*This management report has been prepared taking into consideration the "Guide of recommendations for the development of management reports of listed companies", published by the CNMV in July 2013.*

## 1. COMPANY'S STANDING

The company has undergone a major transformation over the last 15 years, staying clearly ahead of the energy transition in order to tackle the challenges posed by climate change and the need for clean electricity.

Boasting a track record that spans over 170 years, today Iberdrola is a multinational group leading the energy sector: the company produces and supplies electricity to some 100 million people in the countries in which it operates. Furthermore, the company has become the leader in clean energy —Iberdrola is the first renewable producer amongst European utilities and the cleanest power company in the USA, with almost zero emissions—, it is pioneering the rollout of smart grids and has an energy storage capacity in excess of 4 GW.

This is the result of the combination of its corporate vision —which in 2001 led the company to look ahead to future trends in the sector—, the strategy followed to make this vision a reality, its successful implementation, and the ethical values that have always guided all the group's actions. On this basis, Iberdrola is now embarking on a new stage of growth, supported by a strong investment drive between 2016 and 2020, essentially in regulated businesses or with long-term contracts, which will provide the security, stability and visibility that are the hallmarks of the company's business model. Likewise, Iberdrola will continue maintaining its social commitments, acting as a driver for the growth and generation of employment in the countries where it operates, and creating sustainable value for all its stakeholders.

### 1.1 Governance system

The purpose of the IBERDROLA Group's business model is the "supply of reliable, high-quality and environment-friendly electricity", by means of a sustainable long-term industrial project.

The model is based on three pillars: a framework of trust based on an advanced governance model; the Mission, Vision and Values of the Iberdrola Group approved by the Board and distinguishing features which make Iberdrola a different company.

The model is made competitive by responsible management of the Company's tangible and intangible assets. To operate with this model, Iberdrola has defined the activities in which it wishes to be a proactive operator, and organises its management on the basis of three global lines of business: Network business, Generation and Sales business and Renewables business, with a Corporation as a central organisational body for the group.

The Corporation formulates the group's strategy and supervises its fulfilment.

## Mission, Vision and Values of the Iberdrola Group

The Mission, Vision and Values of the Iberdrola Group constitute its corporate philosophy, inspire and take form in the Corporate Policies Company's By-Laws and in the other rules of the Corporate Governance System, govern the day-to-day activities of the companies of the Group thereof, channel its leadership role in all of its areas of activity, focus its strategy of maximising social dividends, and guide their strategy and all of their actions. The ethical behaviour of all personnel participating in the daily construction of the Company's corporate enterprise.

**Mission**

The Group's mission is to create value sustainably in carrying out its activities for society, citizens, customers, employees, shareholders, and other stakeholders, as the leading multinational group in the energy sector providing a quality service through the use of environmentally-friendly energy sources, which engages in innovation, leads the process of digital transformation in its area of activity, and is committed to the fight against climate change through all of its business activities, with a social dividend and the generation of employment and wealth, considering its employees to be a strategic asset. Along these lines, we foster their development, training, and measures of reconciliation, favouring a good working environment and equal opportunity. All of the foregoing is within the framework of our strategy of social responsibility and compliance with tax rules. It is what modern business social responsibility calls Shared Value, the sum of all the economic and social values that a company generates.

This mission goes hand in hand with a vision based on the ambition to lead a better future, creating sustainable value with a top-quality service for people and communities in which the Group operates, incorporating twelve values: the creation of sustainable value, ethical principles, good corporate governance and transparency, development of the Group's human resources, social commitment, a sense of belonging, safety and reliability, quality, innovation, protection of the environment, a focus on the customer and institutional loyalty.

The Group's mission, vision and values inspire the contents of the Corporate governance system, a set of internal regulations which, in accordance with current legislation and utilising the corporate autonomy permitted by this legislation, furthers the Company's corporate purpose at the head of a multinational energy leader operating across a range of social and economic contexts, satisfaction of social interests, understood as the common interests of all the shareholders of an independent company determined to carry out its corporate purpose in a sustainable fashion and create long-term value, with a wide-ranging non-controlling and institutional shareholding structure.

To achieve a rules-based system ensuring that the Company's commitment to the Mission, Vision, and Values of the Iberdrola group governs all of its activities, focused on maximising social dividends by generating value in a sustainable manner, Iberdrola has provided itself with a Corporate Governance System, its internal system of rules, which is configured in accordance with applicable law in the exercise of corporate autonomy supported thereby and applies to the entire Group as a whole.

The Corporate Governance System is made up of five blocks of rules, each grouped into a book: the By-Laws, the Mission, Vision, and Values of the Iberdrola group, the Corporate Policies, the governance rules of the corporate decision-making bodies and other internal committees, and the other codes, regulations, and procedures making up and elaborating upon Iberdrola's regulatory compliance system.

This structure ensures the articulation of the rules and principles governing the organisation, operation, and conduct of the Company and its Group under the form of a true regulatory system, which is subject to periodic review and update by the Board of Directors.

