1.1 Profile, organization and strategy of the Group

1.1.1. General presentation

The ENGIE Group is one of the world's leading industrial companies and a benchmark in the fields of gas, electricity and energy services.

It is active throughout the entire energy value chain, in electricity and natural gas, upstream to downstream in:

- purchasing, production and marketing of natural gas and electricity;
- transmission, storage, distribution, management and development of major natural gas infrastructures;
- energy services.

This model was heavily impacted in 2015 by the energy revolution which was marked by the sustained collapse of prices for natural gas, oil and electricity in numerous markets worldwide, in a context of production overcapacity.

Against this backdrop, the Group was nevertheless able to rely on its strong positions in regulated infrastructure, business services, and the fast-growing renewable generation segment. The development of these same activities, accompanied by a bold asset rotation plan, will enable the Group to transform itself into a leader of the energy revolution over the next three years.

Listed in Paris and Brussels, ENGIE is represented in the major stock indices (see Section 5.1.1.1 "Share capital and voting rights").

The Group's fundamental values are drive, commitment, daring and cohesion.

On February 25, 2016, the Group presented its new strategic vision following the meeting of the Board of Directors held the day before.

1.1.2 History and evolution of the Company

The Company is the result of the merger-absorption of SUEZ by Gaz de France, following the decisions of the Combined Shareholders' Meetings of Gaz de France and SUEZ of July 16, 2008. The merger took effect on July 22, 2008.

Initially incorporated in 1946 as an EPIC (French public industrial and commercial enterprise), it became a limited liability company with a 99-year term under Law 2004-803 of August 9, 2004 on the electricity and gas public service and electricity and gas companies (amending Law 46-628 of April 8, 1946) whose provisions were aimed at organizing the change in the Company's legal status.

On July 7, 2005, the Company publicly floated its shares on the stock market. The Company's shares, under its former name, Gaz de France, were first listed on July 7, 2005.

Law 2004-803 of August 9, 2004, as amended by Law 2006-1537 of December 7, 2006 governing the energy sector and Decree 2007-1784 of December 19, 2007, authorized the transfer of the Company from the public to the private sector. On July 22, 2008, the Company absorbed SUEZ in a merger which entailed transferring the majority of the Company's share capital to the private sector. The new company took the name "GDF SUEZ".

SUEZ itself was the result of the merger in 1997 of Compagnie de Suez and Lyonnaise des Eaux. At the time, Compagnie de Suez – which had built and operated the Suez Canal until its nationalization by the Egyptian government in 1956 – was a holding company with diversified stakes in Belgium and France, particularly in the finance and energy sectors. Lyonnaise des Eaux was a diversified company active in the management and treatment of water, waste, construction, communication and technical facility management. SUEZ became an international industrial and services group whose objective was to meet essential requirements in electricity, gas, energy and industry services, water and waste management.

The deregulation of European energy markets in the early 1990s promoted the international development of both Gaz de France and SUEZ, which progressively expanded their activities beyond their respective traditional markets, both in Europe and internationally.

On February 3, 2011, the Company completed a merger with International Power. In 2012, it confirmed its strategy as a global energy player, finalizing the purchase of shares held by the minority shareholders of International Power on June 29, 2012.

The shareholders' agreement for SUEZ Environnement Company expired on July 22, 2013 and was not renewed. The cooperation and shared functions agreement and the financing agreement between the Company and SUEZ Environnement Company have also come to an end. The Company now uses the equity method to consolidate SUEZ Environnement Company's activities in its financial statements, rather than full consolidation.

The Company intends to maintain its role as a long-term strategic partner of SUEZ Environnement Company and as its majority shareholder. The guiding principles of the industrial and commercial agreements between the Company and SUEZ Environnement Company were confirmed in January 2013, and form the basis of a framework agreement between the two companies, similar to what might have been concluded with third parties outside the Group. They relate to reciprocal preference, under market conditions, in purchasing/sales, continuing cooperation in certain industrial activities, development of potential joint commercial offerings and cooperation in sustainable development, innovation and research and development.

As well as this framework agreement, SUEZ Environnement Company and the Company signed external purchasing agreements that allowed SUEZ Environnement Company to benefit from the Company's purchasing conditions until July 2015.

Lastly, in early March 2016, the two companies signed an agreement providing for the contribution of all of SUEZ IP's share capital from ENGIE to SUEZ Environnement Company, which owns all intellectual property rights related to the SUEZ brand. The main terms and conditions of this transaction as set out in the contribution agreement are detailed in section 4.5.1.

On July 29, 2015, the Extraordinary Shareholders' Meeting, chaired by Gérard Mestrallet, approved a change in the company name, and adopted "ENGIE" as its new legal name.

The name of the share listed on the stock market was also changed to ENGIE, and its code changed to "ENGI", with effect from July 31, 2015.

ENGIE has its head office at 1, place Samuel de Champlain, 92400 Courbevoie, France. The telephone number is +33 (0) 1 44 22 00 00. ENGIE is listed in the Nanterre Trade and Companies Register under reference number 542,107,651. Its NAF (French business sectors) code is 3523Z.

ENGIE is a public limited liability company (*société anonyme*) with a Board of Directors subject to the laws and regulations governing public limited companies and any specific laws governing the Company, and to its bylaws.

The Company's 12-month fiscal year runs from January 1 to December 31 of each year.

1.1.3. Organization

Until December 31, 2015, ENGIE was organized at operational level into five business lines (for details, see Section 1.3, "Description of business lines in 2015").

At the end of 2014, Gérard Mestrallet asked Isabelle Kocher, Deputy Chief Executive Officer, to develop an organizational structure that could speed up the Group's transformation. The assignment included setting medium- and long-term goals for each business, in line with the strategy discussed by the Board of Directors during the 2014 strategy meeting. The four key aims were to 1) simplify the Group's organizational structure; 2) bring ENGIE closer to its customers and regions; 3) make it a key player in the energy transition by shrinking the gap between technology and consumers; and 4) improve collaboration between the Group's companies.

On April 1, 2015, Gérard Mestrallet and Isabelle Kocher presented a new "enterprise project" to the European Works Committee. The project was also presented to employee representative bodies in a consultation process that began in April 2015 and ended on November 13, 2015. The Company approved the organizational structure on November 23, 2015 and assigned some 350 employees to new positions of responsibility.

ENGIE's new organizational structure took effect on January 1, 2016. The aim is to lower the Group's center of gravity and manage its results and performance through 24 newly-created business entities (BU). Each BU is responsible for its own P&L. This structure is tailored to the challenges of an increasingly decentralized energy world. The BUs have therefore been set up geographically – by country or group of countries – according to the concentration of business activities in the region concerned. These BUs cover all Group activities and address the challenges faced by customers and counterparties in a given region.

- Ten geographical BUs have been set up as follows: Africa; North America; Latin America; Asia-Pacific; Benelux; Brazil; China; Northern, Southern and Eastern Europe; Middle East, South & Central Asia and Turkey; and the United Kingdom. The BUs are responsible for centrally managing all Group activities within their region.
- France has a special structure, given its size and the presence of regulated entities. It has eight entities, four specializing in gas infrastructure (transmission, distribution, terminals and storage) and four related to the B2B, B2C, networks, and renewables businesses.
- In addition, there is a Generation Europe BU focusing on thermal power generation.
- Finally, there are five global BUs with overall responsibility for their respective activities worldwide. These complement the operational BUs and are as follows: International Exploration & Production; Global Energy Management; Global LNG; Tractebel Engineering; and Gaztransport & Technigaz (GTT).

In addition to this geographical structure, five *Métiers* (business lines) have been created: gas value chain; centralized power generation; decentralized solutions for cities and regions; business solutions; and solutions for residential customers and contractors, a *Métier* that includes Solairedirect. The role of these *Métiers* is to:

- accelerate growth by supporting projects and managing major programs for the future (energy efficiency, energy renovation of buildings, green mobility, truck-delivered LNG, biogas, etc.);
- participate in key decisions (investment, disinvestment, etc.) in conjunction with regional heads;
- operate as a network, in part to identify and prepare the skilled talent needed to develop the BUs.

Six operational functions and five functional divisions supplement the organizational structure, each one headed by an executive vice-president. Their purpose is to support the BUs and strengthen the initiatives of the *Métiers* by developing synergies in the Group.

The operational functions are as follows: Strategic Sourcing & Procurement, Business Development Oversight (BDO), Research & Technologies, Nuclear Development, Industrial Projects, and Group Knowledge Management.

The functional divisions are as follows: the Finance Division; the General Secretariat; the Communications, Marketing and Environmental and Societal Responsibility Division; the Group Human Resources Division; and the Strategy Division.

Finally, there are four divisions that report directly to the Chief Executive Officer: the Group Audit, Risk and Internal Control Division; the European and International Relations Division; the Sales, Innovation and New Businesses Division; and the Nuclear Safety and Radiation Protection Division, which includes the Digital project.

The Company operates its own business; it has the organization of an integrated industrial group. At the end of 2015, the number of the Company's direct or indirect subsidiaries (controlling interest) was approximately 2,000. The Group's main consolidated subsidiaries are listed in Section 6.2 "Consolidated financial statements – Note 2 (Main subsidiaries at December 31, 2015)". For a list of major subsidiaries and investments directly owned by the Company, see Section 6.4 "Parent company financial statements – Note 23 (Subsidiaries and investments)".

The Company's activities and the strategic economic assets of its main subsidiaries as well as their geographical location are presented in Section 1.3 "Description of business lines in 2015", which reflects the Group's organization at the end of 2015.

1.1.4 Strategic Priorities

The markets in which the Group is expanding are currently undergoing profound change:

- increase in energy demand is concentrated in the fast growing economies: 100% of the increase in primary energy consumption between 2013 and 2040 will take place outside the OECD countries, according to the International Energy[1] (IEA);
- natural gas is playing a more central role at the global level due to abundant resources brought on by the development of unconventional gas production (nearly 220 years of probable reserves[1]), growth in demand (+1.4% annually between 2012 and 2040[1]) and an expanding outlook for new uses (retail LNG, etc.);
- in Europe (EU 28) the energy transition has begun in many countries: the contribution of renewable sources of energy (excluding hydropower) to the energy mix will increase from 16% to 38% between 2013 and 2040[1], and energy efficiency issues are developing;
- energy will be increasingly managed at local level, and even individually. "Consumer-players" are taking control of their consumption and sometimes even generating power.

The economic slowdown in Europe and energy efficiency policies have led to a fall in consumption which, in combination with continuing development of renewable energy and plentiful cheap coal, has generated surplus capacity and low electricity prices in the long term. This situation has caused a significant crisis in thermal power generation.

The transition - indeed the energy revolution - has been ongoing for several years at three different levels:

- the technological revolution is gaining pace thanks to progress in photovoltaics, batteries and micro heat pumps;
- added to this is the digital revolution: 'smart' solutions have changed people's relationships with the city, home and car;
- and finally, a cultural and societal transformation is playing out. Today's consumers are looking for a more thoughtful use of energy and they want customized low-carbon solutions to manage their consumption and even produce their own green energy.

ENGIE anticipated this paradigm shift two years ago and adapted its strategy to guide the Group toward the new energy world. The Group's ambition focused on two key themes in 2015:

- to be the benchmark energy player in fast growing markets
- to be the leader in energy transition in Europe.

In Europe, the Group is adapting to the profound changes taking place in the energy sector and increasing the priority it gives to its customer approach.

The Group is restructuring its gas supply portfolio, by optimizing diversification and renegotiating long-term contracts with its suppliers.

In power generation, the Group continues to rationalize its fleet of thermal power plants in response to the crisis in thermal generation, and is campaigning for improvements in European regulations, mainly through the Magritte Group[2], which is calling for measures to preserve the energy future of Europe.

In renewable energy, the Group aims to pursue its development in certain countries, with priority given to the more mature technologies: solar, hydropower, onshore wind power and biomass for electricity and heat. Partnerships are being sought for these projects.

In infrastructures activities, the aim is to adapt to the energy transition context:

- by adapting infrastructures to changes in demand and new uses (mobility, smart grids);
- by preparing infrastructure and commercial offerings for gas being a vector for renewable energy (biomethane, power to gas, etc.).

ENGIE aims to strengthen its leadership in energy efficiency, as the benchmark energy partner of its customers, businesses, local authorities and individuals, emphasizing the technological content of its activities to provide the most suitable global energy services offering. The Group also aims to increase its international presence by creating strong local positions. The aim is to capitalize on countries in which the Group already operates.

Today, the energy revolution is international and the Group is accelerating the execution of its strategy. The company plan, which features a more decentralized organization with a flatter reporting structure, will guide ENGIE's transformation to become the global leader of the energy transition.

To this end, as from late February 2016, ENGIE is adapting its business portfolio to its long-term vision and seizing new growth opportunities in:

- low-carbon activities, which will account for over 90% of the Group's EBITDA by 2018;
- activities not exposed to commodity prices, so that the share of contracted/regulated undertakings in the Group's EBITDA is under 85% in 2018;
- integrated solutions for customers, which will see a 50% increase in EBITDA over the period.

This acceleration is supported by the Group's strong capital structure, robust cash-flow generation, and the three business segments in which it has forged leading historical positions:

- power generation from gas and renewable energy;
- energy infrastructure, particularly in natural gas;
- energy supply and service solutions tailored to each type of customer (business, residential, contractors and public sector).

This faster-paced strategy features a three-year transformation plan with four objectives:

- to redesign the Group's portfolio, based on its historical positions and its strong capital structure;
- to improve the Group's performance;
- to prepare the Group's future, particularly by investing in innovation and new technologies – including digital - in order to offer all customers new products and services that are in step with the energy transition;
- to adapt the Group's operations to make it more agile and open to the outside, by leveraging a streamlined organization that is closer to the regions.

(1) Source: IEA 2015 World Energy Outlook, New Policies scenario.

(2) The Magritte Group, of which ENGIE is a founder member, is an initiative bringing together the CEOs of the 11 biggest energy groups in Europe (Centrica, CEZ Group, Enel, Eni, E.ON, Fortum, Gas Natural Fenosa, GasTerra, ENGIE, Iberdrola and RWE) to lobby heads of state and government.

This transformation plan is designed to create value and improve the Group's risk profile. It is based on four key programs:

- a €15 billion (net debt impact) asset rotation program over 2016-2018 which, through disposals, partnerships and/or site closures, will reduce the Group's exposure to activities that are sensitive to commodity prices;
- a €22 billion CAPEX program over 2016-2018, including €7 billion for maintenance expenditure and at least €500 million for innovation, funded mainly by operating cash flows;
- Lean 2018, an efficiency program that seeks recurring OPEX savings with a net aggregate impact on EBITDA of €1 billion by 2018;
- a new, €1.5 billion business and digital development program that will generate significant organic growth by 2018 and beyond.

In this context of transformation, ethics and the safety of people are core elements of the Group's strategy.

To become more agile and adapt to the trends in its environment, the Group has been implementing a far-reaching action plan since 2014 that places human beings at the heart of its transformation in three main areas:

- developing and advancing our employees (training, responsibilities, internal mobility);
- animating the Group and spreading its values;
- enhancing performance to serve our customers (innovation, managing complexity) and rolling out a new code of conduct for managers, the "Management Way".

On the financial front, the Group prioritizes maintaining a sound financial structure in the long term (aiming to retain an "A" credit rating), which will mainly be achieved through strict investment criteria. ENGIE's financial objective is to offer its shareholders attractive returns while maintaining a solid financial structure and robust cash flow generation (see Section 6.1.1.7 "Outlook").

Within ENGIE, environmental and societal responsibility plays an integral part in drawing up business strategy, through the development of:

- sustainable business, which involves identifying environmental and societal issues and transforming them into opportunities for the Group's businesses;
- the management of non-financial risks, which involves managing the risks associated with the Group's activities and facilities that relate to the environment, local and international acceptability, health and safety, human resources management, ethics and governance.

ENGIE has formalized its sustainable development commitments, mainly through the publication of its policy in 2014.

In May 2014, ENGIE issued a green bond for a total amount of €2.5 billion. This bond loan has helped to finance the Group's development in renewable energy and energy efficiency projects (see Section 5.1.6.4 "Green bond").

1.1.5 Improving performance

Perform 2015 was launched in 2012 to support the deployment of the Group's strategy and to improve its performance in a sustainable manner. The overall gross target of the program[1] was increased to €4.5 billion cumulatively over the 2012-2015 period in order to support the acceleration in the Group's transformation and to deal with an on-going difficult economic environment in Europe.

The results of the Perform 2015 program amounted to €5.8 billion, exceeding the initial target by 30%. In 2015, the program had a gross positive impact of €0.6 billion on income essentially associated with defined actions in terms of operational efficiency and Opex optimization. The portion affecting recurring net income, Group share stood at €135 million.

In view of adverse exogenous events (major decline in oil and gas prices in early 2015), the Group launched the Quick Reaction Plan (QRP) to reduce its operating costs, which totaled €250 million in 2015.

The year was marked by ongoing performance improvement initiatives, particularly the rationalization of the real estate portfolio in France and Belgium. Reducing assets from 13 sites in Brussels to two – Engie Towers and Ariane – generated a financial gain of €48 million in 2014-2015.

Opex savings in terms of purchases in 2015 amounted to €380 million, following the introduction of Category Management through the One For Value program. (As an example, reducing gas turbine maintenance purchases generated savings of €25 million in OPEX and in CAPEX for the Group in 2015).

In 2016, the Group is launching an ambitious performance program called "Lean 2018" with a cumulative net impact on EBITDA of €1 billion by 2018. This target is 50% higher than Perform 2015 (on annual basis). The new program is the next stage in ongoing efforts to enhance performance, and is designed to create recurring gains on Group operating costs.

(1) The term "gross" applies specifically to the component of the objective relating to operating costs, thus €2.6 billion for the program. A gross gain is by nature recurring, from which implementation costs are deducted but prior to inflation, other costs and taxes.

1.1.6 Competitive positioning

Electricity generation and marketing, as well as gas marketing are business sectors that are broadly open to competition in Europe, while their regulation continues to vary by country, especially when it comes to prices for residential customers. Activities that constitute natural monopolies – such as the transmission and distribution of electricity and, to a large extent, of gas – are more tightly controlled by domestic regulators and European rules.

Elsewhere in the world, with few exceptions, private players often operate under long-term contracts issued on a tender basis.

ENGIE is a European and world leader in electricity and natural gas:

- in Europe, ENGIE is the No. 3 seller[1] of natural gas. In LNG, ENGIE is a global player. It is the No. 1 importer in Europe and the No. 5 importer[2] in the world. It is also a major player in exploration and production;
- the Group is the leading gas infrastructure operator in Europe: it has the No. 2 transmission network, is No. 1 in distribution, European No. 1 in storage capacity (in terms of useful storage) and the No. 2 owner/operator of LNG terminals. It also owns Turkey's No. 3 gas distributor;
- in electricity, the merger of ENGIE and International Power created the world's leading independent power producer (IPP). The transaction also reinforces the Group's international standing as the No. 1 producer-developer in the Gulf States, the No. 1 IPP in Brazil and Thailand, No. 2 in Peru and No. 3 in Chile. The Group is the No. 6 producer[1] and the No. 7 supplier[1] in Europe.

This global and European leadership is fortified by the Group's deep Franco-Belgian roots:

- in France, ENGIE is the historic leader of gas marketing and the No. 2 producer and supplier[1] of electricity. In renewable energy, ENGIE is the No. 2 hydropower operator in France and the leader in wind power;
- in Belgium, ENGIE, through its subsidiary Electrabel, is the No. 1 producer and supplier of electricity[2] and the No. 1 supplier of natural gas[1].

The Group is also the European leader in B2B energy services: the Energy Services business line is ranked joint No. 1 in France, Belgium, the Netherlands and Italy[1] ENGIE also has strong positions in Germany, Switzerland, Austria, Spain and the UK in heating networks (where it is No. 1), as well as facility management since the acquisition of Balfour Beatty WorkPlace. Lastly, it has set up the initial bases for development in Central Europe, Asia, North America and Latin America.

(1) Source: ENGIE internal analyses of 2015 data.

(2) Source: IHS CERA 2015.

1.2 Key figures

1

1.2.1 Group financial data

(in millions of euros)	2011	2012	2013 reported	2013 restated [a]	2013 restated [a] pro forma [b]	2014 reported	2014 restated [c]	2015
1. Revenues	**90,673**	**97,038**	**89,300**	**87,898**	**79,985**	**74,686**	**74,686**	**69,883**
of which generated outside France	59,517	61,124	54,331	52,944	47,947	46,852	46,852	44,817
2. Income								
EBITDA [a]	16,525	17,026	14,775	14,223	13,017	12,138	12,133	11,262
• Current operating income	8,978	9,520	7,828	N/A	N/A	N/A	N/A	N/A
• Current operating income after share in net income of entities accounted for using the equity method	N/A	N/A	N/A	8,254	7,665	7,161	7,156	6,326
• Net income, Group share [d]	4,003	1,544	(9,289)	(9,198)	(9,646)	2,440	2,437	(4,617)
• Net recurring income, Group share [d] [e]	3,455	3,825	3,440	3,449	3,449	3,125	2,725	2,588
3. Cash flow								
Cash flow from operating activities	13,838	13,607	12,024	11,980	11,333	8,751	8,751	10,383
of which cash generated from operations before financial income and income tax	16,117	16,612	14,313	14,129	13,125	11,776	11,771	10,942
Cash flow from investment	(7,905)	(8,451)	(5,611)	(5,103)	(4,368)	(3,939)	(3,939)	(6,230)
Cash flow from (used in) financing activities	(2,496)	(8,322)	(6,982)	(7,027)	(7,041)	(4,973)	(4,973)	(3,295)
4. Balance sheet								
Shareholders' equity [d]	**62,930**	**59,834**	**47,955**	**47,971**	**47,971**	**49,257**	**49,548**	**43,078**
Total equity [d]	80,270	71,303	53,490	53,659	53,659	55,959	55,981	48,750
Net debt	37,601	43,914	29,840	28,800	28,800	27,511	27,511	27,727
Net debt / EBITDA	2.28	2.58	2.02	2.02	2.21	2.27	2.27	2.46
Total assets [d]	213,410	205,448	159,611	155,932	155,932	165,305	165,304	160,658
5. Per-share data *(in euros)*								
• Average outstanding shares [f]	2,221,040,910	2,271,233,422	2,359,111,490	2,359,111,490	2,359,111,490	2,366,768,979	2,366,768,979	2,392,150,727
• Number of shares period-end	2,252,636,208	2,412,824,089	2,412,824,089	2,412,824,089	2,412,824,089	2,435,285,011	2,435,285,011	2,435,285,011
• Earnings per share [d] [f]	1.80	0.68	(3.94)	(3.90)	(4.09)	1.00	1.00	(1.99)
• Net recurring income Group share, per share [d] [f]	1.56	1.68	1.46	1.46	1.46	1.32	1.12	1.02
• Dividend paid [g]	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00
6. Total average workforce	**240,303**	**236,156**	**223,012**	**223,012**	**223,012**	**236,185**	**236,185**	**241,913**
• Fully consolidated entities	218,905	219,253	178,577	178,870	139,134	150,589	150,589	155,494
• Proportionately consolidated entities	17,610	12,477	3,431	3,138	3,138	769	769	777
• Entities consolidated by the equity method	3,788	4,426	41,004	41,004	80,740	84,827	84,827	85,642

(a) December 31, 2013 data restated to reflect the retrospective application of consolidation standards. The calculation method for the EBITDA has been changed since December 31, 2014. 2013 EBITDA was calculated for comparison (see Note 2 of Section 6.2 "Financial statements" of the 2014 Registration Document).

(b) December 31, 2013 data restated to present SUEZ Environnement as if it were consolidated by the equity method as of January 1, 2013 (see Section 6.1.1.6 "Pro forma financial information" of the 2014 Registration Document).

(c) December 31, 2014 data restated to reflect the retrospective application of IFRIC 21 (see Note 1.1 of Section 6.2 "Financial statements").

(d) December 31, 2012 data restated to reflect the retrospective application of IAS 19R (see Note 1.1 of Section 6.2 "Financial statements" of the 2013 Registration Document).

(e) Financial indicator used by the Group in its consolidated financial statements since December 31, 2012 (see Note 8 of Section 6.2 "Consolidated financial statements" of the 2013 Registration Document). 2011 data were calculated for comparison.

(f) Earnings per share are calculated based on the average number of shares outstanding, net of treasury shares. Previous years' figures are not restated in case of payment of dividend in shares.

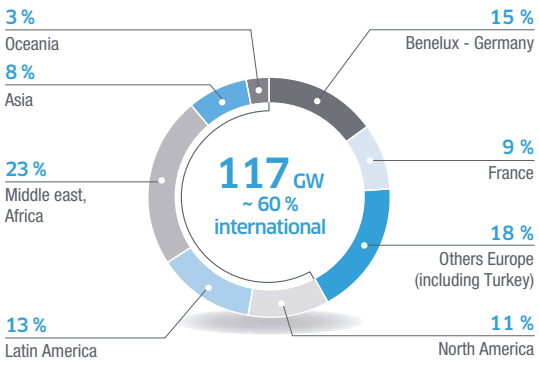
(g) 2015 dividend: proposed dividend, including an interim dividend of €0.50 paid in October 2015.

1.2.2 Operational indicators

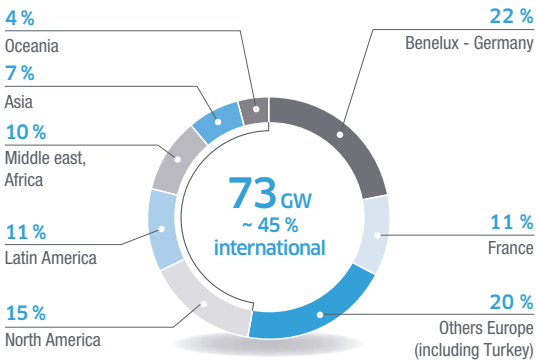
1.2.2.1 Electricity production

ENGIE owns and develops a flexible and efficient generation fleet in its key markets: Europe, Latin America, the Middle East, Asia-Pacific and North America. The Group's installed capacity as of December 31, 2015 was 117 GW [1] on a 100% basis or 73 GW [2] on a net ownership basis.

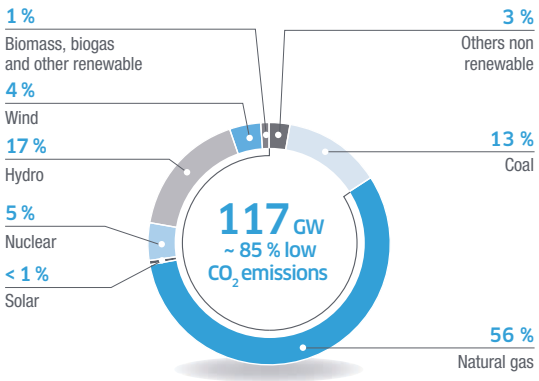
BREAKDOWN OF GENERATION CAPACITY BY REGION (AT 100%)



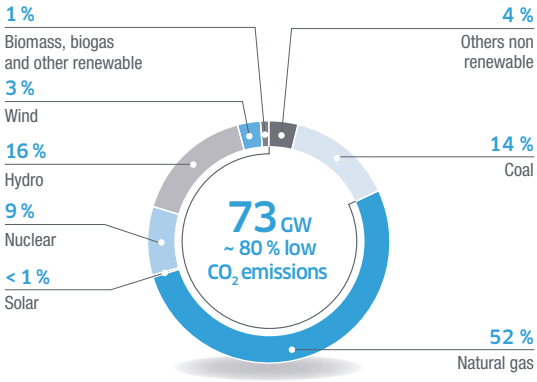
BREAKDOWN OF GENERATION CAPACITY BY REGION (NET OWNERSHIP)



BREAKDOWN OF GENERATION CAPACITY BY FUEL (AT 100%)



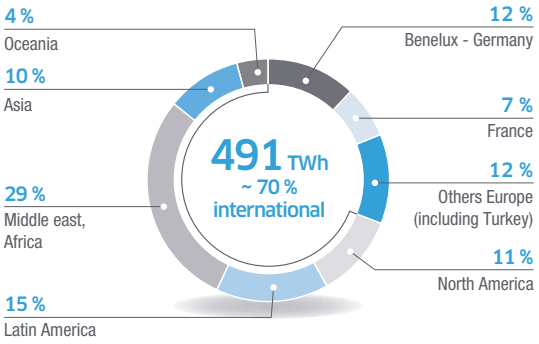
BREAKDOWN OF GENERATION CAPACITY BY FUEL (NET OWNERSHIP)



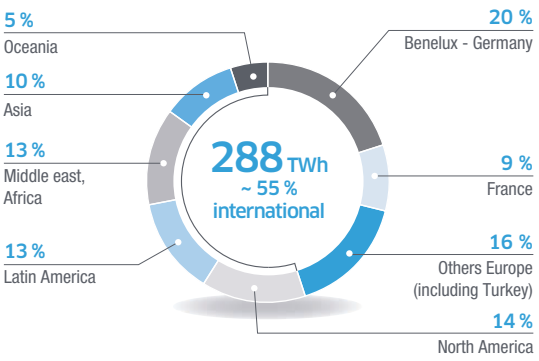
(1) The 100% calculation includes the total capacity of all facilities of ENGIE irrespective of the actual percentage stake of the ownership and the method of consolidation, except for drawing rights which are included in the total if the Group owns them and deducted if they are granted to third parties.

