were down by €86 million.

Other operating income and expenses generated net income of €6,487 million in 2017, €125 million more than in 2016 (an organic change of €136 million or +2.1%):

- in the France - Generation and supply activities segment, the income generated by other operating income and expenses was up by €562 million. This increase particularly reflects movements in provisions and the rise in CSPE subsidies associated with the increase in obligations to purchase renewable energies;
- in the France – Regulated activities segment, the income generated by other operating income and expenses was down by €249 million. This decrease principally reflects non-recurring items registered in 2016 and the higher power cut indemnities in 2017 following the stormy weather in mainland France;
- in Italy the organic increase in other operating income and expenses was €85 million, mainly resulting from sale of the Milan headquarters;
- EDF Énergies Nouvelles registered an organic decrease of €114 million (-23.7%), caused notably by lower levels of activity in Development and Sales of Structured Assets in 2017.

5.2.2 Change in consolidated EBITDA and analysis by segment

(in millions of Euros)	2017	2016	Variation	Variation (%)	Organic growth (%)	Organic growth (%) *(excluding the sales tariff adjustment)*
France - Generation and supply activities	4,876	6,156	(1,280)	-20.8	-20.8	-7.9
France - Regulated activities	4,898	5,102	(204)	-4.0	-4.0	-3.8
United Kingdom	1,035	1,713	(678)	-39.6	-33.3	-33.3
Italy	910	641	269	+42.0	+42.1	+42.1
Other international	457	711	(254)	-35.7	-17.9	-17.9
Other activities	1,566	2,091	(525)	-25.1	-24.7	-24.7
GROUP EBITDA	13,742	16,414	(2,672)	-16.3	-14.8	-10.0

5.2.2.1 France - Generation and supply activities

EBITDA for the France - Generation and supply activities segment amounted to €4,876 million, corresponding to an organic decline of €1,280 million (-20.8%) from 2016. Without the €859 million impact of regulated sales tariff adjustment for the period 1 August 2014 to 31 July 2015 which took place in 2016, EBITDA registered an organic decline of -7.9%.

The lower level of nuclear power and hydropower output compared to 2016 had an unfavourable impact estimated at -€504 million.

EBITDA also declined by around €311 million in 2017 due to the net effect of operations on the wholesale markets, particularly for additional purchases while prices were high, required to cover 2017 ARENH subscriptions. These purchases were also to make up for lower nuclear power output due to further testing in connection with the carbon segregation issue. This effect was partly counterbalanced in the second half-year of 2017 as purchases had been made at particularly high prices in the final quarter of 2016 due to lower nuclear plant availability.

Tariff changes, excluding remuneration of capacity in the tariff "stacking" calculation, led to an estimated decrease of -€363 million[1] compared to 2016.

Heightened competition, reflected in a net loss of around one million residential customers, and negative price effects on new offers also had an estimated net effect of -€341 million on EBITDA.

The weather, which was generally milder than in 2016 with a particularly cold spell early in 2017, and the "leap year effect" of 2016 had a negative effect estimated at -€186 million in 2017.

The introduction of the capacity mechanism[2] had a favourable +€580 million estimated impact on EBITDA for 2017. The capacity price is included in regulated tariffs and market-price offers, and excess capacities are sold off on the wholesale markets.

Under the EDF group's performance plan, operating expenses[3] were brought down by an estimated €494 million (-5.2%) through actions to improve operating performance and control of payroll costs. These measures are being applied across all entities, notably though cost-cutting of support functions and adjustment of the costs of commercial activities.

5.2.2.2 France - Regulated activities

EBITDA for the France - Regulated activities segment stood at €4,898 million, an organic decrease of €204 million (-4.0%).Without the €13 million impact of regulated sales tariff adjustment for the period 1 August 2014 to 31 July 2015 which took place in 2016, EBITDA registered an organic decline of -3.8%, including the unfavourable €42 million effect of a decline in volumes delivered by Enedis[4].

2017 was also marked by exceptionally fierce storms in mainland France, with an estimated negative impact of -€60 million corresponding to the operating expenses incurred for work and power cut indemnities. The hurricanes on St Martin and St Barthélémy generated costs estimated at -€23 million.

All these unfavourable factors were only partially offset by tariff rises for Enedis associated with the introduction of the TURPE5 tariff from 1 August 2017 (raising delivery tariffs on the distribution network by +2.71%) amounting to an estimated +€102 million.

The residual decrease of €168 million in EBITDA is essentially caused by the existence of favourable developments in 2016 that had no equivalent in 2017, principally concerning the island activities.

5.2.2.3 United Kingdom

The United Kingdom's contribution to Group EBITDA for 2017 was €1,035 million, down by 33.3% in organic terms from 2016. The pound sterling's decline against the Euro, especially since the Brexit referendum, had an unfavourable impact of €112 million compared to 2016.

EBITDA in the United Kingdom was penalised by the effect of the downturn in realised prices for nuclear power (-12%). The drop in consumption by residential customers following milder weather and rising energy efficiency also adversely affected EBITDA. Meanwhile, the

1 Tariffs excluding the incorporation of the cost of capacity obligation in the tariff "stacking" - tariff changes of -0.5% and -1.5% at 1 August 2016 respectively on the "blue" residential and non-residential tariffs, and +1.7% at 1 August 2017 on both segments.
2. The capacity mechanism was introduced from 1 January 2017.
3. Sum of personnel expenses and other external expenses. At comparable consolidation scope and exchange rates. At constant pension discount rates. Excluding change in operating expenses of the service activities.
4 Including the impacts of weather changes and the "leap year effect".

number of residential customer accounts declined only slightly compared to end 2016, indicating resilience in a highly competitive market.

Nuclear output amounted to 63.9TWh, confirming the good operating performance by the fleet. The slight decrease of 1.2TWh from 2016 principally reflects the shutdown of Sizewell in late 2017 and a low level of scheduled outages in 2016.

5.2.2.4 Italy

The Italy segment contributed €910 million to the Group's consolidated EBITDA, corresponding to an organic increase of 42.1% compared to 2016.

EBITDA for the electricity activities showed organic growth of €26 million or +10.0% from 2016. It benefited from favourable trends in sale prices and optimisation of the gas-fired plants' generation capacities.

EBITDA for the hydrocarbon activities registered organic growth of €96 million or +19.7% compared to 2016. It benefited from favourable movements in Brent oil and gas prices, and higher output after a new platform came online in Egypt. Maintenance costs for the exploration-production activity were also optimised.

EBITDA also benefited from the positive effect of the sale of the Milan headquarters for around €100 million[1].

5.2.2.5 Other international

EBITDA for the Other international segment stood at €457 million in 2017, an organic decrease of €127 million (-17.9%) compared to 2016.

This decrease was essentially attributable to:

- Belgium (organic decline of -€62 million), mainly as a result of the downturn in electricity prices and lower nuclear power generation due in particular to the maintenance programme, and unplanned outages at Doel 3. Wind power continued to grow as installed capacities were increased, reaching 376MW at 31 December 2017 (+25% compared with 31 December 2016);
- Brazil (organic decline of -€54 million), due to the annual revision of the Power Purchase Agreement (PPA) price, partly offset by optimisation actions on the markets as spot prices were high while unplanned unavailability was at its lowest point, and also by a steady decrease in operating expenses.

2017 also saw the sale of EDF Polska's assets, on 13 November 2017[2].

5.2.2.6 Other activities

Other activities contributed €1,566 million to Group EBITDA for 2017, an organic decrease of €517 million (-24.7%) from 2016.

EDF Énergies Nouvelles' contribution to consolidated EBITDA totalled €751 million, corresponding to an organic decrease of €127 million (-14.8%) from 2016, due to lower sales of assets than in 2016 which registered a high level of such operations. However, production (including Futuren) showed strong growth of close to +11% (+1.2TWh) and contributed €741 million to 2017 EBITDA. Sales of assets covered the structure and development costs. Against this background, the net installed capacity was up by +1.6GW to 7.8GW at 31 December 2017. The portfolio of projects under construction by EDF Énergies Nouvelles totalled 1.9GW, a significant share of 0.9GW concerning solar power projects.

EBITDA at EDF Trading amounted to €358 million in 2017, an organic decline of €341 million (-46.8%) from 2016. This change follows the fall in the trading margin (see section 5.1.4.1.2.6).

Dalkia's EBITDA was €259 million, corresponding to an organic decrease of €4 million (-1.6%). Conclusions and renewals of a large number of commercial contracts, favourable trends in the indexes for revising service prices, and the positive effect of rising energy prices all made positive contributions to EBITDA. However, this financial performance was particularly counterbalanced by occasional operating difficulties concerning one contract owned by a subsidiary.

5.3 Operating profit (EBIT)

EBIT was down by 25.0% from 2016.