The corporate governance system is based on the following principles:

1. Social Dividend and Sustainability
2. Shareholder Engagement
3. Commitment to the Legitimate Interests of Other Stakeholders
4. Plural and balanced composition of the Board of Directors
5. A corporate and governance structure combining decentralised management with proper Group coordination
6. Dedication of the Board of Directors to Setting the Strategy of the Company and of the Group
7. An Efficient System of Checks and Balances
8. Prudent and Balanced Management of Risks
9. Proactive Regulatory Compliance Function

**Vision**

*"We want to be the leading multinational group in the energy sector at the forefront of a better future, sustainably creating value with a quality service for people: customers, citizens, and shareholders (whom we care for and engage in our corporate life) and for the communities in which we carry out our activities, generating employment and wealth (with whom we engage in a constructive dialogue), known for our firm commitment to ethical principles, good corporate governance, and transparency, the safety of people and supply, operational quality and excellence, innovation, protection of the environment, and customer focus. Making it possible thanks to the work of our employees and the people working at our suppliers and collaborators, whom we care for by offering all of our training resources and reconciliation measures for their development and to strengthen equality of opportunity".*

**Values**

The mission and vision of the Group is configured based on a firm commitment to twelve values that all of the Corporate Policies, internal rules, and other internal codes and procedures must follow:

- The sustainable creation of value
- Ethical principles
- Good corporate governance and transparency
- Development of our workforce
- Social commitment
- Sense of belonging
- Safety and reliability
- Quality
- Innovation
- Respect for the environment

- Customer focus
- Institutional loyalty

## 1.2 IBERDROLA's corporate governance model

**Corporate governance system**

Iberdrola is a leading multinational group in the energy sector which pursues the creation of value in a sustainable way in the development of its activities for the society, citizens, customers and shareholders, providing quality service by using energy sources that respect the environment, innovating and considering its employees a strategic asset, committed to social return throughout its business, generating employment and wealth in their environment and all of these, going together with its strategy of social responsibility and compliance of tax rules.

The Corporate Governance System is made up of the Mission, Vision, and Values of the Iberdrola group, the By-Laws, the Corporate Policies, the internal corporate governance rules, and the other internal codes and procedures, each of them available on www.iberdrola.com.

The contents are inspired by and based on commitment to best practices in relation to good governance, business ethics and social responsibility in all areas of its activity.

**Governance model**

This duly makes a distinction between the functions of strategy and supervision and those of management and control:

- The Iberdrola Board, composed of a large majority of independent directors, focuses on defining, supervising and monitoring the policies, strategies and guidelines to which the group must adhere.

- The chairman of the Board, the chief executive officer and the rest of the management team are responsible for the group's strategic coordination and organisation, through the distribution, implementation and monitoring of the general strategy and its basic guidelines.

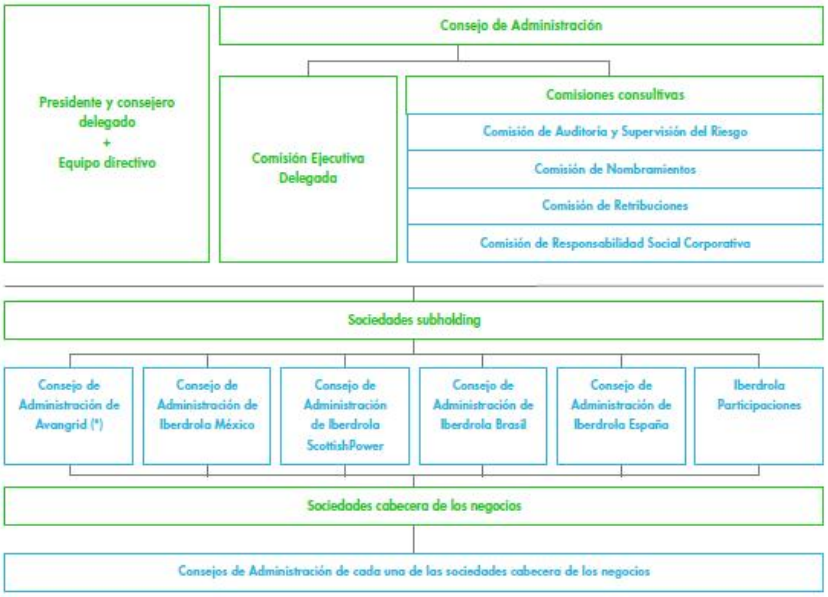
- In all countries in which the group operates, business is organised and strategically coordinated through subholding companies, which group investments in energy business operating in the country concerned and centralise the provision of common services to these companies. The group also has a subholding to handle all non-energy business.

  The subholdings have boards with independent directors, and their own Audit and Compliance Committees, Internal Audit departments and Compliance units or departments.

- Parent companies are tasked with ordinary management and effective administration of all lines of business. They also have boards with independent directors and specific management teams.

  This structure, which operates along with the group's business model, fosters global integration of the lines of business (Networks, Generation and Sales and Renewables), and focuses on maximising operational efficiency, by implementing best market practices.

**Corporate and governance structure of Iberdrola, S.A.**




(*) Sociedad cotizada en la Bolsa de Nueva York.

## 1.3 Scope of activities, sectors and geographical areas

The IBERDROLA Group's economic-financial and operational information has been grouped in the following lines of business: Network business, Generation and Retail businesses, Renewables business, and other businesses. The Corporation includes the costs of the Group's structure (Single Corporation), of the administration services of the corporate areas that are subsequently invoiced to the other companies through specific service agreements.