(2) The net ownership basis calculation uses figures for capacities at their net percentage of the ownership of ENGIE in all companies.

POWER GENERATION BY REGION (AT 100%)

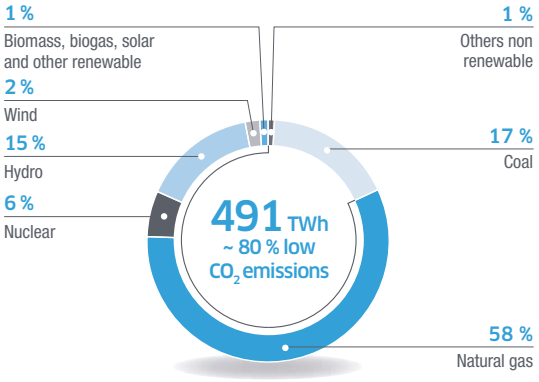


POWER GENERATION BY REGION (NET OWNERSHIP)

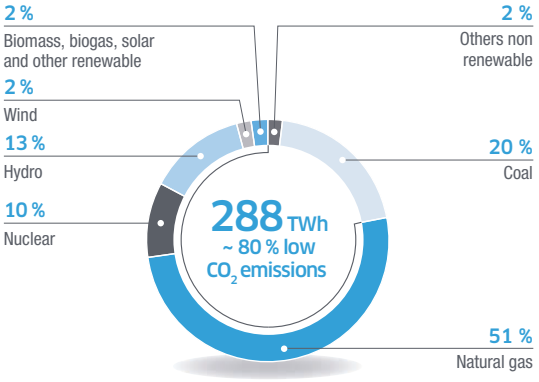


In 2015, the Group produced 491 TWh on a 100% basis, or 288 TWh on a net ownership basis.

POWER GENERATION BY FUEL (AT 100%)



POWER GENERATION BY FUEL (NET OWNERSHIP)



The combined capacity of Group projects under construction at December 31, 2015 was 8.1 GW on a 100% basis, with 34% of this from natural gas, and 18% from renewable energy sources.

With a significant share of electricity capacity from renewable sources, the Group's power generation fleet has a low carbon footprint, with an average 356 kg of CO_2-eq./MWh recorded for Europe in 2014. This compares with the European average estimated by PricewaterhouseCoopers (PwC) for that year of 313 kg of CO_2-eq./MWh.

Worldwide, emissions from the Group's generation fleet evaluated in 2014 were 434.2 kg of CO_2-eq/MWh.

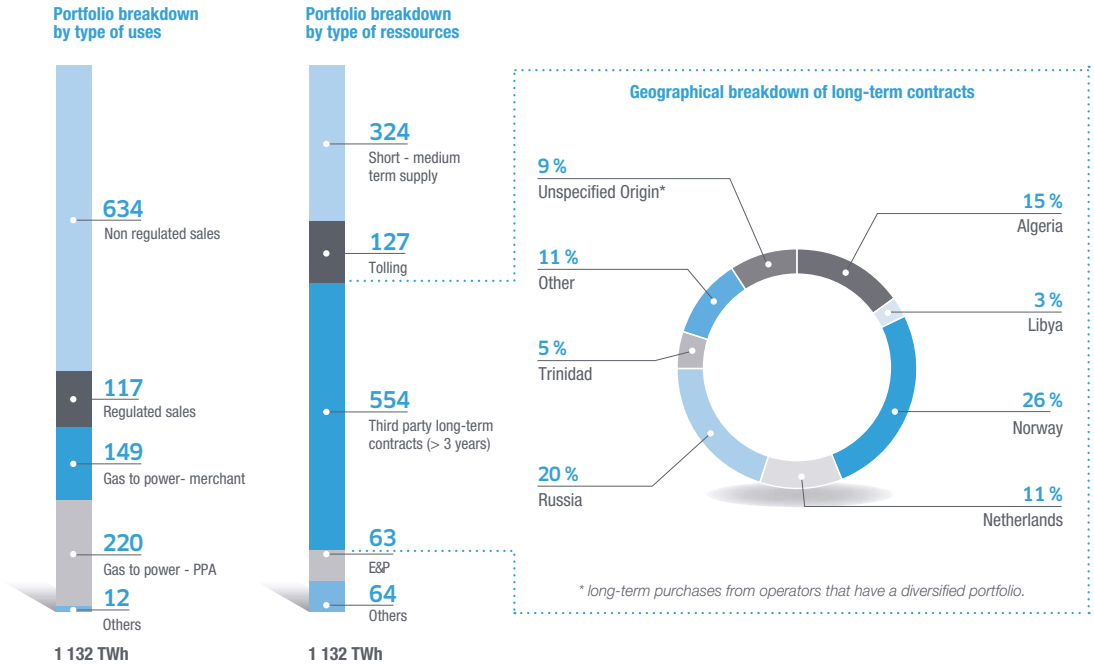
1.2.2.2 Natural gas portfolio

Most of the Group's natural gas is supplied via one of the most diversified portfolios of long-term contracts in Europe, sourced from more than 10 countries. These contracts give ENGIE the necessary visibility to ensure its development and secure its supplies. ENGIE is also one of the biggest spot market players in Europe. It can therefore rationalize its supply costs by adjusting its purchasing to match its needs.

The Group's portfolio, which represents approximately 1,132 TWh (calculated at group share) [(1)], or about 105 billion m^3, is among the most diversified in the world. LNG represents about 13% of the portfolio.

(1) The group share calculation includes the capacities at their percentage of consolidation for full and proportionally consolidated affiliates and at their percentage of holding for companies accounted for using the equity method.

BREAKDOWN OF PORTFOLIO (GROUP SHARE)



1.2.3 Non-financial indicators

The Group's non-financial performance is based on dated and quantified targets and an overall assessment organized around different resources (high level of governance, reporting, scorecard, performance reviews and non-financial indicators).

The Board of Directors' Ethics, Environment and Sustainable Development Committee defines the scope of the policies undertaken, outlooks and action plans in the area of corporate societal responsibility. The Group's Management Committee makes key decisions in this area (see Section 4. "Corporate governance"). The role of the Group's Environmental and Societal Responsibility Executive Committee is to prepare annual action plans, monitor their implementation, gather experiences across the various entities and encourage exchange on major strategies.

A non-financial scorecard made up of key indicators covering the three bases of Societal and Environmental Responsibility is presented to the Group's Management Committee for approval and future direction, then to the Ethics, Environment and Sustainable Development Committee to provide a progress report on implementation of the policy and achievement of the Group's non-financial objectives.

Regarding environmental targets, ENGIE's specific CO_2 emissions in 2015 were stable compared to 2012 (see Section 3.3.4.1 "Climate change"), in line with forecasts. This was due to the full-year operation of the coal-fired plants in Maassvlakte (Netherlands) and Wilhemshaven (Germany). With regard to the targeted increase of 50% over 2009 set for installed capacity of renewable energy, this was exceeded (+60%).

Of the 179 sites considered to be a priority in Europe for biodiversity, 176 (98.3%) validated their targeted action plan, almost meeting the target of 100%. Only three sites still have a plan under discussion.

With regard to social or governance targets, ENGIE's employee accident frequency rate in 2015 was 3.6 (see Section 3.2.6 "Health and safety policy"), below the target of 4. Its training rate of 66% is on target, even though the rate was 64% with the inclusion of UK subsidiaries Cofely Workplace and Cofely Ltd, acquired in 2014 and which have not yet implemented the Group's training policy. The Group almost reached the target of 3% employee share ownership, at 2.7%. This was due to the fact that no employee share ownership plan was launched in 2015. However, the target had been exceeded in 2014 at 3.18% (see Section 3.2.4.3 "Employee shareholding"). The four targets set for gender equality in 2015 have also been almost fully met: the rate of female hires was up by 5% to reach 25% versus a target of 30%; the rate of female managers was 22% versus a target of 25%; the rate of female "high potentials" continued to rise, reaching 28.4% versus a target of 35%; and lastly, the rate of women appointed to senior management was 30%, very close to the target of 33%.

In its investment projects, the Group incorporates ten extra-financial criteria relating to ethics, CO_2 emissions, social impact, human resources, environmental management of ecosystems, cooperation with stakeholders, local purchasing, and health and safety. Furthermore, the Group takes a CO_2 cost into account for its investments.

The Group's social reporting (see Section 3.2 "Social information"), environmental reporting (see Section 3.3 "Environmental information") and societal reporting (see Section 3.4 "Corporate societal commitments"), form the basis of a published Group of indicators that are verified by an independent third party.

In 2015, ENGIE was included in the Dow Jones Sustainability World and Europe Indices, established by extra-financial rating agency RobecoSAM. The Group's inclusion in these indices places it in the top 10% of sustainability-driven companies in the "Multi- and Water Utilities" segment. The Group was given a C+ rating by Oekom in 2014 and is ranked by the Vigeo rating agency. ENGIE is included in the following indices: Euronext Vigeo Eurozone 120, Euronext Vigeo Europe 120, Euronext Vigeo France 20.

Lastly, ENGIE completes a Carbon Disclosure Project (CDP) questionnaire every year. In 2015, the Group achieved a score of 100 out of 100 for the quality and transparency component of its reporting, up five points compared to 2014. It maintained a score of A- for the performance component in the battle against climate change.

The Group still remains in the CDP France Benelux Climate Disclosure Leadership Index (CDLI) which lists companies that obtained a maximum score. (This index used to cover France only but its scope has been extended to include the Benelux countries).

1.3 Description of business lines in 2015

In this section 1.3, the description of the Group's activities and strategic business assets is based on the Group's organizational structure at the end of 2015. The subsections correspond to the five business lines as they existed up to the end of 2015. A subsection is also devoted to Solairedirect, a company acquired by the Group in 2015 which reported directly to corporate headquarters until the end of 2015 (see Section 1.3.6 "Solairedirect").

Organizational changes occurring since January 1, 2016 are described in Section 1.1.3 "Organization".

1.3.1 Energy Europe business line

1.3.1.1 Role

The Energy Europe business line is responsible for the Group's energy activities in continental Europe [(1)], Electricity and natural gas are its core business with activities in thermal and renewable energy power generation, energy management, trading, marketing and sales. Energy Europe's generation portfolio is made up of 40.2 GW of capacity in operation with a further 0.16 GW under construction. With industrial operations in 12 countries [(2)] and commercial operations in 14 countries [(3)], the Energy Europe business line has 21.3 million contracts with customers, including industry, the tertiary sector (commercial & public undertakings) and residential energy users.

1.3.1.2 Strategy

The Energy Europe business line is active in an environment of structural energy-market evolution. The main strategic priorities of the Energy Europe business line can be summarized as follows:

- maximize the value of existing activities by improving performance in all *Métiers* and actively managing the portfolio, by restructuring the thermal power fleet, renegotiating gas procurement contracts, repositioning commercial offerings, and improving operating and maintenance costs of renewable assets;
- develop activities related to the energy transition: renewable energy, services and new businesses;
- participate in establishing a new market design for energy in Europe.

1.3.1.3 Organization

The Energy Europe business line has industrial operations in the following countries: France, Belgium, Luxembourg, Germany, Netherlands, Poland, Hungary, Romania, Italy, Greece, Spain and Portugal. It also has commercial activities without an industrial presence in Austria and Czech Republic.

Role of the *Métiers*

- The Energy Management Trading (EMT) *Métier* is primarily responsible for the optimization of the ENGIE Group's assets in continental Europe. The role of EMT optimize value creation within a consistent risk framework. EMT's teams negotiate natural gas procurement contracts, optimize assets, and provide sales entities with natural gas and electricity as well as energy price risk management services. The teams manage one of the largest and most diversified energy portfolios in Europe, including electricity, natural gas, coal, oil products, biomass, CO_2, and environmental products. EMT manages the business line's portfolio on a day-to-day basis, serving all ENGIE activities, customers, and external counterparties, particularly through its trading activities and presence in Europe's key energy marketplaces, as well as in Singapore. The *Métier* also covers gas and power supply and associated services for national and pan-European large industrial customers (*Giant accounts*) through the ENGIE Global Energy brand.

(1) Excluding infrastructure assets of the Infrastructure Business Line.

(2) Excluding Slovakia (minority stake in Pozagas), Sweden and Norway (project companies owning rights in onshore wind projects).

(3) The Group has commercial activities without an industrial presence in Austria and Czech Republic.

- The Generation *Métier* directs all the business line's nuclear and thermal power assets (including biomass), developing and maintaining power plants and coordinating the local generation teams. Among its priorities, Generation continuously reviews the asset portfolio in conjunction with Energy Management Trading, to tailor it to market conditions. The *Métier* is also responsible for improving the performance of power plants (efficiency, flexibility and availability) to make them more competitive and attractive on the market, and for reducing operating and maintenance costs for the generation fleet. Lastly, Generation is developing and delivering energy solutions and services for industrial customers.
- The Renewable Energies (RES) *Métier* directs all the business line's renewable energy [1] assets and projects (principally hydroelectricity, onshore wind, solar, and new onshore and offshore energy resources). It is therefore responsible for the development, building, operation and maintenance of these assets. Among its priorities, the Renewable Energies *Métier* seeks to increase the profitability of its installed capacity in accordance with the Group's ambitions.
- The Marketing & Sales (M&S) *Métier* principally covers the supply of gas and electricity and associated services to residential, business, corporate, and local authority customers [2]. M&S is also responsible for gas storage and distribution infrastructure activities, primarily in Hungary and Romania. In conjunction with the operating entities in individual countries, the M&S *Métier* is responsible for commercial and customer activities, commercial strategy and the associated marketing activities. It prepares new European offers and their deployment, and drives forward innovative projects.

1.3.1.4 Key figures

(in millions of euros)	2015	2014(*)	Total change *(%)*
Revenues	32,011	35,158	-9.0%
EBITDA	1,612	2,015	-20.0%

* *December 31, 2014 data restated to reflect the retrospective application ok IFRIC 21 (see Note 1.1 of Section 6.2 "Financial statements")*

Electricity capacity by fuel *(in MW)* – data at 100%	**CWE (*)**	**Rest of Europe**
Coal	2,964	2,541
Natural gas	7,779	9,626
Hydroelectric power plants	5,191	173
Wind	1,997	1,313
Other renewable energy sources	503	389
Other non-renewable energy sources	1,510	0
Nuclear (including drawing rights)	6,197	0
TOTAL	**26,140**	**14,042**

Electricity capacity by country *(in MW)* – data at 100%	**Installed capacity**	**Capacity under construction**
Central Western Europe (*)	26,140	139
Rest of Europe	14,042	17
TOTAL	**40,182**	**156**

Electricity generation *(in TWh)* – data at 100%	**CWE (*)**	**Rest of Europe**
Coal	14.1	10.5
Natural gas	23.5	21.7
Hydroelectric power plants	16.2	0.5
Wind	3.8	2.8
Other renewable energy sources	2.1	2.5
Other non-renewable energy sources	4.4	0.0
Nuclear (including drawing rights)	28.0	-
TOTAL	**92.1**	**38.0**

* *Central Western Europe (CWE): Germany, Belgium, France, Luxembourg, Netherlands*

(1) Excluding biomass, operated by the Generation Métier.

(2) Excluding B2B France activities, transferred to the Energy Services business line.

Sales to end customers *(in TWh)* – accounting consolidation method	Electricity	Gas
France [1]	21.9	150.1
Belgium [1] [2]	26.3	35.2
Rest of Europe [1]	23.5	69.6
Global Energy	35.4	54.1
TOTAL	**107.1**	**309.0**

Number of contracts *(in thousands)* – data at 100%	Electricity	Gas	Services
France	2,828	8,625	1,903
Belgium [2]	2,703	1,381	0
Rest of Europe	528	2,646	655
TOTAL	**6,059**	**12,652**	**2,558**

Breakdown of gas supply portfolio for the business line [3] *(in TWh)*	
Long term contracts with third parties	284.2
Purchases from the LNG BU	55.5
Purchases from the Exploration-Production BU	2.6
Short term purchases	87.1
TOTAL	**429.4**

Figures at December 31, 2015.
(1) Excluding Key Account industrial companies (Global Energy)
(2) Including Luxembourg
(3) Excluding ENGIE Global Markets (formely GDF SUEZ Trading).

1.3.1.5 2015 highlights

- Energy Management Trading (EMT):
  - In 2015 ENGIE Global Markets (formely GDF SUEZ Trading) was named "Risk Manager of the year 2015 – Utility" by *Energy Risk* magazine, and received the "Excellence in Energy Markets" award from *Commodities Now* magazine.
  - September: ENGIE, together with E.ON, Shell, OMV and BASF/Wintershall, signed a shareholders' agreement with Gazprom to construct the Nord Stream 2 gas pipeline. The project will double existing gas transport capacity through the Baltic Sea and boost gas supplies in Europe. ENGIE will own 10% of the project company, New European Pipeline AG.
  - October: EMT entered into a 10-year biomass supply agreement with Sumitomo Corporation, the Group's first long-term biomass supply contract.
- Generation:
  - In 2015 ENGIE continued to restructure its thermal fleet.
  - February: after 40 years in service, Doel 1 power plant was shut down and disconnected from the grid under a legislative act in effect since 2013.
  - June: the suitability of the Moorside site for building three AP1000 reactors was confirmed. As a result, ENGIE and the NuGen board of directors approved the payment of an undisclosed sum to the Nuclear Decommissioning Authority (NDA), as provided in the Land Option Agreement signed in 2014. If the final investment decision is approved, NuGen will fully exercise the option and pay the balance due to conclude a land lease contract for a term that covers the building and operation of the plant.
  - June-July: on June 18 the Belgian parliament approved a bill granting a 10-year extension of operations at Doel 1 & 2. In July, ENGIE subsidiary Electrabel and the Belgian state reached an agreement in principle on the terms for extending the operation of both reactors.
  - October: the Cycofos combined cycle gas turbine plant (France) was restarted after being mothballed for two years.
  - November: ENGIE and the Belgian state signed the agreement to extend Doel 1 & 2.
  - December: the Gelderland coal plant (Netherlands) was decommissioned in accordance with the energy agreement concluded with the government and the Dutch Social and Economic Council (*Sociaal-Economische Raad*).
- Renewable Energies:
  - In 2015, ENGIE continued to expand into renewables in Europe, commissioning 363 MW of capacity [1].
- Marketing & Sales:
  - June: ENGIE and Vattenfall, shareholders of GASAG, signed a consortium agreement to exercise joint control of GASAG.
  - September: in Hungary, GDF SUEZ Energia Magyarország Zrt was sold to Fővárosi Gázművek Zrt (Főgáz).
  - In the area of smart technologies and energy efficiency, in 2015 ENGIE signed commercial agreements with Quby in Belgium, Salus in Romania, Nest in France, and Netatmo at european level. The Group also launched two pilot projects with Tendril in Italy and the Netherlands.

(1) Excluding acquisitions.

1.3.1.6 Description of activities

1.3.1.6.1 Central Western Europe

Central Energy Management Trading (Central EMT)

Energy Management Trading (EMT) is designed to structure the portfolio of assets (physical and contractual), negotiate the corresponding contracts, optimize the management of these assets, and provide support to the Group's commercial operations in Europe.

EMT is structured around four activities: Portfolio & Risk Management (PRM), Optimization & Prompt (O&P), Origination & Sales Support (OSS), and Trading.

EMT mainly operates for the Energy Europe business line and also supports other Group business lines, notably in exploration and production, LNG, and coal supply.

Portfolio and Risk Management (PRM)

The business line manages several assets throughout Europe, including power plants, virtual power plants, gas and electricity sourcing or supply contracts, transmission capacity, storage rights, and regasification capacity.

PRM develops an integrated, multi-year policy for these assets and defines strategies to reduce the price risks associated with them. This policy is then implemented by the Optimization and Prompt teams. PRM helps to optimize the portfolio's risk/reward profile and to ensure the profitability of the assets.

Optimization and Prompt (O&P)

Within the scope of the business line's risk policy, O&P optimizes the gas and electricity portfolios over different time horizons, using a wide variety of models. Exposure to price and volume risks is gradually reduced until physical delivery, by systematic transfer to Trading, while ensuring sufficient capacity to handle fluctuations in production, supply and consumption.

ENGIE has the legal obligation, as with all natural gas suppliers, to supply all its French customers without a contingency clause: to be able to provide physical delivery in the event of severe weather conditions that statistically occur no more than twice a century – known as "2% risk".

O&P identifies flexibility in the portfolio in order to structure it as options and market products to be transferred to Trading.

O&P also manages all logistics (transmission and storage capacity, etc.) until physical delivery of energy to the various operators.

Origination and Sales Support (OSS)

OSS is responsible for the energy supply to the commercial entities of Marketing & Sales, commercial relations with counterparties (excluding market counterparties), mainly gas suppliers, and the sale of electricity and gas to large industrial customers (Giant accounts).

Long-term gas contracts

OSS purchases natural gas under long-term contracts from its main suppliers. The aim of the supply strategy is to ensure the competitiveness of the portfolio and security of supply to the Group's customers, mainly through geographical diversification of resources and constant adaptation of the portfolio to the market situation.

In line with market practice, long-term procurement contracts contain volume clauses: minimum volumes to be taken in a period (take-or-pay), transfer of withdrawals to a later period (make-up), or deduction of volumes withdrawn against a prior period (carry forward).

The contracts contain clauses that enable periodic revision of prices according to changes in the market, either on a regular basis or by way of exception. The parties are then required to negotiate in good faith and may, in the event of disagreement, revert to arbitration.

In 2015, EMT continued to renegotiate contracts with its main suppliers to adapt these contracts to new market conditions. As of December 31, 2015, over 60% of the long-term contract portfolio volumes in Europe were indexed to the price of gas sold on the spot market.

Global Energy

Global Energy is Energy Europe's entity in charge of sales of gas, electricity and associated services to national and pan-European large industrial customers. Global Energy develops full supply offers (commodity, flexibility, balancing and delivery), market products (blocks delivered to the hub or financial products), pricing engineering consultancy, risk management solutions, and services related to the energy transition.

Own commercial activity with market counterparties

OSS is also developing its own commercial activity for customers active on the wholesale market (e.g. other energy groups, major consumers directly active in the markets, banks, etc.).

Trading

Trading provides the business line with access to all energy markets as well as the currency market.

Trading helps to optimize assets by managing positions from O&P in the markets, and supports the commercial operations of OSS. Trading also develops proprietary trading operations within lower risk limits.

Lastly, Trading is in charge of international trading activities, as well as the physical procurement of coal and biomass for the power plants of the Energy Europe business line and a portion of those of the Energy International business line.

ENGIE Global Markets (formely GDF SUEZ Trading - GST) and GDF SUEZ Energy Management Trading (GSEMT)

The market activities of O&P, OSS and Trading are carried out by ENGIE Global Markets (formely GDF SUEZ Trading), a subsidiary with "investment services provider" status supervised by the banking and financial authorities, and by GDF SUEZ Energy Management Trading. These two structures are wholly owned by the Group.

EMT's activities have a dedicated and specialized risk control system, with teams responsible for defining risk assessment procedures, proposing credit and market limits, monitoring risk assessment tools, and monitoring market risks on a daily basis.

The system is incorporated in ENGIE's governance through an EMT Risk Committee (EMTRC) comprising senior managers of GDF SUEZ Trading and representatives of the Group and the business line. EMTRC monitors all risks to which EMT is exposed.

Market risks (commodity prices, FOREX rates and interest rate risks) and physical risks (asset failure risks) are monitored based on VaR (value at risk) and stress test models.

Regarding credit risks, lines of credit are allocated counterparty by counterparty. These risks are reduced through the implementation of various tools, such as netting agreements and margin calls, obtaining first-demand guarantees and parent company guarantees, and transaction clearing.

Operational risks are managed by a specialized team that ensures systematic improvement in internal procedures.

Liquidity risk is assessed by stress tests.

General Management and EMTRC are automatically notified if a limit is overrun.

The efficiency of the risk control framework is regularly tested in audits.

The risk control framework for market activities is part of this system and meets all the regulatory requirements.

France

The Energy Europe business line has a firm base in France where it has a large portfolio of activities.

The Generation *Métier* operates four combined-cycle gas plants in France. Three units (Montoir-de-Bretagne, Combigolfe and Cycofos PL2) have been under summer or annual mothballing since April 2013. The Cycofos PL1 combined-cycle plant (428 MW) was restarted in October after a prolonged period of mothballing (two years).

The Renewable Energies *Métier* is responsible for the Group's development in this domain. In 2015, ENGIE increased its capacity in France by 254 MW, comprising 189 MW from onshore wind farms, 7 MW from hydroelectricity, and 59 MW [1] from photovoltaic solar. Under a partnership between ENGIE and Predica, Crédit Agricole's life insurance subsidiary, 90 MW of additional wind power projects were developed in 2015. Following the allocation of two offshore wind farm projects to ENGIE and its partners [2] in May 2014, a public debate phase took place in Dieppe-Le Tréport (April-July) and in Noirmoutier-Île d'Yeu (May-August). ENGIE is also continuing to explore marine energy, notably at the tidal energy pilot farm at Raz Blanchard. In addition, as part of the third solar tender launched by France's Energy Regulatory Commission, ENGIE was awarded 14 photovoltaic projects through its subsidiaries Solairedirect, La Compagnie Nationale du Rhône, La Compagnie du Vent and Futures Energies, accounting for 95.5 MW of installed capacity.

In March 2016, ENGIE signed a contract for the acquisition of the remaining 51% of MAÏA EOLIS, a company specialized in the development, construction, operation and maintenance of wind farms in France. The Group, which already had 49% ownership of the company, thus brings its stake to 100% (subject to satisfaction of conditions precedent once the transaction is finalized).

The Marketing & Sales *Métier* remains the leading seller of natural gas in France (150.1 TWh [3] sold in 2015), despite intense competition, particularly in the B2B segment. The Group maintained its advantage over alternative power suppliers (21.9 [3] TWh sold in 2015) and expanded even faster in 2015, particularly among B2C customers (2.7 million customers at the end of 2015). ENGIE also holds positions across the home energy efficiency value chain, including energy audits, advice, financing of works, design, and equipment installation and maintenance (leader in maintenance, with 1.9 million contracts). In addition, the ENGIE brand was launched on the B2C markets in 2015.

Regulatory framework

A decree defining the rules of a capacity mechanism to secure France's power supply was signed on January 23, 2015. The European Commission began an inquiry into the mechanism for state aid on November 13, 2015. The Commission's acceptance of the mechanism is contingent at the least on whether the mechanism allows cross-border capacity trading and on broader adoption of the remedies defined by France's competition authorities in 2012 to counteract the dominant market position of EDF. Consequently, the mechanism is not expected to be implemented until 2018 instead of 2017.

Meanwhile, the Energy Transition For Green Growth Act was ratified on August 17, 2015. The legislation sets ambitious targets for France: a 40% reduction in greenhouse gas emissions by 2030 from 1990 levels, a 30% reduction in fossil fuel consumption by 2030 from 2012 levels, an increase in the share of renewable energy to 32% of final energy consumption and 40% of power generation by 2030, and a reduction of the share of nuclear power in the energy mix to 50%.

Lastly, a public service agreement signed in November in application of the law specifically binds ENGIE and the French government. The Group has reaffirmed its commitments to the energy transition by developing renewables (particularly solar, wind and biogas), promoting energy efficiency, and controlling energy consumption (by underwriting the "Live Better" program for low-income households, and developing incentives for home renovations to increase energy efficiency). ENGIE has also renewed its commitment to provide high-quality customer service, to ensure gas supply security and to fight energy poverty (for example, by offering assistance to low-income consumers, monitoring the time taken to process claims, and checking the quality of service offered by its contractor partners). In return, the French government will establish and apply a legislative, regulatory and contractual framework offering the visibility and stability the Group needs for its activities, including cost coverage through regulated tariffs.

Sale price of natural gas

ENGIE sells natural gas on the basis of two pricing systems: regulated tariffs and negotiated prices for customers who have opted out of regulated tariffs in favor of market offers from energy suppliers.

(1) Including 15 MW through the acquisition of Novenergia.

(2) EDP Renewables, Neoen Marine and AREVA.

(3) Excluding large industrial customers.

Proportion of regulated tariffs in the sales portfolio

45% of ENGIE's total gas sales [1] are priced on the basis of tariffs established by the government through various acts, decrees and regulatory decisions.

Regulated tariffs

In accordance with Article 11 bis of the Consumer Rights Act, regulated tariffs for natural gas and electricity ended on December 31, 2015 for business customers. In 2015 this measure affected about 100,000 gas customers.

As of January 1, 2016:

- in the gas market, regulated tariffs remain only for retail customers, small businesses (annual consumption below 30 MWh) and small co-owned properties (annual consumption below 150 MWh);
- in the electricity market, only the "Blue" regulated tariffs remain (for retail customers and small businesses).

At the beginning of 2015, there were still two types of regulated tariffs:

- public distribution tariffs for customers connected to the distribution network (6.4 million customers [2]; 73 TWh sold in 2015);
- subscription tariffs for high-use customers connected either to the distribution network or directly to the transmission network. These tariffs were discontinued on July 1, 2015 after customers shifted to market offers. In 2015 only few customers benefitted from these tariffs and sales volumes were very low.