(in millions of Euros)	2017	2016	Variation	Variation (%)
EBITDA	13,742	16,414	(2,672)	-16.3
Net changes in fair value on Energy and Commodity derivatives, excluding trading activities	(355)	(262)	(93)	+35.5
Net depreciation and amortisation	(8,537)	(7,966)	(571)	+7.2
Net increases in provisions for renewal of property, plant and equipment operated under concessions	(58)	(41)	(17)	+41.5
(Impairment)/reversals	(518)	(639)	121	-18.9
Other income and expenses	1,363	8	1,355	n. a.
EBIT	5,637	7,514	(1,877)	-25.0

n. a.: not applicable.

1. *In line with the Group's practice.*
2. *See the EDF press release of 14 November 2017.*

The Group's consolidated EBIT amounted to €5,637 million for 2017, down by €1,877 million from 2016. This decrease and the higher level of net depreciation and amortisation are partly offset by the rise in other income and expenses.

5.3.1 Net changes in fair value on Energy and Commodity derivatives, excluding trading activities

The net changes in fair value on Energy and Commodity derivatives, excluding trading activities, decreased from -€262 million in 2016 to -€355 million en 2017.

5.3.2 Net depreciation and amortisation

Net depreciation and amortisation was up by €571 million compared to 2016.

The France - Generation and supply activities segment registered a €447 million increase in net depreciation and amortisation, essentially explained by the accelerated depreciation of oil-fired facilities in the thermal fleet, an increase in assets associated with provisions following revision of the discount rate, and a volume effect on maintenance investments in the nuclear fleet.

The France - Regulated activities segment registered a €123 million increase in net depreciation and amortisation, much of it attributable to the impact of the Linky[1] smart meter rollout.

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

The €17 million increase between 2016 and 2017 in net increases in provisions for renewal of property, plant and equipment operated under concessions is attributable to the France - Regulated activities segment.

5.3.4 Impairment/reversals

In 2017, impairment amounted to €518 million and principally concerned the United Kingdom (€246 million) and Italy (€150 million) (see note 13 to the 2017 consolidated financial statements).

In 2016, impairment amounted to €639 million.

5.3.5 Other income and expenses

In 2017, other income and expenses amounted to €1,363 million and principally concerned a gain of €1,462 million on the sale of 49.9% of the Group's investment in CTE (see note 14 to the 2017 consolidated financial statements).

In 2016, other income and expenses principally comprised income of €112 million following the favourable outcome of a dispute with the Hungarian State.

5.4 Financial result

(in millions of Euros)	2017	2016	Variation	Variation (%)
Cost of gross financial indebtedness	(1,778)	(1,827)	49	-2.7
Discount effect	(2,959)	(3,417)	458	-13.4
Other financial income and expenses	2,501	1,911	590	+30.9
FINANCIAL RESULT	(2,236)	(3,333)	1,097	-32.9

The financial result for 2017 corresponds to a financial expense of €2,236 million, €1,097 million improvement from 2016. This change is explained by:

- a decrease in the cost of gross financial indebtedness, as charges on the bond issues of 2017 and the full-year effect of charges on the bond issues of October 2016 were offset by repayments over the year and a favourable foreign exchange effect, mainly concerning the USD;
- a decrease of €458 million in discount effect, principally due to a less pronounced year-on-year decrease in the discount rate for nuclear provisions in France at 31 December 2017 than 31 December 2016 (-0.1% for real rates, compared to -0.2% in 2016). At 31 December 2017, the discount rate stood at 4.1% including an average inflation rate of 1.5% (4.2% and 1.5% at 31 December 2016);
- a €590 million improvement in other financial income and expenses, notably due to the rise in gains on sales of dedicated assets (€985 million in 2017 compared to €428 million in 2016).

5.5 Income taxes

Income taxes amounted to €147 million in 2017, €1,241 million less than in 2016. This decrease reflects the Group's lower consolidated income before taxes in 2017, but also results from sales of investments that benefit from reduced-rate taxation, the favourable outcome in France of challenges to the 3% contribution on dividend distributions, and the lower corporate income tax rates in the United States and Belgium.

1. Linky is a project led by Enedis, an independent EDF subsidiary as defined in the French Energy Code.

5.6 Share in net income of associates and joint ventures

The Group's share in net income of associates and joint ventures was a positive €35 million in 2017, compared to €218 million in 2016.

This change results primarily from the smaller contribution from RTE after 49.9% of the company was sold on 31 March 2017.

The share in net income of associates in 2017 includes impairment totalling €618 million. Details of this impairment are given in note 23 to the 2017 consolidated financial statements "Investments in associates and joint ventures".

5.7 Net income attributable to non-controlling interests

Net income attributable to non-controlling interests amounted to €116 million in 2017, €44 million less than in 2016. This change is essentially explained by the decrease in Centrica's revenues from nuclear generation activities in the United Kingdom, due to lower market prices for electricity.

5.8 EDF net income

EDF net income totalled €3,173 million for 2017, up by €322 million (+11.3%) from 2016.

5.9 Net income excluding non-recurring items

The Group's net income excluding non-recurring items[1] stood at €2,820 million for 2017, down by 31.0% from 2016.

1. Group net income excluding non-recurring items and net changes in fair value on Energy and Commodity derivatives, excluding trading activities, net of tax. Non-recurring items and net changes in fair value on Energy and Commodity derivatives, excluding trading activities, net of tax:

- *+€617 million for miscellaneous risks and impairment in 2017 (including a €1,289 million gain on the sale of 49.9% of CTE), compared to -€1,039 million in 2016.*
- *-€264 million of net changes in fair value on Energy and Commodity derivatives, excluding trading activities, net of tax in 2017, compared to -€195 million in 2016.*

6 NET INDEBTEDNESS, CASH FLOW 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 and are managed according to a liquidity-oriented policy.

The Group's net indebtedness stood at €33,015 million at 31 December 2017 compared to €37,425 million at 31 December 2016.

(in millions of Euros)	2017	2016	Variation	Variation (%)
Operating profit before depreciation and amortisation (EBITDA)	13,742	16,414	(2,672)	-16.3
Cancellation of non-monetary items included in EBITDA	(1,796)	(1,703)		
Net financial expenses disbursed	(1,209)	(1,137)		
Income taxes paid	(771)	(838)		
Other items including dividends received from associates and joint ventures	221	323		
Operating cash flow [(1)]	10,187	13,059	(2,872)	-22.0
Change in working capital	1,476	(1,935)		
Net investments [(2)]	(9,810)	(11,663)		
Cash flow after net investments	1,853	(539)		
Dedicated assets	(1,171)	10		
Cash flow before dividends [(3)]	682	(529)		
Dividends paid in cash	(891)	(1,036)		
Group cash flow	(209)	(1,565)		
Other monetary changes	3,855	549		
(Increase)/decrease in net indebtedness, excluding the impact of changes in exchange rate	3,646	(1,016)		
Effect of change in exchange rates	701	1,107		
Effect of other non-monetary changes	63	(121)		
(Increase)/decrease in net indebtedness	4,410	(30)		
NET INDEBTEDNESS AT BEGINNING OF PERIOD	37,425	37,395		
NET INDEBTEDNESS AT END OF PERIOD	33,015	37,425		

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

(2) Net investments are operating investments and financial investments for growth, net of disposals. They also include net debts acquired or transferred in acquisitions or disposals of securities, investment subsidies received, non-Group partner investments, Linky, new developments and 2015-2020 assets disposal plan.

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

6.1 Operating cash flow

The operating cash flow amounted to €10,187 million in 2017 compared to €13,059 million in 2016, a decrease of €2,872 million (-22.0%).

This change mainly reflects:

- the lower EBITDA (-€2,672 million);
- an increase in net financial expenses disbursed (-€1,209 million in 2017 against -€1,137 million in 2016), essentially explained by the full-year effect in 2017 of the bond issues made in October 2016, and the bond issues of early 2017;
- a decrease in income taxes paid (-€771 million in 2017 versus -€838 million in 2016), mainly due to lower taxable income in the United Kingdom;
- a decrease in "Other items including dividends received from associates and joint ventures" (€221 million in 2017 against €323 million in 2016), principally due to the lower level of dividends received after the sale of 49.9% of CTE in March 2017.

6.2 Change in working capital

Working capital improved by €1,476 million in 2017.

This change is mainly explained by:

- receipts of +€814 million for adjustment of 2014 French regulated sales tariff;
- gains resulting from the working capital improvement plan, essentially on inventories and trade receivables (approximately +€422 million);
- favourable weather effects in France (+€228 million).

The difference between the 2016 and 2017 change in working capital (+€3,411 million) is explained by the effect of the 2014 French regulated sales tariff adjustment (+€1,753 million) and a favourable weather effect in France (+€963 million). It also reflects a reduction in inventories of the optimisation and trading activity in 2017 (+€460 million) due to the disposal of the coal trading activity (EDF Trading) and the sale of EDF Polska's assets to PGE.