Given the nature of the activities carried out by the IBERDROLA Group, its organization responds to the strategic business units, rather than product and service lines. These businesses are managed independently, as they respond to different technologies, regulations, and geographic markets (Note 7).

**Corporate Structure**

The IBERDROLA Group has a decentralised structure and management model to approximate the decision taking to places where they should have effect, through the subholding companies and parent companies of the businesses. In addition, the independence and listed subholding companies' reinforced autonomy are guaranteed.

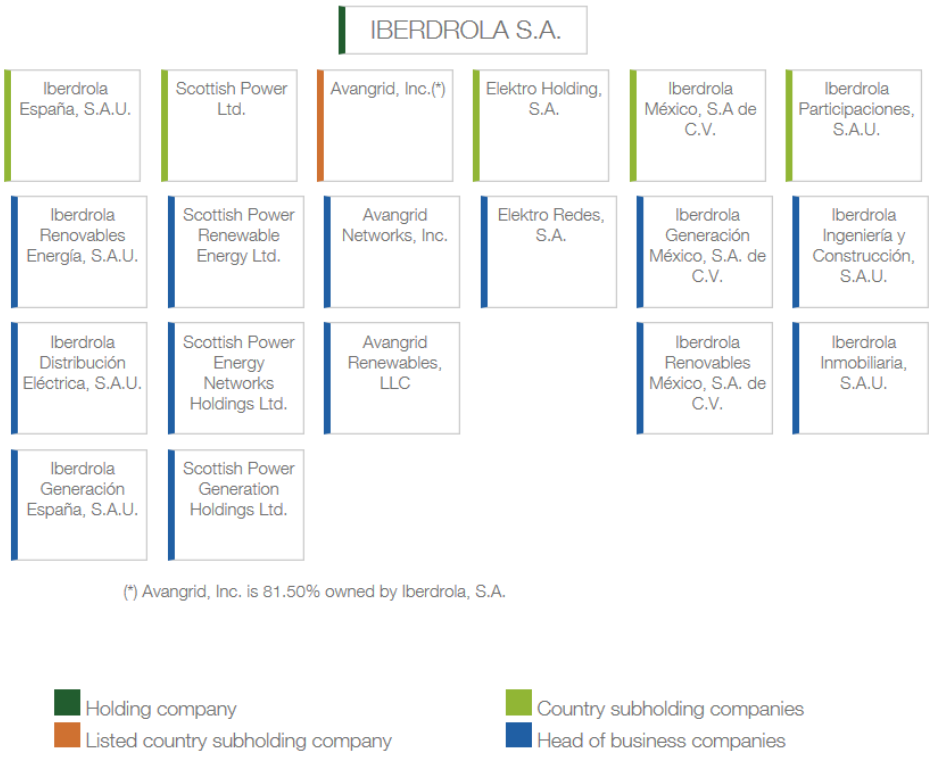
The corporate structure encompasses the Company (IBERDROLA, S.A.), subholding companies and business parent companies.

IBERDROLA, which performs exclusively the function of the parent company, is the company holding the stake of the subholding companies. Such entities group together equity stakes in the energy head of business companies carrying out their activities within the various countries in which the Group operates. This structure is rounded out with a country subholding company that groups together certain equity interests in other entities, including the non-energy head of business companies. One of the main functions of the subholding companies is the centralization of the common services provided to one another, always in accordance with the provisions of the applicable law.

This corporate structure has been successfully deployed in Spain, Mexico, Brazil and the UK, and produces a rapid streamlined process for ordinary management decisions to be taken by business parents, and introduces proper Group coordination, in exercise of the supervisory functions of subholding companies and IBERDROLA.

In the United States of America, the Company holds a majority stake in the subholding company listed on the New York Stock Exchange, Avangrid, Inc. For this company the Corporate governance system contemplates a special system of greater autonomy to properly protect the interests of non-controlling shareholders, boosting vigilance of operations in connection with other Group companies, and this gives it a greater measure of independence to coordinate its investees and run businesses.

**Simplified scheme of the corporate structure of the Group**




The Company's and the Group's governance conforms to the structure described above: separates the duties relating to strategy, oversight, and control of the Group as a whole, the duties of organisation and coordination of the businesses in each country and the multinational no-energetic business, as well as those of day-to-day administration and effective management of each business.

It is established on the following bases:

a) The Board of Directors of the Company, which exclusively exercises holding company duties, has assigned powers relating to the establishment of the Group's policies and strategies and of the basic guidelines for the management thereof, as well as general oversight of the development of such policies, strategies and guidelines and of decisions on matters that are strategically significant at the Group level.

b) The chairman of the Board of Directors & chief executive officer of the Company, with the technical support of the Operating Committee, the Group's Business CEO and the rest of the management team, assumes the duty of organisation and strategic coordination of the Group through the dissemination, implementation and monitoring of the overall strategy and of the basic management guidelines established by the Board of Directors.

c) This organisation and coordination duty is strengthened through the boards of directors of country subholding companies, which includes independent directors, and their own audit committees, internal audit areas, and compliance units or divisions.

d) The business subholding companies of the Group assume decentralised executive responsibilities. They carry out the day-to-day administration and effective management of each of the businesses, and are responsible for the day-to-day control thereof. These business subholding companies are organised through their respective boards of directors and their own decision-making bodies.