Tariff-setting procedure

Tariffs are set in France under the Energy Act and the decree of December 18, 2009, as amended on May 16, 2013, concerning regulated tariffs for natural gas sales. These provisions state that prices must cover corresponding costs. The regulator (*Commission de régulation de l'énergie* – CRE) audits supply and non-supply costs for ENGIE every year, and makes recommendations for tariff changes accordingly. On July 1 each year, the government publishes an order setting out the formula representing the changes in supply costs and the tariff levels. Since July 1, 2015, the pricing formula includes an indexation of 77% on gas market prices, the remainder being pegged to oil product indices and to the euro-dollar exchange rate.

In the interval between any two governmental orders, ENGIE, after advice from the CRE, can pass on changes in supply costs resulting from the application of the pricing formula each month. If there is an exceptional rise in oil or natural gas products, the government may issue an order, after advice from the CRE, temporarily setting tariffs that are below ENGIE's costs for a period of no more than one year.

In 2015 (12 monthly changes), regulated tariffs and public distribution rates decreased by 9.7%. Regulated subscription tariffs were last published in July 2015.

Belgium-Luxembourg

In Belgium, ENGIE's wholly-owned subsidiary Electrabel is the leading player in the power sector.

At year-end 2015, the Generation *Métier* operated a capacity of 9,101 MW, including 4,377 MW in nuclear power units (including drawing rights), and 2,637 MW in natural gas-fired thermal power plants. In Luxembourg, the *Métier* operates the Esch-sur-Alzette plant (376 MW), which was added to the strategic reserve in 2015. The closure of the Drogenbos GT & CCGT and Awirs 4 units (48 MW, 460 MW and 95 MW, in Belgium), initially planned for 2015, was postponed until later dates. The Generation *Métier* also operates various cogeneration units for industrial customers. The contract with Bayer was renewed for a 10-year term and includes operations and maintenance (O&M) services. The Solvay cogeneration unit in Jemeppes-sur-Sambre was transferred to Solvay at the end of the contract. Solvay and Electrabel signed an agreement to provide O&M services to the site.

At the end of 2015 the Renewable Energies *Métier* operated onshore wind capacity of 212 MW. Six new projects representing a total installed capacity of 40 MW were commissioned at the end of 2015. Other projects representing a total installed capacity of 39 MW are under construction and expected to enter into service in the second half of 2016. As part of the development of its onshore wind assets, Electrabel signed a partnership agreement with a number of Belgian municipalities to create two joint ventures in Flanders and Wallonia (Wind4Flanders and Wind4Wallonia). ENGIE is also a partner in Greensky, along with Infrabel (the Belgian railway infrastructure manager) and other companies, to develop a wind farm along the high-speed Louvain-Liège train line. The farm will eventually become one of the largest in Belgium. With regard to offshore wind power, the Mermaid project (North Sea) reached an administrative milestone when the Belgian state awarded it an environmental permit and license to build and operate the farm.

Following the presentation of a report proving the unprofitability of the Awirs biomass plant, the Wallonian regulator revised the green certificates support system for the next five years. This should lead to benchmark profitability of 9% (IRR). An annual review is planned.

(1) Including large industrial customers.

(2) Average on a yearly basis.

The Marketing & Sales *Métier* has a large portfolio of business customers (industrial and tertiary sectors) for electricity (14.6 TWh [1] in 2015) and natural gas (13.5 TWh [1] in 2015), as well as energy services. Despite persistently fierce competition, marketing and sales efforts have stabilized the Group's share of the electricity market and even increased its share of the B2B gas market. In the retail market, ENGIE manages approximately 2.7 million electricity contracts and 1.4 million natural gas contracts. Concrete measures implemented since 2013 (price repositioning, marketing initiatives, improvement of operating performance) continued to yield results in 2015, stabilizing market share. Lastly, the Marketing & Sales *Métier* develops a range of innovative products and services for all customer categories (insulation, home boiler replacement, smart technologies, development of natural gas service stations in partnership with local actors...).

In Wallonia, the finalization agreement providing for Electrabel's early withdrawal from Ores Assets [2] on December 31, 2016 (instead of year-end 2019 as originally planned) was adopted at the end of May 2015. The memorandum of understanding also provided for the public partners' exit from the capital of Electrabel Customer Solutions, effective December 31, 2014.

Nuclear power generation [3] [4]

For 2015, Electrabel's nuclear contribution tax liability was €165.8 million.

ENGIE, EDF and the Belgian state signed an agreement in March 2014 governing the extension of the lifetime of the Tihange 1 nuclear plant: the investment program to safely continue operating this plant through 2025 is being implemented. The margin sharing mechanism defined in the agreement in substitution of the fixed nuclear contribution tax has been applicable since October 2015.

The Act of June 28, 2015 authorizes the 10-year extension of operations at Doel 1 & 2. A royal decree dated September 27, 2015 supplementing the operating terms and conditions for the Doel 1 and Doel 2 nuclear reactors as part of their long-term operation was published, as was a decision by the AFCN on September 30, 2015 regarding the LTO (long-term operation) action plan for Doel 1 and Doel 2. ENGIE and the Belgian state signed an agreement on November 30, 2015 to extend the operating terms of the two reactors. Under the agreement, Electrabel must pay the Belgian state an annual charge of €20 million from 2016 to 2025 in exchange for the extension of Doel 1 & 2. The agreement also provides for a new nuclear contribution tax system until 2026 for the Doel 3 & 4 and Tihange 2 & 3 nuclear reactors. The agreement's entry into force is contingent on the adoption of two bills before July 31, 2016.

Against this backdrop, the Doel 1 unit (shut down on February 15, 2015) restarted on December 30, 2015 and the Doel 2 unit (shut down on October 23, 2015) restarted on December 25, 2015.

In November, the AFCN authorized the safe restart of the Doel 3 and Tihange 2 nuclear plants, shut down since March 2014 after the detection of flaws formed during the tank forging phase. An extensive series of tests and inspections revealed that these flaws were attributable to hydrogen and did not affect the tank's structural integrity, which was guaranteed in any case. Consequently, the AFCN granted permission to restart the two plants in December (Doel 3 on December 21, 2015 and Tihange 2 on December 14, 2015).

Thermal power generation

To ensure the security of Belgium's energy supply in the medium and long term, discussions are under way with the office of the Energy Minister and her administration. A strategic reserve has been set up for the 2014-2017 winters and proposals are expected for the introduction of a capacity remuneration mechanism for new and existing generation facilities.

Germany

The Energy Europe business line operates in Germany through its power generation and energy sales activities.

The Generation *Métier* currently operates 1,924 MW of gas and coal capacity in Germany, of which 1,619 MW comes from the Farge, Zolling and Wilhelmshaven power plants (mainly coal) and 603 MW from nuclear drawing rights. The *Métier* also manages 431 MW of cogeneration plants owned and operated by municipal utilities (Energieversorgung Gera GmbH and Kraftwerke Gera GmbH, EnergieSaarLorLux AG, WSW Energie & Wasser AG, and GASAG Berliner Gaswerke AG). The supercritical coal-fired plant in Wilhelmshaven (731 MW) was commissioned in October.

At the end of 2015, ENGIE operated in Germany an installed onshore wind capacity of 196 MW and hydroelectric facilities of 142 MW. In 2015, power at the hydroelectric pumped-storage plant in Pfreimd was increased by 6 MW after the plant underwent a major upgrade.

The Marketing & Sales *Métier* operates on most customer segments. B2B sales amounted to 13.6 TWh of electricity and 7.8 TWh of natural gas. The Group is also active in the sale and distribution of electricity, gas and heat to residential and small business customers, through its investments in municipal utilities. In June, ENGIE and Vattenfall signed a consortium agreement for joint control of GASAG. This agreement was approved by the European Commission in December, covers a term of 20 years and will not take full effect until 2020-2021. The dispute between GASAG and Land Berlin relating to the tenders for the renewal of the gas network concession is still ongoing.

(1) Excluding large industrial customers.

(2) Ores Assets is an electricity and natural gas distributor created from the merger of eight Wallonian "intercommunales mixtes" (utilities owned by private and public stakeholders).

(3) For disputes relating to the nuclear power contribution tax and extension of the operating terms of the Tihange 1, Doel 1 and Doel 2 nuclear reactors, please refer to Section 6.2 "Consolidated financial statements", Note 27 "Legal and anti-trust proceedings".

(4) For risk factors related to the operation of the Belgian nuclear power plants, please refer to Section 2.4.3 "Nuclear power plants in Belgium".

After initiating the process of legislative debate on electricity market reform in 2013, the government published a white paper of its proposals in July, followed by a draft bill in September. The debate is expected to continue in 2016 with the aim of implementing reform in 2017. The purpose is to improve the functioning of the energy market through 20 so-called "no-regret" measures (particularly uncapped market prices, better adapting the markets to renewable energy and to the need for flexibility, for example balancing/intraday markets, and greater integration at the European level). A reserve capacity of up to 4.4 GW and a "climate" reserve of 2.7 GW grouping together old lignite-fired plants are also part of the reform package. Furthermore, gas-fired cogeneration plants should receive stronger support.

Netherlands

ENGIE is a leading player in the Dutch energy market.

At year-end 2015 the Generation *Métier* operated an installed capacity of 4,402 MW comprised of several gas- and coal-fired plants. The Eems 6 and Flevo 5 plants (359 MW and 438 MW, respectively) were seasonally mothballed. The Gelderland and Harculo HC62 plants (592 MW and 86 MW respectively) were shut down on January 1, 2016. The new supercritical coal-fired plant in Rotterdam, with a capacity of 731 MW and connected to the grid since 2014, entered into service on January 29, 2015. The energy agreement on "sustainable growth", signed in 2013 by the Dutch government and members of the Social and Economic Council, provided in particular for the closure of several coal-fired plants (including Gelderland, wholly owned by the Group) before January 1, 2016, and the elimination of the coal tax for the remaining plants after January 1, 2016.

ENGIE is expanding its renewable energy activities. At year-end 2015, the Renewable Energies *Métier* operated an onshore wind capacity of 56 MW. In 2015, ENGIE built and commissioned two solar energy plants on the Gelderland (Nijmegen) and Harculo (Zwolle) sites for total power of approximately 2 MW. The projects were open to financial investments from ENGIE customers.

The Marketing & Sales *Métier* is also active on the Dutch market. Through Electrabel, it supplies gas and power to more than 0.5 million retail customers. In the B2B segment, ENGIE is a major supplier with sales of 5.1 TWh of electricity and 6.2 TWh of gas.

ENGIE also develops comprehensive offers for carriers (road, inland waterway and sea), from sales of liquefied natural gas (LNG) to deployment of new refueling facilities. In 2015 the Group increased its number of LNG filling stations, signing agreements to build 10 stations in the Netherlands as well as open its first station for trucks.

1.3.1.6.2 Eastern and Southern Europe

Poland

In Poland, the Energy Europe business line is mainly active in power generation.

At year-end 2015, the Generation *Métier* operated 1,717 MW, comprising coal-fired capacity in Polaniec of 1,527 MW and capacity of 190 MW for the Green Unit biomass facility, which is one of the largest biomass units in the world. ENGIE is upgrading its generation units to increase their capacity and efficiency and bring them in line with the European Industrial Emissions Directive. Units 1, 2, 3, 6 and 7 were modernized in 2013 and 2014. The upgrade of unit 4 was completed in 2015; upgrading of unit 5 has been postponed.

The Renewable Energies *Métier* has 147 MW of installed onshore wind power, distributed across the sites of Jar Moltowo, Wartkowo, Gluchow [(1)] and Pagow. The Dabrowice wind farm (36 MW) was commissioned in December.

The regulatory environment for renewable energy has changed significantly for new projects. On January 1, 2016, the government replaced the former green certificates trading system with a system of contracts for difference defined over 15 years through an auction system based on a benchmark price for each technology. Existing assets can choose to stay within the current green certificates system or participate in specific auctions to benefit from the new system. Co-firing will continue to benefit from green certificates although the number of certificates awarded will be halved.

The Marketing & Sales *Métier* focuses on the sale of electricity to B2B customers (0.6 TWh sold in 2015).

Hungary

ENGIE operates in Hungary through its subsidiary GDF SUEZ Energy Holding Hungary and Egáz-Dégáz.

In September, ENGIE sold its gas sales operations (753,000 residential customers) to Fővárosi Gazművek Zrt (Főgaz), which became the new majority shareholder of GDF SUEZ Energia Magyarország Zrt (GSEM).

In February 2015, ENGIE sent a Notice of Dispute to the Justice Ministry following the Energy Charter Treaty. The notice concerned Égáz-Dégáz, a natural gas distributor with a distribution network of 23,184 km and 13.7 TWh of natural gas distributed to 774,000 customers in 2015. Negotiations initiated in June 2015 regarding the acquisition of Égáz-Dégáz by the Hungarian authorities are still ongoing.

Romania

The Energy Europe business line is responsible for the sale and distribution of natural gas and is expanding its activities in power.

Since the end of 2013, the Renewable Energies *Métier* has managed two wind farms, for installed capacity of 98 MW. These farms are located in Gemenele (Braila region) and Baleni (Galati region). The regulatory framework has been deteriorating since the end of 2013, having a negative impact on the profitability of wind assets. However, amendments made in May 2015 to the law governing renewable energy support mechanisms clarified the position of wind energy producers.

The core business consists of supplying gas to 1.6 million customers located mostly in the southern and eastern parts of the country via Distrigaz and CONGAZ. The Group supplies electricity to about 2,150 industrial and commercial customers. Its subsidiary Distrigaz Sud Retele operates a distribution network of 17,743 km, and CONGAZ, a network of 950 km. The Group strengthened its position in CONGAZ by acquiring the 13.95% stake held by Petroconst, the main minority shareholder. This takes the Group's shareholding from 85.77% to 99.72%. ENGIE is also active in the energy services sector serving 655,000 customers through Distrigaz Confort, with a focus on maintenance of home installations. Energy Europe is also present in natural gas storage, mainly through its subsidiary Depomures, which has a total operating capacity of 300 million cubic meters.

(1) 8.5 MW through the acquisition of Novenergia.

Romania is in the midst of deregulating electricity and gas prices. To support the process of gas market deregulation, the regulator requires producers (between 2015 and 2018) and suppliers (between 2015 and 2016) to make a portion of their portfolio available to a centralized market. The transition to full deregulation of gas prices for the non-residential sector was completed on September 1, 2015. ENGIE successfully switched over its customers following the opening up of the B2B market, keeping a significant market share. Moreover in the perspective of the future deregulation of the B2C market, the government adopted in July a new framework aimed at gradually bringing gas prices (energy portion) in the Romanian market in line with those of the European markets. ENGIE continues to encourage the authorities to manage the transition to a deregulated gas market as optimally as possible.

Austria & Czech Republic

ENGIE is active in the Austrian and Czech Republic natural gas markets. Gas volumes sold amount to almost 1.0 TWh and 1.7 TWh, respectively.

Italy & Greece

In Italy, Energy Europe operates in power generation and energy sales.

The Generation *Métier* directly operates 1,526 MW (through majority stakes in thermal assets) and holds a 50% stake in Tirenno Power S.p.A, which manages 3,276 MW. Energy Europe also holds 1,100 MW of drawing rights. Total capacity breaks down as 5,236 MW for gas and 591 MW for coal. Vado Ligure units 3 and 4, owned by Tirreno Power, were shut down in March 2014 by order of the court of Savona. The Italian Environment Minister subsequently suspended authorization to operate these units [(1)].

Political discussions on a major revision of the institutional framework on conventional generation are ongoing. A centralized capacity mechanism has been in the process of design since 2011. The Italian Economic Development Ministry is in discussion with the European Commission regarding the amendments proposed by the national regulator which will modify the current system.

The Renewable Energies *Métier* also manages 158 MW of wind assets and 5 MW of photovoltaic assets. In addition, the Group manages 75 MW of hydraulic facilities through Tirreno Power.

The Marketing & Sales *Métier* sells gas and electricity to different market segments (residential and B2B), for a total of 0.9 million contracts, of which 0.1 million are dual offers (electricity and gas). A bill proposing the elimination of regulated tariffs from 2018 is currently under discussion in parliament. At the same time, the Italian energy regulator wants to set up a system for faster transfer to the open market, particularly for business customers. In the B2B market, the introduction in 2015 of mandatory energy audits for some customer categories allowed ENGIE to position itself in the energy efficiency market.

In Greece, Energy Europe is mainly present through two joint ventures with GEK TERNA (a Greek private company) for Heron I and II power plants, for a total capacity of 570 MW. The business line is also active in the B2B electricity market.

Spain

In Spain, Energy Europe is active in power generation, energy management, and sales (power, gas & bidding services for third parties).

The Generation *Métier* has an installed net capacity in Spain of 1,990 MW with two natural gas combined-cycle power plants: Castelnou (791 MW) and Cartagena (1,199 MW). The energy of both power plants is sold on the wholesale market.

The business line operates hydroelectric (65 MW) and solar (22 MW) assets [(2)].

Marketing & Sales activity is focused on the industrial market with 2.4 TWh sold in gas and 2.5 TWh in electricity.

The law on hydrocarbons adopted in May 2015 provides for an organized natural gas market, now in place since December. In addition, operational procedures allowing renewable energy to participate in ancillary services were approved in December 2015 and came into force in February 2016.

Portugal

Energy Europe's activities in Portugal are mainly focused on power generation and natural gas distribution. The Group operates through a joint venture with Marubeni (Trustenergy) for its thermal and renewable energy generation.

The Generation *Métier* has an installed thermal power capacity of 2,406 MW, of which 1,830 MW comes from gas-fired combined-cycle plants and 576 MW from one coal-fired plant.

The Renewable Energies *Métier* also manages 963 MW from renewable assets (mainly wind) through interests held by Trustenergy in companies such as Lusovento Holding B.V. and Generg SGPS. In September 2015, Trustenergy took a minority stake in the Windplus consortium, partnering with EDP-R, Repsol, Mitshubishi Heavy Industries and Chiyoda to develop a pilot project (WindFloat Atlantic). The consortium will build a floating wind farm off the coast of Portugal with power generation capacity of 25 MW.

In January 2016, ENGIE finalized the sale of its 25.35% stake in Portgás to the EDP group. Portgás markets and distributes natural gas and propane in a concession in northern Portugal.

(1) See Section 6.2 "Financial statements", Note 27 "Legal and anti-trust proceedings"

(2) 21 MW through the acquisition of Novenergia.

1.3.2 Energy International business line

1.3.2.1 Role

The Energy International business line is responsible for the Group's energy activities outside Europe [1]. The business line is currently present in 26 countries across five regions worldwide. Together with power generation, it is also active in closely linked businesses including downstream LNG, gas distribution, water desalination and energy retail. The business line has a strong presence in its markets with 74.9 GW [2] in operation and a significant programme of 7.8 GW [3] of projects under construction as at December 31, 2015.

1.3.2.2 Strategy

Generating value for the long-term is central to the business model. To achieve this, Energy International uses a portfolio management approach, which involves maintaining a balanced portfolio in terms of geographical spread, business activity, generation fuels, technologies and contract types. This approach provides access to multiple opportunities, whilst mitigating risks through diversification.

The four main strategic priorities of the business line are:

- pursue growth in fast growing markets: strengthen positions in existing markets and be considered a local player. Capture opportunities in attractive new markets with a mix of technologies, including new opportunities along the energy value chain. Develop renewable sources of energy where economically viable;
- optimize the value of the portfolio: pursue a more integrated business model with a "system-play" approach [4]. Target synergies that will allow cost reductions and achieve scale effects in operations. Relocation of capital in projects that offer superior returns;
- optimize assets: deliver successfully the construction program and achieve operational optimization, always ensuring a safe working environment for all employees;
- explore opportunities for business diversification: capture growth in new markets and new activities along the energy value chain. Identify and enter new business opportunities in related business, including decentralized generation and full solutions for clients.

1.3.2.3 Organizational structure

The Energy International business line has five key regions: Latin America, North America, UK-Turkey, South Asia, Middle East & Africa (SAMEA) and Asia-Pacific. The business line headquarters are based in London and Brussels, with respective regional headquarters in Santiago, Houston, London, Dubai and Bangkok.

Each region is headed by a Chief Executive Officer (CEO) who is responsible for the financial performance and operational activities in the region, and proposes strategic orientations and new development actions.

The business line follows a matrix organization structure, which provides the regional teams with both the flexibility and the responsibility to run and develop their businesses, while the functional support teams ensure direction and consistency, and help optimize synergies across the regions and the Group.

The regions interact with the business line headquarters through six functional support departments: Strategy & Communications, Finance, Business Development Oversight, Legal, HR and responsibilities of the Chief Operating Officer (Operations, Markets & Sales and IT). The functional support managers and their teams provide supervision, guidance, common methodologies and procedures, suggestions for improvements, as well as knowledge and experience gathered from across the organization to the regional teams.

(1) Except the activities in the UK-Turkey region.

(2) GW and MW always stand for the maximum net technical capacity of the power plants, which corresponds to the gross power less auto consumption. Installed capacity corresponds to 100% of the total capacity of all interests held by ENGIE irrespective of the actual percentage stake of the holding.

(3) Projects under construction include the projects not yet under construction but for which the company is contractually bound to build or acquire.

(4) A system-play approach is an approach which seeks to create industrial synergies alongside our investments in power generation through investing in closely linked businesses, such as LNG terminals, gas distribution and energy retail (largely for commercial and industrial customers).

1.3.2.4 Key figures

Millions of euros	2015	2014	Total change *(%)*
Revenues	14,534	13,977	+4,0%
EBITDA	3,589	3,716	-3,4%

Note [1]	Latin America	North America	UK-Turkey	South Asia, Middle East & Africa	Asia-Pacific
Capacity in operation *(GW)*	15.7	13.0	6.3	27.9	12.0
Capacity under construction *(GW)*	2.4	0.1	0.0	5.4	0.0
Electricity production *(TWh)*	73.8	51.4	20.9	149.6	60.8
Electricity sales *(TWh)*	56.1	72.0	26.1	8.5	41.3
Gas sales *(TWh)*	9.8	39.7	42.1	0.0	4.3

(1) All information as of December 31, 2015. Installed capacity is consolidated at 100%; sales figures are consolidated according to accounting rules.

1.3.2.5 2015 Highlights

January

- SAMEA – The Kathu Solar Park, a 100 MW greenfield Concentrated Solar Power (CSP) project, in the Northern Cape Province of South Africa was awarded preferred bidder.

February

- North America – Think Energy announced major market expansion, launching residential retail electricity services in Massachusetts.

March

- Latin America – EnerSur began construction of 113 MW additional capacity at the ChilcaUno thermal power plant in Peru.

April

- UK-Turkey – The proposed 4,400 MW Turkish nuclear power plant project near Sinop received formal approval by the Parliament for the Inter-Governmental Agreement between Turkey and Japan and the Host Government Agreement.
- UK-Turkey – The retail business in the UK secured 15-year PPAs for the renewable energy from two new UK biomass plants.

July

- Latin America – E-CL began construction of the first pylon of the SING-SIC interconnection line in Chile.
- North America – ENGIE signed four Memorandums of Understanding and Cooperation to promote energy development in Mexico.
- Asia-Pacific – CHP5 Concessionaire signed Power Purchase Agreement with entities representing the Government of Mongolia.
- Latin America – Jirau hydro power plant in Brazil achieved full assured energy (2,185 MW average) following commercial operation of the 33rd turbine.

September

- SAMEA – the 335 MW Dedisa Peaking Power Project in Port Elizabeth, South Africa, started commercial operation.

October

- SAMEA – A Memorandum of Understanding (MoU) was signed by ENGIE and SUEZ with the Jeddah Economic Company (JEC) to work together to provide key services and power to the Kingdom City project in Saudi Arabia.

November

- SAMEA – Inauguration of West Coast One, a 94 MW wind farm located 130 km north of Cape Town in South Africa.

1.3.2.6 Regional overview

1.3.2.6.1 Energy Latin America

Energy Latin America manages the Group's gas and electricity activities in Latin America. Energy Latin America is organized into four countries: Brazil, Chile, Peru and Argentina. It manages 15,741 MW of capacity in operation and 2,376 MW of capacity under construction. ENGIE has decided to withdraw from the Project in Uruguay.

Argentina

In Argentina, ENGIE holds a 64.2% interest in Litoral Gas SA, a gas distribution company which has a market share of 12% in terms of volume delivered in the region of Santa Fé and in the Northeast of the province of Buenos Aires. In addition, it holds a 46.7% interest in Energy Consulting Services (ECS), an electricity and gas sales and consultancy company. ENGIE also holds an interest in Gasoducto Norandino, a gas transmission company with a pipeline of approximately 1,000 km between Argentina and Chile, which is 100% owned by E-CL.

The government suspended the application of the pre-existing regulatory framework through the declaration of a state of economic emergency in 2002. This implied a tariff freeze and a reduction of tariffs in dollar terms due to local currency devaluation. Since then, very few tariff adjustments have been implemented in the energy sector.

Brazil

In Brazil, ENGIE's existing power assets and the development of selected small and medium sized power plants are managed by Tractebel Energia (TBLE), the country's largest independent electricity producer (approximately 6% of Brazil's installed capacity), which is 68.7% owned by ENGIE. The company operates a total installed capacity of 8,765 MW. TBLE shares are traded on the Brazilian stock exchange, following the utmost Governance Principles.

Energia Sustentável do Brasil (ESBR) holds the concession contract to build, own and operate the 3,750 MW Jirau hydropower project. ESBR is owned by GSELA (40%), Mitsui (20%) [(1)], Eletrosul (20%) and Chesf (20%). 30-year Power Purchase Agreements (PPAs) have been signed with distribution companies for the off-take of 73% of the project's 2,185 MW assured energy production. The remaining assured energy is contracted to shareholders GSELA, Eletrosul and CHESF. At the end of Q3,2015, the project had started commercial operation of the 35th unit, bringing the total installed capacity connected to the national grid to 2,625 MW. With the COD of the 33rd turbine on July 31, Jirau HPP achieved 100% of its commercial capacity (2,185 MW average). The plant's full COD is foreseen in the second half of 2016. Due to vandalism acts that took place in 2011 and 2012, project implementation was delayed compared to its original schedule. Jirau is currently discussing a waiver to its commercial obligations at the justice. A Decision in the First Instance agreed to grant 535 days of delay to Jirau HPP compared to the original schedule. Final decision on the merit is yet to be judged. In line with the prevailing business model, ENGIE's stake in Jirau will be transferred to Tractebel Energia when main development risks have been mitigated.

In addition to Jirau HPP, ENGIE through its subsidiary Tractebel Energia has a total 765 MW under construction in different projects.

On the regulatory side, the most important recent measures were the implementation of the tariff flags scheme in January 2015 and the Law 13,205 was voted on in November 2015 and its adjacent Normative Resolution 688 was approved in December 2015.

- The implementation of tariff flags scheme imposes a variable cost to the final consumer electricity tariffs as of January 1, 2015. If the Brazilian Electricity System faces a critical hydrological condition, where the dispatch of TPPs with expensive variable cost is required, the electricity bills will be overcharged according to projected thermal dispatch, which is thus classified in green flag (no increase at the base tariff), orange or red.
- The Law 13,205/2015 and Normative Resolution 684 propose a regulatory framework for the allocation of the hydrological risk (expressed by the Generation Scaling Factor – GSF [(2)] within generators. This framework proposes an assurance system that generators can adhere to be protected, in different levels, against the hydrological risk. This measure was the Government's response to multiple injunctions filed by private hydro generators, questioning the application of the GSF. Both Tractebel Energia and Energia Sustentavel do Brasil decided to adhere to the agreement and consequently to withdraw their participation in the legal injunction obtained by the Brazilian Association of Independent Power Producers (APINE).

Despite a relative recovery in the second half of 2015, Brazil underwent another year of unfavorable hydrology which continued to influence the sector's performance.

Peru

In Peru, ENGIE owns 61.73% of EnerSur, which has an installed capacity of 1,902 MW and a market share of around 16% in terms of energy production. EnerSur shares are traded on the Lima stock exchange.

Conversion of the 538 MW ChilcaUno thermoelectric power station to a combined cycle plant with capacity of 805 MW was completed in 2012 and the Cold Reserve thermoelectric plant located in Ilo (south of Peru) of 564 MW was completed in 2013. Construction of a new 121 MW HPP at Quitaracsa reached COD in October 2015. EnerSur also won a bid in December 2013 to build and operate a 500 MW thermal plant in Ilo (Nodo Energetico), COD expected in Q4,2016. Additionally, EnerSur started the construction of an additional unit of CCGT in the site of Chilca (Chila Plus) where COD is expected for Q4, 2016.

ENGIE also has natural gas transmission activities in Peru, with an 8.1% stake in TGP (Transportadora de Gas del Perú), which transports natural gas and associated liquids.

Regulations are based on unbundling of generation, transmission and distribution activities. These activities have been partially privatized. As a result, all new investments in generation are undertaken by the private sector. Around a third of Peru's generation is still controlled by state-owned company Electroperú.

(1) Closing of the sale of 20% stake to Mitsui took place in January 2014.

(2) GSF represents the assured energy adjustment factor applied to hydro generators when the overall system generation is below its total assured energy. Therefore, in a situation of deficit in the system hydropower plants allocated energy are discounted at GSF.

In July 2014, the tender regarding the construction and operation of a new gas pipeline linking the area of domestic production (Camisea) to the Southern part of Peru was awarded to the consortium constituted by Odebrecht and Enagas. This will allow ENGIE to convert Nodo Energetico to gas.