6.3 Net investments

Net investments amounted to €9,810 million in 2017 compared to €11,663 million in 2016, a decrease of €1,853 million (-15.9%). Details are as follows:

(in millions of Euros)	2017	2016	Variation	Variation (%)
France - Generation and supply activities	5,849	5,692	157	+2.8
France - Regulated activities	3,212	3,301	(89)	-2.7
United Kingdom	643	806	(163)	-20.2
Italy	511	458	53	+11.6
Other international	553	607	(54)	-8.9
Other activities	1,200	952	248	+26.1
NET INVESTMENTS EXCLUDING LINKY, NEW DEVELOPMENTS AND 2015-2020 ASSETS DISPOSAL PLAN	11,968	11,816	152	+1.3
LINKY, NEW DEVELOPMENTS AND 2015-2020 ASSETS DISPOSAL PLAN	(2,158)	(153)	(2,005)	N.A.
NET INVESTMENTS	9,810	11,663	(1,853)	-15.9

N.A.= not applicable.

6.3.1 Net investments excluding Linky, new developments and 2015-2020 assets disposal plan

Net investments by the France – Generation and supply activities segment rose by €157 million or +2.8%. The increase is mainly attributable to investments in the Bouchain thermal power plant.

Net investments by the France – Regulated activities segment were down by €89 million (-2.7%), notably reflecting the falling number of metering stations and transformers due to rollout of the Linky meter.

Outside France, net investments decreased by €164 million or -8.8%.

- In the United Kingdom, the decrease of €163 million or -20.2% is mainly explained by lower investments in coal-fired and nuclear power plants, and slower-paced investment in smart metering and to a lesser extent renewable energies.
- In Italy, net investments were up by €53 million due to investments made in energy services.
- In the Other international segment, net investments were practically stable (-€54 million). This stability results mainly from fact that the end of the modernisation and environmental compliance programme for coal and cogeneration plants in Poland was counterbalanced by rising investments in China.

Net investments by the Other activities segment were up by €248 million or +26.1%, reflecting the faster development of renewable energies. This rise primarily concerned EDF Énergies Nouvelles, which stepped up its investments in Europe and Brazil, while investments declined in North America.

6.3.2 Linky, new developments and 2015-2020 assets disposal plan

- Investments in the Linky programme, which was stepped up in 2017, amounted to €612 million.
- New developments correspond to the Group's new development projects. In 2017, these new developments concerned investments for the acquisition of Framatome (€1,868 million), New Nuclear investments in the United Kingdom (the ramp-up of the Hinkley Point C project was partly offset by a favourable foreign exchange effect), and to a lesser extent, investments in offshore wind farm projects in the United Kingdom and France, and the takeover of a service company in the United Kingdom.
- Assets disposals essentially concerned the sales of 49.9% of CTE, Polish companies, EDF Démász Zrt in Hungary, network and regasification assets in Italy and real estate assets in France and Italy, and amount to €6,193 million.

6.4 Dedicated assets

In compliance with the French Law no. 2006-739 of 28 June 2006 on the sustainable management of radioactive materials and waste, EDF has built up a portfolio of dedicated assets for secure financing of its long-term nuclear obligations which amounted to €26,502 million at 31 December 2017.

Overall, the changes in dedicated assets comprise:

- allocations to reach full coverage of obligations;
- reinvestment of financial income (dividends and interest) generated by these assets;
- withdrawals of assets corresponding to the costs incurred over the period in application of long-term nuclear obligations falling within the scope of the Law of 28 June 2006;
- exceptional withdrawals proposed to the governance bodies in charge of managing dedicated assets when the value of the portfolio exceeds the amount of the obligations to be financed; such withdrawals must be validated by these bodies.

The net change of -€1,171 million in dedicated assets in 2017 corresponds to the first three categories above, including a regulatory allocation of €1,095 million in compliance with the letter of 10 February 2017 from the ministers for the Economy and Finance, and for the Environment, Energy and the Sea.

6.5 Cash flow before dividends

The cash flow before dividends in 2017 was positive at €682 million (compared to a negative -€529 million in 2016) and is mainly explained by the following factors:

- operating cash flow of €10,187million;
- net investments of -€9,810 million;
- a net allocation to dedicated assets of -€1,171 million;
- a favourable change of €1,476 million in working capital.

The €1,211 million difference from 2016 is essentially due to favourable developments in the change in working capital and disposals, although their impact was mitigated by lower operating cash flow (-€2,672 million) and a higher net allocation to dedicated assets (-€1,181 million).

6.6 Dividends paid in cash

Dividends paid in cash during 2017 (-€891 million) comprise:

- the balance of the 2016 dividend (-€75 million);
- the interim dividend for 2017 (-€35 million) decided by the Board of Directors on 7 November 2017 and paid on 11 December 2017 at the rate of €0.15 per share, for shareholders who did not take up the scrip dividend option;
- payments made in 2017 to bearers of perpetual subordinated bonds for the "hybrid" bond issues of January 2013 and January 2014 (-€565 million);
- dividends paid by Group subsidiaries to their minority shareholders (-€217 million).

6.7 Group cash flow

The Group cash flow amounted to -€209 million, versus -€1,565 million in 2016. The €1,356 million improvement primarily reflects the change in cash flow before dividends (+€1,211 million) and the decrease in dividends paid in cash (+€145 million).

6.8 Effect of change in exchange rates

The foreign exchange effect (mainly resulting from a decline by the pound sterling and a rise by the US dollar against the Euro[1]) had a favourable impact of +€701 million on the Group's net indebtedness at 31 December 2017.

6.9 Other monetary changes

Other monetary changes had a favourable impact of +€3,855 million on the Group's net indebtedness at 31 December 2017, principally in line with the cash capital increase with preferential subscription rights for shareholders that took place in March 2017. This operation reduced the Group's net indebtedness by €4,005 million net of expenses.

6.10 Financial ratios

	2017	2016	2015
Net indebtedness/EBITDA	2.4	2.3	2.1
Net indebtedness/(Net indebtedness + equity)[(1)]	40%	48%	48%

(1) Equity including non-controlling interests.

*1. The pound sterling fell by -3.51% against the Euro, from €1.168/£1 at 31 December 2016 to €1.127/£1 at 31 December 2017.
The US dollar fell by -12.12% against the Euro, from €0.949/$1 at 31 December 2016 to €0.834/$1 at 31 December 2017.*

7 MANAGEMENT AND CONTROL OF MARKET RISKS

7.1 Management and control of financial risks

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

Since 2002, a dedicated body - the Financial Risks Control department *(département Contrôle des Risques Financiers et Investissements - CRFI)* - has been in charge of financial risk control at Group level, mainly by ensuring correct application of the principles of the Strategic Financial Management Framework (July 2015). This department, which has reported to the Group's Risk Division since 2008, is an independent unit that also has the task of carrying out a second-level check of the risk of counterparty default (methodology and organisation) for EDF entities and operationally controlled Group subsidiaries (excluding Enedis), and a first-level check of financing activities by EDF SA's Trading room. The CRFI department also carries out a second-level check of management activities concerning the dedicated asset portfolio.

The CRFI department issues daily and weekly monitoring reports of risk indicators relevant to activities in EDF SA's trading room.
Regular internal audits are carried out to ensure controls are actually applied and are effective.

7.1.1 Liquidity position and management of liquidity risks

7.1.1.1 Liquidity position

At 31 December 2017, the Group's liquidities, consisting of liquid assets, cash and cash equivalents, totalled €22,655 million and available credit lines amounted to €11,943 million.

For 2018, the Group's scheduled debt repayments (principal and interest) are forecast at 31 December 2017 at €10,429 million, including €3,712 million for bonds (excluding hybrid bonds).

No Group company was in default on any borrowing at 31 December 2017.

7.1.1.2 Management of liquidity risks

On 20 January 2017, EDF raised ¥137 billion, i.e. around €1.1 billion, through four senior bond issues on the Japanese market ("Samurai bonds") with maturities of 10 years and more:

- ¥107.9 billion bond, with a 10-year maturity and a fixed coupon of 1.088%;
- ¥19.6 billion green bond, with a 12-year maturity and a fixed coupon of 1.278%;
- ¥6.4 billion green bond, with a 15-year maturity and a fixed coupon of 1.569%;
- ¥3.1 billion bond, with a 20-year maturity and a fixed coupon of 1.870%.

This operation contributes to the Group's investment strategy and is part of its policy to extend the average maturity of its debt.

Details of the Group's bond borrowings are given in note 38.2 to the 2017 consolidated financial statements "Loans and other financial liabilities".

The average maturity of Group debt was 13.7 years at 31 December 2017, compared to 13.4 years at 31 December 2016. For EDF SA, the average maturity of debt was 14.3 years at 31 December 2017, against 14.4 years at 31 December 2016.

At 31 December 2017, the residual maturities of financial liabilities (including interest payments) are as follows under IAS 39 (valued on the basis of exchange and interest rates at 31 December 2017):

31 December 2017 *(in millions of Euros)*	Debt	Hedging instruments (1) Interest rate swaps	Hedging instruments (1) Currency swaps	Debt
2018	10,429	(543)	(21)	349
2019-2022	20,876	(1,862)	(70)	144
2023 and later	64,764	(3,029)	(806)	120
TOTAL	96,069	(5,434)	(897)	613
Debt repayment	55,512			
Interest expense	40,557			

(1) Data on hedging instruments include both assets and liabilities.