The corporate and governance structure of the Group described above operates jointly with the Group's Business Model, which entails the global integration of the businesses and aims to maximise the operational efficiency of the different units. The Business Model ensures the dissemination, implementation and monitoring of the overall strategy and of the basic management guidelines established for each business, primarily through the exchange of best practices among the various companies of the Group, without detracting from their independence in decision-making.

In any case, the Company and the Group assume the commitments established by law in connection with the legal and functional separation of the companies carrying out regulated activities, while the country subholding companies ensure compliance with the law on this matter.

### 1.4 Organization of the Board, or bodies in which it delegates its decision, including control functions and the policy followed with minority interests.

A comprehensive description of the governance structure of the Company, functions and internal regulations of the committees can be seen in Appendix C of the Annual Corporate Governance Report, which forms part of this Management Report.

### 1.5 Regulatory framework of the activities

A comprehensive description of sector regulation and operation of electric and gas system in the markets in which the Group operates can be seen in section 4 of this report.

### 1.6 Main products and services, production processes

The main products that IBERDROLA offers to its customers are power and natural gas, both in the wholesale and retail markets reaching the final consumer. Also offers a wide range of products, services and solutions in the fields of:

- Improving the quality of life, calm and safety of the consumer.
- Efficiency and energy services.
- Caring for the environment: renewable energy and sustainable mobility.
- Power quality and safety of the facilities.
- Installation of electrical infrastructure.
- Global management of facilities and energy supplies.

Through its subsidiaries it also provides engineering and construction services of power generation facilities, distribution and control; operation and maintenance of power generation facilities, management and promotion of the ground; and sale and rental of housing, offices and commercials. More detailed information can be found in www.iberdrola.com, in "customers" section.

As a general rule, companies directly manage the activities that belong to its core business, and outsource other estimated to be developed more efficiently by other specialized companies, which IBERDROLA requires certain quality standards and responsible behaviour in environmental, social and labour fields.

This information can be extended with corresponding indicators described in the Sustainability Report.

## 1.7 Strategic principles for the 2016-2020 period

**Market conditions**

The energy scenario on which Iberdrola will be operating in the years ahead notched up considerable progress towards a more sustainable energy model following the introduction of the Paris Climate Change Agreement on 4 November last year, barely eleven months after it was signed. In the same line, the European Commission ratified its target of reducing $CO_2$ emissions by 40% by 2030 and its wish for the EU to lead energy transition with its "Clean energy for all Europeans" package.

In due consideration of the technological potential of our sector to assist decarbonisation by using renewable energies, the economy must be electrified to a greater extent in order to meet international commitments in relation to emissions, and simultaneously to service growing world energy demand.

In this context, in the years ahead Iberdrola intends to step up its focus on the solutions energy sustainability requires, which have already made it the "energy company of the future": more renewable energy, more storage capacity, more networks and more smart facilities.

Iberdrola's current business model combines geographic diversification with a focus on activities linked to the energy transition:

- In the United States the company is taking up a position to home in on opportunities for investment in energy infrastructures and renewables through the platform operated by its subsidiary AVANGRID, which has eight regulated energy distribution companies in New York, Connecticut, Maine and Massachusetts, and is the country's second largest wind energy producer.

- The company will continue to expand in the United Kingdom in terms of networks and consolidate its leadership in renewable energies, especially offshore wind power plants on the current platform.

- In continental Europe it will bolster its position in network digitalisation, and its reputation as one of the energy companies with the fewest emissions, a leader of the renewables sector in Spain, and a consolidated platform in Germany and France to develop new offshore wind plants.

- In Mexico, its status as the largest private electricity generator will enable it to take up the opportunities arising from deregulation in the sector.

- In Brazil it is well placed for potential restructuring of the sector as the country's largest distributor in terms of numbers of customers, geographic diversification (Bahía, Río Grande do Norte, Pernambuco and São Paulo states) and renewables capacity.

**Strategic Pillars**

Iberdrola's 2016-2020 strategy will maintain a focus of currency-diversified growth, with most organic growth opportunities concentrated in A-rating countries, to enable dividend policy to be boosted on the strength of higher earnings, maintaining financial solvency.

**Balanced growth**

The strategic basis presented by IBERDROLA establishes a net investment programme of EUR 25,000 million in its main geographic and business areas with stable and predictable regulatory frameworks.

Iberdrola will allocate 42% of total investment to electricity and distribution networks. The allocation to renewable energies and regulated generation will be the 39% and 7% of the total amount forecast, respectively. 12% of total investment will be earmarked for generation and commercial business.

88% of the investment scheduled will target regulated business –networks, renewable energies and long-term contracts-.

Geographically, Iberdrola will concentrate most investment in A-rating countries - 48% in Dollars, 29% in Sterling Pounds, 20% in the Eurozone and 3% in Brazilian Reals.

***Main projects***

- United States: Through AVANGRID, the Group will continue to invest in network infrastructures in the states of New York, Maine, Connecticut and Massachusetts, and hopes to add new transmission projects to the portfolio. IBERDROLA is also building four wind power plants in the US with a combined power output of 743 MW which jointly with two photovoltaic plants of 66 MW results in a total of 809 MW in construction.

- United Kingdom: IBERDROLA will continue to implement network infrastructures under the regulatory frameworks already approved for transmission and distribution (RIIO-T1 and RIIO-ED1). With respect to renewable energy projects in the UK, and is continuing its East of Anglia project in the North Sea which, along with the Wikinger offshore wind farm in the Baltic Sea (Germany), will add 1,100 MW to IBERDROLA's offshore installed power output.