Chile

E-CL is the leading company in electricity generation in Northern Chile, with an installed capacity of 2,081 MW. ENGIE owns 52.76% of E-CL. E-CL's subsidiary Electroandina operates a port in Tocopilla and its gas transportation subsidiary Gasoducto NorAndino owns a gas pipeline of approximately 1,000 km between Chile and Argentina.

ENGIE also holds a 63% stake in the Mejillones LNG regasification terminal (GNLM). The commercial operation started in June 2010, using first a 162,400 m^3 (gross capacity) floating storage unit. Since March 2014, it has been replaced by an onshore LNG storage tank, with a net capacity of 175,000 m^3.

Since April 2011, Solgas (previously Distrinor – 100% ENGIE) has been selling natural gas sourced through GNLM to industrial clients and power plants located in the north of Chile.

In Chile's Central Electricity Grid, through the wholly owned company Eólica Monte Redondo, the Group's two main assets are the Monte Redondo 48 MW wind farm, and 34.4 MW Laja hydropower plant, which reached COD in May 2015.

To comply with the supply contract with distribution companies awarded in Dec 2014, E.CL began the construction of a new 375 MW power plant and a port in the area of Mejillones, in addition to the transmission line 2x500kV, 1,500 MW between the cities of Mejillones and Copiapó, interconnecting the 2 main grids in Chile. The project of interconnection is currently being developed by TEN, an E.CL wholly owned company.

By Decree 158, published in April 2015, the facilities of TEN (Transmisora Eléctrica del Norte) project, were declared as part of Chile's trunk transmission system, ensuring a regulated income.E.CL began the process of finding a strategic partner for 50% ownership of TEN. In December 2015 E-CL and Red Eléctrica Internacional reached an agreement in which Red Eléctrica Internacional, through its subsidiary Red Eléctrica Chile, is acquiring 50% of the share capital of TEN.

Uruguay

In July, ENGIE, through GNLS – contracted by Gas Sayago SA to build and operate the LNG regasification terminal in Montevideo, Uruguay – sent a letter to Gas Sayago with regard to the impossibility of continuing the regasification terminal project in Uruguay. Since then GNLS has worked with Gas Sayago so as to ensure a transition of works, assets and information. On September 30, Termination Agreement for the termination of the Terminal Use Agreement (TUA) was signed and all Conditions Precedent (CPs) to effectiveness of the termination of the TUA were completed on October 6.

1.3.2.6.2 Energy North America

Energy North America manages the Group's electricity and gas activities in the United States, Canada, Puerto Rico and Mexico. GSENA operations are organized into five business segments: US power generation, US retail, US natural gas/LNG, Mexico and Canada. A central portfolio management group optimizes the interface between each business segment. The business employs 2,300 people.

Energy North America has an ownership interest in 12,971 MW of electric power and cogeneration capacity. Of this capacity, close to 1,000 MW are powered by renewable sources.

The US natural gas/LNG business includes a LNG receiving facility and a gas sales business in New England. In the US, the company also markets power to commercial and industrial customers, and to small business and residential customers, in 11 States plus the District of Columbia. In Mexico, the company operates natural gas Local Distribution Companies (LDCs), gas transmission pipelines and power plants. The business in Canada is composed primarily of utility-scale wind and solar facilities.

United States

North American operations are headquartered in Houston, Texas, and the US business employs over 1,500 people. It owns and operates the Everett terminal just North of Boston, Massachusetts, which has the capacity to deliver approximately 700 million cubic feet of natural gas per day to the New England market. Energy North America leases over 10.6 billion cubic feet (Bcf) of natural gas storage. The US activities have 11,379 MW of capacity in operation.

In February 2016, ENGIE announced that it had signed two definitive agreements for the sale of its interests in 10 GW of merchant power generation capacity in the US. 8.7 GW of thermal assets will be acquired by a joint venture formed by Dynegy and ECP. 1.2 GW of pumped storage hydro assets (First Light) and 0.2 GW of conventional hydro assets located in Massachusetts and Connecticut will be acquired by Public Sector Pension Investment Board, a Canadian pension investment fund. The transactions are subject to customary closing conditions and are expected to be close in H2 2016 and H1 2016 respectively.

Energy North America markets to large commercial and industrial customers under the Group's brand and to small commercial and residential customers under the *Think Energy* retail brand. The retail business serves approximately 60,000 customer meters with an estimated peak load of nearly 10,000 MW. Retail electricity and natural gas sales to customers are regulated in the US by each of the 50 States' public utility commissions.

The Group's energy interests in the US are governed by Federal and State regulations. Interstate wholesale electricity and natural gas markets in the US are regulated by the Federal Energy Regulatory Commission (FERC). Since 1992, the FERC has issued successive regulatory orders to remove barriers to competition in wholesale electricity markets. Over 60% of electricity consumed is delivered through one of the ten Independent System Operators (ISOs) or Regional Transmission Organizations (RTOs) that were created to facilitate electricity competition.

In 2015, the following milestone was achieved:

- Think Energy is now active in 12 deregulated states in the United States.

The final version of the US Environmental Protection Agency's Clean Power Plan, setting power plants greenhouse gas emissions reductions targets, entered the Federal Register in August, requiring States to reduce emissions by 32% from 2005 levels by 2030.

Puerto Rico

The activities in Puerto Rico include a 35% stake in the 507 MW EcoEléctrica gas-fired plant and in the EcoEléctrica LNG terminal.

Mexico

In Mexico, ENGIE operates six LDCs that serve more than 425,000 customers through a 10,000 km gas system and two gas transmission companies operating over 900 km of pipelines. ENGIE also manages three steam-electricity cogeneration plants with a total installed capacity of 320 MW. Output from these power plants is sold under long-term contracts to industrial clients.

In 2015, the following milestones were achieved:

- ENGIE, together with its partner PEMEX, are building the Ramones Phase II South pipeline (Ramones II South), a segment of the Ramones natural gas pipeline system, which is one of the largest energy infrastructure projects in Mexico's history, extending from the Texas border to central Mexico. The project has progressed as expected and will start operations early 2016;
- the 80 km Mayakan Extension gas pipeline has been completed and is now fully physically interconnected with the Mexican pipeline network.

Sweeping Energy Reforms were voted in in 2013. New laws and regulations were published in 2014/2015. As a result of these reforms the regulation of the electricity and natural gas markets is under the remit of the *Comision Reguladora de Energia* (Energy Regulatory Commission), which is also charged with encouraging investment and promoting competition in electricity and natural gas markets. The new electricity market will begin operations in 2016. ENGIE is developing options to grow under this new scheme either in electricity or gas markets, focused on power generation based on efficient cogeneration, natural gas and renewables, and natural gas distribution and transportation.

Canada

The Canadian operations include utility-scale wind and solar generation totaling 801 MW. The renewable portfolio operates within a joint venture set up in 2012 between Mitsui & Co and a consortium led by Fiera Axium Infrastructure Inc., each holding a 30% interest. ENGIE, the largest shareholder with a 40% interest, continues to operate and maintain these assets. The company also owns and operates the 112 MW West Windsor natural gas-fired power plant in Ontario.

In Canada, energy policy is the jurisdiction of Provincial Governments. Energy markets across Canada tend towards vertically integrated utilities and/or various government owned corporations (with the exception of Alberta). Government-run procurements are a common contracting method and result in long-term PPAs for generation facilities.

1.3.2.6.3 Energy UK-Turkey

Energy UK-Turkey operates a diverse portfolio of 6,268 MW of generation assets, including conventional coal, oil and gas-fired plants, pumped storage and renewables. In addition, it owns a retail business, a gas distribution business and a trading function.

United Kingdom

Energy UK-Turkey is one of the major electricity generators in the UK with a merchant generation fleet of operational assets with a total capacity of 5,025 MW.

Together with Mitsui (25%), ENGIE (75%) operates power plants at Rugeley (coal), Saltend (gas), Deeside (gas), First Hydro (pumped storage) and Indian Queens (light fuel oil) as well as the trading business. The demolition of the 100%-owned Teesside (gas) plant completed in 2015. In February 2016 it was announced that Rugeley power Station is expected to cease operations in early summer 2016. Energy UK-Turkey also holds 50% ownerships of seven operational wind farms (Barlockhart, Blantyre, Carsington, Craigengelt, Crimp, Flimby, Sober) as well as a small pipeline of renewable projects at various stages of development.

The region has a trading business which trades UK power, UK gas, EU carbon, and coal to manage the commodity price exposures associated with its generation assets and retail market position. The UK retail business, based in Leeds, supplies around 16,500 industrial and commercial sites with electricity and/or gas. In addition to supplying energy, the retail business offers demand-side services and is a growing provider of export contracts and Power Purchase Agreements (PPAs). The region also has a 30% ownership interest in OPUS, an electricity and gas supplier to over 200,000 UK customers in the SME (small and medium sized businesses) sector.

The UK market has enjoyed a liberalized electricity market since the introduction of the New Electricity Trading Arrangements (NETA) in 2001. The UK Government has brought forward some major changes over the last 5 years to help it meet its EU 2020 targets including the Carbon Price Floor to provide greater certainty going forward, the Contract for Difference (CfD) scheme to encourage the deployment of low carbon technology, and the Capacity Mechanism (CM) to ensure security of supply; the Government also created the Levy Control framework (LCF) to control costs to the consumer. ENGIE engages with these instruments when it is appropriate to do so, for example by participating in the CM auction. The UK electricity market will continue to evolve over the coming years as low carbon technologies are increasingly deployed under these incentives, coal generation is closed, and gas fired generation is increasingly used to provide essential support to the system.

Turkey

With a total generating capacity of 1,243 MW, Energy UK-Turkey has a presence in two generation assets in Turkey through its 95% stake in the 763 MW Baymina Enerji, a combined cycle gas turbine (CCGT) power station, and a 33.3% stake in 480 MW Uni-Mar Marmara, a combined cycle gas turbine (CCGT) power plant. Power generated is sold to TETAS, the national electricity offtaker, under long-term PPAs. The region also owns 90% of Turkey's third largest natural gas distributor, IZGAZ, which distributes and markets natural gas to more than 300,000 residential, commercial and industrial customers in the Kocaeli region. Furthermore, Energy UK-Turkey has also been developing its power trading and origination activities as well as its retail business in the country.

In cooperation with its Japanese partners Mitsubishi Heavy Industries (MHI) and Itochu, ENGIE has launched a feasibility study for a nuclear power station to be built near the city of Sinop, based on the ATMEA1 technology developed by MHI and Areva (around 4.5 GW). The intergovernmental agreement between the Turkish and Japanese governments and the agreement between the project operators and the Turkish government have been approved by the respective authorities and were ratified by the Turkish parliament in 2015.

Historically Turkey has been a PPA market with a single buyer. However, the Turkish power market is currently going through a process of liberalization with the aim of becoming a fully merchant market. Merchant market trading has been gradually introduced with daily settlements on the Balancing and Settlements Market commencing at the end of 2010.

1.3.2.6.4 Energy South Asia, Middle East & Africa (SAMEA)

Middle East

In the Gulf Cooperation Council (GCC) countries, Energy SAMEA acts as an asset developer, owner and operator, selling the electricity and water it produces directly to government-owned utilities under long-term P(W)PAs (Power (and Water) Purchase Agreements). It is the leading private power and water developer in the region with total generation capacity of 28.6 GW and 1,212 MIGD (5.5 million m^3) water/day of desalination capacity in operation and under construction. It is common in the Middle East IP(W)P (Independent Power (and Water) Producer) business model for projects to be part owned by the host governments/offtakers alongside partners. The region conducts the operations of all of the plants that it owns, often through an arms-length Operations & Maintenance (O&M) contract.

The regulatory frameworks in the different countries of the GCC are similar, with competitive tenders launched by the power authorities calling for private power producers to bid for concessions to build, own and operate plants. The output is then sold by the private producer to a public utility under long-term contracts, the terms of which are stipulated at the tender stage.

Energy SAMEA has ownership interests in the following natural gas-fired power and water producing plants in the GCC:

- Saudia Arabia: Marafiq, Riyadh PP11, Tihama;
- Bahrain: Al Dur, Al Ezzel, Al Hidd;
- Qatar: Ras Laffan B, Ras Laffan C;
- UAE: Fujairah F2, Al Taweelah A1, Shuweihat S1, Shuweihat S2, Umm Al Nar, Mirfa;
- Oman: Al Kamil, Al Rusail, Barka 2, Barka 3, Sohar 1, Sohar 2;
- Kuwait: Az Zour North.

The SAMEA region currently has 2,660 MW power capacity and 159 MIGD (723,000 m^3/day) water capacity under construction in the GCC, in Saudi Arabia (extension of Tihama), Kuwait (Az Zour North IWPP) and the UAE (Mirfa IWPP).

One and a half years after the start of the Az Zour North 1 Independent Water and Power Project in Kuwait, the project achieved Early Commercial Operation Date (ECOD) of its three units. The plant is now delivering circa 660MW to the State of Kuwait until March 2016, when the three operating units will be handed back to the EPC contractor for the conversion to combined cycle capacity. Az Zour North 1, a gas-fired CCGT of 1,500 MW with an associated water desalination plant of 486,000 m^3/day, is Kuwait's first independent water and power producer. The project is owned 40% by a consortium with ENGIE (17.5%) and 60% by the Kuwaiti government.

In Oman, OPWP (Oman Power & Water Procurement Company) confirmed that the Power Purchase Agreement for Al Kamil, a 277 MW Independent Power Producer (65% owned by ENGIE), will be extended to 2020. The 15-year-long PPA of Al Kamil with OPWP would normally expire in April 2017.

South Asia

In Pakistan, in the south-western province of Baluchistan, Energy SAMEA holds 100% in Uch I, a 551 MW gas-fired facility. The 381 MW gas-fired unit Uch II (100% ownership), an extension to Uch I, started commercial operation in April 2014. The electricity generated from Uch II is sold through a 25-year Power Purchase Agreement with the National Transmission and Despatch Company, a state-owned utility.

All power generated by IPPs in Pakistan is sold under long-term PPAs to distribution companies. The end consumer market is not liberalized. Around 50% of generation capacity is held by private IPPs, while the remainder is held by state-owned entities.

In India, ENGIE has a 89% equity share in the Meenakshi thermal project in Andhra Pradesh, which comprises 269 MW of operational capacity and 638 MW under construction. In February 2016, ENGIE announced an agreement to sell its entire shareholding in Meenakshi to India Power Corporation Limited. The deal is expected to close in H1 2016 subject to customary approvals and regulatory consents.

The power sector in India is liberalized, with various offtake arrangements (long-term PPAs, short-term bilateral contracts and spot trading) all possible.

Also in Andhra Pradesh, ENGIE signed binding Joint Venture Agreements with Andhra Pradesh Gas Distribution Corporation (APGDC), GAIL and Shell for the development of a Floating Storage and Regasification Unit (FRSU) in Kakinada. The two JVAs respectively cover the creation of a Terminal Company and of an LNG Supply & Gas Marketing Company. ENGIE's share in each will be 26%.

ENGIE also has a strategic partnership with Petronet LNG Ltd.

Africa

In Africa, ENGIE has 2.8 GW thermal and renewable power capacity in operation and under construction.

In South Africa, the 94 MW West Coast 1 Wind Farm, in which ENGIE holds a 43% equity stake, started commercial operation in June. The project is part of South Africa's successful Renewable Energy Independent Power Producer Procurement (REIPPP) programme. In September, Dedisa Peaking Power (38% owned by ENGIE) started commercial operation, adding 335 MW power to the national transmission system in the Eastern Cape Province. Together with the 670 MW Avon Peaking Power Project near Durban (KwaZulu-Natal) that is still under construction, Dedisa is South Africa's first large scale independent power project originated by the Department of Energy. The power generated by these two open cycle gas turbine power plants will be sold to Eskom Holdings, South Africa's state-owned utility, under a Power Purchase Agreement (PPA) over a 15-year term.

Also in South Africa, Kathu Solar Park, a consortium led by ENGIE (49%) with South African investors was awarded preferred bidder by the Department of Energy. Kathu is a 100 MW greenfield Concentrated Solar Power (CSP) project with parabolic trough technology and equipped with a molten salt storage system that allows 4.5 hours of thermal energy storage. It is situated in the Northern Cape Province, 600 km south-west of the capital Pretoria.

In Morocco the Safi 2x693 MW project is under construction. Following completion of the plant, expected in 2018, the electricity produced will be sold to the *Office National de l'Electricité et de l'Eau Potable* (ONEE) under a 30-year Power Purchase Agreement.

In Egypt, ENGIE received the Letters of Eligibility and signed the Land MoUs for the development of a 50 MW solar PV project (Binban, Aswan) and two 50 MW wind projects (Gulf of Suez). ENGIE was also awarded top-ranked bidder status for the 250 MW Gulf of Suez wind project.

In terms of regulation, a single buyer model, whereby output is sold by the private producer to a public utility under long-term contracts, has been adopted in Morocco and South Africa.

1.3.2.6.5 Energy Asia-Pacific

Energy Asia-Pacific has strongholds in Australia, Indonesia, Singapore and Thailand. Its businesses in Asia-Pacific include the construction and operation of power plants, natural gas distribution systems and retail activities.

Australia

The Australian business is focused on a diverse portfolio of generation assets operating in the National Electricity Market (NEM) that serves 90% of the Australian population and demand, resident in the eastern states. The portfolio also includes a co-generation asset that is located in the separate South Western Integrated System (SWIS) market that serves Western Australia. It also has a retail business called "Simply Energy" in the NEM, serving electricity and gas accounts in the domestic, small to medium enterprise and large commercial and industrial customer segments.

The Australian Energy business is an important participant in the NEM. It predominantly produces wholesale electricity and is focused on delivery of value through optimal participation of its assets in the relevant Australian electricity, gas and renewable energy markets, exploration of potential synergies with other ENGIE businesses in Australia, and opportunistic growth of its generation and retail portfolios, including renewables. In 2013, Mitsui acquired a 28% stake in all the Australian Energy assets (except Loy Yang B and Kwinana – where Mitsui already owned 30%). The portfolio in Australia:

- generating assets in South Australia: 893 MW;
- generating assets in Victoria: 2,507 MW;
- generating assets in Western Australia: 123 MW;
- retail customers Simply Energy: over 552,000.

Australian energy markets have been progressively liberalized since the mid-1990s, when the first wholesale electricity market was introduced in Victoria. The level of private and state-owned energy infrastructure varies between states. Under the Competition Principles Agreement, between state and federal governments, publicly owned businesses in competitive markets are treated in a manner intended to ensure competitive neutrality between public and private energy businesses. Queensland is the only state in the NEM that is yet to privatize their generation assets and New South Wales is in the process of privatizing their wholly Government owned network business

The NEM is a deregulated merchant wholesale market serving the interconnected eastern states of Australia, in operation since 1998. It is a near real-time, energy-only, gross pool, spot market with no capacity payments. Up to 48 GW of installed generation capacity is dispatched on a five-minute basis over five states.

Gas markets exist in each of the eastern states except Tasmania, and are less developed than the electricity market. With the commencement of significant export LNG projects in 2015/16 it is expected that domestic gas prices will be linked to export LNG prices. The Wholesale Electricity Market (WEM) for the SWIS commenced operation in September 2006. The WEM operates in the south-west region of Western Australia, the location of most of that state's population (estimated at just over 2 million). The SWIS has a summer peak demand of approximately 4,000 MW. The WEM market structure is a net bilateral structure and has separate capacity and energy mechanisms.

The (former) Australian Government's "Clean Energy Future" greenhouse gas emissions reduction scheme commenced in July 2012, committing it to a medium-term national target of reducing emissions significantly. In September 2013, a new government was elected and in July 2014 they repealed the Carbon Legislation. An emission reduction fund was established on July 1, 2014, to replace the Carbon scheme and is now funding projects that deliver CO_2 reductions through a reverse auction process. In addition there is a Renewable Energy target scheme in place that encourages renewable energy projects.

Indonesia

ENGIE holds a 40.5% stake in Paiton 3 & 7/8, with a total of 2,035 MW coal-fired capacity, located on the island of Java. A PPA is in place for both Paiton 7/8 and Paiton 3 up to 2042. In February 2016, ENGIE announced an agreement to sell its 40.5% stake in Paiton to Nebras Power Q.S.C and a combination of some of the existing Paiton shareholders. The deal is expected to close in H2 2016, subject to customary approvals and regulatory consents.

In cooperation with PT Supreme Energy, the business is also developing three geothermal projects in Sumatra (Muara Laboh, Rantau Dedap and Rajabasa).

State owned incumbent PLN has the monopoly on transmission and distribution systems. Since the mid-1990s IPPs have been allowed to operate in Indonesia and they now operate 16% of the existing generating capacity. The end-user market is not liberalized.

In December 2009, the "Crash 2 program" for 10,000 MW of new generation capacity was launched. This program stipulated that 50% of this new capacity is to come from IPPs and 50% from PLN, and that 5,340 MW of the new capacity will come from renewable resources. In 2014, the new Jokowi administration has set a target to develop 35,000 MW of new generating capacity by 2019 out of which 10,000 MW will be developed by PLN and 25,000 MW will be built by IPPs.

Thailand & Laos

The Glow Group, in which ENGIE holds a majority interest (69.1%), is listed on the Stock Exchange of Thailand. It is a major participant in the Thai energy market with a combined installed capacity in Thailand and Laos of 3,216 MW. The Glow Group generates and supplies electricity to the Electricity Generating Authority of Thailand (EGAT) under Thailand's SPP (Small Power Producer) and IPP (Independent Power Producer) programs, in addition to supplying electricity, steam, industrial water and services to large industrial customers principally located in the Map Ta Phut industrial Estate, Rayong Province.

ENGIE also owns a 40% stake in PTT NGD, a distributor of natural gas to industrial customers in the Bangkok region.

State-owned EGAT is the main entity in the electricity sector. Until liberalization of the sector, EGAT generated around 95% of Thailand's power. It now accounts for about 50% of generation capacity while the rest is accounted for by the non-government sector comprising IPPs, SPPs and imports from Laos and Malaysia. IPPs in Thailand sell the energy that they produce to EGAT under long-term contracts, the terms of which are stipulated at the IPP tender stage. In industrial parks private generation companies can sell electricity to local customers.

Singapore

ENGIE holds a 30% stake in Senoko Energy, the largest vertically-integrated energy company by generation capacity in Singapore. Senoko Energy owns and operates a unique portfolio of power generation assets with a combined capacity of 3,200 MW and with a market share of more than 25%. Its retail arm currently has about 20% share of the contestable market.

In 2001, the electricity generation and retail markets were separated from the natural monopoly existing in the electricity transmission market. The National Electricity Market of Singapore (NEMS) was established in 2003: generation companies compete to sell electricity every 30 minutes, while electricity retailers buy electricity from the NEMS and offer packages to sell electricity to eligible consumers. In 2004, in order to promote efficiency and competition in the electricity market, vesting contracts were introduced whereby generation companies are committed to sell a specified amount of electricity at a specified price.

Senoko continues to renew its generation portfolio. Its latest plant are the 2×431 MW MHI repowered CCP known as CCP6&7, which both went into commercial operation in 2012. In the retail market, the threshold for retail contestability has been lowered gradually since 2001. Today, commercial and industry customers using more than 2,000 kWh of electricity per month on average are eligible for contestability.

1.3.3 Global Gas & LNG business line

1.3.3.1 Role

The Global Gas & LNG business line manages the Group's upstream gas and LNG activities. Its roles are defined as follows:

- the business line embodies and manages the Group's overall ambitions in the field of natural gas and LNG, and as such plays a coordinating role in the gas value chain within the Group;
- it develops activities in the field of engineering and services related to the containment required for LNG transportation and storage;
- it operates exploration as well as production (gas and oil) assets and LNG commercial and physical assets. As such, it contributes to supplying the Group in terms of natural gas and LNG. Furthermore, it manages the Group's operational and commercial expertise in upstream gas activities.

1.3.3.2 Strategy

The Global Gas & LNG business line plays a major role in the Group's strategy of gas chain integration. Its main objectives are therefore:

- to put the upstream gas businesses in a position to support supply of the Group's existing and potential downstream markets, including power generation;
- to manage and consolidate the Group's positions in exploration and production in Europe and in the countries bordering the Mediterranean, and to reinforce its development on new markets;
- to develop, secure, diversify and ensure the competitiveness of the Group's LNG supply portfolio in order to meet its customers' needs;
- to consolidate ENGIE's international leadership in LNG by leveraging the Group's expertise in every segment of the LNG value chain;
- to optimize the value of its assets.

1.3.3.3 Organization

The Global Gas and LNG business line is structured in three entities: ENGIE E&P, ENGIE LNG and GTT.

1.3.3.4 Key figures

(in millions of euros)	2015	2014	Gross change *(in %)*
Business line revenues	5,993	9,551	-37.3%
Revenue contribution to Group	4,246	6,883	-38.3%
EBITDA	**1,625**	**2,225**	**-27.0%**

Key figures 2015:

- hydrocarbon production sold: 59.1 Mboe;
- reserves as of December 31, 2015: 699.2 Mboe.

1.3.3.5 2015 highlights

January

- The 1,000th tanker truck was loaded with retail LNG at the Montoir-de-Bretagne LNG terminal.
- Three licences were awarded to ENGIE E&P Norge during the 2014 Awards in Predefined Areas (APA) round.
- The production-sharing contract for Block 7 in Mauritania expired on January 20.
- GTT North America received an order from Conrad Industries for an LNG bunker barge, the first of its kind on the North American shipping market.
- ENGIE strengthened its presence in China and signed two major contracts: 1/ an agreement for a natural gas fired distributed generation project in an industrial park in Sichuan; and 2/ a draft natural gas supply agreement with Beijing Enterprise Group.
- In Indonesia, a major milestone was reached on the Jangkrik project with a first steel cut ceremony to mark the launch of construction on the floating LNG production unit.
- ENGIE, Shell and Indian companies Andhra Pradesh Gas Distribution Corporation (APGDC) and GAIL signed two agreements for a floating LNG terminal off the deep-water port of Kakinada in India.

March

- ENGIE E&P UK announced the discovery of a new oil deposit in the central North Sea.

April

- ENGIE E&P International sold an 11.67% share of the Muara Bakau licence to Indonesian company Saka, retaining a 33.33% stake.
- ENGIE E&P International announced the success of a third exploration wells in the Sud-Est Illizi licence in Algeria.
- GTT signed a cooperation agreement with South Korean shipbuilder Samsung Heavy Industries to industrialize its new Mark V technology. Under the agreement, Samsung will build a mock up for the final developments and related tests.
- ENGIE celebrated the 50th anniversary of the first commercial delivery of a liquefied natural gas (LNG) cargo.

June

- ENGIE E&P International and its partners signed the first LNG purchase and sale agreements for the Jangkrik project.
- A long-term supply agreement was signed with Novatek (Russia) for one million tons per annum (Mtpa) of LNG from the Yamal LNG liquefaction plant.
- ENGIE signed an agreement with Beijing Enterprise Group to provide LNG to Beijing and deepen cooperation between the two companies.

July

- A partnership agreement was signed between ENGIE and Kansai Electric (Japan) relating to the optimization of LNG flows.

August

- ENGIE E&P UK completed the second offshore installation phase for the Cygnus project.
- Four new licences were awarded to ENGIE E&P UK in the 28th round for the southern North Sea and the North Sea west of Shetland.
- The Netherlands and UK affiliates of ENGIE E&P made a joint discovery of hydrocarbons in the southern North Sea.
- A new retail LNG sale agreement for Europe was signed with Prima LNG.

September

- An LNG representative office was opened in Tokyo (Japan).
- A retail LNG sale contract was signed with Flogas (United Kingdom).

October

- Two exploration licences in the Parnaíba basin and four exploration licences in the Recôncavo basin in Brazil were awarded to ENGIE E&P International in the 13th round.
- A long-term sale contract was signed with Tohoku Electric for the delivery of 270,000 tpa of LNG starting in 2018.
- The first installation of the innovative SloShield (TM) monitoring system was completed on the GasLog Singapore vessel through subsidiary Cryovision. Designed to detect LNG tank sloshing, SloShield (TM) provides real-time feedback to crew.
- Launch of LNG Advisor, a new offering specifically designed for LNG tankers, to monitor boil-off gas from LNG during transportation with the company Chenière Marketing International LLP (US).
- A five-year LNG purchase and sale agreement was signed with US company Cheniere Marketing International LLP.

November

- Inauguration of a biological wastewater treatment station at Adrar in Algeria, as part of the CSR program for the Touat project.
- In South Korea, construction began on the Group's first LNG fuel bunker ship, celebrated with a first steel cut ceremony.

December

- ENGIE E&P UK was awarded new onshore licences in the 14th round.
- The LNG BU signed a new contract to sell retail LNG with Gas Natural of Spain. With this contract, ENGIE's total retail LNG sales in 2015 exceeded, for the first time, the equivalent volume of an average cargo delivered by LNG tanker.

1.3.3.6 Description of activities

1.3.3.6.1 ENGIE E&P

Role

Development of ENGIE's natural gas and liquid hydrocarbons production is a key activity in the Group's integration throughout the gas value chain. It supports the Group's international growth, particularly in high-growth regions, and gives access to a portfolio of diversified, balanced and profitable reserves.

Principal key indicators

Europe and North Africa are the core areas of the Group's exploration and production business. However, the Group has been stepping up its international expansion by supporting its other entities, particularly in Brazil.