The EDF group was able to meet its financing needs by conservative liquidity management, and has obtained financing on satisfactory terms.

A range of specific levers are used to manage the Group's liquidity risk

- the Group's cash pooling system, which centralises cash management for controlled subsidiaries. The subsidiaries' cash balances are made available to EDF SA in return for interest, so as to optimise the Group's cash management and provide subsidiaries with a system that guarantees them market-equivalent financial terms;
- centralisation of financing for controlled subsidiaries at the level of the Group's cash management department. Changes in subsidiaries' working capital are financed by this department in the form of stand-by credit lines provided for subsidiaries, which may also be granted revolving credit from the Group. EDF SA and the investment subsidiary EDF Investissements Groupe (EDF IG), set up in partnership with the bank Natixis Belgique Investissements, also provide medium and long-term financing for EDF group operations outside France, arranged by EDF SA and EDF IG on a totally independent basis: each company sets its own terms, which are the same as the subsidiary would have in an arm's-length market transaction;
- active management and diversification of financing sources used by the Group: the Group has access to short-term resources on various markets through programmes for French commercial paper *(billets de trésorerie)*, US commercial paper and Euro market commercial paper. For EDF, the ceilings for these programmes are €6 billion for its French commercial paper, $10 billion for its US commercial paper and €1.5 billion for its Euro market commercial paper.

At 31 December 2017, the amount of commercial paper outstanding was €700 million for French commercial paper, and $1,496 million for US commercial paper. No Euro market commercial paper was issued in 2017. EDF has access to the world's main bond markets: the Euro markets through its EMTN programme, which currently has a ceiling of €45 billion, particularly for Euro and sterling issues; and the domestic markets used for stand-alone issues in US dollars (144A bonds), yen (Samurai bonds) and Swiss francs.

The Group's main borrowings at 31 December 2017 are as follows:

Type of borrowing *(in millions of currency units)*	Entity	Issue date [(1)]	Maturity	Nominal amount	Currency	Rate
Euro MTN	EDF	02/2008	02/2018	1,500	EUR	5.00%
Bond	EDF	01/2009	01/2019	2,000	USD	6.50%
Bond	EDF	01/2014	01/2019	1,250	USD	2.15%
Bond	EDF	01/2010	01/2020	1,400	USD	4.60%
Euro MTN	EDF	05/2008	05/2020	1,200	EUR	5.38%
Bond	EDF	10/2015	10/2020	1,500	USD	2.35%
Euro MTN	EDF	01/2009	01/2021	2,000	EUR	6.25%
Euro MTN (green bond)	EDF	11/2013	04/2021	1,400	EUR	2.25%
Euro MTN	EDF	01/2012	01/2022	2,000	EUR	3.88%
Euro MTN	EDF	09/2012	03/2023	2,000	EUR	2.75%
Euro MTN	EDF	09/2009	09/2024	2,500	EUR	4.63%
Bond (green bond)	EDF	10/2015	10/2025	1,250	USD	3.63%
Euro MTN	EDF	11/2010	11/2025	750	EUR	4.00%
Euro MTN (green bond)	EDF	10/2016	10/2026	1,750	EUR	1.00%
Bond	EDF	01/2017	01/2027	107,900	JPY	1.09%
Euro MTN	EDF	03/2012	03/2027	1,000	EUR	4.13%
Euro MTN	EDF	04/2010	04/2030	1,500	EUR	4.63%
Euro MTN	EDF	07/2001	07/2031	650	GBP	5.88%
Euro MTN	EDF	02/2003	02/2033	850	EUR	5.63%
Euro MTN	EDF	06/2009	06/2034	1,500	GBP	6.13%
Euro MTN	EDF	10/2016	10/2036	750	EUR	1.88%
Bond	EDF	01/2009	01/2039	1,750	USD	6.95%
Euro MTN	EDF	11/2010	11/2040	750	EUR	4.50%
Euro MTN	EDF	10/2011	10/2041	1,250	GBP	5.50%
Bond	EDF	01/2014	01/2044	1,000	USD	4.88%
Bond	EDF	10/2015	10/2045	1,500	USD	4.75%
Bond	EDF	10/2015	10/2045	1,150	USD	4.95%
Euro MTN	EDF	09/2010	09/2050	1,000	GBP	5.13%
Euro MTN	EDF	10/2016	10/2056	2,164	USD	4.99%
Bond	EDF	01/2014	01/2114	1,350	GBP	6.00%

(1) Date funds were received.

At 31 December 2017, EDF has an overall amount of €10,280 million in available credit facilities (syndicated credit and bilateral lines):

- the syndicated credit line amounts to €4 billion with expiry dates extending to November 2020. No drawings had been made on this syndicated credit line at 31 December 2017;
- bilateral lines represent an available amount of €6,150 million, with expiry dates extending to December 2020. The level of this available financing is very frequently reviewed to ensure the Group has sufficient backup credit facilities;
- the amount available from the credit lines with the European Investment Bank is €130 million. €70 million had been drawn on the total credit line of €200 million at 31 December 2017. Three other credit lines were fully drawn at 31 December 2017 for amounts of €225 million, €500 million and €500 million.

EDF Investissements Groupe has a syndicated credit facility for €1,000 million (expiring in September 2020). At 31 December 2017, there were no drawings on this credit facility.

Edison has a credit line with the European Investment Bank for €275 million (which is fully drawn) and a credit line with a pool of banks for

€300 million, on which no drawings on had been made at 31 December 2017.

7.1.2 Credit rating

The financial ratings agencies Standard & Poor's, Moody's and Fitch Ratings attributed the following long-term and short-term ratings to EDF group entities at 31 December 2017:

Company	Agency	Long-term rating	Short-term rating
	Standard & Poor's	A-, negative outlook[1]	A-2
	Moody's	A3, stable outlook	P-2
EDF	Fitch Ratings	A-, stable outlook	F2
EDF Trading	Moody's	Baa2, stable outlook	n.a.
EDF Energy	Standard & Poor's	BBB-, negative outlook[2]	A-3
	Standard & Poor's	BB+, stable outlook	B
Edison	Moody's	Baa3, stable outlook	n.a.

n.a.= not applicable.
(1) S&P revised EDF's outlook from stable to negative on 20 November 2017.
(2) S&P revised EDF Energy's outlook from stable to negative on 20 November 2017.

7.1.3 Management of foreign exchange risk

Due to the diversification of its activities and geographical locations, the Group is exposed to the risk of exchange rate fluctuations, which may have an impact on the translation differences affecting balance sheet items, Group financial expenses, equity and net income.

To limit exposure to foreign exchange risks, the Group has introduced the following management principles:

- local currency financing: to the extent possible given the local financial markets' capacities, each entity finances its activities in its own accounting currency. When financing is contracted in other currencies, derivatives may be used to limit foreign exchange risk
- matching of assets and liabilities: the net assets of subsidiaries located outside the Euro zone expose the Group to a foreign exchange risk. The foreign exchange risk in the consolidated balance sheet is managed by market hedging involving use of financial derivatives. Hedging of net assets in foreign currencies complies with risk/return targets, and the hedging ratio varies depending on the currency, ranging from 36% to 66% for the principal exposures. 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 laid down in the Strategic financial management framework, EDF and the main subsidiaries concerned by foreign exchange risks (EDF Energy, EDF Trading, Edison, EDF Énergies Nouvelles) are required to hedge firm or highly probable commitments related to these future operating cash flows.

As a result of the financing and foreign exchange risk hedging policy, the Group's gross debt at 31 December 2017 breaks down as follows by currency after hedging:

GROSS DEBT STRUCTURE BY CURRENCY BEFORE AND AFTER HEDGING

31 December 2017 *(in millions of Euros)*	Initial debt structure	Impact of hedging instruments[1]	Debt structure after hedges	% of debt
Borrowings in EUR	27,609	18,454	46,063	81%
Borrowings in USD	17,224	(14,752)	2,472	4%
Borrowings in GBP	9,495	(2,331)	7,164	13%
Borrowings in other currencies	2,518	(1,371)	1,147	2%
TOTAL DEBT	56,846	-	56,846	100%

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

The table below presents the impact on equity of a variation in exchange rates on the Group's gross debt at 31 December 2017:

EXCHANGE RATE SENSITIVITY OF THE GROUP'S GROSS DEBT

31 December 2017 *(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
Borrowings in EUR	46,063	-	46,063
Borrowings in USD	2,472	247	2,719
Borrowings in GBP	7,164	716	7,880
Borrowings in other currencies	1,147	115	1,262
TOTAL DEBT	56,846	1,078	57,924

Due to the Group's hedging policy for foreign exchange risk on the Group's gross debt, the income statement for companies controlled by the Group is marginally exposed to foreign exchange rate risk.