- Mexico: IBERDROLA's investment packages will focus on regulated generation and renewable energies, on the strength of the energy reform introduced in this country. The Company is building three combined-cycle plants and two cogeneration plants on long-term contracts, with a combined power output of 2,700 MW, and has plans for further investment in renewable energies in the years ahead.

- Spain: investment will focus on networks, where the distribution regulatory framework has been approved up to 2019.

- Portugal: the company has begun work on construction of about 1,200 MW hydroelectric storage facility at the Támega River, which should be up and running by 2023.

- Brazil: IBERDROLA is building eight wind plants with a combined power output of 245 MW, and is also involved on hydroelectric projects such as Belo Monte and Baixo Iguaçu along with NEOENERGÍA. In terms of networks, tariff frameworks have been approved for ELEKTRO (up to 2019), CELPE (up to 2017), COELBA and COSERN (up to 2018).

***Operating efficiency in every activity area***

IBERDROLA, one of Europe's most efficient major electricity companies, will continue to boost its operating efficiency on the strength of technical progress in terms of the automation and digitalisation of all its businesses and processes, as well as the homogenization of processes through the implementation of the best practices of the group in all its businesses.

***Earnings performance***

In the years ahead, efficient operation of ongoing assets, along with the aforementioned investment plan, will lead to sustainable growth in Company earnings, with an estimated average annual increase in gross operating profit (EBITDA) of more than 6% up to 2020, or EUR 10,000 million, with better exposure to regulated business or long-term contracts up to 81%. The average annual increase in net profit is expected to be around 7.5%, or EUR 3,500 million by 2020, representing an increase of two percentage points in the net profit/EBITDA ratio to 35%.

***Shareholder remuneration***

The trend forecast for the period will enable the company to increase long-term remuneration for shareholders, in keeping with results, with a payout in the region of 65-75%, which would result in a dividend per share of EUR 0.37-0.40 in 2020. In any case, a floor of EUR 0.31 per share is established during the period.

At the same time, IBERDROLA intends to maintain the scrip dividend formula used in recent years, and the current number of shares - around 6,240 million - is kept steady through repurchase operations.

***Financial solvency***

The Company will continue to hold a solid financial position compatible with the investment plans and the remuneration provided to shareholders.

- The average annual operating cash flow, EUR 6,900 million, will comfortably outstrip annual average investment, which stands at EUR 4,800 million. By areas of business, cash generation in Deregulated business and Networks will outstrip investment, while Renewables business will be slightly down against investment.

- Maintenance of the current financial model, giving subsidiaries a capital structure which sends out the right economic signals and is consistent with an investment-grade rating, while adhering to current structural subordination guidelines.

- Optimisation of the liquidity position (around EUR 8,000 - 9,000 million) in current market conditions, in order to improve the cost of borrowing, maintaining 18 months of coverage even in stress scenarios.

*This caption of the management report of IBERDROLA contains forward-looking information, including financial projections and estimates and their underlying assumptions, statements regarding plans, objectives and expectations with respect to future operations, capital expenditures, synergies, products and services and statements regarding future performance or administrators estimates which are based on assumptions that are considered reasonable by them*.

*Although IBERDROLA believes that the expectations reflected in such forward-looking statements are reasonable, investors are cautioned that forward-looking information and statements are subject to various risks and uncertainties, many of which are difficult to predict and generally beyond the control of IBERDROLA, risks that could cause actual results and developments to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements.*

*Forward-looking statements are not guarantees of future performance and have not been reviewed by the auditors of IBERDROLA. You are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date they were made. All subsequent oral or written forward-looking statements included in this report are expressly qualified in their entirety by the cautionary statement above. All forward looking statements included herein are based on the information available on the date hereof. Except for required by applicable law, IBERDROLA undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.*

# 2 BUSINESS EVOLUTION AND RESULTS

## 2.1 Operating highlights for the period

Iberdrola's results for the period must be framed within the implementation of the corporate strategy announced on Investor Day 2016, defined by the growing weight of regulated activities (transmission and distribution of electricity and gas) and the renewables business, both in terms of utilising investment opportunities and contributing to the Group's profit, with a growing weight of the United States and Mexico businesses on said contribution.

The results of financial year 2016 are affected by the performance of Iberdrola's reference currencies compared to 2015. The depreciation of the Sterling Pound and the Brazilian Real has not been offset by the US Dollar, which hardly varied compared to 2015.

In this respect, the following is remarkable:

- In Spain, the period is characterised by high renewable production (40.8% of the total) due to the strong increase in hydroelectric production (+25.3%) especially during the first half of the year. Demand has risen slightly compared to 2015 (+0.7%), with no variation in terms adjusted to number of working days and temperature. The evolution of electricity consumption of the group companies and industries shows that over the last 12 months, consumption has remained at levels similar to 2015.

- In the United Kingdom, electricity demand dropped by 1.3% compared to 2015. However, customers' gas demand (not including generation consumption) increased by 2.6%.

- Avangrid's area of influence on the East Coast of the United States saw a 0.8% and 2.3% drop in electricity demand and gas demand, respectively.