As of December 31, 2015, the Group published the following results:

- operations in 13 countries;
- 343 exploration and/or production licences held (of which 56% are operated by the Group);
- proven and probable (2P) reserves of 699.2 million barrels of oil equivalent (Mboe), of which 76% is natural gas and 24% liquid hydrocarbons;
- production of 59.1 Mboe, of which 62% is natural gas and 38% liquid hydrocarbons.

Activities of ENGIE E&P

Legal framework of the Exploration & Production activities

The Group conducts its exploration and production activities through its subsidiary ENGIE E&P International SA, in which it holds a 70% stake (with the remaining 30% held indirectly by the China Investment Corporation), and the company's affiliates (wholly owned), which together constitute the ENGIE E&P Business Unit, within the framework of licences, concessions or production-sharing contracts drawn up with the public authorities or national companies of the countries involved. Under current partnership contracts, one of the parties is generally designated as operator, meaning that it is responsible for conducting daily operations, with the other parties' approval required for important matters such as the adoption of a development plan, major investments, and budgets. Only companies approved by local public authorities can be selected as operators.

Proven and probable (2P) reserves

In 2015, 16 exploration and appraisal wells were drilled, nine of which were successful. Part of the resources thus proven will contribute to reserves in the future.

The tables below show all of the Group's proven and probable (2P) reserves (including developed and undeveloped reserves [1]) and their geographical distribution.

(1) Developed reserves are those that can be produced from existing facilities. Undeveloped reserves are those needing new wells, new facilities or significant additional investments, starting from existing facilities, such as a compression unit.

DEVELOPMENT OF THE GROUP'S RESERVES [1]

	2015			2014			2013		
	Natural gas	Liquid hydro-carbons	Total	Natural gas	Liquid hydro-carbons	Total	Natural gas	Liquid hydro-carbons	Total
Reserves as of December 31, N-1	571.6	187.2	758.8	609.9	188.9	798.8	642.6	192.9	835.5
Revision + discoveries	24.2	3.0	27.3	25.9	14.7	40.5	2.9	12.3	15.2
Assets bought and sold	-27.5	-0.3	-27.8	-27.0	1.9	-25.0	0.0	0.0	0.0
Production sales	-36.8	-22.3	-59.1	-37.2	-18.3	-55.5	-35.6	-16.4	-51.9
Reserves as of December 31	531.5	167.6	699.2	571.6	187.2	758.8	609.9	188.9	798.8

CHANGES IN THE GROUP'S RESERVES BY COUNTRY

	2015			2014			2013		
	Natural gas	Liquid hydro-carbons	Total	Natural gas	Liquid hydro-carbons	Total	Natural gas	Liquid hydro-carbons	Total
Germany	29.8	62.0	91.8	30.6	64.5	95.1	41.9	63.5	105.4
Norway	190.3	89.8	280.1	206.6	107.4	314.0	203.8	108.0	311.8
United Kingdom	45.0	1.0	46.0	46.6	1.0	47.6	56.3	1.2	57.4
Netherlands	62.9	5.9	68.9	75.1	6.4	81.4	76.5	6.7	83.2
Other [1]	203.5	8.9	212.4	212.8	8.0	220.7	231.4	9.6	241.1
TOTAL	**531.5**	**167.6**	**699.2**	**571.6**	**187.2**	**758.8**	**609.9**	**188.9**	**798.8**
Change	-7%	-10%	-8%						

(1) "Other" covers Algeria, Ivory Coast, Egypt and Indonesia.

As of December 31, 2015, ENGIE E&P's 2P reserves of liquid hydrocarbons and natural gas ("entitlement" [2] were 699.2 Mboe, compared with 758.8 Mboe in 2014. Gas accounts for 76% of these reserves, which represent a volume of 532 Mboe, or 85 billion cubic meters.

For those fields that are operated under a production-sharing contract, the "tax barrels" reserves have been recognized in accordance with the Society of Petroleum Engineers (SPE) rules for recognizing 2P reserves. These "tax barrels" reserves correspond to the taxes paid on behalf of ENGIE E&P by its partners, the national oil companies, to the authorities of the respective countries.

The Group's share in 2P reserves for the fields in which it is a partner (working interest reserves [3]) was 864 Mboe at the end of 2015, compared with 922 Mboe at the end of 2014.

Each year, a proportion of approximately one-third of the reserves is evaluated independently by a specialist consulting firm (DeGolyer and MacNaughton this year).

To estimate its 2P reserves, the Group uses the "SPE PRMS" classification, based on the common definitions of the SPE and the World Petroleum Congress (WPC).

The 2P reserves replacement ratio for a given period is defined as the ratio of additions of 2P reserves for the period (discoveries, net acquisitions and revisions of reserves) to production for the period. The 2P reserves replacement ratio for ENGIE E&P was 90% over the 2011-2013 period, 82% over the 2012-2014 period, and 18% over the 2013-2015 period.

(1) As amounts are rounded by the database, there may be insignificant variances between line-items and totals.

(2) Unless otherwise specified, the references made to 2P reserves and production must be understood as ENGIE E&P's stake in these reserves and production (net of all licence charges taken in kind by third parties in the form of crude oil or natural gas (entitlement)). These references include the total of these net 2P oil, gas, and other hydrocarbon reserves estimated as being extractable for the remaining duration of the licences, concessions, and production-sharing agreements. ENGIE holds an equity interest of 70% in ENGIE E&P International, which it consolidates by the full consolidation method.

(3) Under a production-sharing agreement, part of the hydrocarbons produced is returned directly in kind to the government. These volumes are not recognized as 2P reserves and are therefore less than the reserves calculated on the basis of the percentage interests held (working interest reserves).

Production

During the fiscal year ended on December 31, 2015, the production of gas and liquid hydrocarbons sold by ENGIE E&P was 59.1 Mboe.

The table below sets out ENGIE E&P's production, including the share from companies consolidated by the equity method, by country:

CHANGE IN GROUP PRODUCTION BY COUNTRY – NATURAL GAS AND LIQUID HYDROCARBONS

	2015			2014			2013		
	Natural gas	Liquid hydro-carbons	Total	Natural gas	Liquid hydro-carbons	Total	Natural gas	Liquid hydro-carbons	Total
Germany	3.7	2.8	6.5	4.2	2.8	7.0	4.8	3.1	7.9
Norway	17.9	16.5	34.4	14.5	13.3	27.7	12.0	12.3	24.3
United Kingdom	1.7	0.1	1.8	3.3	0.2	3.4	1.7	0.1	1.7
Netherlands	12.3	2.5	14.8	13.7	1.7	15.3	15.5	0.5	16.0
Other (1)	1.2	0.4	1.6	1.6	0.4	2.0	1.6	0.4	2.0
TOTAL	**36.8**	**22.3**	**59.1**	**37.2**	**18.3**	**55.5**	**35.6**	**16.4**	**51.9**

(1) "Other" covers the Ivory Coast and Egypt.

France

The Head Office of the exploration & production activity directs and controls the operational activities of the affiliates and New Assets. The Group holds an exploration permit in France.

Activity in affiliates

Germany (ENGIE E&P Deutschland)

As of December 31, 2015, the Group owned a stake in 53 oil and natural gas fields in Germany, including 48 in production, with 2P reserves of 92 Mboe at December 31, 2015 (including approximately 32% in the form of natural gas).

Norway (ENGIE E&P Norge)

ENGIE E&P Norge owns a stake in 17 oil and natural gas fields off the coast of Norway, including eight in production, its share of which was 280 Mboe of 2P reserves as of December 31, 2015 (including approximately 68% in the form of natural gas).

In 2015, three exploration wells failed to discover hydrocarbons.

United Kingdom (ENGIE E&P UK)

At the end of 2015, the Group held stakes in 22 fields in the UK North Sea, of which 10 were in production. As of December 31, 2015, the share of 2P reserves held by the Group in these fields represented 46 Mboe (98% of which was in the form of natural gas).

In the United Kingdom, the Group drilled five exploration wells and side-tracks in 2015, but found no commercial accumulations of hydrocarbons, and took part in exploration projects for unconventional gas.

Its joint discovery with the Netherlands resulted in additional proven volumes.

The Netherlands (ENGIE E&P Nederland)

The Group has stakes in 58 fields in the Dutch exclusive economic zone, of which 48 are in production. As of December 31, 2015, the share of 2P reserves held by the Group in these fields represented 69 Mboe (91% of which was in the form of natural gas).

In 2015, two exploration wells discovered additional volumes.

Egypt (ENGIE E&P Egypt)

The Group holds stakes in four concessions in Egypt, two of which are in production. The Group operates two concessions in exploration.

Australia (ENGIE Bonaparte)

ENGIE, as operator (60%), and Australian company Santos (40%) continued to look at a range of solutions for the development of the Petrel, Tern and Frigate gas fields.

Other countries

In Algeria, the Touat gas production project entered its on-site construction phase. A total of 18 production wells are available. On the Sud-Est Illizi licence, five new exploration and appraisal wells produced additional volumes.

The Jangkrik gas project is making progress in Indonesia. The first contracts for the sale of LNG from Jangkrik were signed in June 2015. Ten of the 11 production wells were drilled; construction of the floating production and processing unit (FPU) and the subsea facilities continued. ENGIE sold an 11.67% share of the project to Indonesian company Saka, retaining a 33.33% stake.

In Brazil, ENGIE was awarded six new exploration licences in the 13th round of the tender.

In Qatar, the Exploration and Production Sharing Agreement (EPSA) was terminated on April 9, 2015 after ENGIE E&P and its partners gave notice of withdrawal. The Group has decided not to pursue its exploration and production activities in the country.

In total, excluding Europe and withdrawals in progress, the Group holds stakes in 26 licences, in Algeria, Australia, Azerbaijan, Brazil, Egypt, Indonesia, Libya, and Malaysia. As of December 31, 2015, the share of 2P reserves held by the Group in these licences represented 212 Mboe, some 96% of which was in the form of gas.

Gas marketing

ENGIE E&P produced a total of 63 TWh of natural gas in 2015. 28% of this production was sold through other Group entities (ENGIE LNG, GEM).

Sales to other Group entities also come in the form of contracts under arm's length conditions, similar to third-party supply contracts.

The remaining production (72%) is sold directly to third parties, mostly under long-term contracts (e.g. in the Netherlands and Germany), or annual contracts obtained after government tenders (e.g. gas from Norway).

1.3.3.6.2 ENGIE LNG

Role

- Developing and diversifying the LNG supply portfolio (LNG production and purchase contracts with producers).
- Increasing the Group's LNG sales in the short, medium and long term, focusing on high-growth areas (Asia, Latin America, etc.).
- Supplying ENGIE's various entities and customers with LNG, through the management of supply and vessel chartering contracts.
- Increasing the value of the portfolio of LNG purchase and sale contracts through physical and financial optimization of the contracts and the tanker fleet.

The Group's positions in LNG

- A portfolio of 16.4 million metric tons per year of long-term supply contracts from six countries.
- Regasification capacity in six countries.
- A fleet of 14 ships [1] including two LNG regasification vessels.

Description of the LNG activities in the Group

ENGIE's recognized expertise over the entire LNG value chain, from production to imports and marketing, including LNG terminal operation and maritime shipping, enables it to meet the needs of the industry.

LNG gives the Group access to new natural gas resources and helps it diversify and secure its supply. It also enables the Group to develop new markets and to rationalize management of its gas supply portfolio. The LNG business is being developed in coordination with the Group's upstream activities (exploration & production) and downstream activities (natural gas supply and power production).

LNG supply and positions in liquefaction

ENGIE buys LNG under long-term (15-20 years) and medium-term (2-5 years) supply contracts. The Group also purchases spot LNG cargoes. The Group's contractual annual long-term commitments are as follows (as of December 31, 2015):

	Annual LT commitment [4]		
	In millions of metric tons of LNG *per annum (Mtpa)*	TWh equivalent	
Algeria (DES [1] for a portion of volumes)	6.8	102	-
Egypt	3.7	55	5% of Idku train 1
Nigeria (DES contract [1])	0.4	6	-
Norway (12% stake connected to the Snøhvit deposit)	0.5	7	12% of the Melkøya plant
Trinidad and Tobago [2]	2.0	30	-
Yemen	2.6	39	-
Shell (long-term DES contract) [1]	0.4	6	-
TOTAL (2015)	**16.4**	**245**	
United States (Cameron LNG)	4 [3]	60	16.6% of the Cameron LNG plant (Louisiana)
Russia (Yamal LNG)	1 [3]	15	

(1) Delivered ex-ship. The vendor unloads LNG cargoes directly at the customer's regasification terminal.
(2) The contract with Trinidad and Tobago is handled contractually by ENGIE Energy North America.
(3) LNG production will start in 2018.
(4) Nominal contractual quantities.

ENGIE LNG is also involved in the development of liquefaction plant projects:

- a liquefaction plant in the US: in May 2013, ENGIE signed an agreement to create a joint venture with Sempra Energy, Mitsubishi and Mitsui to develop, finance and build the Cameron LNG natural gas liquefaction plant at the Cameron LNG terminal in Louisiana. This agreement will give ENGIE access to an annual liquefaction capacity of 4 million tons from 2018. The foundation stone for the project was laid in October 2014;
- a liquefaction plant in Cameroon: the project, in cooperation with Société Nationale des Hydrocarbures (SNH), comprises construction of a liquefaction plant with a maximum annual capacity of 3.5 million metric tons of LNG, located near Kribi and supplied by a national transmission network connecting it with Cameroon's offshore natural gas fields;

(1) At the end of December 2014.

LNG destination and positions in regasification terminals

In 2015, LNG deliveries were made mainly in Europe and Asia, as well as in North and South America.

The Group has access to regasification capacity in six countries: France, the United Kingdom, Belgium, the United States, Chile and Puerto Rico.

In India in April 2012, ENGIE was selected as a strategic partner of the Andhra Pradesh Gas Distribution Corporation (APGDC) for the development of a floating import LNG terminal. With a capacity of 3.5 Mtpa, the terminal will be located at Kakinada on the east coast of India. ENGIE would have a stake in the terminal with access to regasification capacity. Shell joined this project in July 2014.

ENGIE LNG is also positioned in the Asian LNG markets undergoing high growth, with the signing of several sale contracts, including:

Long-term gas contracts:

- a contract for the sale of 0.8 million tons per annum of LNG to the Taiwanese company CPC from 2018 for a period of 20 years, provided by the Cameron LNG liquefaction plant;
- a contract for the sale of 0.3 million tons per annum of LNG to the Japanese company Tohoku Electric Power from 2018 for a period of 20 years, provided by the Cameron LNG liquefaction plant.
- a partnership contract with Japanese company Kansai Electric for the purchase/sale and optimization of 0.4 million tons per annum of American LNG from 2019, for a minimum period of four years and for up to 20 years.

Medium-term contracts:

- a contract for the sale of 2.5 million metric tons of LNG to the Malaysian company Petronas between 2012 and 2016;
- a contract for the sale of 2.6 million metric tons of LNG to the Chinese company CNOOC between 2013 and 2016;
- a contract for the sale of 0.8 million metric tons of LNG to the Japanese company Tohoku Electric Power between 2014 and 2017; and
- an agreement for the sale of 1.2 million metric tons of LNG to the Japanese company Chubu Electric between 2015 and 2017.

Retail LNG

- ENGIE is expanding its activity to new uses for LNG. In 2014, the Group signed a partnership agreement with Mitsubishi (Japan) and NYK (Japan) to develop LNG as a shipping fuel. This cooperation resulted in an order for an LNG supply vessel, currently under construction in South Korea and scheduled to enter into service in 2016. This boat will operate from the port of Zeebrugge.
- The Group also distributes LNG by tanker truck from several terminals in France, Belgium and the United Kingdom.

Maritime transport

ENGIE uses a fleet of LNG vessels that it adapts in size to meet its long-term commitments and its one-time opportunities. The chartering terms vary from a few days to 20 years or more. At the end of 2015, the ENGIE fleet included 14 LNG carriers:

- 3 ships owned by the Group: Matthew (126,540 m^3), Provalys (154,500 m^3), GDF SUEZ Global Energy (74,130 m^3);
- 2 ships of which the Group is a co-owner: Gaselys (154,500 m^3, owned by the NYK Group and ENGIE) and BW GDF SUEZ Boston (owned by the BW Gas Group and ENGIE); and
- 9 other ships chartered from other shipping companies.

In maritime transport, ENGIE also has an 80% stake in shipping management company GAZOCEAN (the other 20% stake is held by Japanese shipping company NYK), and a 40% stake in Gaztransport & Technigaz (GTT).

1.3.3.6.3 GTT (Gaztransport & Technigaz)

Role

GTT is the world leader in the design of cryogenic membrane containment systems used in the shipping industry for LNG transportation. GTT has more than 50 years of experience in its field.

GTT operates in 5 sectors: LNG carriers, FLNG (floating production, storage and unloading units for LNG), FSRU (floating storage and regasification units for LNG), land storage tanks and solutions for LNG use as fuel.

GTT aims to:

- provide the LNG industry with containment systems designed by the Company that enable the safe and reliable bulk transportation and storage of LNG;
- provide engineering, consultancy, training, maintenance assistance and execution of technical studies at every stage of the LNG chain; and
- adapt its technologies to promote new outlets for LNG, including by helping to develop LNG as a shipping fuel, and the transportation of LNG by sea or river in small or mid-sized vessels.

Principal key indicators

As at December 31, 2015:

- the order backlog contained more than 118 orders (LNG tankers, ethane tankers, FLNG [1], FSRU [2], and land storage tanks);
- GTT is the leader in its sector, representing more than 83% of global orders for LNG tankers, FSRU and FLNG, and the only three FLNG orders over 50,000 m^3, between 2010 and December 31, 2015;
- GTT employs around 380 staff, two-thirds of whom are engineers.

(1) Floating LNG production, storage and unloading units.

(2) Floating LNG storage and regasification units.

Activities

GTT has developed tried and tested technologies over the past 50 years. It is the only company that markets "membrane" containment technologies for ships with general approval for application on vessels. Applied to LNG tankers, these technologies allow for LNG to be transported in bulk in the ship, as the hull is protected by thermal insulation that maintains the LNG at cryogenic temperature (-162°C at atmospheric pressure). As the LNG is contained by a thin metal lining, this double membrane complies with regulatory requirements.

GTT's two main technologies whose implementation is comprehensively controlled, Mark III and NO 96, are well-known for their excellence and reliability. They are protected by patents. These technologies, and developments in them, are mainly used on tankers for LNG transportation. Meanwhile, thanks to long-term investments in research and development relating to its traditional technologies, GTT has developed new applications, particularly for floating units (FSRU and FLNG), and land storage tanks.

GTT's customers can access its technologies by implementing licensing agreements that provide them with protected rights to the technologies as well as the know-how of GTT, which supports its customers throughout their construction projects.

GTT also provides its customers with engineering services irrespective of whether they enter into a licensing agreement.

Lastly, GTT provides ad hoc services that include training, maintenance assistance, certification assistance and execution of technical studies.

GTT's technologies have long been accepted and endorsed by the classification companies in the maritime domain.

The Company, which has been ISO-9001-certified since December 2010, is now focused on fine-tuning its quality management system so that it can continue consistently to meet the quality standards required by its customers.

Nearly all of the Company's customers are in Asia (mainly China and South Korea).

1.3.4 Infrastructures business line

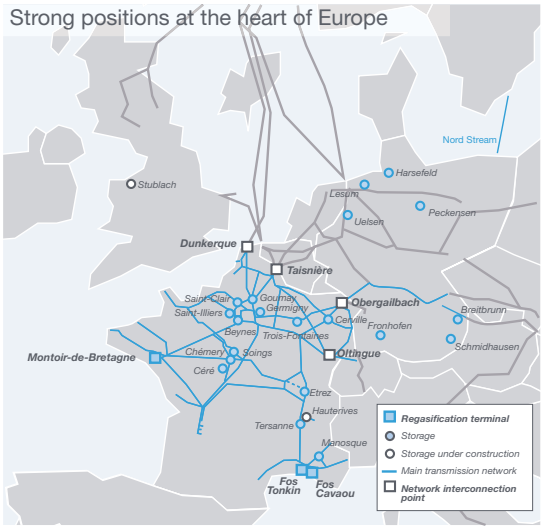
1.3.4.1 Role

The Infrastructures business line combines in a coherent body the Group's gas infrastructures in France, through four specialized subsidiaries in transmission, storage, LNG terminals and distribution activities. To achieve overall optimization, a number of foreign infrastructure management subsidiaries (in Germany and the UK) also report to it.

The combined positions of these subsidiaries and stakes make the ENGIE Group the leading European player in the gas infrastructures sector.

Its business model guarantees it stable, recurring revenues and cash flow that contribute effectively to the financial stability of the ENGIE Group.

Strong positions at the heart of Europe



1.3.4.2 Strategy

The Infrastructures business line and its subsidiaries aim to promote the development of their long-term activities by strengthening the position of natural gas in the French energy mix, and by seeking new sources of growth in France and internationally.

Their strategic reflections also aim to adapt the offer from subsidiaries in the short-term, given the situation marked by restrictions, uncertainty and opportunities.

Finally, they seek to combine day-to-day professional excellence (safety of property and persons and continuity of customer supply) and economic efficiency.

GRDF distribution network in France

1.3.4.3 Organization

The organization of activities within the Infrastructures business line is based on four independent subsidiaries which are all incorporated as French *sociétés anonymes*. In France, each of them operates, markets and develops facilities directly under their own responsibility: Storengy for its storage sites, Elengy for its LNG terminals at Montoir-de-Bretagne and Fos Tonkin, GRDF for its distribution network, and GRTgaz for its transmission network (pipelines and in-line compression stations).

In addition, three of them carry the Group's investment stakes in Europe:

- ENGIE storage subsidiaries in Germany and the UK are attached to Storengy;
- Megal and GRTgaz Deutschland in Germany are attached to GRTgaz;
- Elengy, the majority shareholder of Société du Terminal Méthanier de Fos Cavaou (Fosmax LNG), operates the terminal.

In accordance with the Energy Code, GRTgaz owns the assets necessary to accomplish its missions. The commercial and financial agreements and service provision contracts between GRTgaz and ENGIE or its subsidiaries are strictly regulated (cf. Articles L. 111-17 and L. 111-18 of the Energy Code). Some are subject to prior authorization from the Energy Regulatory Commission (CRE). In particular, service provision contracts by the "vertically integrated company" to GRTgaz (cf. article L. 111-10 of the Energy Code) must be strictly necessary to GRTgaz's activity for the purpose of ensuring the gas system's balance, security and safety.

1.3.4.4 Key figures

(in millions of euros)	2015	2014	Total change *(in %)*
Business line revenues	6,608	6,812	-3.0%
Revenue contribution to Group	3,055	2,994	+2.0%
EBITDA	3,402	3,274	+3.9%

1.3.4.5 2015 highlights

- April: Establishment for the first time in Europe of a common market area (*Trading Region South* or "TRS") made up of the GRTgaz South and TIGF regions to streamline operations and increase the attractiveness of the French gas market.
- June: Completion of the *Nouvelles données pour une Nouvelle donne* ("New Data for a New Deal") consultation process between the French government, local authorities and GRDF that will be used as the basis of a decree defining the data to be provided in the annual report.
- June: Elengy signed an agreement with Novatek Gas & Power to provide long-term transshipment services at the Montoir terminal starting in late 2017.
- September: First injection of biomethane into the GRTgaz transmission network in Chagny (eastern France).
- October: Implementation by GRTgaz of new gas balancing rules, taken from the corresponding "network code".
- October: Change in visual identity of GRDF and further differentiation of the names and visual identities of GRDF and ENGIE at the request of the CRE.
- November: Commissioning of the "Artère de Flandres" pipeline (23 km) and Hondschoote metering station on the French-Belgian border; connection of the LNG terminal in Dunkirk.
- November: Signing on November 30, 2015 of a 2015-2018 public service contract between the government and GRDF pertaining to service commitments to customers and local authorities, security of supply, safety of individuals, GRDF's contribution to the energy transition and support for households facing energy insecurity.
- December: Purchase by GRTgaz of gas lines to build the Val de Saône gas pipeline, subsidized by the European Commission.
- December: New offering of direct transshipment to the Fos Cavaou terminal.

1.3.4.6 Description of activities

A specific legislative and regulatory environment

ENGIE remains a vertically integrated group but its organization concerning gas infrastructure management activities has been strongly impacted by the implementation of successive European Directives regarding the organization of the domestic energy market and the laws transposing them. The infrastructure activities have all been affiliated.

In 2011, in its transposition of the "internal market in natural gas" Directive 2009/73/EC, known as the "Third Gas Directive", France opted for the ITO [(1)] system for the transmission network manager (GRTgaz). This system sets out the autonomy and independence rules with which GRTgaz must comply in respect of ENGIE while recognizing the entitlement of ENGIE to perform economic and management supervision. In 2012, the CRE certified the compliance of GRTgaz with these provisions.

After a thorough analysis of French legislation (especially the Energy Code) transposing the Third Gas Directive, the European Commission made some comments on its compliance with the Directive. France's Energy Transition for Green Growth Act of August 17, 2015, authorized the government to take measures to complete this transposition.

The legal framework within which the activities of the Infrastructures business line are carried out includes the General Local Authorities Code which specifies the scheme applying specifically to concession-based distribution networks, the Energy Code which reviewed and updated a substantial part of the other legislative provisions relating to natural gas, and the Environment Code which specifically determines the rules on the construction and operation of transmission infrastructures.

(1) Independent Transmission Operator.

The Energy Code imposes public service obligations on ENGIE and its subsidiaries, especially natural gas infrastructure managers. It provides for the French state to sign public service contracts with ENGIE, GRTgaz and GRDF to ensure the implementation of public service tasks. These contracts were signed in the fourth quarter of 2015. They cover the period 2015–2018. The French State publishes an indicative multiyear plan describing foreseeable changes in demand for natural gas, how this demand is met and investments scheduled to this end.

The CRE ensures the proper functioning of the market to the benefit of consumers and ensures compliance by infrastructure managers with their obligations: access to infrastructures, non-discrimination, and respect for the confidential nature of commercially sensitive information (CSI). Managers of the transmission and distribution networks must draft a Code of Conduct approved by the CRE. An independent compliance manager, reporting to the CRE, monitors its implementation.

The CRE sets the regulatory framework (rate of return for assets, tariff indexation mechanism, measures to encourage certain types of investment, etc.) and the corresponding infrastructure access tariffs.

1.3.4.6.1 Underground natural gas storage

The Group is the leader in underground storage in Europe, with a storage capacity of around 12.5 Gm^3.

France

As of December 31, 2015, Storengy was operating in France:

- 14 underground storage facilities (including 13 wholly-owned). Nine of these storage facilities are in aquifers (total useful storage volume of 9 billion m^3), four are in salt caverns (total useful storage volume of 1 billion m^3), and one is in a depleted field (useful storage volume of 80 million m^3); three of these sites have been mothballed (corresponding to a total useful volume of 800 million m^3);
- 51 compressors with a total power of 219 MW, needed to withdraw and inject natural gas;
- surface facilities required to process the gas withdrawn, before injection into the transmission network.

Legislative and regulatory environment in France

Underground storage facilities fall under the Mining Code and are operated pursuant to a concession granted by the French State following a public inquiry and competitive tenders. ENGIE holds mining rights that it farms out [(1)] to its subsidiary Storengy, which operates them and thus holds the corresponding authorizations.

According to the Third Gas Directive, access to storage is organized according to a system known as "negotiated system". Storage prices are set by Storengy in a transparent, non-discriminatory manner. The Energy Code and the decree of August 21, 2006 set the access conditions for storage facilities. This decree specifically sets out the conditions for granting and assigning storage capacity access rights and their distribution, and requires the authorized supplier or agent to maintain sufficient stores in order that, on October 31 of every year, they have enough natural gas to supply their customers from November 1 to March 31. An annual decree sets out the storage rights in question and related obligations. Pricing conditions vary according to the technical capacity of the reservoirs, the basic storage service and the type of additional operating services selected.

This system is expected to change very soon. Having consulted with stakeholders in April 2015, French public authorities are now seeking to regulate storage. An auction system would be set up to sell storage capacity under market conditions. In addition, a financial compensation mechanism would be established whereby storage operators could receive revenues as authorized by the regulator.

Germany

Storengy Deutschland GmbH, a wholly-owned subsidiary of Storengy, is one of the leaders on the German underground gas storage market, with over 8% market share by volume. The company owns and operates six storage sites for a working capacity of nearly 1.7 billion m^3 (three salt sites: Harsefeld, Lesum and Peckensen; and three depleted sites: Fronhofen, Schmidhausen and Uelsen). It also holds a 19.7% stake in the depleted site at Breitbrunn (992 million m^3 in total).

United Kingdom

Storengy UK Ltd, a wholly-owned subsidiary of Storengy, is dedicated to the construction and marketing of storage capacity in saline cavities at Stublach, in Cheshire. The planned storage capacity at the site is 400 million m^3 of useful volume, divided into 20 cavities. The UK's Office of Gas and Electricity Markets (OFGEM) granted it a third-party access exemption for the entire project.

Storage strategy

Storengy must adapt to an environment characterized not only by long-term adverse market conditions but also by the ongoing move towards an "energy transition". This means:

- optimizing and enhancing its business in its traditional markets;
- facilitating the momentum of natural gas as an energy solution, for example by contributing to new energy storage solutions (hydrogen, heat and biomethane storage);
- leveraging its core competencies (drilling, geoscience, risk management, etc.) on a global level and developing new activities such as geothermal energy.