The table below sets forth the foreign exchange position relating to net assets in foreign currencies of the Group's subsidiaries.

NET ASSET POSITION

31 December 2017 (1) *(in millions of Euros)*	Net assets	Bonds	Derivatives	Net assets after management
USD	4,426	3,200	(1,380)	2,606
CHF (Switzerland)	713	-	468	245
GBP (United Kingdom)	14,411	5,435	(177)	9,153
CLP (Chile)	1,135	-	-	1,135
PLN (Poland)	340	-	305	35
BRL (Brazil)	1,066	-	-	1,066
CNY (China)	10,028	-	-	10,028

(1) Net assets as stated at 31 December 2017; bonds and derivatives as stated at 31 December 2017. The net positions shown exclude certain non-significant exposures.

The above table shows the assets of the Group's foreign subsidiaries in foreign currencies, adjusted for changes in the fair value of cash flow hedges and available-for-sale financial assets recorded in equity, and changes in the fair value of financial instruments recorded in income.

The following table sets forth the risk for equity of foreign exchange losses on net assets in foreign currencies of the Group's principal subsidiaries at 31 December 2017, assuming unfavourable, uniform exchange rate variations of 10% against the Euro. Net assets are converted at the closing rate and impacts are reported in absolute value.

EXCHANGE RATE SENSITIVITY OF NET ASSETS

	At 31 December 2017			At 31 December 2016		
(in millions of currency units)	Net assets after management, into currency	Net assets after management, converted into Euros	Impact on equity of a 10% variation in exchange rates	Net assets after management, into currency	Net assets after management, converted into Euros	Impact on equity of a 10% variation in exchange rates
USD	2,606	2,173	217	2,857	2,710	271
CHF (Switzerland)	245	209	21	169	157	16
GBP (United Kingdom)	9,153	10,316	1,032	8,058	9,412	941
CLP (Chile)	1,135	2	-	2,607	4	-
PLN (Poland)	35	8	1	164	37	4
BRL (Brazil)	1,066	268	27	1,377	401	40
CNY (China)	10,028	1,285	129	10,141	1,385	139

The foreign exchange risk on available-for-sale securities is mostly concentrated in EDF's dedicated asset portfolio, which is discussed in section 5.1.6.1.6 "Management of financial risk on EDF SA'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 2017.

7.1.4 Management of interest rate risk

The exposure of the Group's net indebtedness to interest rate fluctuations covers two types of risk: a risk of change in the net financial expenses on floating-rate financial assets and liabilities, and a risk of change in the value of financial assets invested at fixed rates. These risks are managed by monitoring the floating-rate portion of net indebtedness, defined by reference to the risk/return for net financial expenses, taking into consideration expected movements in interest rates.

Some of the debt is variabilised and the Group may use interest rate derivatives for hedging purposes. The distribution of exposure between fixed and floating rates is monitored.

The Group's debt after hedging instruments at 31 December 2017 comprised 55.3% at fixed rates and 44.7% at floating rates.

A 1% uniform annual rise in interest rates would generate an approximate €254 million increase in financial expenses at 31 December 2017, based on gross floating-rate debt after hedging.

The average cost of Group debt (weighted interest rate on outstanding amounts) was 2.95% at the end of 2017.

The table below sets forth the structure of Group debt and the impact of a 1% variation in interest rates at 31 December 2017. The impact of the change in interest rates was €49 million lower than in 2016.

STRUCTURE AND INTEREST RATE SENSITIVITY OF GROUP DEBT

31 December 2017 *(in millions of Euros)*	Initial debt structure	Impact of hedging instruments	Debt structure after hedging	Impact on income of a 1% variation in interest rates
Fixed rate	52,900	(21,469)	31,431	-
Floating rate	3,946	21,469	25,415	254
TOTAL	56,846	-	56,846	254

Concerning financial assets, the table below presents the interest rate risk on floating-rate bonds and negotiable debt securities held by EDF, and their sensitivity to interest rate risks (impact on net income).

INTEREST RATE SENSITIVITY OF FLOATING-RATE INSTRUMENTS

31 December 2017 *(in millions of Euros)*	Value	Impact on income of a 1% variation of interest rates	Value after a 1% variation in interest rates
FLOATING-RATE INSTRUMENTS	1,205	(12)	1 193

The Group's interest rate risk notably relates to the value of the Group's long-term nuclear commitments (see note 29 to the 2017 consolidated financial statements) and its commitments for pensions and other specific employee benefits (see note 31 to the 2017 consolidated financial statements), which are adjusted to present value using discount rates that depend on interest rates at various time horizons, and debt instruments held for the management of the dedicated assets set aside to cover these commitments (see section 5.1.6.1.6 "Management of financial risk on EDF's dedicated asset portfolio").

7.1.5 Management of equity risks

The equity risk is concentrated in the following areas:

Coverage of EDF's nuclear obligations

Analysis of the equity risk is presented in section 5.1.6.1.6 "Management of financial risk on EDF SA's dedicated asset portfolio".

Coverage of employee benefit obligations for EDF SA, EDF Energy and British Energy

Assets covering EDF's employee benefit liabilities are partly invested on the international and European equities markets. Market trends therefore affect the value of these assets, and a downturn in equity prices would lead to a rise in balance sheet provisions.

30.9% of the assets covering EDF's employee benefit obligations were invested in equities at 31 December 2017, representing an amount of €3.6 billion of equities.

At 31 December 2017, 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 38.0% in equities and 33.6% in equity funds, representing an amount of £654 million of equities.

At 31 December 2017, the British Energy pension funds were invested to the extent of 25.0% in equities and equity funds, representing an amount of £1,688 million of equities.

CENG fund

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

EDF's long-term cash management

As part of its long-term cash management policy, EDF has continued its strategy to reduce the portion of equity-correlated investments, resulting in a non-significant position well below €1 million at 31 December 2017.

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

Dedicated assets have been built up progressively by EDF since 1999 to secure financing of its long-term nuclear commitments. The Law of 28 June 2006 and its implementing regulations defined provisions not related to the operating cycle, which must therefore be covered by dedicated assets; they are listed in note 47 to the 2017 consolidated financial statements, "Dedicated assets".

The dedicated asset portfolio is managed under the supervision of the Board of Directors and its advisory committees (Nuclear commitments monitoring committee, Audit committee).

The Nuclear Commitments Monitoring Committee (CSEN) is a specialised Committee set up by EDF's Board of Directors in 2007.

A Nuclear Commitments Financial Expertise Committee (CEFEN) exists to assist the company and its governance bodies on questions of matching assets and liabilities and asset management. The members of this Committee are independent of EDF. They are selected for their skills and diversity of experience, particularly in the fields of asset/liability management, economic and financial research, and asset management.

Governance and management principles

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

Strategic asset allocation is based on asset/liability reviews carried out to define the most appropriate target portfolio for financing long-term nuclear expenses. Strategic allocation is validated by EDF's Board of Directors and reviewed every three years unless circumstances require otherwise. Since 2013, this target allocation has consisted of a financial portfolio and around one quarter of unlisted assets (the proportion of 19.2% had been reached at 31 December 2017). The unlisted assets are managed by EDF Invest (formed in 2013 following the decree of 24 July 2013) and comprise infrastructures, real estate and investment funds.

The financial portfolio contains two sub-portfolios, "equities" and "bonds", themselves divided into "secondary asset classes" or "pockets" that correspond to specific markets. The strategic allocation of the financial portfolio is 49% international equities and 51% bonds.

A benchmark index is set for monitoring performance and controlling the risk on the financial portfolio:

- MSCI World AC DN hedged in Euros 50% (excluding emerging country currencies) for the equities sub-portfolio, and
- a composite index of 60% Citigroup EGBI and 40% Citigroup EuroBIG corporate for the bonds sub-portfolio.

A third "cash" sub-portfolio exists to provide secure coverage for the disbursements related to the purpose of the asset covered, and may be reinforced tactically, particularly when a conservative approach is required in the event of a market crisis.

The CSPE receivable was allocated to dedicated assets on 13 February 2013 (see note 47 to the 2017 consolidated financial statements).

Tactical management of the financial portfolio has several focal areas:

- monitoring of exposure between the "equities" and "bonds" sub-portfolios;
- within each sub-portfolio, allocation by "secondary asset class";
- selection of investment funds, aiming for diversification:
  - by style (growth securities, unlisted securities, high-return securities),
  - by capitalisation (major stocks, medium and small stocks),
  - by investment process (macroeconomic and sector-based approach, selection of securities on a "quantitative" basis, etc.),
  - by investment vehicle (for compliance with maximum investment ratios);
- for bonds, a choice of securities held directly, through brokers, or via investment funds incorporating the concern for diversification:
  - by type of issue (fixed income, indexed income),
  - by type of instrument (government or supranational bonds, covered bonds and similar, corporate bonds),
  - by issuer and by maturity.

The allocation policy for the financial portfolio was developed by the Operational Management Committee [1] on the basis of the economic and financial outlook for each market and geographical area, a review of market appreciation in different markets and market segments, and risk analyses produced by the CRFI department.