- On the other hand, demand in the markets of Iberdrola in Brazil grows 1% compared to the same period of the previous year, mainly in the Northwest markets of the country covered by Neoenergía, due to the demand of Elektro falls slightly affected by the smaller Industrial activity in this area.

During financial year 2016, commodities international markets of raw materials evolved as follows:

- The average price of Brent oil was steady at USD 43.7 per barrel compared to USD 52.8 per barrel last year (-16.8%).

- The average price of gas (TTF) over the period dropped to EUR 14.0/MWh, compared to EUR 19.8/MWh in 2015 (-29.3%).

- The average price of API2 coal was USD 59.8/MT, compared to USD 55.9/MT (+7.0%) last year.

- The average cost of $CO_2$ rights dropped from EUR 7.7/MT in 2015 to EUR 5.3/MT in 2016 (-31.2%).

The average performance of Iberdrola's main reference currencies against the Euro in 2016 compared to last year was as follows: the Sterling Pound and the Brazilian real depreciated by 12.7% and 4.6%, respectively, and the USD remained at levels similar to the previous FY (+0.3%).

The following highlights should be noted regarding the period analysed, in comparison to the previous financial year:

- First full year of consolidation of UIL in the United States, an effect registered in the Networks Business of said country.

- Consolidated EBITDA increased by 5.5 % compared to 2015, reaching EUR 7,807.7 million.

- The Net Financial Result improved by 11.7%, as a result of the financial cost drop and the exchange rate hedges carried out at the start of the year, mainly on Sterling Pound, despite an increase in average debt.

In this context, IBERDROLA Group's total production in this period increased by 1.4% to 132,414 GWh (130,594 GWh in 2015). The distribution by geographical areas is the following:

| Net Production (GWh) | 2016 | 2015 | % change |
|---|---|---|---|
| Spain | 61,725 | 54,453 | 13.4 |
| United Kingdom | 13,531 | 18,448 | (26.7) |
| United States | 17,436 | 17,015 | 2.5 |
| Mexico | 37,717 | 38,866 | (3.0) |
| Brazil | 639 | 441 | 44.9 |
| Rest of the world | 1,366 | 1,371 | (0.4) |
| **Total** | **132,414** | **130,594** | **1.4** |

At the end of 2016, IBERDROLA had 43,277 MW installed generation capacity, of which 65.5% produces emission-free energy while operating at a very low variable cost. In the table below, distribution classified by countries and technologies is shown:

| Countries | 2016 | 2015 | MW var (16-15) |
|---|---|---|---|
| Spain | 25,605 | 25,607 | (2) |
| United Kingdom | 4,522 | 6,450 | (1,928) |
| United States | 6,502 | 6,294 | 208 |
| Mexico | 5,840 | 5,415 | 425 |
| Brazil | 187 | 187 | – |
| Rest of the world | 621 | 621 | – |
| **Total power (MW)** | **43,277** | **44,574** | **(1,297)** |

| Technologies | 2016 | 2015 | MW var (16-15) |
|---|---|---|---|
| Hydraulic | 10,392 | 10,392 | – |
| Nuclear | 3,166 | 3,166 | – |
| Coal | 874 | 3,178 | (2,304) |
| Gas Combined Cycles | 13,778 | 13,353 | 425 |
| Cogeneration | 299 | 299 | – |
| Wind power, mini-hydraulic and other renewables | 14,768 | 14,186 | 582 |
| **Total power (MW)** | **43,277** | **44,574** | **(1,297)** |

The following exceptional highlights should be noted with regard to the period analysed, compared with the previous fiscal year:

- UIL's first full consolidation exercise in the United States, which is integrated in the Network business in that country. The integration of Iberdrola USA and UIL, and its subsequent incorporation into AVANGRID took place on 16 December 2015.

- Reclassification results of capital grants.

  Since May 2016, the capital gains attributed to results are classified as "Other operating income" and not reducing the amortizations as previously. Correlated comparative information for 2015 has been corrected with this effect. The increase in revenues in 2016 and 2015 amounted to EUR 82 million and EUR 91 million respectively. The effect on the Group's Net Profit is null, since it is corrected with higher depreciation for the same amount.

The optimisation of financial soundness and liquidity as strategic priorities are summarized as follows:

- Net Debt stood at EUR 29,414 million, with an improvement in leverage to 42.0% compared to 40.7% in 2015.
- Funds Generated from Operations at the end of 2016 had increased by 6.8% and reached EUR 6,311 million.
- Solvency ratios had slightly improved as at December 2016.

## 2.2 Business evolution

### *2.2.1 Analysis of the profit and loss account*

The key figures for the financial year 2016 are as follows:

| Millions of euros | 2016 | 2015 | % charge |
|---|---|---|---|
| Net revenue | 29,215 | 31,419 | (7.0) |
| Gross margin [1] | 12,916 | 12,843 | 0.6 |
| EBITDA [2] | 7,808 | 7,397 | 5.6 |
| EBIT [3] | 4,554 | 3,829 | 18.9 |
| Net profit | 2,843 | 2,460 | 15.6 |

(1) Gross Margin: Revenue – Procurements

(2) EBITDA: Operating profit+ Amortisation and provisions

(3) EBIT: Operating profit

#### 2.2.1.1 *Gross Margin*

Gross Margin was at EUR 12,916 million with a 0.6% increase compared to what was obtained in financial year 2015, supported by the contribution of UIL (EUR +770 million), which more than compensates for the performance of the average reference currencies (EUR -339 million).