1.3.4.6.2 LNG terminal activities

LNG terminals are port facilities that allow liquid natural gas (LNG) to be received and regasified. New services have been added since 2012: reloading and transshipment of LNG tankers and LNG truck loading (road transported LNG).

Elengy is the second-largest European LNG terminal operator (*source: GIIGNL*), with three LNG terminals in France. The facilities operated by Elengy have a total regasification capacity [(2)] of 21.25 billion m^3 (Gm^3) of gas per annum at December 31, 2015.

(1) Farming out: in mining law, the name given to an agreement by which the holder of the operating rights (Government or concessionaire) leases the mine to a third party in return for a royalty.

(2) Quantity of natural gas, expressed as a volume of gas in a gaseous state, that the terminal is capable of receiving over a given period as LNG and routing to the adjacent transmission network as a gaseous gas.

Fos Tonkin Terminal

Brought into service in 1972, Fos Tonkin is located on the Mediterranean coast and receives LNG primarily from Algeria. Its regasification capacity stands at 3 billion m^3 per year. Its jetty can accommodate ships carrying up to 75,000 m^3 of LNG and its tank has a total capacity of 150,000 m^3.

Montoir-de-Bretagne Terminal

Montoir-de-Bretagne, which was brought into service in 1980, is located on the Atlantic coast and receives LNG from various sources. It has a regasification capacity of 10 billion m^3 per year, two jetties that can accommodate ships transporting up to around 260,000 m^3 of LNG (Q-Max) and three tanks with a total capacity of 360,000 m^3. Renovation of the terminal was completed in 2013, allowing it to be operated at its current capacity until 2035.

Fos Cavaou Terminal

The Fos Cavaou terminal was brought into commercial service in 2010. It has a regasification capacity of 8.25 billion m^3 per year, a jetty that can accommodate Q-Max-size tankers, and three tanks with a total capacity of 330,000 m^3. The terminal is owned by a dedicated subsidiary, Fosmax LNG, in which Elengy has a 72.5% stake, while Total Gaz Electricité Holding France SAS holds a 27.5% stake. It is operated by Elengy.

Legal and regulatory environment specific to regasification activities in France

An LNG terminal is subject to classification for environmental protection purposes (so-called "Seveso" facilities) and, as such, its operation is subject to specific authorization by the prefecture. (These authorizations were obtained in 2008 for Montoir-de-Bretagne and Fos Tonkin, and in 2012 for Fos Cavaou).

Access to LNG terminals: principles and tariffs

Regulated tariffs for access to LNG terminals applicable since April 1, 2013 were adopted following the CRE ruling of December 13, 2012 and adjusted mid-period by the CRE ruling of December 17, 2014. They are scheduled to apply until March 31, 2017.

The tariff package consists of five terms depending on (i) the number of unload operations, (ii) quantities unloaded, (iii) use of regasification capacity, (iv) gas-in-kind and (v) seasonal adjustment. The RAB for Elengy and Fosmax LNG combined stood at €1,098 million at January 1, 2016 with an actual rate of return of 8.5%, before corporate income tax.

The LNG terminal activities strategy

Elengy's strategy is centered on the following key points:

- to optimize operation methods for each of the three sites in order to get best value from them regardless of their utilization rate;
- to create and implement new services at the terminals, similarly to what is being done in terms of reloading, transshipment between LNG tankers and the loading of tanker trucks;
- to search for growth opportunities internationally by highlighting the asset management and operations expertise developed over the past 50 years.

1.3.4.6.3 Distribution activities in France

GRDF develops, operates and maintains the distribution network, delivers gas for suppliers and consumers, and connects biomethane producers to the network. With regard to its distribution activities, it operates within the general framework set out in Section 1.3.4.1 but has specific features related to its classification as a local utility.

Legislative and regulatory environment specific to these activities

The Concession system

Each municipality where a gas supply is available grants a concession to an authorized distributor to operate the public service of gas distribution on its territory. Concessions are entered into or renewed based on standard specifications established jointly by the French national federation of concession-granting and state-controlled municipalities ("*Fédération Nationale des Collectivités Concédantes et Régies*" or "*FNCCR*") and GRDF. Concession-granting bodies exercise control to ensure the proper execution of the obligations resulting from these specifications.

Distribution structures belong to the municipalities even when they are built and financed by the distributor, who has an exclusive right to use them.

The Energy Code recognizes the entitlement of exclusive concession rights to historic concession-holders, i.e. GRDF and 22 local distribution companies (LDC), to exclusive service areas. As holders of a "distribution monopoly", they are the sole operators with whom municipalities may renew the concession. The grounds for terminating a concession contract early are strictly controlled (listed exhaustively) as is the date the concession can be terminated (cannot be in the first half of the contracted term). Termination also requires two years' notice and the concession-granting authority must pay compensation to the concessionaire for early termination.

Apart from the exclusive service areas of GRDF and the LDC, the Energy Code allows all municipalities not supplied with natural gas to entrust their public gas distribution to the operator of their choice.

The joint service specific to GRDF and ERDF

The Energy Code assigns a joint service, primarily responsible for construction, worksite project management, network operations and maintenance, and metering operations.

GRDF and ERDF are linked by an agreement defining their relationship within the joint service, the services it provides, and the distribution of the resulting costs. This agreement, signed for an indefinite period, may be terminated at any time, subject to 18 months' notice, during which period the parties undertake to renegotiate this agreement.

GRDF activities

At December 31, 2015, the French natural gas distribution network operated by GRDF was the leading network of this type in Europe due to its length (197,928 km) [(1)]. It has some 10.9 million delivery points [(2)] in the 9,528 municipalities served (8,947 of them based on exclusive rights assigned to GRDF), representing approximately 77% of the French population.

With 276 TWh of natural gas delivered in 2015, GRDF represented 95% of the French market for network gas distribution.

(1) Source: Internal benchmark from public data for 2015.

(2) As of December 31, 2015, 2,383,991 customers supplied in this way used an alternative gas supplier.

The average residual term of its concession contracts, weighted by volumes distributed, was 12.91 years at December 31, 2015.

The joint service's agents took more than 21.9 million gas meter readings in 2015 and made some 2.3 million technical interventions related to gas on customers' premises.

Access to the gas distribution network: principles and tariffs

The GRDF gas distribution tariff (the "ATRD 4") came into force on July 1, 2012 [1] for a period of four years. It applies to the GRDF exclusive service area. The structure of this tariff is consistent with the previous tariff (compensation on asset base and consideration of operating expenses). A Charges and Revenue Regularization Account (CRRA) offsets the difference between some projected and actual income and expenses, specifically for the income relating to the volume of gas transported.

The regulated asset base (RAB) includes all distribution activity assets such as pipelines and connections, pressure regulation stations, meters and other technical and IT-related equipment, depreciated on a straight-line basis to determine the annual capital expenses. Pipelines and connections, which represent 92% of the assets in the RAB are depreciated over 45 years. The RAB stood at €14,226 million, subject to CRE validation, at January 1, 2015 with an actual rate of return of 6%, before corporate income tax.

The tariff structure changed on July 1 each year according to a percentage variation equal to "inflation + 0.2%" (excluding the effect of the CRRA), based on productivity of 1.3% per annum on net operating expenses. On July 1, 2015, the tariff increased by 3.93%, including the effect of the CRRA and covering the costs of the GRDF advanced metering infrastructure between mid-2013 and late 2015. In addition, periodic updates to the catalogue and the price of services (suppliers, customers and biomethane producers) are now subject to rulings by the CRE.

Following the CRE's discussions on March 10, 2016 to decide on the standard tariff for the use of GRDF's public networks for natural gas distribution, a new tariff (known as "ATRD 5") will take effect on July 1, 2016 for a period of four years. The tariff's application, calculation method and key principles (incentivizing regulations, CRRA) are similar to those of the previous tariff (ATRD4, applied from July 1, 2012 to June 30, 2016).

The RAB includes all distribution activity assets. The rate of return applied to the RAB is 5% (real, pre-tax). The 100 basis point cut from the rate used by the CRE for the previous tariff is mainly due to the decline in interest rates from the levels that prevailed during the previous tariff period. The tariff covers operating costs and introduces a cost-control incentive for operators. A CRRA offsets the difference between projected and actual income and expenses, specifically for the income related to the quantities of gas transported (to cover the climate change impact).

The tariff structure will increase by 2.76% on July 1, 2016 and will then change on July 1 of each year according to a percentage variation equal to "inflation - 0.8%" (excluding the impact of CRRA).

Lastly, a specific regulatory framework for the Gazpar smart meters project was defined in the CRE ruling of July 17, 2014. It is based on the allocation of a remuneration premium of 200 basis points on the metering assets brought into service during the industrial deployment phase (2017-2022), accompanied by a capped global mechanism to encourage compliance with all the project's aspects, i.e.:

- biennial monitoring of compliance with the provisional timetable for the project's deployment, with penalties for delays;
- annual monitoring of the unit cost of the meters;
- annual monitoring of the system's performance;
- annual monitoring of the investment expenditure on the IS and smart meter chain.

GRDF strategy

GRDF's strategy is revised every four years. At the end of 2015, GRDF reported on its previous company project and set new objectives for 2018 as follows:

- operational excellence in the performance of its businesses in order to be recognized as committed professionals;
- promote natural gas as an energy of the future by demonstrating its relevance to the energy mix on a daily basis;
- create a model with all businesses for a company that is responsible, more open and collaborative.

1.3.4.6.4 Transmission activities

Around 75% of GRTgaz is owned by ENGIE, with 25% owned by Société d'Infrastructures Gazières (SIG), a consortium composed of CNP Assurances, CDC Infrastructures and Caisse des Dépôts.

GRTgaz develops, operates and maintains a transmission network, manages the natural gas flows that flow through it, and markets network access services to gas suppliers. It also manages an interest in the Megal Germany transmission network.

Facilities

GRTgaz wholly owns one of the longest high-pressure natural gas transmission networks in Europe [2] representing 32,323 km in France at December 31, 2015. The main network (8,346 km) sends natural gas from entry points (LNG terminals, interconnection points with international pipeline networks) to the regional network. The regional network (23,977 km) then directs it towards some 4,500 delivery points serving industrial customers and distribution networks. GRTgaz operates 27 compression stations.

In 2015, GRTgaz sent 53.6 billion m^3 of gas across the French network (590 TWh).

In addition, GRTgaz has investments in the Megal transmission network in Germany (1,167 km), representing a cumulative length [3] of 429 km.

(1) CRE ruling of February 28, 2012.

(2) Source: internal benchmark from public data for 2010.

(3) Cumulative length of the network: length in kilometers of the pipes for the network in question multiplied by the percentage stake held by ENGIE.

Legal and regulatory framework for gas transmission in France

This activity takes place within a general framework (defined in section 1.3.4.5.) aimed at ensuring the independence of the network manager.

The Energy Code states that the construction and operation of natural gas transmission pipelines must be authorized by a competent administrative body, the conditions for which are set by Articles L. 555-7 *et seq.* and Articles R. 555-2 *et seq.* of the Environment Code. Authorizations are nominative and non-transferable. Entities that obtain natural gas transmission authorizations must comply with the terms and conditions of the authorizations.

On November 30, 2015, the French government and GRTgaz signed the first public service agreement setting out the objectives and procedures for implementing the public service missions(Art. L. 121-46 of the Energy Code). The agreement complies with the regulatory framework (allocated resources, objectives) and takes into account not only security of supply and continuity of delivery but also the new challenges facing the gas industry (integration and attractiveness of the French gas market, promotion of natural gas and renewable gas, development of new uses, and so on).

Access to the gas transmission network: principles and tariffs

Pursuant to its ruling on the pricing decision of December 13, 2012, the CRE defined the methodology and set the tariffs known as "ATRT 5", which were to enter into effect on April 1, 2013 for a period of four years. The tariff structure is updated annually on April 1. Each year, it is drawn up to cover the income authorized by the CRE, according to observed inflation data and the best available forecasts of capacity subscriptions for the year in question.

The blueprint for net operating expenses includes a productivity objective. An incentive for cost control in investment programs is introduced, along with a revision clause after two years enabling adjustment of the blueprint for net operating expenses for 2015 and 2016, under certain conditions.

The basic actual rate of return before corporate income tax applied to the regulated asset base (RAB) is 6.5%. An increase of 3% is retained for investments already made, creating additional capacity on the main network. In terms of new investment, the allocation of this increase is restricted to the Val de Saône projects and decentralized odorization of natural gas.

The CRE ruling on December 10, 2015 led to an average increase of 4.6% in the GRTgaz tariff at April 1, 2016.

The RAB 2015 for the transmission network stands at €7,579 million (subject to validation by the CRE).

Transmission Europe

Megal GmbH & Co. KG ("Megal"), 49% owned [(1)] by GRTgaz Deutschland (a wholly owned subsidiary of GRTgaz), and 51% by Open Grid Europe, has a pipeline network connecting the Czech and Austrian borders to the French border. Megal has granted rights to use its assets to GRTgaz Deutschland and to Open Grid Europe, which separately manage the transmission service purchased by the shippers on their part of the network. GRTgaz Deutschland GmbH markets approximately 58% of the capacity of the Megal network.

Transmission business strategy

The GRTgaz strategy aims to ensure its development in the long term both in France and internationally by:

- contributing to a better integration in the European markets either through investments or agreements negotiated with other transmission network managers (for example, with Switzerland's FluxSwiss and Italy's Snam Rete Gas to create the first major physical entry point of natural gas in France from Switzerland, in Oltingue, Haut-Rhin;
- promoting new uses of gas (for industry or mobility, for example), developing renewable natural gas through the injection of biomethane into the transmission network, and promoting research into maximizing the benefit of surplus renewable energy (power to gas);
- continuing to grow internationally, in countries where gas consumption is growing fast, in close collaboration with other Group entities.

(1) In 2013, GRTgaz sold its shares in Austrian carrier BOG and increased its stake in MEGAL from 44% to 49%.

1.3.5 Energy Services business line

1.3.5.1 Role

Environmental and energy efficiency is a European priority in the fight against global warming and one of the major aims in sustainable development policies for companies and local authorities worldwide.

It is one of the major elements in the energy transition, and is the core business of the Energy Services business line. More-efficient energy use means obtaining optimal service that reduces both the overall energy bill as well as its environmental impact.

European leader in energy services, the Energy Services business line offers, mainly via the Cofely brand, environmental and energy-efficient solutions to its industrial, tertiary, local authorities, public administration, and infrastructure customers through services which are:

- multi-technical (e.g. electrical, thermal or HVAC engineering and system integration);
- multi-service (engineering, installation, maintenance, operation and facility management);
- multi-energy (e.g. renewable energy sources and gas); and
- multi-country.

They cover the entire technical services value chain from design, installation and maintenance of equipment to the management of energy and utilities, multi-technical maintenance and facility management, in the long term. The business line supports its customers throughout the life cycle of their facilities and their sites, allowing them to get the most out of their assets, manage their costs more efficiently, improve their energy efficiency, and focus on their core activity. It develops local energy generation plants that include an increasing range of renewable energy sources, such as biomass, geothermal and solar energy. In addition, it is capable – in terms of technical expertise, project management, contract relations, and geographical networking – to meet the challenges that numerous industrial and service sector customers face:

- the need to refocus on core activities and outsource the search for integrated multi-technical and multi-service solutions, in both the private and public sectors;
- the need to implement energy-efficient solutions;
- modernization of public institutions: health care establishments, university campuses, military or penitentiary sites, etc.;
- the need to pay increasing attention to mobility and safety with, consequently, a major need to upgrade rail, road, and urban transport infrastructures;
- new forms of contracts that allow performance-based indexing or the sharing of savings made.

1.3.5.2 Strategy

The Energy Services business line has the following strategic priorities:

- to consolidate its position as the European leader of B2B energy efficiency solutions providers by emphasizing sales momentum and developing innovative products and services;
- to expand its international presence in targeted geographical regions through organic growth as well as acquisitions;
- to strengthen the technological content of its activities and develop innovation;
- to reinforce synergies with the Group's other business lines;
- to continue to improve its profitability by optimizing processes, mobilizing internal synergies, and developing cross-functional products and services.

1.3.5.3 Organization

Business organization by country

The business line is composed of six activities: Engineering, France Facilities Systems & Maintenance, France Services, Networks, Benelux, and International.

Each activity is managed by a single manager responsible for its results and reports directly to the business line's General Management. The business line's management is deliberately decentralized to ensure that decisions are made as close to operations as possible. Commercial and technical cooperation between the Energy Services business line entities and other ENGIE entities is encouraged in order to achieve optimum efficiency in terms of sharing technical and commercial expertise and costs.

The Energy Services business line offer covers the entire multi-technical services value chain:

- design engineering;
- electrical, mechanical and HVAC engineering; system integration; large projects; industrial maintenance;
- multi-technical management (e.g. electrical, thermal and HVAC engineering and system integration);
- on-site management of energy networks and utilities as well as urban networks including mobility and public lighting;
- facility management.

1.3.5.4 Key figures

(in millions of euros)	2015	2014	Total change *(in %)*
Revenues	16,001	15,673	+2.1%
EBITDA	1,227	1,127	+8.9%

The business line is present in almost 40 countries, most of them in Europe, where it is active on some 1,300 sites.

1.3.5.5 2015 highlights

- January: In France, Cofely Services signed a partnership with start-up Partnering Robotics to develop services with the Diya One robot.
- February: In France, Cofely Réseaux teamed up with Kyotherm, Omnes Capital and Storengy to design and operate the geothermal network for the future *Villages Nature* holiday complex in Marne-la-Vallée.
- February: In the UK, a joint venture was created between Cofely (51%) and the Cheshire West and Chester Council to develop customer and integrated workplace management services. Under the contract, 300 municipal employees will be transferred to the joint venture.
- March: In Germany, through its subsidiary HGS, Cofely acquired the Services division of SEVA, which specializes in the construction and operation of cogeneration plants.
- April: In France, Cofely Ineo signed a 12-year energy performance contract for public lighting in the town of Sainte-Adresse.
- May: In South Africa, Tractebel Engineering signed a contract with Eskom to oversee the construction of six new generators and to replace some steam generators at the Koeberg plant.
- June: In France, Cofely Services was awarded a 25-year public service contract for the future biomass-fueled urban heating network in Périgueux.
- June: In Belgium, Cofely renewed a 15-year maintenance contract for the facilities of NRB, Belgium's leading IT services company.
- July: In the UK, Cofely signed a five-year facility management contract with brewing company Molson Coors.
- July: In Chile, Cofely acquired IMA, a provider of maintenance services for industrial companies, purchased 80% of Energia del Sur (a biomass producer), and signed a four-year facility management contract with Mall Plaza for a shopping mall in Santiago.
- August: In Italy, Cofely signed a five-year energy efficiency contract with the La Scala opera house in Milan.
- September: In the United States, as part of a public-private partnership, Cofely won a 15-year contract to provide Operations & Maintenance (O&M) services for the Detroit Metro Region Freeway Lighting.
- September: In Dubai, Cofely Besix FM won two new facility management contracts with the Emirates Group, for its headquarters as well as the Emirates Aviation University.
- September: In Australia, Cofely acquired TSC, which is active in building maintenance in Australia and New Zealand.
- September: In France, Cofely Axima acquired Nexilis, which specializes in HVAC engineering, and Promat, a specialist in fire protection.
- October: In the United States, through its subsidiary Ecova, Cofely acquired the start-up Retroficiency, which specializes in remote energy audits of buildings.
- December: in Australia, Cofely acquired DESA, a leading provider of communications, electrical and energy efficiency solutions in the country.

1.3.5.6 Description of activities

Engineering (Engineering Division)

Tractebel Engineering is one of the leading engineering firms in Europe. Operating in 20 countries, it provides engineering and consulting solutions to public and private-sector clients in the electricity, nuclear, gas, industry, and infrastructures sectors. Tractebel Engineering offers a range of innovative and long-term solutions throughout the life cycle of its customers' facilities: feasibility studies, basic engineering, assistance with project management, assistance with operations and maintenance, and dismantling.

Systems, Facilities and Maintenance (France SIM, Benelux and International Divisions)

Through its specialized subsidiaries, such as Cofely Axima, Cofely Endel, Cofely Ineo and Cofely Fabricom, the Energy Services business line provides its customers with multi-technical services to extend the working life and improve the reliability and energy efficiency of their facilities. The Energy Services business line operates in the tertiary, industrial, energy, transport and local authority sectors and provides innovative solutions for:

- electrical engineering and communication and information systems;
- HVAC engineering and refrigeration;
- mechanical engineering and industrial maintenance.

Energy services (FSE, Networks, Benelux and International Divisions)

Cofely develops services dedicated to energy and environmental efficiency for customers in the tertiary and industrial sectors and helps local authorities with sustainable urban development. Cofely offers solutions for:

- improving the energy efficiency and limiting the environmental impact of buildings (technical management-maintenance, energy efficiency agreements, etc.);
- generation, operation and distribution of local and renewable energy sources (cogeneration plants, industrial utilities, heating and cooling networks, etc.);
- integration of services (facility management, multi-site management, public-private partnerships, etc.).

Electricity generation and distribution (International Division)

The Energy Services business line, with its subsidiary SMEG, distributes electricity and gas in Monaco, and produces and sells electricity in the Pacific region with its subsidiaries EEC (New Caledonia), EDT (French Polynesia), EEWF (Wallis and Futuna) and Unelco (Vanuatu) as a partner in the development of these territories.

Main markets

The Energy Services business line is active in four main markets:

- industry, which accounts for about 33% of its business. The business line's major industry customers are the oil industry, the paper industry, chemicals, power generation, steel making and food processing;

- private services, accounting for some 28% of its business, mainly in offices and business centers, shopping malls, data centers and the private residential market;
- public services, which accounts for 22%. The business line has a strong presence in multiple occupancy buildings, public administration, hospitals, university campuses, etc.;
- the infrastructures segment, for the remainder of its activity. The business line carries out installation and maintenance work for the electricity and gas networks, ports and airports, street lighting networks, etc.

1.3.5.7 Regulatory framework

The main regulatory change impacting Energy Services in France was Law 2015-992 of August 17, 2015, known as the Energy Transition for Green Growth Act. To help meet ambitious targets for greenhouse gas emission reductions, changes to the energy mix, and lower energy consumption, the law provides numerous measures to encourage the growth of energy efficiency and energy solutions at the regional level. With the exceptional complementarity of its activities and areas of expertise, the business line is ideally positioned to meet the resultant demands.

At the European level, there is greater awareness of the crucial role heating plays on the path to a low-carbon economy. The European Commission is set to release its “Heating and Cooling Strategy”, which will be incorporated into laws providing a framework for the development of heating and cooling networks and better deployment of energy efficiency in buildings.

These changes will only be strengthened by the momentum achieved during COP21.

1.3.6 Solairedirect

On September 3, 2015, ENGIE acquired Solairedirect, which has reported to the Corporate office since December 31, 2015.

Solairedirect is a company with global reach in the solar energy sector. With its market share of 13.29% (total) et 22.37% (2015) in France as of December 31, 2015 in terms of megawatts (MW) of capacity into service [(1)] and its proven experience in developing photovoltaic power units in France and abroad, the company is taking opportunities to expand in the emerging sector of competitively priced solar energy in various markets worldwide.

Most of Solairedirect's business is focused on large-scale photovoltaic power units, including ground-mounted solar farms and roof installations generating more than 1 MW of power.

Solairedirect operates in three areas, aiming with this structure to capture maximum value at each life stage of a photovoltaic project:

- "Development and Construction", which encompasses project development, engineering, and the supply and installation of photovoltaic power units,
- "Asset Servicing", involving operating, maintenance and management services relating to photovoltaic power units under long-term contracts (20-25 years), and
- "Investment Management", involving the management and enhancement by Solairedirect of its portfolio of investments in photovoltaic power units.

At December 31, 2015, Solairedirect had developed, built and marketed 49 solar farms with total installed capacity of 392,5 MW in France and 9 solar farms with total installed capacity of 120.3 MW in South Africa, India, the US and Chile. The Group is currently installing 17 solar farms in France, Chile and India which will have total installed capacity of 229.5 MW when complete.

Capitalizing on its experience in France and through its network of investors and leading financial institutions in the solar energy market, Solairedirect is positioned to take advantage of emerging opportunities offered by markets combining high levels of sunlight, easy access to financing and a market dynamic that favors the competitiveness of solar energy compared to other energy sources. Apart from the solar farms mentioned above, which had already begun selling energy or were being installed at December 31, 2015, Solairedirect has potential projects with total capacity of 5,855 MW in various stages of development, including 655 MW at the backlog [(2)] stage, 1,807 MW at the pipeline stage [(3)], and 3,393 MW at the qualified lead stage [(4)]. Backlog projects account for 67% of Solairedirect's business, while pipeline projects and qualified leads account in photovoltaic markets outside France account for 94%, a sign of the increasing globalization of its activities.

Solairedirect offers investors in the photovoltaic industry a comprehensive range of turnkey solutions, enabling them to invest in photovoltaic facilities generating renewable power with no greenhouse gas emissions (GHGs) under financial conditions that offer high cash flow visibility. For each project, Solairedirect makes a strategic decision either to transfer control of the project company that it has created to equity investors at the time of the investment decision (the greenfield stage), in which case, it provides, installs and puts into service production facilities on behalf of the investors under one or more turnkey contracts, or it makes this transfer after the photovoltaic facility has begun selling electricity and has reached the provisional or definitive reception stage (the brownfield stage). In the latter case, Solairedirect benefits in its consolidated financial statements from recurring revenues from electricity sales from the time that the facility is commissioned until control of the project company that owns the operational photovoltaic facility is transferred to the investors. In both cases, Solairedirect may provide operational, maintenance and management services for the solar facilities under long-term contracts.

(1) Calculation issued from statistics of EnR RTE-ERDF-SER-ADeF Panorama 2015.

(2) Before the construction phase, in the case of projects not based on the sale of electricity at wholesale prices, projects for which the Group has entered into or is certain to enter into an electricity sales contract, and intends, in the next 12-18 months, to obtain the remaining elements necessary for project financing in the jurisdiction concerned (control of the site, permits, network connection agreements); in the case of projects based on the sale of electricity at wholesale prices, projects for which the Group has the necessary elements for project financing in the jurisdiction concerned.

(3) Projects for which the Group has not yet obtained the elements required to qualify the project as a backlog project, but for which the Group has completed one of the following stages: (i) control of the site and the required permits are obtained; (ii) a network connection agreement has been signed or is certain to be signed, (iii) the project has been selected or qualified after a call for tenders including an initial selection phase or (iv) a tender has been put forward as part of a call for tenders that does not have an initial selection phase.

(4) Potential projects for which development costs have been approved by the Group and internal resources have been allocated to carry ithem out.

1.4 Real estate, plant and equipment

The Group owns or leases a significant amount of industrial real estate around the world. Many Group activities involve operating very large plants that the Group only partially owns.

As of December 31, 2015, the Group operated electricity power plants, natural gas terminals and storage facilities in over 40 countries.

The tables below show the main facilities currently in operation, either wholly or partially owned by the Group. Leased properties are covered in Notes 22 and 23 of Section 6.2 "Consolidated Financial Statements".

POWER PLANTS (CAPACITY > 400 MW AND FULLY CONSOLIDATED, EXCL. UNITS UNDER CONSTRUCTION)

Country	Site/plant	Total capacity [1] *(MW)*	Type of plant
Germany	Wilhelmshaven	731	Coal
	Zolling	538	Coal-, biomass-, fuel oil-fired
Saudi Arabia	Marafiq	2,744	Natural gas
	Ju'aymah	484	Natural gas
	Shedgum	484	Natural gas
	Riyadh PP11	1,729	Natural gas
Australia	Hazelwood	1,554	Lignite
	Loy Yang	953	Lignite
	Pelican Point	479	Natural gas
Bahrain	Al Dur	1,234	Natural gas
	Al Ezzel	954	Natural gas
	Al Hidd	929	Natural gas
Belgium	Amercœur	451	Natural gas
	Coo	1,164	Hydraulic pumping
	Doel	2,905	Nuclear
	Drogenbos	508	Natural gas
	Herdersbrug	480	Natural gas
	Tihange	3,008	Nuclear
Brazil	Cana Brava	450	Hydroelectric
	Estreito	1,087	Hydroelectric
	Jirau	3,075	Hydroelectric
	Ita	1,450	Hydroelectric
	Jorge Lacerda	773	Coal
	Machadinho	1,140	Hydroelectric
	Salto Osòrio	1,078	Hydroelectric
	Salto Santiago	1,420	Hydroelectric
Chile	Mejillones	869	Coal-fired and natural gas
	Tocopilla	963	Natural gas, coal- and fuel oil-fired
United Arab Emirates	Fujairah F2	2,000	Natural gas
	Shuweihat 1	1,500	Natural gas
	Shuweihat 2	1,510	Natural gas
	Taweelah	1,592	Natural gas
	Umm Al Nar	2,240	Natural gas
Spain	Cartagena	1,199	Natural gas
	Castelnou	791	Natural gas

(1) Capacity of assets in which ENGIE holds a stake, all of which are taken into account irrespective of the real ownership percentage.