Changes in the portfolio during 2017

On 31 March 2017, following the approval by the relevant merger control authorities, EDF finalised the sale to Caisse des Dépôts and CNP Assurances of a 49.9% stake in the electricity transmission entity Coentreprise de transport d'électricité (CTE), which had held 100% of the shares of RTE since December 2016. The sale was based on a valuation of €8.2 billion for 100% of the equity of RTE. After completion of this operation, EDF's entire investment in CTE, i.e. 50.1%, was allocated to dedicated assets carried by EDF Invest.

EDF Invest continued to build up its portfolio of infrastructures, real estate property and investment funds over 2017, notably with the following operations.

In April 2017, Atlantia's Board of Directors accepted a binding offer from the consortium consisting of Allianz, EDF Invest and the investment fund DIF for 5% of the capital of Autostrade per l'Italia. This transaction was completed in July 2017. The stake in Autostrade per l'Italia acquired by the consortium was raised from the initially planned 5% to 6.94% through the exercise of a call option granted by Atlantia.

Autostrade per l'Italia is one of Europe's largest motorway concession operators, managing more than 50% of the Italian motorway network and 61% of all kilometres of motorway in Italy. The company's network comprises a total 21 motorways covering approximately 3,000km across 16 regions of Italy.

In June and September 2017, EDF Invest, together with Beni Stabili, the Italian subsidiary of Foncière des Régions, and Predica, acquired a non-controlling interest in Central Sicaf, which manages a portfolio of offices and technical premises that are all leased to Telecom Italia and

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

were previously owned 100% by Beni Stabili.

In October 2017, EDF Invest, together with KKR Infrastructure, finalised the acquisition of a minority interest in the Dutch carpark operator Q-Park NV. Q-Park is one of Europe's largest carpark operators, with more than 870,000 parking spaces on over 6,300 sites across 10 countries in North-West Europe. It specialises in investment, construction and management for high-quality carparks in strategic locations and has 2,100 employees.

In December 2017, EDF Invest acquired 50% of the Ecowest real estate development in Levallois-Perret, which is leased principally to L'Oreal's Luxury division. This new 59,000m^2 property with 1,085 parking spaces was delivered in June 2017, and has been awarded both BREEAM "Excellent" and HQE "exceptional" environmental certifications.

After four years of activity, EDF Invest has thus built up a diversified portfolio of unlisted assets totalling €2.7 billion (excluding CTE) at 31 December 2017. For the first time since EDF Invest was launched, its investments outside the Group are equivalent to the equity investment in CTE. A fuller description of EDF Invest's activity and assets is available from its website, www.edfinvest.com.

The internal rate of return (IRR) since 2013 on the EDF Invest portfolio (excluding CTE) is approximately 11% on infrastructures and real estate property, including a recurring cash yield (cash transferred to EDF SA in dedicated assets, excluding non-recurring items and partial sales) of 7%, particularly concerning infrastructures.

In infrastructures, with €1.6 billion invested in 8 operations in Europe alongside partners who are key actors on the market (insurers such as Allianz, institutional actors such as GIC, the Singapore sovereign fund and industrial entities including Atlantia and SNAM), EDF Invest has demonstrated its capacity for expansion across Europe (6 countries) and in a variety of sectors.

In real estate, with €0.7 billion invested in more than 10 operations in France, Germany and Italy, EDF Invest is a recognised institutional investor on the market for its ability to take positions in significant operations, as reflected in the operations undertaken this year.

Changes in the financial portfolio are presented below under the heading "Performance of EDF's dedicated assets portfolio".

At 31 December 2017, the degree of coverage of provisions by dedicated assets was 108.5% applying the regulatory calculations.

Withdrawals from dedicated assets totalled €378 million, equivalent to the payments made in respect of the long-term nuclear obligations to be covered in 2017 (€377 million in 2016). The regulatory allocation to dedicated assets (required by article 2-IV of decree 2007-243, amended) for 2016, amounting to €1,095 million, was made in March 2017 in compliance with the letter of 10 February 2017 from the ministers of the Economy and Finance, and of the Environment, Energy and the Sea (no allocations were made in 2016). The regulatory allocation to dedicated assets for 2017 amounts to €386 million (taking the coverage ratio to 110%) and will be made during 2018.

Content and performance of EDF's dedicated asset portfolio

BREAKDOWN OF THE PORTFOLIO

	31/12/2017	31/12/2016
Equities sub-portfolio	35.5%	31.1%
Bonds sub-portfolio	33.0%	26.8%
Cash sub-portfolio	0.4%	3.5%
CSPE after funding	11.9%	16.7%
Unlisted assets (EDF Invest)	19.2%	21.9%
TOTAL	100%	100%

At 31 December 2017, the total value of the portfolio was €28,115 million compared to €25,677 million in 2016.

The content of the financial portfolio is also presented in note 47 to the 2017 consolidated financial statements, "Dedicated assets".

PORTFOLIO CONTENT UNDER THE CLASSIFICATION FROM ARTICLE 4, DECREE 2007-243 OF 23 FEBRUARY 2007

Categories *(in millions of Euros)*	31 December 2017 Net book value[1]	31 December 2017 Realisable value	31 December 2016 Net book value[1]	31 December 2016 Realisable value
OECD government bonds and similar	4,261	4,363	3,167	3,335
OECD corporate (non-government) bonds	618	636	542	593
Funds investing in the above two categories	4,352	4,544	3,910	4,058
Funds not exclusively invested in OECD bonds	8,230	9,785	6,059	7,790
Hedges, deposits, amounts receivable	-	30	(18)	(18)
TOTAL FINANCIAL PRODUCT PORTFOLIO	17,461	19,358	13,660	15,758
CTE (the holding company that holds 100% of RTE)[2]	2,705	2,705	3,905	3,905
Other unlisted securities and real estate assets	2,427	2,703	1,530	1,728
TOTAL EDF INVEST	5,132	5,408	5,435	5,633
CSPE after funding	3,294	3,349	4,182	4,286
TOTAL DEDICATED ASSETS	25,887	28,115	23,277	25,677

(1) Net book value in the parent company financial statements.

(2) In 2017, dedicated assets include 50.1% of Coentreprise de Transport d'Électricité (CTE) (75.9% in 2016).

PERFORMANCE OF EDF'S DEDICATED ASSET PORTFOLIO

The table below presents the performance by portfolio at 31 December 2017 and 31 December 2016:

(in millions of Euros)	31/12/2017 Stock market or realisable value	Performance for 2017 Portfolio	Performance for 2017 Benchmark index[1]	31/12/2016 Stock market or realisable value	Performance for 2016 Portfolio	Performance for 2016 Benchmark index[1]
Equities sub-portfolio	9,972	12.9%	13.0%	7,992	7.8%	9.8%
Bonds sub-portfolio	9,282	2.1%	0.8%	6,866	4.3%	3.8%
TOTAL FINANCIAL PORTFOLIO	19,254	7.7%	6.6%	14,858	6.2%	6.8%
Cash sub-portfolio	104	-0.1%	-0.4%	900	0.2%	-0.3%
TOTAL FINANCIAL AND CASH PORTFOLIO	19,358	7.7%	-	15,758	5.9%	-
CSPE after funding	3,349[2]	0.4%	-	4,286[2]	4.2%[2]	-
EDF INVEST[3]	5,408	8.9%	-	5,633	40.1%[5]	-
including CTE shares[4]	*2,705*	*7.3%*	-	*3,905*	*55.4%[5]*	-
including other unlisted assets	*2,703*	*11.2%*	-	*1,728*	*7.9%*	-
TOTAL DEDICATED ASSETS	28,115	6.6%	-	25,677	11.1%[5] [6]	-

(1) Benchmark index: MSCI World AC DN hedged in Euros 50% (excluding emerging country currencies) for the equities sub-portfolio, composite index of 60% Citigroup EGBI and 40% Citigroup EuroBIG corporate for the bonds sub-portfolio, Eonia Capitalisé for the cash subportfolio, 49% equities index and 51% bonds index for the total financial portfolio.

(2) Including a €55 million adjustment at 31 December 2017 (€103 million after the €22 million gain on the €872 million of receivable assigned at 31 December 2016). For the unadjusted receivable, the performance for 2016 was 1.7%.

(3) Performance for assets held at the start of the year.

(4) At 31 December 2017, 50.1% of the Group's investment in Coentreprise de Transport d'Électricité (CTE), the company that holds 100% of RTE. At 31 December 2016, 75.9% of the Group's investment in CTE.

(5) Excluding adjustments related to the CTE operation, in 2016, RTE's performance was 1.6%, EDF Invest's performance was 3.8% and the overall performance by all dedicated assets was 5.2%. The performance for 2017 reflects the final valuation, corresponding to completion of the sale on 31 March 2017.

(6) Including adjustments of RTE and the CSPE receivable; 4.8% without these two adjustments. The performance by dedicated assets excluding RTE was 5.7% in 2016.