| Millions of euros | 2016 | 2015 | % change |
|---|---|---|---|
| Network Business | 6,161 | 5,514 | 11.7 |
| Deregulated Business | 4,634 | 4,841 | (4.3) |
| Renewable Business | 2,179 | 2,361 | (7.7) |
| Other Businesses | 106 | 235 | (54.9) |
| Corporation and adjustments | (164) | (108) | (51.9) |
| **Gross Margin** | **12,916** | **12,843** | **0.6** |

- **Network business**

The Network business increased its contribution by 11.7% to EUR 6,161 million (EUR 5,514 million in 2015).

| Millions of euros | 2016 | 2015 | % change |
|---|---|---|---|
| Spain | 2,028 | 1,952 | 3.9 |
| United Kingdom | 1,267 | 1,472 | (13.9) |
| United States | 2,537 | 1,698 | 49.4 |
| Brazil | 329 | 392 | (16.1) |
| **Total Network business** | **6,161** | **5,514** | **11.7** |

The Network business increased 11.7% compared to 2015, amounting to EUR 6,161 million, with positive developments in Spain and the United States and reductions in the United Kingdom and Brazil. As noteworthy events in the period we can highlight:

- In Spain, it reached EUR 2,028 million, as a result of the definitive approval of the regulatory framework of Distribution.

- In the United Kingdom, it came to EUR 1,267 million (-13.9%), mainly due to the depreciation of the Sterling Pound (+10%) and the revenue profile defined in the new regulatory framework for Distribution (RIIO ED1) which came into force in April 2015.

- The contribution of the United States for the period totalled EUR 2,537 million (+49.4%) due to the consolidation of UIL.

- Gross Margin for Brazil (Elektro) was at EUR 329 million (-16.1%) affected by the depreciation of the Brazilian Real, a decrease in circulated energy and the different composition of the demand with regard to last year.

- **Deregulated Business**

The Deregulated Business (Generation and Retail) decreased by 4.3% to EUR 4,634 million (EUR 4,841 million in 2015).

| Millions of euros | 2016 | 2015 | % change |
|---|---|---|---|
| Spain and Portugal | 3,071 | 2,971 | 3.4 |
| United Kingdom | 1,000 | 1,306 | (23.4) |
| Mexico | 509 | 584 | (12.8) |
| Brazil | 6 | – | 100.0 |
| United States | 48 | (20) | 340.0 |
| **Total Deregulated Business** | **4,634** | **4,841** | **(4.3)** |

- In Spain, it reached EUR 3,071 million (+3.4%) thanks to the different production mix compared to 2015 and to the greater volume of sales to customers.

- Gross Margin for the United Kingdom was EUR 1,000 million, negatively affected by the depreciation of the Sterling Pound, the increase of regulatory costs both in Generation and in Retail and the lower sales as a result of warmer period.

- Mexico contributed EUR 509 million to the Gross Margin (-12.8%), due to the lower margins in contracts with CFE as they are liked to certain macroeconomic variables (this impact is compensated at EBITDA level as Net Operated Expenses is also linked to those variables) and also with private customers and to the delay in putting in operation of several plants that are already in operation.

- **Renewables business**

The Renewable business decreased its Gross Margin by 7.7% to EUR 2,179 million (EUR 2,361 million in 2015).

| Millions of euros | 2016 | 2015 | % change |
|---|---|---|---|
| Spain and Portugal | 764 | 751 | 1.7 |
| United Kingdom | 385 | 572 | (32.7) |
| United States | 802 | 822 | (2.4) |
| Brazil | 36 | 36 | – |
| México | 69 | 57 | 21.1 |
| Rest of the world | 123 | 123 | – |
| **Total Renewable business** | **2,179** | **2,361** | **(7.7)** |

The main causes of this trend are:

- In Spain, it increased to EUR 764 million (+1.7%) due to greater production.
- Gross margin decline in United Kingdom, dropped by EUR 385 million, due to the effect of the depreciation of the Sterling Pound, the lower production (-16.8%) resulting from the lower wind power of the period, lower market prices and the LECs elimination in the third quarter of 2015.
- A contribution from the US of EUR 802 million (-2.4%) as a result of the non-renewable gas business that had a positive result in 2015 due to the derivatives in electricity and gas (EUR 31 million) that has not been repeated this year. The greater production (+5.2%) offsets the drop in the average price.
- Latin America contribute to EUR 105 million (+12.9%) with Mexico improving by 21.1% thanks to the new capacity in operation, and Brazil was practically flat.

- **Other businesses**

The contribution of Other Businesses reached EUR 106 million, a decrease of 54.9% (EUR 235 million in 2015).

#### 2.2.1.2 *Gross Operating result – EBITDA*

Consolidated EBITDA increased by 5.6% to EUR 7,808 million (EUR 7,397 million in 2015), which improved the Network business (+12.5%) and decreased Generation and Customers (-3.0%) and Renewables (-8.9%).

| Millions of euros | 2016 | 2015 | % change |
|---|---|---|---|
| Network Business | 4,082 | 3,627 | 12.5 |
| Deregulated Business | 2,253 | 2,323 | (3.0) |
| Renewable Business | 1,500 | 1,647 | (8.9) |
| Other Businesses | (111) | (10) | (1,010.0) |
| Corporation and adjustments | 84 | (190) | 144.2 |
| **EBITDA** | **7,808** | **7,397** | **5.6** |

Contribution of non-recurring elements at EBITDA level was EUR 54 million, given that the positive impact of the Social tariff ruling (EUR +142 million) was partially offset by another set of effects (EUR -88 million in total), which include favourable rulings in Spain, efficiency measures, extraordinary IFRS losses in the Networks US business and the compensation to customers imposed by OFGEM.