Country	Site/plant	Total capacity [1] *(MW)*	Type of plant
USA	Astoria 1	575	Natural gas
	Astoria 2	575	Natural gas
	Armstrong	620	Natural gas
	Bellingham	527	Natural gas
	Blackstone	478	Natural gas
	Coleto Creek	635	Coal
	Hays	893	Natural gas
	Midlothian	1,394	Natural gas
	Northfield Mountain	1,146	Hydraulic pumping
	Troy	609	Natural gas
	Wise County Power	746	Natural gas
France	CombiGolfe	435	Natural gas
	CyCoFos	490	Natural gas and steelworks gas-fired
	DK6 (Dunkirk)	788	Natural gas and steelworks gas-fired
	Génissiat	423	Hydroelectric
	Montoir-de-Bretagne	435	Natural gas
Greece	Viotia	570	Natural gas
Indonesia	Paiton	1,220	Coal
	Paiton 3	815	Coal
Italy	Torre Valdaliga	1,442	Natural gas
	Vado Ligure	1,373	Natural gas and coal-fired
Kuwait	Az Zour North.	668	Natural gas
Oman	Al-Rusail	665	Natural gas
	Barka 2	678	Natural gas
	Barka 3	744	Natural gas
	Sohar	585	Natural gas
	Sohar 2	744	Natural gas
Pakistan	Uch 1	551	Natural gas
Netherlands	Eems	1,931	Natural gas
	Flevo	873	Natural gas
	Rotterdam	731	Coal
	Gelderland	592	Coal- and biomass-fired
Peru	Chilca	805	Natural gas
	ILO 31	564	Fuel-oil fired
Poland	Polaniec	1,717	Coal-, biogas- and biomass-fired
Puerto Rico	Ecoelectrica	507	Natural gas
Portugal	Elecgas	840	Natural gas
	Pego	576	Coal
	Turbogas	990	Natural gas
Qatar	Ras Laffan B	1,025	Natural gas
	Ras Laffan C	2,730	Natural gas
United Kingdom	Deeside	515	Natural gas
	First Hydro	2,088	Hydraulic pumping
	Rugeley	1,026	Coal
	Saltend	1,197	Natural gas
Singapore	Senoko	3,201	Natural gas and fuel oil-fired
Thailand	Gheco One	660	Coal
	Glow IPP	713	Natural gas
Turkey	Ankara Boo	763	Natural gas
	Marmara	480	Natural gas

(1) Capacity of assets in which ENGIE holds a stake, all of which are taken into account irrespective of the real ownership percentage.

UNDERGROUND NATURAL GAS STORAGE (> 550 MM3 OF TOTAL USEFUL STORAGE VOLUME [1])

Country	Location	Gross useful volume (Mm^3) [1]
France	Gournay-sur-Aronde (Oise)	1,310
France	Germigny-sous-Coulombs (Seine-et-Marne)	820
France	Saint-Illiers-la-Ville (Yvelines)	690
France	Chémery (Loir-et-Cher)	3,710
France	Céré-la-Ronde (Indre-et-Loire)	570
France	Étrez (Ain)	640
France	Cerville (Meurthe-et-Moselle)	650
Germany	Uelsen	840

(1) Useful storage volume held by ENGIE, all of which is taken into account irrespective of the real ownership percentage.

METHANE TERMINALS

Country	Location	Total regasification capacity ($Gm^3(n)$ per annum) [1]
France	Montoir-de-Bretagne	10
France	Tonkin (Fos-sur-Mer)	3
France	Cavaou (Fos-sur-Mer)	8.25
USA	Everett	6.3
Chile	Mejillones	1.7
Puerto Rico	Penuelas	0.8

(1) Capacity of assets held by ENGIE, all of which are taken into account irrespective of the real ownership percentage.

1.5 Innovation, research and technologies policy

1.5.1 Innovation

To be leader in the energy transition in Europe, the Group relies on innovation to meet its customers' new requirements.

ENGIE created a new entity in February 2014 called "Innovation, Marketing and New Business", intended to support changes on mature energy markets and the convergence between energy services and information technologies. Its aim is to position the Group at the forefront of these changes by developing additional growth vectors and new ways of doing business within the Group. Four priority sectors have been identified by the Group:

- smart energy management;
- decentralized generation and energy storage;
- cities, regions and mobility;
- energy efficiency and home comfort.

New tools and processes have been deployed to foster entrepreneurial creativity and to ensure that innovation promotes the Group's long-term commercial development. A social network for innovation, "innov@ENGIE", was launched in mid-2014 for Group employees. This internal tool is intended to boost the innovation dynamic in the Group and promote innovation among employees. At December 31, 2015, innov@ENGIE had over 8,700 members. On average, five new product or business ideas are submitted each week. At the end of 2015, 350 ideas had been submitted.

To turn these ideas into products, an incubation process for employee projects was created. At December 31, 2015, 14 teams of Group employees were developing projects in external incubators created from partnerships primarily in France (Paris Région Lab, Le Village, Agoranov, Atlanpole, Euratechnologie, and Midi-Pyrénées), Belgium (Costation and WSL), the Netherlands, the United Kingdom and Brazil.

This process enriches existing initiatives such as the Trophées de l'Innovation ("Innovation Awards"), an in-house competition held each year for innovative projects submitted by Group employees. In 2015, the seventh annual Innovation Awards attracted around 500 submissions.

To strengthen its links with the innovation ecosystem of its host regions, the Group partners with major innovation-themed events and has launched around 20 calls for projects to startups. ENGIE launched a number of public initiatives, such as a "Hackathon" on drones and "Innovation Days" in Marseille and Bordeaux. In June 2015, ENGIE's "Innovation Week" saw the organization of 120 events involving Group employees, startups and entrepreneurs in 21 countries.

The ENGIE New Ventures investment fund, with a €100-million endowment, was launched in May 2014 to back innovative startups. This fund was designed to take minority stakes in developing startups linked to the Group's activities by offering them dual leverage: financial leverage through investment and operational leverage with the Group's subsidiaries.

At December 31, 2015, there were eight new startups in fields such as energy storage (AMS), networks dedicated to connected devices (Sigfox), load shedding (Kiwi), drones (Redbird), nanotechnologies (APIX), big data (Tendril) and mobility (Powerdale). Lastly, the Group is

spearheading cross-cutting projects to foster the emergence of new products such as Terr'Innove, a regional energy management system.

1.5.2 Research and Technologies

ENGIE conducts research in an effort to harness and bring to maturity tomorrow's technologies, which will set its businesses apart. Research is also carried out to improve operational performance. This research, which relies on partnerships with globally renowned organizations, helps promote widespread recognition of the Group's expertise and allows the Group to win new contracts.

In 2015, Group expenditure on research and technological development amounted to €190 million.

More than 1,000 researchers make up the Research and Technologies network, which includes the Research & Technologies Department and all Group entities conducting research specific to their fields of activity.

1.5.2.1 Priorities

In 2015, the Research & Technologies department:

- stepped up its activities and continued its international expansion with new laboratories in Masdar (United Arab Emirates) and Singapore, adding to the laboratory opened in Chile in 2014;
- created new centers of expertise such as the Drones Lab and 3D Printing Lab, following the Battery Lab launched in 2014;
- intensified its pilot-project policy with the start of construction on the Gaya project (gasification of dry biomass) and launch of new pilot projects in four areas: connected devices, low-temperature heat recovery, decentralized energy, and tidal energy farms;
- was heavily involved in COP21-related initiatives, proposing technical solutions (a green gas-fired cogeneration system to heat the Le Bourget building, selected following research conducted at CRIGEN), conducting public awareness campaigns on smart home energy management ("Smarty21" game), organizing a major international competition, the "Decarbonathon", focused on research into solutions to reduce CO_2 emissions and the urban ecological footprint (in partnership with the World Economic Forum's Young Global Leaders, the National Physical Laboratory, Climate-KIC and the French national intellectual property office, INPI).

Corporate office research programs support technology intelligence and coordinate prospective research in priority areas. The major achievements in 2015 in priority research areas are as follows:

- urban energy use: development of "PowerZee", a gamified app that allows campus residents at Nanyang University (Singapore) to participate in saving energy; contribution to the development of a 3D solutions simulator for French sustainable cities ("Astainable®"); completion of field tests to confirm the effectiveness of the 18 kW "Robur" natural-gas heat pump for the single-family home market; completion of fuel cell tests in laboratories and at customer sites as part of a European project;
- green mobility: testing of high-performance electric-vehicle recharging solutions in conjunction with Powerdale; collaboration developed with the Francorchamps driving school to train technicians in natural gas engines;
- digital technologies and smart energy management: quantification of the value provided by energy storage solutions to grid managers faced with increases in intermittent renewable generation; study of the opportunity to create value by cross-comparing data from various Group entities; selection of a project to test the interoperability and cyber security of digital home solutions;
- renewables and distributed energy: study of distributed energy systems and related technology building blocks; launch of new collaborative projects focusing on distributed energy, floating offshore wind power and floating tidal turbines; comparative trials in real conditions of the first organic photovoltaic modules; continuation of work on demonstration plants of second-generation biomethane production (Lyon, France) and concentrated solar thermodynamic power (Mejillones, Chile); pilot tidal energy farm (Raz Blanchard, France);
- hydrogen: continuation of work to develop electrolyzers to produce synthetic methane and methanol: demonstration and industrial specifications for flexibility;
- liquefied natural gas (LNG) and gas chains of the future: development of the LNG fuel sector by studying changes in LNG characteristics over time, performing life cycle analyses and developing applications to optimize LNG transmission and distribution chains; development of the retail LNG sector by studying infrastructure options for a small-scale LNG distribution offer;
- CO_2 reduction and recovery: investigation into CO_2 recovery methods such as hydrogenation for methane or methanol production, or biological methods for the production of renewable liquid fuel.

Activities coordinated by the Research & Technologies Department are carried out in the Group's specialized centers for research and expertise around the world which serve the Group's operating entities and external customers.

1.5.2.2 An international network of research units

- CRIGEN (*Centre de Recherche et Innovation Gaz et Énergies Nouvelles*) is the Group's laboratory dedicated to natural gas, new energies and emerging technologies. Located in the Paris region, it has 345 employees, seven test centers, one scientific computing center, and customers in over 30 countries. It also runs the Group's new laboratory in Singapore. CRIGEN develops working methods that promote innovation.

  Key achievements in 2015:
  - innovation: Organization of the third edition of "CRIGEN Innovation Days" with 15 Group entities, "Data Search Engine & Analytics Hackathon" in partnership with the Information Systems department; participation in the first drone "hackathon";
  - hosting of two startups at its incubator to help develop process engineering solutions: Lidron (measurements taken via laser sensor) and Cédalion (drone testing to detect problems in pipelines);
  - use of bio-polymers to replace chlorine in the treatment of microorganisms in the water channels of regasifiers at Elengy's LNG terminals;
  - commissioning of a test lab for GRDF's Gazpar smart meters and networks;

- completion of performance tests on a condensing boiler connected to smart devices.

- Laborelec is the Group's electricity technology laboratory. Located near Brussels, it has branch offices in the Netherlands and Germany and runs the Group's laboratories in the Middle East and Chile. Laborelec has a staff of 236. Its expertise focuses on reducing environmental impact, improving facilities availability and maintenance, and energy systems of the future.

  Key achievements in 2015:

  - technical assistance with facility commissioning at EnerSur plants in Chile, development of technical expertise in gas turbines, and development of photovoltaic plants;
  - updating of the Group's cyber-security guidelines, support in their roll-out, and creation of a support center for Group entities;
  - technical support for the WindFloat floating wind farm project (Portugal) in the areas of protection against corrosion, electrical system architecture, component welding and facilities monitoring;
  - technical assistance provided to the Doel and Tihange nuclear power plants for drawing up the report on the reactor restart (qualification of non-destructive tests, analyses of the causes of anomalies detected);
  - application of methods to assess the effectiveness of the carbon capture processes that have been developed: campaign to monitor emissions from the carbon capture pilot plant at the Mongstad test center (Norway).

- Cylergie, the Lyon-based EIG, conducts research into energy services for Cofely Services and other entities from the Energy Services business line. Its key research areas are heating and cooling networks, renewable energy and thermal storage, energy efficiency, comfort and indoor air quality, health risk management, and controlling the environmental impact of Group facilities.

  Key achievements in 2015:

  - roll-out of Sigfox connected devices to Cofely Services business lines;
  - incorporation of innovative solutions from a number of startups in the development of an interior air quality offer;
  - development of a "virtual building" to test regulation systems.

- Cofely Ineo, which reports to the Energy Services business line, is based in France and structures its R&D and innovation activity around the notions of systems and "systems of systems". It has expertise in energy, communication networks and information systems.

  Key achievements in 2015:

  - continuation of the Smart Grid project in a business park in Toulouse, with the development of battery and flywheel storage solutions;
  - development of a "SmartCity" multi-technology platform based on "OpenControl©" technology (Barcelona);
  - study into anti-drone solutions.

- Tractebel Engineering is a global engineering consulting firm specializing in energy and complex infrastructures. It offers services covering the entire project life cycle. The firm's R&D activities focus primarily on renewable energy, nuclear power, hydraulic engineering and electricity networks.

  Key achievements in 2015:

  - research in relation to collaborative projects focusing on the functioning of the future pan-European electricity grid;
  - inclusion of electric mobility in grid management taking into account the development of renewable generation.

- The Gaztransport & Technigaz BU focuses its R&D on improving the performance of its technologies and developing new product and service offers with high technological content;

- The International Exploration & Production BU carries out R&D in geosciences and operations to meet the operating needs of its subsidiaries and the Group's underground storage needs. Its research has led, for example, to the development and testing of treatment solutions for the process water of its offshore operations;

- With regard to nuclear power, R&D activities focus primarily on surface or geological storage of nuclear waste, final shutdown and dismantling of nuclear facilities, performance improvement of existing plants and safe extension of their lifespan, optimized fuel use, societal impacts of nuclear energy, and the safety of third-generation reactors/technologies and SMRs (Small Modular Reactors), particularly the innovative concept of immersed SMRs that offer rapid access to nuclear power generation.

02 Risk factors

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02 Risk factors

The material risks to which the Group is exposed, based on its own assessment, are described below. Other risks not mentioned or unknown to date could also affect the Group. If these risks were to materialize, they could have a significant negative impact on the Group's operations, financial position and earnings, image and outlook, and/or on the ENGIE share price.

2.1 Risk management process

2.1.1 Enterprise risk management policy

The Group has adopted a policy of Enterprise Risk Management (ERM), whose principles are consistent with professional standards (including ISO 31000, Federation of European Risk Management Associations). The policy sets out ENGIE's ambition to "better manage its risks in order to ensure its performance".

The Group's Enterprise Risk Management policy applies to the Group's business processes and controlled entities, while observing the rules of governance that apply to each entity.

This policy promotes risk-taking at a reasonable level from a legal perspective, which is acceptable to generally held opinion and economically viable. It stipulates that all managers are risk managers. Generally, the Management Committees of the Group's entities are the main bodies that determine the actions to be taken to manage risk, except where an ad hoc risk committee has been created, such as for market risk.

To achieve this aim, the Group has appointed the Director of Audit, Risk and Internal Control as Chief Risk Officer, who oversees Risk Management Department. The Chief Risk Officer's role is to ensure that the Group has adequate expertise in all areas for effective risk management. Risk analysis and coordination of action plans are performed in collaboration with all the Group's functional lines.

Each year, the Group's ERM process begins with a risk review by the General Management Committee: each priority risk identified is coordinated by a member of the General Management Committee or by the head of the functional department concerned. The ERM campaign is then launched across the Group, setting out guidelines for risk management throughout the year. Finally, the Audit Committee examines the risk review and issues an opinion on the effectiveness of the risk management system, before reporting to the Board of Directors (see Section 4.1.4 "Standing Committees of the Board of Directors").

Knowledge of risks resulting from feedback from operating entities and functional departments is supplemented by interviews with directors, analysis of publications by external observers and review of major events. The current risk management system has been maintained and strengthened in the new Group organization.

2.1.2 Crisis management

ENGIE may have to face crisis situations. The Group has defined a crisis management and communication policy, which sets out general operating principles and the roles of the various participants, and it has set up a dedicated organization.

The Group is thus equipped with a warning, analysis and decision-making system to manage crises at the relevant organizational level.

The efficiency of the system and the way that it is structured (emergency plans, business continuity plans, etc.) are regularly assessed using internal controls and appropriate training exercises.

2.1.3 Risk and insurance coverage

The ENGIE Insurance Department is responsible for preparing, establishing and managing insurance programs in the areas of Group asset protection (against property damage and losses in earnings), personal protection, third-party claims (civil liability) and automobile insurance and prevention.

For each of these areas:

- the amounts insured depend on the financial risks resulting from potential claim scenarios and coverage conditions offered by the market (available capacities and price conditions);
- financing is optimized: low or moderate-level hazard risks are covered by self-insurance plans, through deductibles and retentions or through the use of the Group's reinsurance company, whose commitments on a cumulative basis represent a maximum estimated loss of approximately 0.3% of the Group's 2015 revenues.

However, the Group could, in certain cases, be required to pay out sizable compensation that the current insurance program does not cover or could incur very high costs that its insurance policies do not reimburse or reimburse inadequately. Although the Group has excellent insurance coverage, specifically with regard to civil liability and environmental risks, it could be liable beyond the maximum insured amount or for events not covered (primarily due to the common insurance exclusions).

2.1.3.1 Civil liability

A Directors and Officers civil liability program covers the representatives of ENGIE, its subsidiaries and Group representatives within its equity holdings.

A general civil liability program (including for environmental damage) has been taken out for all the Group's entities in a total amount of €800 million, all damages combined. This program operates either at the first euro of liability or in excess of the underlying coverage taken out by some entities (usually with cover of $50 million).

2.1.3.2 Nuclear civil liability

As an operator of nuclear power plants in Doel and Tihange (Belgium), Electrabel's civil liability is governed by the Paris and Brussels Conventions, which aim to ensure that victims receive compensation and to encourage solidarity among signatory countries.

This liability falls exclusively on the operator of the facility where the nuclear accident occurs. In exchange for this strictly objective liability, the amount of compensation is capped per accident and establishes a 10-year statute of limitations. The signatory states to the conventions also created a mechanism that provides additional compensation beyond this maximum amount.

The nuclear civil liability insurance program taken out by Electrabel complies with the Belgian national law requiring the operator to provide financial guaranties or to take out civil liability insurance up to €1.2 billion.

2.1.3.3 Property damage

The Group's business lines have property insurance covering the facilities that they own, lease or manage on behalf of third parties, with the exception of transmission and distribution network pipelines and heating networks in France. The main programs provide cover based either on new replacement value or on contractual limits per loss event. In the latter case, the limits are set on the basis of major scenarios in accordance with insurance market rules and available offers (cost and capacity).

Insurance covering business interruption and additional operating costs is taken out based on each risk analysis and in consideration of existing assistance plans.

Construction projects are covered by "Erection All Risks" programs taken out by the owner or operator, project manager or prime contractor.

Exploration-production activity, which is carried out primarily offshore, is covered by a specific insurance program tailored to this sector's risks and in accordance with its practices.

2.1.3.4 Marine liability

An insurance contract covers LNG transportation by LNG vessel, limited to €50 million per shipment.

Marine insurance contracts cover liability as ship owner (limited to $6 billion, except for war risk limited to $500 million and pollution risk limited to $1 billion) or as charterer (limited to $750 million). Damage to ships is covered up to their agreed value.

2.1.3.5 Employee protection programs

The operating entities develop programs covering employees against the risk of accidents and medical expenses, in accordance with legislation in effect and pursuant to company agreements.

2.2 Risks related to the external environment

The Group is sensitive to the structural and economic risk factors that affect the energy sector. These risks are all analyzed and measured as part of strategic planning processes that allow the Group to anticipate and prepare for changes in the external environment. The Group's research and innovation policy also helps to deal with strategic developments (see Section 1.5.1 "Innovation").

2.2.1 Economic environment

2.2.1.1 Group markets

The Group's business depends on economic activity, which may lead to reduced demand for energy and related services from the customers. Changes in supply and demand on the energy markets affect the price of commodities (gas, oil, coal, electricity, etc.). Such changes to the external environment directly affect the Group's business volumes and margins.

In the OECD area, the structural decline in the demand for energy is a result of improvements in energy efficiency (new and renovated buildings, networks, and industrial processes), voluntary regulations and an environmentally responsible attitude on the part of consumers (private and public).

In non-OECD countries, energy demand is growing, but is sensitive to the level of economic growth in these countries.

In view of these risks, monitoring mechanisms have been set up and business models adjusted. The Group's geographic and sector diversity provides a means of mitigation. In addition, the Group has a range of energy services that it offers to industrial, business and residential customers, both inside and outside Europe, to meet the specific requirements of the energy transition.

In Europe, the lack of substantial growth, the rise of renewables and the competitiveness of coal are generating excess capacity in thermal power plants, impacting the Group's generation fleet. Furthermore, stagnating demand for natural gas could also result in excess capacity in Europe's gas infrastructure, despite the fact that new uses are being developed, such as biogas and power to gas.

Policies aimed at reducing CO_2 emissions, renewable energy support systems, and other regulatory and tax systems increase the complexity of the competitive balance among different forms of energy and may compromise the profitability of existing assets and create uncertainty over relevant technology choices for the future (including gas, renewables, nuclear, and coal).

In the short term, the Group has optimized its generation fleet and is managing market risk (see 2.5.1 "Commodities market risk"). The Group closed or mothballed several thermal generation units in 2015. In the medium-term, the Group intends to propose a new energy market model in Europe, specifically as part of the Magritte initiative [(1)]. In the longer term, a technology watch enables the Group to develop strategic scenarios that anticipate changes in the energy mix.

2.2.1.2 Competitive environment

In its different businesses, the Group competes with players with increasingly diverse profiles, both in terms of size – with major international players and local emerging players – and sectors. The decentralization of systems due to the energy transition has lowered barriers to entry to some activities (photovoltaic power, services), allowing smaller players to compete with the Group.

The emergence of digital and smart energy technologies has impacted the gas and electricity value chain, as well as services in general, with new competitors from information technology, telecommunications and equipment manufacturers. The Group is rationalizing its operations and processes to adapt its cost structure, enhance its integrated position on the value chain, and develop offers tailored to changes in its environment.

2.2.1.3 Changes in the business model

The energy sector is changing rapidly: in technologies (solar and wind power and electricity storage), in customer requirements (climate change), and in the structure of competition and increased digitization in the sector. In response to these changes, the Group has established a structure dedicated to innovation and new activities with representatives in its organization, in order to provide tailored solutions to its customers and prepare for future sources of growth.

The Group is focused on developing renewable energy sources and developing services specifically for the energy transition. The roll-out of the Group's new organization, even if it involves the same execution risk as any major project, will enable the Group to implement its development strategy.

2.2.2 Regulatory and political environment

The legal and regulatory landscape for the Group's businesses is changing in terms of both environmental and social issues and due to energy sector regulation.

2.2.2.1 Environmental and social legislation

The Group's businesses are subject to a host of laws and regulations that address environmental protection, promote energy systems with zero or low greenhouse gas emissions, reduce energy consumption, protect health and develop safety standards. The legislative bills and regulatory texts mentioned below would particularly impact the Group's strategy and results:

- European climate change and energy policy to the 2030 horizon is aimed at promoting energy efficiency, reducing CO_2 emissions, and increasing the contribution of renewable energy sources to the energy mix;
- the French Energy Transition Act provides greater visibility with regard to carbon targets and steering of the energy transition. Vigilance must be exercised when implementing certain measures as these changes take place, particularly support mechanisms for renewable energy, competitive tenders for hydroelectric concessions, and measures to combat fuel poverty, the scope of ambition and timetable of which present real challenges for all stakeholders;
- changes in European and national regulations on CO_2 allowances and prices have affected the CO_2 market in Europe and have consequences for the relative competition between natural gas and coal power generation. Increasing numbers of countries are adopting such regulations. At the European level, the post-2020 review of the European GHG allowance trading system is a major factor. In the non-ETS sector, a carbon price has been established in the French Energy Transition Act to calculate national taxes on the consumption of energy products and natural gas;
- the amendment of the policy document referring to the best available techniques for large combustion facilities could lead to substantial changes at some European sites. Similarly, the new directive for medium-sized combustion facilities adopted in 2015 could bring new restrictions;
- the EU Directive on energy efficiency adopted in late 2012 has to be transposed into the various Member State laws and entails, in France, for example, a doubling of the Energy Savings Certificates obligation in the third period (2015-2017), which could have an impact on the Group's margins in France;
- the EU regulation on data protection, which is scheduled for early 2018, may have an impact on ENGIE's commercial activities in the coming years;
- the bill providing a framework for biodiversity regulation in France includes a provision to include the "Avoid, Reduce, Offset" principle in the environmental code. This principle has also been applied to the regulations of other countries.

The increasing implementation of "soft law" worldwide requires the Group to analyze its activities through an additional lens that includes even more input and expectations from stakeholders.

The Group is rationalizing its generation fleet and its project portfolio so that it can take advantage of opportunities, and is working to limit all of these risks, principally as part of a proactive environmental and social policy (see Section 3.3 "Environmental information"). In 2015, the Group decided to no longer pursue new developments in coal, believing that a carbon price will steadily be established in the world's various regions and that coal-fired power plants will be adversely affected in the future.

(1) See 1.1.4 Strategic priorities.

2.2.2.2 Sector regulations

In some Member States and at European level, and in some other regions including the United States, Asia-Pacific, Mexico and Brazil, public measures have been implemented in the energy sector through regulation and the extension of regulatory powers in the area of competition. They can occur by the high taxation of the profits made by energy companies, the withdrawal of funds established for the dismantling of nuclear power plants, by changes to the market operating rules and supply security, by the regulator's intervention in the deregulated sector to encourage the development of competition or else by the desire to hand back control of utilities to local authorities. National budget deficits and high levels of indebtedness contribute to increase this risk.

Some regulatory changes may alter the risk profile of the Group and impact its earnings and its business model:

- on February 25, 2015, the European Commission published the key elements of its "Energy Union" policy. Some developments are positive, mainly because they introduce greater visibility, such as the formalization of an energy and climate framework for 2030 based on a stronger carbon market, and the redesign of the electricity market model. Others might have a variable impact on the Group's activities, such as new rules on security of gas supply, the reworking of the Third Energy Package and the oversight of intergovernmental agreements. In the work under way on the new electricity market structure and its evolutions in 2016, the Group is paying close attention to the framework that will enable coordinated development of national capacity markets;
- the implementation of common rules for the European internal electricity and gas market (including the electricity and gas network codes) are intended to complete the creation of a real internal energy market. These changes may require the technical adjustment of our operations;
- in February 2013, the European Commission adopted a Council Directive proposal to levy a tax on financial transactions whose entry into force is scheduled for January 1, 2017. The implementing provisions and exemptions, specifically the criteria for categorizing businesses as financial institutions, have yet to be agreed by the 11 Member States participating in enhanced cooperation;
- the guidelines for state aid for energy and the environment, published in 2014, have impacted the Group's activities, particularly national support mechanisms for renewable energy sources (to gradually integrate them into the market) and energy efficiency, infrastructure financing, environmental tax exemptions and fee waivers linked to the financing of renewables (preferential rates for industrial partners), and capacity payment mechanisms;
- in Brazil, the Group is exposed to regulatory changes on electricity markets. For example, drought conditions could result in restricted availability of hydro generation and greater exposure to market volatility to replace lost production;
- in the United States, the developments in progress and changes in electricity market regulation could lead to uncertainty in terms of the Group earnings in this region;
- in the Asia Pacific region and in Mexico, energy market deregulation and tariff renewal could also increase uncertainty about the Group's performance.

Through concerted action as part of the "Magritte" initiative, which brings together the CEOs of the European energy companies, and through its presence in EU and Member State institutions, the Group tries to anticipate any legislation likely to affect it, and formulates proposals for decision-makers. The Group also partially diversifies regulatory and legislative risk by conducting its business in a number of different countries. Some regulatory developments also offer new market opportunities for the Group's activities (see the description of the legislative and regulatory framework in which the various entities operate in Section 1).

2.2.2.3 Controlled, administered or regulated tariffs

In France, a portion of the Group's sales are made in the context of regulated tariffs. French laws and rules, European regulation and decisions by regulators (in particular, the French Energy Regulation Commission (CRE) for decisions on tariffs for access to certain infrastructures) may affect the Group's sales, profits or profitability, in the event of the partial impact of procurement, infrastructure and commercial costs on natural gas selling prices or the partial impact of costs on gas infrastructure access tariffs or electricity sales from renewable energy.

Also in France, the opening of the electricity market to suppliers other than the traditional operator, in addition to the opening for very large customers, is still limited and could be jeopardized by the emergence of price reductions arising from regulated tariffs that replace and compete with commercial offers.

Price control mechanisms also exist in other countries, specifically Belgium, Italy, Romania, Brazil and Mexico, for energy generation, distribution and sales.

2.2.2.4 Social acceptability

To engage in its activities, the Group must hold various permits and authorizations. Dealing with the regulatory authorities concerned to obtain or renew these can be a long and costly process. In addition, the Group may face opposition from the local population or associations during the installation or operation of certain equipment, or in relation to public energy price protests.

The Group therefore implements widespread consultation upstream of its projects, forges partnerships with civil society and ensures the positive economic impact of its activities, in line with community expectations (see Section 3.4 "Social information").

2.2.2.5 Country risk

The Group is present, operates or procures natural gas in a growing number of countries. The Group is therefore exposed to risks including changes in regulation, sovereign default, convertibility, expropriation, corruption, acts of war, the extra-territorial effects of some legislation, etc. Moreover, in some countries, the Group might be unable to defend its rights before the local courts in the event of a dispute with governments or other local public entities.