2017 began in a climate of great political uncertainty in Europe. But apart from some short-lived episodes of tension over French government bonds just before France's presidential elections, there was ultimately little tension on the markets. This situation was helped by the fact that election outcomes were generally as hoped. The quiet political front, after more unexpected events in 2016, combined with simultaneous worldwide economic growth, the absence of inflation, and monetary policies that remained generous, were all welcomed by investors. 2017 was an exceptional year on the stock markets. The US market saw record close-of-trade results on 62 of the year's 251 trading days, almost one day in four. The Japanese market registered its highest results in 25 years. In Europe, the DAX (admittedly boosted by dividend reinvestment) also attained record levels. The horizon looks clear for the time being. Optimism on the markets has not been affected by the Fed's rate increases, which should continue in 2018, nor by the slower pace of stock purchases by the ECB. This optimism is indicated by the very low volatility observed: the VIX (US market volatility index) stood at an average 11% for the year, a level never before attained over such a long period. Also, the volatility of the dedicated asset benchmark index was 3.4%, against 7.6% one year earlier.

Against this background, the investment policy followed for the financial portfolio brought good results, achieving an increase of+7.7% while the composite benchmark index rose by +6.6%. The main factor in this above-benchmark performance was the prudent positioning taken as regards sensitivity and exposure to core Euro zone sovereign bonds in a market of gradually rising long rates. The credit portfolio also significantly outperformed its benchmark index thanks to strong exposure to subordinated bank securities. Finally, the slight overexposure on equities maintained throughout the year was beneficial, since the MSCI World All Countries net index hedged in Euros 50%, excluding emerging country currencies, rose by +13.0% whereas the bond section of the benchmark index (60% Citigroup EGBI and 40% Citigroup EuroBIG corporate) only increased by +0.8%. Finally, dynamic management of the investment vehicles in the equity portfolio was particularly successful: after a mediocre year in 2016, vigorous reallocation in early 2016 towards high-performance active equity management in both Europe and Japan was a good decision. The managers outperformed their benchmarks in these regions, achieving more than +3.5% growth in Japan and more than +1.5% growth in Europe.

In 2017, the overall after-tax performance of dedicated assets (impacts on reserves and net income) was +€1,035 million: +€733 million on the financial portfolio and cash portfolios (+€1,319 million before tax), +€35 million for the CSPE receivable after funding (+€63 million before tax) and +€267 million for EDF Invest (including +€210 million for the CTE/RTE shares allocated to dedicated assets).

Dedicated assets' exposure to risks

EDF is exposed to equity risks, interest rate risks and foreign exchange risks through its dedicated asset portfolio.

The market value of the equities sub-portfolio in EDF's dedicated asset portfolio was €9,972 million at 31 December 2017. The volatility of the equities sub-portfolio can be estimated through the volatility of its benchmark index, which at 31 December 2017 was 6.0% based on 52 weekly performances, compared to 15.2% at 31 December 2016. 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 €598 million. This volatility is likely to affect the Group's equity.

At 31 December 2017, the sensitivity of the bond sub-portfolio (€9,282 million) was 5.08, i.e. a uniform 100 base point rise in interest rates would result in a €472 million decline in market value which would be recorded in consolidated equity. The sensitivity was 4.89 at the end of 2016. The sensitivity of the bond sub-portfolio was thus well below the sensitivity of the benchmark index (6.5).

7.1.7 Management of counterparty/credit risks

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

The Group has a counterparty risk management policy which applies to the parent company and all operationally controlled subsidiaries. This policy sets out the governance associated with monitoring for this type of risk, and organisation of the counterparty risk management and monitoring. The policy also involves monthly consolidation of the Group's exposures, updated monthly for financial and energy market activities and quarterly for other activities. The CRFI (Financial Risks Control) department closely monitors Group counterparties (daily review of alerts, special cautionary measures for certain counterparties).

The table below gives details, by rating, of the EDF group's consolidated exposure to counterparty risk. At 30 September 2017, 79% of the Group's exposure concerns "investment grade" counterparties, mainly as a result of the predominance of exposures generated by the cash and asset management activity, with most short-term investments concerning low-risk assets:

	Good credit rating	Poor credit rating	No internal rating	Total
31/03/2017	80%	12%	8%	100%
30/09/2017	79%	12%	9%	100%

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

	Purchases	Insurance	Distribution and sales	Cash and asset management	Fuel purchases and energy trading	Total
31/03/2017	13%	0%	10%	71%	6%	100%
30/09/2017	14%	1%	8%	71%	6%	100%

Exposure in the energy trading activities is concentrated at the level of EDF Trading, where each counterparty is assigned a limit that depends on its financial robustness. A range of methods are used to reduce counterparty risk at EDF Trading, primarily position netting agreements, cash-collateral agreements and establishment of guarantees from banks or affiliates.

For counterparties dealing with EDF's trading room, the CRFI department has drawn up a framework specifying counterparty authorisation procedures and the methodology for calculation of allocated limits. The level of exposure can be consulted in real time and is systematically monitored on a daily basis. The suitability of limits is reviewed without delay in the event of an alert or unfavourable development affecting a counterparty.

As the political and financial situation in the Euro zone is still uncertain, EDF has continued to apply a conservative management policy for its cash investments in non-core countries. Apart from dedicated assets, purchases of sovereign debt are restricted to maximum maturities of three years for Italy and Spain. Only banking, sovereign and corporate counterparties with good credit ratings are authorised, for limited amounts and maturities.

7.2 Management and control of energy market

7.2.1 Management and control of energy market risks

In keeping with the opening of the final customer market, the growth of wholesale markets and its international development, the EDF group is exposed to price variations on the energy market which can significantly affect its financial statements.

Consequently, the Group has an "energy markets" risk policy for all energy commodities, applicable to EDF and entities over which it has operational control.

The purpose of this policy is to:

- define the general framework for management of energy market risks, governing the various Group entities' asset portfolio management activities (energy generation, optimisation and sale), and trading for EDF Trading;
- define the responsibilities of asset managers and traders, and the various levels of control of activities;
- implement a coordinated Group-wide hedging policy that is coherent with the Group's financial commitments;
- consolidate the exposure of the various entities operationally controlled by EDF on the structured energy-related markets.

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

7.2.2 Organisation of risk control and general risk hedging principle

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 Executive Committee to set out and monitor an annual Group risk profile consistent with the financial objectives, and thus direct operational management of energy market risks over market horizons (generally three years).

The basic principle for hedging is:

- netting of upstream/downstream positions; wherever possible, sales to final customers are hedged by Internal sales;
- gradual closing of net positions before the end of the budget year, based on a predefined hedging trajectory[1] that captures an average price, potentially with overweighting in year N-1 in view of liquidity constraints on the forward markets.

On the French electricity market, EDF is exposed to very high uncertainty over its net exposure due to the fact that the ARENH system is optional. Since the volumes subscribed are only known shortly before the delivery period, EDF is obliged to use assumptions for ARENH subscriptions, which include prudence margins. EDF thus remains subject to risks that the assumptions may not correspond to reality, such that during the year it could find itself obliged to sell reserved volumes that in the end were not actually subscribed, or conversely to purchase volumes sold before the ARENH bids took place on the assumption that there would be no subscriptions.

Given its close interaction with the decisions made in the generation, supply and trading activities, the energy risk management 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 Executive Committee on a quarterly basis. The control processes are regularly evaluated and audited.

7.2.3 Principles for operational management and control of energy market risks

The principles for operational management and control of energy market risks for the Group's operationally controlled entities are based on strict segregation of responsibilities for managing those risks, distinguishing between management of assets (generation and supply) and trading.

Managers of generation and supply assets are responsible for implementing a risk management strategy that minimises the impact of energy market risks on the variability of their financial statements (the accounting classifications of these hedges are described in note 41 to the 2017 consolidated financial statements, "Derivatives and Hedge accounting"). However, a residual risk remains that cannot be hedged on the market due to factors such as insufficient liquidity or market depth, and uncertainty over volumes.

For operationally controlled entities in the Group, positions on the energy markets are taken predominantly by EDF Trading, the Group's trading entity, which operates on the markets on behalf of other Group entities and for the purposes of its own trading activity associated with the Group's industrial assets. Consequently, EDF Trading is subject to a strict governance and control framework, particularly the European regulations on trading companies.

EDF Trading trades on organised or OTC markets in derivatives such as futures, forwards, swaps and options (regardless of the accounting classification applied at Group level). Its exposure on the energy markets is strictly controlled through daily limit monitoring overseen by the subsidiary's management and by the division in charge of energy market risk control at Group level. Automatic escalation procedures also exist to inform members of EDF Trading's Board of Directors of any breach of risk limits (value at risk limit) or loss limits (stop-loss limits).