The diversity of the Group's locations results in some mitigation of country risk. Warning thresholds by country or group of countries enable the Group's exposure to be monitored. The Group also manages these risks within partnerships or contractual negotiations adapted to each location. It chooses its locations by applying a formal investment procedure that appraises risk. The inclusion of international arbitration clauses in contracts is applied as widely as possible. Regular monitoring of economic and non-economic indicators relating to corruption, human rights, and inequality is done in each country to assess the Group's exposure to country risk.

2.2.3 Impact of climate

Significant climate changes (mainly in temperature, but also in terms of water availability[1] and wind) from one year to the next can cause substantial fluctuations in the electricity and gas supply-demand balance. These factors, which combine price and volume impacts and which may intensify due to the future consequences of global warming, have a direct effect on the Group's income.

Beyond annual changes, there has been a warming of the average climate, although periods of extreme cold are possible in Europe. Regulations require suppliers to provide storage capacity according to their customer portfolio. If supplier bookings are not adequate, it could lead to strong pressure on the supply-demand balance for gas in Europe, including France.

Although the Group cannot protect itself against fluctuations in demand, it is able to modulate its gas purchases and rationalize its electricity production, which enables it to adapt its production and supply costs (see Section 2.3.1 "Purchases and sales").

In the longer term, the Group might be faced with an increase in extreme events (flooding, water shortage, drought, etc.). The Group is looking at ways of combining sustainable development and managing the impact of climate change on its business, particularly as part of a proactive environmental and social policy (see Section 3.3 "Environmental information").

2.2.4 Reputational risk

The Group is exposed to reputational risk, both directly and indirectly, especially when the Group's values, ethics, operational excellence or legitimacy as a utility are called into question.

In 2015, GDF SUEZ became ENGIE, in order to give the Group greater visibility in relation to its commitment to the energy transition. The flagship brand "ENGIE" (name and logotype) is registered in over one hundred countries. As a vital part of the Group's intangible corporate assets, the brand is constantly monitored to protect it against any fraudulent use that could harm the Group's image.

Through its policies, organization, procedures and governance, the Group endeavors to prevent operational risks (Section 2.3 "Operating risks") and smear campaigns that could affect its reputation.

(1) Availability of water resources for a dam or waterway, dependent on rainfall.

2.3 Operating risks

2.3.1 Purchases and sales

2.3.1.1 Purchase and sale of natural gas

The Group has established a portfolio composed in part of long-term, take-or-pay contracts (see Section 1.3.1.6.1 "Central Western Europe").

In case of major gas supply interruption (for example, due to an interruption of Russian deliveries or an interruption of transit in Ukraine) or an interruption of LNG supply (for example, from Yemen or Egypt), the replacement cost for gas, including transportation, could be higher and affect the Group's margins. To mitigate this risk, the Group has a number of tools for flexibility and modulation (flexibility in long-term contracts, storage and regasification capacity, and purchasing in the marketplaces) as well as a diversified portfolio.

Prices of long-term purchase contracts (partially indexed to the price indices of oil products) may be decorrelated from selling prices or prices in the gas markets. This spread might have a significant impact on the Group's results. Long-term contracts include price adjustment clauses, so that the economic balance between producer and buyer can be altered. The Group's buy/sell margin may therefore change according to price adjustments in LNG or gaseous gas contracts and the state of the gas market in general.

Negotiations in recent years have led to the integration of market indices in long-term contracts and/or to the reduction of the difference between the contract price and market price. They have also led to increased frequency of price revisions.

2.3.1.2 Purchase and sale of electricity

The Group is an electricity producer in Europe, the United States and Australia, where the profitability of its assets is linked mainly to prices in electricity markets. The economic climate or decisions by some states regarding the electricity sector may lead to volatility in electricity prices, which may have an impact on Group earnings.

The Group may also have to buy power to supply its customers, for example to cover any non-availability of its fleet. These purchases are optimized but could generate extra supply costs.

The Group monitors changes in its risk exposure and makes decisions accordingly (see Section 2.5.1 "Commodities market risk").

2.3.1.3 Operational risks related to the purchase and sale of energy

The main risks related to regulated sales are outlined in Sections 2.2.2.2 "Sector regulations" and 2.2.2.3 "Controlled, administered or regulated rates".

In its portfolio optimization activities for physical assets (power plants, long-term contracts, etc.) and customers, as well as in managing the associated financial positions, the Group is exposed to operating risks such as fraud, execution error, and process and system failure. Operations are monitored via appropriate processes, and risks are taken into account as part of the Group's internal control program, "INCOME". In addition, a specific system for increased monitoring of operating risks has been set up in some of the Group's entities.

2.3.1.4 Purchase risks and supply chain risks (excluding energy)

The performance of the Purchasing and Procurement function and its ability to manage the associated risks affect all of the Group's activities. Management of purchasing and supplier risks is monitored at Group level: specifically, external risks that are regarded as having the biggest impact, such as the failure of a major supplier, or the dependence of a Group entity on a critical supplier, or vice versa.

The implementation of purchasing management by homogenous supplier market has strengthened processes for selecting and qualifying suppliers, and has enabled their performance to be monitored, thereby limiting the impact of these risks on the Group's activities. Similarly, for new projects, risk management covers specific purchase and supplier/subcontractor risks (see Section 2.3.2.2 "Risks related to development and major projects").

2.3.2 Management of assets and development

2.3.2.1 Optimization of the asset and investment portfolio

External expansion, notably by means of acquisitions, could lead the Group to issue equity securities, or to borrow. Acquisitions present risks related to integration difficulties and failure to achieve expected benefits and synergies. Risks related to the valuation of assets or liabilities or non-achievement of expected results could arise at the end of the acquisition process, resulting in provisions for asset impairment. The Group also sells assets for which it may retain certain liability guarantees.

The acquisition processes implemented by the Group, particularly during due diligences, aim to assess to the greatest possible extent the uncertainties related to these risks in such cases. The resulting appraisal depends on the quality of the information transmitted to the Group and is limited by the judicial and regulatory framework applicable under local corporate law.

2.3.2.2 Risks related to development and major projects

The Group bases its growth on various major industrial construction projects, such as gas and electricity plants and dams, where it usually acts as owner and/or operator. The profitability of these assets – whose service life is several decades – depends greatly on cost control and construction times, the operational performance of the industrial asset, external phenomena (e.g. natural disasters and strike actions), regulatory and fiscal changes and changes in the competitive environment and markets over the long term, which could reduce the profitability of certain assets or result in lost revenues or asset impairment.

The Group is also responsible for the facility design and construction phases of some projects. Although these projects are always subject to in-depth studies and the Group has acknowledged expertise, construction deadlines may not always be met resulting in penalties, construction costs may be higher than anticipated, the facilities' performance may not comply with the specifications and subsequent accidents may trigger the Group's civil liability, professional indemnity or criminal liability. This could have a negative impact on the Group's image, financial position, or earnings.

The Group has strengthened operational monitoring and oversight of projects and is monitoring the portfolio of projects at Group level, which provides the warnings needed to launch corrective action. A policy governing supervision of construction projects and joint project management methods have reinforced existing mechanisms within the entities executing industrial projects.

In addition, the implementation of contract management arrangements allows for better control of some of these risks, including through the use of indemnification mechanisms, in respect of our customers, as well as our suppliers and subcontractors. Insurance underwriting allows for insurance claims to be indemnified and also improves prevention.

2.3.2.3 Risk linked to nuclear development

The Group actively pursues its projects in the development, construction and operation of nuclear power plants. The Group has teamed up with Toshiba Westinghouse (AP1000 technology) in the United Kingdom, and is also a member of a consortium formed with Japanese groups Mitsubishi Heavy Industries and Itochu (ATMEA1 technology) in Turkey.

It should be noted that these projects are currently still in the initial development stage, and that the Group's financial exposure is therefore not material.

The Group has established governance principles for development, construction, operation and decommissioning based on its experience as a nuclear power plant operator. It is also active in employee recruitment, training and retention, both for facilities in operation, service entities and Group projects.

2.3.2.4 Risks relating to partnerships and minority investments

Partnerships and acquisitions of minority interests are one of the ways in which the Group can share the economic and financial risks inherent to some projects, by limiting its capital employed and allowing it to adapt more appropriately to the specific context of local markets (see Note 3 to Section 6.2 "Consolidated financial statements"). As much as possible, the Group protects itself against the risks resulting from joint control or lack of control (such as a lack of information or an impact on the Group's reputation) with the signing of shareholders' agreements on governance and information reporting, and with the role of the director representing the Group.

However, changes to the project, the economic situation, the partner's strategy or even the local political and economic environment may, in some cases, lead to the failure of a partnership or changes in its control or governance, a change of control or a partnership's governance, or to a disinvestment.

These situations may lead the Group to develop contractual arrangements for deadlock resolution or, in the event of conflict with the partner(s), to seek a solution before the relevant courts or arbitration bodies.

2.3.3. Legal risks

The Group faces legal risks in all its businesses and on global markets. These risks arise from the legal and regulatory framework, from operations, from partnerships, from purchases of companies, and from contracts signed with customers and suppliers (see respective subsections of this Chapter 2).

In the course of its operations, the Group is engaged in a certain number of legal disputes and arbitration procedures, and is also subject to investigations and procedures. The main investigations and procedures are described in Note 27 of Section 6.2. "Consolidated financial statements". With the exception of these procedures, and to the Company's knowledge, no other governmental, legal or arbitration procedure (including a suspended or threatened procedure [(1)] exists that is likely to have, or has had, a material impact on the financial position or profitability of the Company and/or Group in the past 12 months.

2.3.4 Ethical risks

Any breach of the ethical principles of the Group could expose it to ethical and legal risks (see Note 27 to Section 6.2 "Consolidated financial statements").

Ethics policies are established to avoid, as far as possible, the occurrence of such risks. Reporting to the General Secretary, who is the Group's Compliance Officer, the Ethics and Compliance Division promotes their implementation within the group, through the managerial line and the network of Compliance Officers.

Ethical risks (see Section 3.1 "Ethics and compliance") are analyzed each year and action plans are defined. Moreover, risks relating to human rights are specifically assessed at the operational level as part of the Group's risk analysis process.

In addition, the policy on the analysis of ethical risk relating to investment projects and human rights guidelines applicable to the whole Group require the entities to analyze corruption risks and human rights risks for every new project.

2.3.5 Risks related to human resources

2.3.5.1 Workforce competences

Developments in the Group's activities (the impact of digitization, for example), as well as its international growth, require new know-how and the mobility of certain employees. In addition, demographic aging affects specific technical sectors. An active policy of mobility between entities and between activities, combined with policies for professionalization, for the development of support functions, for the recognition of experts, and for attractiveness, through remuneration measures and incentives tailored for the environment, is also implemented (see Section 3.2.1 "Human resources development policies"). The Group has strengthened its workforce forecasting through its professional observatory. The opening of negotiations for a labor agreement will make skills forecasting the main focus of the consultation with social partners.

2.3.5.2 Employee commitment and managerial behaviors

Rapid developments in the energy markets and the new company-wide project will bring major changes, requiring support and guidance for employees and managers. These changes must be given meaning so that all line managers can buy into them and employees can play an active role in their mobility and become change agents.

The Group invests in the promotion of behavior that helps in the development of staff, relying in particular on the deployment of the "ENGIE Management Way" (see Section 3.2 "Social information"), and emphasizes the prevention of psycho-social risks. Particular attention is also paid to the managerial chain to provide assistance in its role in change management.

(1) This term means investigations or controls that have begun.

2.3.6 Risks related to health and safety and protection of Group assets

2.3.6.1 Health and safety at work

The Group is committed to eradicating fatal accidents and reducing occupational accidents and illnesses. The Group health and safety policy was agreed with the union federations at European level and subsequently worldwide. An action plan was drawn up for 2010-2015, and a new plan was defined for 2016-2020 (see Section 3.2.6 "Health and safety policy").

Addressing the risk of death in the workplace is part of the overall system for controlling the risk of occupational accidents. On this basis, a specific plan for the sustainable prevention of fatal accidents was launched in 2012. It relies specifically on adherence to the nine "life-saving rules" in all of the Group's businesses.

2.3.6.2 Employee safety

The international scope of the Group means it may be exposed to a number of health and safety risks, the threat of which warrants a specific organization entrusted to the Safety Department which has established a country watch. In this way, the Group continually evaluates the risks of terrorism, armed conflicts and confrontation with criminal organizations. Geographic areas are subject to classification according to specific prevention and protection measures. To accomplish this mission, the Group relies on State services as well as specialized providers. Should a specific situation occur, the crisis unit can be mobilized to provide exceptional resources, for instance in the event of an evacuation.

2.3.6.3 Protection of tangible and intangible Group assets

The Group's sites and industrial or tertiary facilities, which make up its tangible Group assets, may be exposed to malicious acts. Information, whether digital, physical or even verbal in form, constitutes the Group's intangible assets and may also be exposed to the same malicious acts.

To combat this type of risk, the Group implements a policy for the protection of tangible and intangible Group assets, covering technical (including IT), legal, managerial and organizational areas. Sensitive sites where tangible corporate assets are located are subject to protective measures tailored to the local situation and revised according to the actual threat status. The Group is continuing to act to protect its intangible Group assets, in order to deal with any reported incidents and to prevent any internal or external action aimed at capturing and using sensitive information. An Information Security Committee, with members from all Group functional departments and chaired by the General Secretary, coordinates and manages the Group's security policies. It reports to the General Management Committee.

2.3.7 Risks related to information systems

The introduction of new technologies, the evolution of industrial control systems and the development of new uses (e.g. social networking) expose the Group to new threats. Cyber-attacks and hacking attempts are increasingly targeted and carried out by specialists, and can target the company along with its customers or partners. More generally, IT system failure could result in information losses or leaks, delays and extra costs that could be detrimental to the Group's activities or image. New regulations on information security require strengthening our protection measures.

In response, the Group has set up prevention and security measures for its information systems and data that are tailored to the risks identified. Large-scale attacks are managed by the Incident Management Committee (IMC), which reports to the Safety Department. In connection with its internal control policy and security policy, these organizational, functional, technical and legal security measures are subject to continuous controls (alert monitoring, infrastructure supervision, etc.), testing operations (intrusion tests, social engineering tests, cyber-crises management tests, etc.), and campaigns to raise awareness. The Group also invests in the architecture of its systems to improve their security and performance. The complexity of these projects could generate unexpected costs and delays.

2.4 Industrial risks

The areas of activity in which the Group operates entail major industrial risks capable of causing harm to persons and property, and exposing it to claims for civil, criminal and environmental liability. These risks may concern facilities that belong to the Group or are managed by the Group on behalf of third parties (manufacturers or local authorities), or facilities where the Group's employees work. The industrial safety of the facilities that the Group operates is one of its major concerns. The handling of these risks is subject to in-depth monitoring and specific targeted investments, and audits of the facilities in question are performed regularly.

2.4.1 Industrial facilities and Seveso sites

The Group operates and builds systems for gas transmission, distribution and storage systems, exploration-production facilities, LNG tankers, regasification and gas liquefaction facilities, electrical power plants, and hydro facilities and provides services in an industrial environment. Some of these facilities are classified as high-threshold Seveso sites.

Risks can stem, for example, from operating incidents, design flaws or from external events beyond the Group's control (including third-party actions and natural disasters). Industrial accidents can cause injuries, loss of life or major property and/or environmental damage, as well as activity interruptions and operating losses.

The Group carries out its industrial activities in compliance with a framework of safety regulations, including the "Seveso III European Directive [(1)]". These industrial risks are controlled by implementing a safety management system at these sites based on the principle of continuous improvement, which is intended to reduce the level of residual risk by responding to the highest risks on a priority basis. Moreover, industrial security is part of the Group's internal control program. The Group conducts periodic audit and control missions to ensure that these measures are effectively implemented.

A specific action plan for the protection of industrial control systems, linked to industrial processes, is being implemented. It aims to prevent the risk of activity interruption or accidents due to cyber-attacks.

For the most part, these risks are covered by insurance policies. In the event of a major claim, these policies could prove insufficient (see Section 2.1.3 "Risk and insurance coverage").

2.4.2 Environmental pollution

Facilities that the Group owns or manages on behalf of third parties may entail risks of damage to the natural environment (air, water, soil, the habitat and biodiversity), and may pose health risks to consumers, neighboring residents, employees and subcontractors. These health and environmental risks are governed by strict national and international regulations. Non-compliance with these environmental standards or a process failure can have a significant negative impact on the Group's image, its business, financial situation, earnings and outlook, and lead to the engagement of its liability as a legal entity. Any amounts set aside, insured or guaranteed may be insufficient. Complaints and convictions relating to the environment are reported in Section 3.3.4.9 "Active prevention of environmental risks".

Health and environmental risks are regularly monitored by the Group, by external auditors and by governmental authorities, both for operational sites and closed facilities, such as former gas plants.

2.4.3 Nuclear power plants in Belgium

The Group owns and operates seven nuclear reactors of the pressurized water type at two nuclear electricity production sites at Doel and Tihange in Belgium. Since the commissioning of the first reactor in 1974, these sites have been without any major nuclear safety incidents that could have resulted in danger to employees, subcontractors, the general population or the environment. However, they could present civil liability risks for the Group, specifically in the event of a nuclear accident or the discharging of large quantities of radioactive material into the environment.

All persons working at Group nuclear power plants have appropriate qualifications, in particular control room operators. During operations, compliance with safety rules and conditions at the facilities are subject to inspection by the Belgian Federal Agency for Nuclear Control (AFCN), assisted by Bel-V, its technical support subsidiary. In addition, both nuclear sites are OHSAS 18001, ISO 14001 and EMAS-certified.

Electrabel takes account of feedback from accidents or incidents to continuously improve the security of its facilities. Electrabel has pursued the action plan implemented after the Fukushima accident in 2011, particularly in response to more severe natural disasters and the risk of cyber-attack. Similarly, after the sabotage of a turbine at the Doel plant in 2014, Electrabel stepped up its existing action plan to reduce the risk of internal threats at all its nuclear sites. In 2015, Electrabel established the "Rigor and Responsibility" action plan, designed to reinforce the safety culture at its nuclear sites. This was in response to a "pro justitia" of the AFCN on August 3, 2015 which stated that the safety culture at the Tihange plant had declined. The risk of terrorist attack was also reassessed and armed protection measures were approved and are currently being rolled out.

(1) Directive 96/82/EC ("Seveso II"), amended and repealed by Directive 2012/18/EU ("Seveso III").

In 2012, hydrogen-induced flaws created in the manufacturing process were detected in the vessel walls of the Doel 3 and Tihange 2 reactors. The other vessels, which were manufactured differently, were also inspected with no signs of flaws detected. The Doel 3 and Tihange 2 reactors were not authorized to operate in 2015, which impacted the Group's financial results. In 2015, Electrabel continued its efforts to comply with all the AFCN's requests. On July 17, 2015, it submitted a new supporting report for each of the two vessels to the nuclear safety authorities. In late November 2015, the AFCN authorized the restart of Doel 3 and Tihange 2, after a positive evaluation of the report with the help of the Oak Ridge National Laboratory (ORNL-USA).

The government agreed to an extension of the operating life of Doel 1 and Doel 2 beyond 40 years. The parliament voted to confirm this decision at the end of June 2015, but the agreement in principle with the government on the accord setting out the economic parameters for this extension has yet to be consolidated in legislation. In addition, the 10-year extension from 2015 for Tihange 1 took effect on October 1, 2015, with a program of associated works that will continue until 2019 (see Section 1.3.1 "Energy Europe" and Note 12.3.1 to Section 6.2 "Consolidated financial statements").

The operation of nuclear power plants is regulated in part by radioactive waste authorizations. The Group therefore reduces its discharges of radioactive liquid and gaseous effluents as much as possible, while controlling the volume of low and medium radioactive waste. In Belgium, all nuclear waste management is the responsibility of the National Agency for Radioactive Waste and Enriched Fissile Material (ONDRAF). In 2013, barrels of medium radioactive waste from the Doel plant, stored at Belgoprocess, were subject to additional checks related to the discovery of a gel-like substance on the surface of the barrels. However, this issue has no effect on the safety of the environment or the health of the population. Studies are in progress in liaison with ONDRAF. The phenomenon was not detected at the Tihange plant, where a different encasement process is used, one that does not contain aggregates.

Finally, spent nuclear fuel is stored at electricity production sites pending a political decision on the fuel cycle downstream process. Costs associated with the management of spent fuel and the dismantling of facilities are included in the costs of electricity production from nuclear sources and are the subject of provisions. The assumptions and sensitivities regarding the assessment of these amounts are detailed in Note 18.2 to Section 6.2 "Consolidated financial statements".

Objections have been raised in various EU countries to the Belgian government's extension or starting up of some nuclear plants.

2.4.4 Exploration and production of hydrocarbons

The exploration and production of hydrocarbons are activities subject to significant risks such as geological hazards and risks of industrial accidents.

Geological hazards are related to difficulties in investigating subsoil, the physical characteristics of oil or gas fields and those of hydrocarbons. In fact, estimates of discovered reserves must be large enough and have a positive economic analysis in order for said reserves to be exploited. During production, reserves may turn out to be lower than expected and this may adversely affect the economics of their use.

Risks of industrial accidents are related to hydrocarbon leaks, fire, explosion and the loss of control of wells.

In order to reduce the impact of these risks, the Group:

- conducts its activities by sharing risks as part of consortia in which it may be an operator or simply a partner. As far as possible, the Group teams up with companies that are known for their expertise, rules and high level of commitment to safety and accident prevention;
- carries out its operations under the rules of a safety management system (see also Section 2.4.1) based on the ISO 14001 and OHSAS 18001 international standards, and takes into account good practices in the E&P industry, particularly those of the International Association of Oil and Gas Producers (OGP);
- has its hydrocarbon reserves regularly assessed by an independent third party;
- insures its facilities against structural damages, loss of production and civil liability lawsuits, including pollution, in accordance with industry practice.

2.5 Financial risks

2.5.1 Commodity market risk

The Group is chiefly exposed to two kinds of commodity market risk: price risk relating directly to fluctuating market prices, and volume risk (weather risk and/or risk depending on economic activity). The Group is exposed to these risks, particularly in relation to gas, electricity, coal, oil and oil products, other fuels, CO_2, and other green products (see Section 6.1.1.7 "Outlook").

With the exception of trading activities, market risks are assessed by means of their impact on EBITDA. Accordingly, the main risk indicators for managing the energy portfolios include sensitivity to unit price changes, the EBITDA at Risk, portfolio hedging ratios and stress tests based on predefined unfavorable scenarios. For trading activities, and in accordance with market standards, risk indicators include sensitivities, Value at Risk (VaR) and stress tests (see Note 17.1.1 to Section 6.2 "Consolidated financial statements").

The Group has implemented a specific governance process to control market and counterparty risks based on (i) the general principle of separation of risk management and operational activities, (ii) a Group-level Energy Market Risks Committee that is responsible for validating risk policies and monitoring consolidated exposure, (iii) following market and counterparty risk mandates, and (iv) a specific risk control functional line coordinated by the Finance Department.

Most of its electricity production activity outside Europe and the United States is secured by long-term Power Purchase Agreements (PPAs), often with local authorities, in which variations in operating expenses, in particular fuels, are transferred as "pass-throughs" into electricity sale prices. This substantially limits exposure to price fluctuation risks, even if the transfer is imperfect in some contracts.

The Group also relies on derivative products linked to energy in order to provide its customers with hedging instruments and to hedge its own positions.

2.5.2 Counterparty risk

Due to its financial and operational activities, the Group is exposed to the risk of default by its counterparties (customers, suppliers, partners, intermediaries, banks).

The impact of this may be felt in terms of payment (non-payment for services or deliveries made), delivery (non-delivery of paid supplies or services) or assets (loss of financial investments).

These risks are managed via framework agreements that use standard mechanisms such as third-party guarantees, netting agreements and margin calls or by the use of dedicated hedging instruments. Operational activities may also involve prepayments or suitable recovery procedures (especially for retail customers).

2.5.3 Foreign exchange risk

The Group is exposed to foreign exchange risks defined as the impact on the balance sheet and the income statement of exchange rate fluctuations as it performs its operational and financial activities. These are broken down into (i) a transactional risk related to current operations, (ii) a specific transactional risk related to investment, merger-acquisition or disposal projects, (iii) a translational risk related to assets outside the Eurozone, and (iv) a risk related to consolidation in euros of the subsidiaries' accounts where the functional currency is not the euro. This risk is concentrated in dollar-denominated equity investments (in the United States and on assets considered on a dollarized basis), as well as equity investments located primarily in Brazil, Australia and the UK.

For an analysis of foreign exchange risk sensitivity, see Note 16.1.3.2 to Section 6.2 "Consolidated financial statements".

As part of the Group's foreign exchange risk policy, recurring transactional risk is subject to systematic hedging in cases where this risk is material and almost certain to materialize. During the examination of investment projects, the specific transactional risk is subject to a case-by-case hedging strategy. Finally, translational risk is covered by partial hedging strategies subject to a reasonable hedging cost and sufficient market liquidity related to the risk of currency depreciation.

2.5.4 Interest rate risk

The Group is exposed to interest rate fluctuations which partly depend on decisions by central banks. The Group's objective is to control its borrowing costs by limiting the impact of interest rate changes on its income statement and, with this in view, to create a balanced distribution among the various reference rates over the medium-term. The Group's policy is therefore to diversify the net debt reference rates among fixed, variable and protected variable ("capped variable") rates. This distribution may change within the limits set by management according to the market situation.

The breakdown by type of interest rate of the outstanding financial debt and sensitivity analysis for interest rate risk are presented in Note 16.1.4.1 and Note 16.1.4.2, respectively, to Section 6.2 "Consolidated financial statements."

In order to manage the interest rate structure of its net debt, the Group uses hedging instruments, mainly rate swaps and options. Managed centrally, rate positions are reviewed periodically and when any new financing is raised. This management is subject to a risk mandate: any substantial change in the rate structure requires prior approval from the Finance Department.

2.5.5 Liquidity risk

Liquidity is based on the regular renewal of various financing tools available to the Group such as credit lines, bond financing or other financing tools, to ensure their availability and their adequacy in relation to financing requirements. The Group has pre-agreed credit facilities appropriate for the scale of its operations and for the timing of contractual debt repayments. Note 16.2.1 to Section 6.2 "Consolidated financial statements" explains the distribution of the various forms of financing used.

ENGIE pools the majority of the cash flow requirements and surpluses of the Group's majority owned subsidiaries, as well as most of their medium- and long-term external financing requirements. Financing vehicles (long-term and short-term) provide centralization, as do the Group's dedicated cash-pooling vehicles in France, Belgium and Luxembourg.

2.5.6 Impairment risk

Assumptions and estimates are made to calculate the recoverable value of goodwill and tangible and intangible fixed assets, with particular reference to market outlook, which is more sensitive for certain operations. These assumptions and estimates are needed to assess cash flows and the discount rate to apply. Any change in these assumptions could have a significant effect on the amount of the recoverable value and could lead to changes in the impairment to be recognized (see Note 1.3.1.2 to Section 6.2 "Consolidated financial statements").

2.5.7 Equity risk

As of December 31, 2015, the Group holds a number of non-consolidated interests in listed companies (see Note 16.1.1 to Section 6.2 "Consolidated financial statements"), the value of which fluctuates on the basis of trends in the world stock markets and/or the position of the relevant companies.

In addition, the Group holds interests in listed companies consolidated using the equity method, including SUEZ Environnement (see Note 4 to section 6.2 "Consolidated financial statements"), for which a significant or extended fall in the price below the value on the balance sheet is an indication of impairment.

2.5.8 Tax risk

Rule tightening by States seeking financial resources cannot be ruled out. Changes in tax regulation, particularly harmonization between European States, or case law relating to the application of tax rules, may have an impact on the Group's earnings (see Note 27.1 to Section 6.2 "Consolidated financial statements").

2.5.9 Pension funding risk

A significant portion of the Group pensions commitments and the assets associated with these plans are concentrated in France and Belgium. Other defined-benefit pension plans are mainly located in Europe, Brazil and Australia.

In recent years the Group has terminated a number of defined-benefit plans and replaced them with defined-contribution plans. The defined-benefit plans still in operation notably include, in France, the special electricity and gas industry (EGI) plan, which is a legal statutory plan.

Note 19 to Section 6.2 "Consolidated financial statements" details the items measured and recognized.

The calculation of commitments is estimated with actuarial methods using methods, assumptions and models to assess liabilities or determine asset allocations and associated risks that could have a significant impact on asset / liability levels and financing requirements.

In France, commitments within the scope of the EGI are estimated using actuarial assumptions and rules respectively governing benefits paid out by plans operating under common ordinary law and amounts that remain the Group's responsibility. These assumptions and rules may be subject to changes that increase the Group's commitments and therefore require an increase in the relative relevant provisions.

Substantial commitments exist in the form of other post-employment benefits and other long-term benefits for employees, in addition to pension liabilities. These mainly comprise energy-related benefits provided to retired employees within the scope of EGI.

Hedging levels and financing requirements for the Group's pension plans vary according to the performance of financial markets and asset allocations, as well as interest and inflation rates and changes in the applicable legal and regulatory framework.

For some plans outside the scope of the EGI, ENGIE may be required to fully or partly finance any difference between the market value of these assets and the hedging levels projected for these plans, or any insufficiency in the return on the assets in respect of the guaranteed minimum average rates.