Value at Risk (VaR) is a statistical measure of the potential maximum loss in market value on a portfolio in the event of unfavourable market movements, over a given time horizon and with a given confidence interval[2]. Specific Capital at Risk (CaR) limits are also used in certain areas (operations on illiquid markets, long-term contracts and structured contracts) where VaR is difficult to apply. The stop-loss limit stipulates the acceptable risk for the trading business, setting a maximum level of loss over a rolling three-month period. If these limits are exceeded, EDF Trading's Board of Directors takes appropriate action, which may include closing certain positions.

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1. *The risk management frameworks, which are approved annually by the Group for each entity with exposure to energy market risks, may include acceleration or deceleration plans allowing departures from these trajectories if predefined price thresholds are exceeded. Since these plans do not comply with the general principle of gradual hedging, they can only be applied under strict conditions.*
2. *EDF Trading estimates the VaR by the "Monte Carlo" method, which is based on volatilities and historical correlations measured using observed market prices over the 40 most recent business days. The VaR limit applies to the total EDF Trading portfolio.*

During 2017, the VaR limit was reduced from €50 million to €35 million in view of the significant price volatility on energy markets at the end of the winter of 2016-2017, and the CaR limit for long-term contracts was reduced from €300 million to €250 million. CaR limits for operations on illiquid markets and the stop-loss were unchanged and remain at €250 million and €180 million respectively.

These limits were not exceeded and EDF Trading managed its risks within the boundaries of its mandate from EDF at all times. The stop-losses have never been triggered since their introduction.

For an analysis of fair value hedges of the Group's commodities, see note 41.4.3 to the 2017 consolidated financial statements. For details of commodity derivatives not classified as hedges by the Group, see note 42.3 to the same consolidated financial statements.

7.3 Management of insurable risks

The EDF group has insurance programmes that cover EDF SA and its controlled subsidiaries as they are integrated. The coverage, exclusions, excesses and limits are appropriate to each business and the specificities of these subsidiaries.

The main insurance programmes cover:

- Conventional damage to Group property: EDF is a member of the international mutual insurance company for energy operators, OIL[1]. Additional insurance coverage is provided by EDF's captive insurance company Wagram Insurance Company DAC[2], as well as other insurers and reinsurers.
- Damage to the EDF group's nuclear facilities: in addition to coverage through EDF's membership of OIL, physical damage (including following a nuclear accident) to EDF's nuclear installations in France and EDF Energy's nuclear facilities in the United Kingdom, and nuclear decontamination costs, are covered by a Group insurance policy involving the French nuclear pool (Assuratome), the British atomic pool National Risk Insurers (NRI), the European Mutual Association for Nuclear Insurance (EMANI), and the insurer Northcourt.

  In connection with CENG's operations in the United States, EDF Inc. is a member of NEIL[3].
- Damage to merchandise transported: this programme covers damage to goods in transit, for all Group entities and subsidiaries.
- Nuclear operator's civil liability:

  In France, EDF's insurance policies comply with French laws 68-943 of 30 October 1968, 90-488 of 16 June 1990 and 2006-686 of 13 June 2006 (the "TSN" law on nuclear transparency and safety) which are now part of the French Environment Code. These laws transposed the civil liability obligations imposed on nuclear facility operators by the Paris convention (for more information in the regulations concerning the nuclear operator's civil liability, see section 1.5.6.2.2 "Specific regulations applicable to basic nuclear facilities").

  The Law on the Energy Transition for Green Growth enacted on 17 August 2015 amended the provisions of articles L.597-28 and L.597-32 of the French Environment Code. Among the changes, the civil liability limits for nuclear operators were raised with effect from 18 February 2016 to €700 million for nuclear facilities, €70 million for reduced-risk facilities, and €80 million for risks during transport.

  To comply with the new legal thresholds, EDF published a contract notice on 10 August 2015 entitled "EDF SA Nuclear Civil Liability Insurance Programme" to obtain and set up the insurance coverage needed for its nuclear civil liability and management of the associated claims.

  With the insurance obtained in response to this notice, the Group meets its new obligations. The insurance is shared between the nuclear insurance market (AXA, reinsured by the French nuclear pool Assuratome) the Group's captive insurance companies, and the mutual insurance company ELINI.

  This cover took effect on 18 February 2016 for a three-year term. In view of the changes likely to be made to nuclear operators' obligations during this period (particularly the application of protocols amending the Paris and Brussels conventions), withdrawal clauses have been included in the contract.

  Management of claims is the responsibility of ELINI, which has a computerised claim processing system, and EQUAD, which has the necessary human and network resources.

  In the United Kingdom, where EDF Energy operates nuclear power plants, the nuclear operator's civil liability rules are similar to French rules. On 4 May 2016 the British parliament approved the Nuclear Installations Order (for transposition of the protocols of February 2004 amending the existing conventions) which in substance makes the same changes as the French TSN law of 2006, but will mostly only come into force at the same time as the protocols.

  This Order raises the British operators' obligations from the current limit of £140 million to the equivalent of €700 million, and they will be progressively increased over a five-year period to reach a ceiling of €1.2 billion.

  EDF Energy is currently insured by ELINI and Wagram Insurance Company DAC. The captive insurer Océane Re also bears the risk via a reinsurance contract for Wagram Insurance Company DAC.

  The entry into force of France's Energy Transition law on 18 February 2016 led to a 40% increase in the Group's insurance premiums. The forthcoming implementation of the protocols amending the Paris and Brussels conventions will also lead to a substantial increase in the Group's insurance premiums.
- General civil liability: this programme covers the Group against the possible financial consequences for third parties of the (non-nuclear) risks inherent to the EDF group's businesses.
- Civil liability of directors and senior executives: EDF's insurance programme covers defence costs and other financial consequences arising from third party claims of liability against the Group's managers and key executives in connection with their duties.
- Construction risks: EDF takes out insurance policies covering specific worksite risks (general worksite risks/general assembly and testing 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 and Hinkley Point C, or construction or renovation of generation or distribution units. The Group has put framework agreements in place for work on similar facilities (source substations, hydropower plants).

1. Oil Insurance Limited.
2. An Irish insurance company fully-owned by EDF.
3. Nuclear Electric Insurance Limited.

- Exploration and production: Edison has a specific "Exploration and Production" programme that is open to all Group subsidiaries, providing damage and civil liability coverage for onshore and offshore assets. This programme is based on the insurance provided by OIL, plus additional coverage purchased on the market.
- Enedis' overhead distribution network: to renew its insurance cover for storm and gale damage, on 27 June 2016 Enedis signed a parametric insurance contract for significant storm damage to the overhead distribution network. In the event of damage, this innovative five-year contract with total capacity of €275 million provides payouts based on a composite parametric index referring to wind speeds recorded by Météo France weather stations, weighted by the distribution network's vulnerability for each region included in the scope of Enedis' concession.

The total value of premiums for all types of coverage provided by EDF's insurance programmes and Group programmes managed by EDF Assurances was €199 million in 2017.

8 TRANSACTIONS WITH RELATED PARTIES

The types of transaction undertaken with related parties are detailed in note 48 to the 2017 consolidated financial statements, "Related parties".

9 SCOPE OF CONSOLIDATION

A list of all consolidated companies is presented in note 51 to the 2017 consolidated financial statements; "Scope of consolidation".

10 PRINCIPAL RISKS AND UNCERTAINTIES

The principal risk factors to which the EDF group considers itself exposed are presented in section 2 of the 2017 Reference Document.

The Group's policies for risk management and control are described in section 2 of the 2017 Reference Document.

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

11 OUTLOOK

2018 targets confirmed

The Group is continuing the deployment of its strategic plan and confirms its 2018 targets[1]:

- Operating expenses[2]: €800 million reduction compared to 2015;
- EBITDA[3]: between €14.6 and €15.3 billion ;
- Cash flow[3,4] excluding Linky, new developments and 2015-2020 assets disposal plan: slightly positive or close to balance;
- Net investments excluding Linky, new developments and 2015-2020 assets disposal plan: around €11 billion;
- Total net investments excluding acquisitions and 2015-2020 assets disposal plan: less than or equal to €15 billion;
- Assets disposal plan: around €10 billion over 2015-2018[5];
- Net financial debt/EBITDA[3]: less than or equal to 2.7x;
- Target payout ratio, based on net income excluding non-recurring items[6]: 50%.

Targets beyond 2018

In 2019, in a context marked by an expected decline in nuclear generation in France compared to 2018, the measures to reduce operating expenses[2] will be increased, with the target being revised upwards to €1.1 billion compared to 2015.

The 2019 target payout ratio of the net income excluding non-recurring items[6] is confirmed at 45%-50%.

1. *See EDF press release dated 13 November 2017.*
2. *Sum of personnel expenses and other external expenses. At comparable consolidation scope and exchange rates. At constant pensions discount rates. Excluding change in operating expenses of service activities.*
3. *At comparable exchange rates and "normal" weather conditions, on the basis of a nuclear output in France assumption of >395TWh. At constant pensions discount rates.*
4. *Excluding eventual interim dividend for the 2018 fiscal year.*
5. *Disposals signed or realised.*
6. *Adjusted for the remuneration of hybrid bonds accounted for in equity.*