- **Net operating expenses**

In addition to the above-mentioned trend of the Gross Margin, Net Operating Expenses dropped by 4.5% to EUR 3,572 million (EUR 3,739 million in 2015), impacted by the control of costs and the incorporation of UIL.

| Millions of euros | 2016 | 2015 | % change |
|---|---|---|---|
| Network Business | 1,441 | 1,385 | 4.0 |
| Deregulated Business | 1,504 | 1,565 | (3.9) |
| Renewable Business | 537 | 560 | (4.1) |
| Other Businesses | 216 | 242 | (10.7) |
| Corporation and adjustments | (126) | (13) | (869.2) |
| **Net operating expenses** | **3,572** | **3,739** | **(4.5)** |

- **Levies**

The Taxes item dropped by 9.95% to EUR 1,537 million, with the impact of the incorporation of UIL (EUR -138 million) offset by the positive net impact of EUR 217 million related to favorable judgments in Spain in both 2016 and 2015.

### 2.2.1.3. *Net Operating result – EBIT*

EBIT totalled EUR 4,554 million, 18.9% higher in comparison with 2015 (EUR 3,829 million).

| Millions of euros | 2016 | 2015 | % change |
|---|---|---|---|
| Network Business | 2,649 | 2,485 | 6.6 |
| Deregulated Business | 1,313 | 962 | 36.5 |
| Renewable Business | 703 | 659 | 6.7 |
| Other Businesses | (125) | (30) | (316.7) |
| Corporation and adjustments | 14 | (247) | 105.7 |
| **EBIT** | **4,554** | **3,829** | **18.9** |

- **Amortisations and provisions**

Amortisations and Provisions dropped by -8.8%, totalling EUR 3,254 million:

- The Amortisations item remained stable (+0.1%), totalling EUR 3,076 million, the lower amortisation following the write-off in 2015 of the Longannet Plant (EUR +132 million), and the effect of the extension to 40 years of useful life of the towers and the civil works of the onshore wind farms in accordance with industry standards (EUR +147 million), offset the incorporation of UIL (EUR -188 million) and the increase due to new investments.

- The Provisions item totalled EUR 178 million (-64,0%), decreasing EUR 316 million, mainly due to the fact that in the fourth quarter of 2015 the Longannet power plant was repaired in an amount of EUR 288 million.

### 2.2.1.4. *Financial Result*

The net financial profit/(loss) was EUR -903 million, improving by 11.7% compared to that registered in 2015 (EUR 1,023 million).

The reduction in the average cost to 3.49% (57 b.p. lower than last year) has contributed with a EUR 64.8 million (6%) on the improvement of the result associated to debt, despite the fact that average net debt increased by EUR 2,365 million.

The result for DVMEs and derivatives improved by EUR 115.6 million, greatly because of the coverage on net profit that generated a positive valuation for the evolution of Sterling Pound after Brexit.

Several non-recurring contingencies recorded in 2016 (mainly interests accrued in legal decisions and sale of the stake in Euskaltel) resulted in a lower financial revenue of EUR 60.8 million.

#### 2.2.1.5 *Results of Companies Consolidated by the Equity Method*

The Result of Companies Method of Participation reached EUR 49 million (-11.9% compared to 2015, EUR 55 million). The improvement in Gamesa's results is offset by the lower contribution from Neoenergia and the effect of the sale of wind farm participation in Italy.

#### 2.2.1.6 *Income from Non-Current Assets*

Income from Non-Current Assets amounted to EUR 48 million with a decrease of EUR 77 million compared to 2015 (EUR 125 million). In 2016 the most significant transactions have been the sale of Iriquois (minority stake in a local gas network) in the United States, and the sale of the stake in the real estate company Oceanic Center.

#### 2.2.1.7 *Net Profit*

Lastly, Net Profit came to EUR 2,705 million, an increase of 11.7% compared to that obtained in 2015 (EUR 2.422 millions).

Recurring Net Profit reached EUR 2,531.7 million (EUR 2,261.4 million in 2015) (+12%) as a result of the good performance of the business and the year-on-year comparison of specific items in each year.

The balancing of the Recurring Net Profit and the Reported Net Profit is as follows:

| Millions of euros | 2016 | 2015 |
|---|---|---|
| **Recurring Net Profit** | **2,531.7** | **2,261.4** |
| Extraordinary writte-off | 30.5 | -275.5 |
| Income from non-current assets | 40.7 | 140.6 |
| Non-recurring taxes | 102.1 | 295.1 |
| **Reported Net Profit** | **2,705.0** | **2,421.6** |

Tax expenses increased by 71.6% to EUR 904.6 million, mainly due to non-recurring tax effects recorded in 2015. The lower tax rate in Spain (from 28% to 25%) is offset by income in countries with higher tax rates, such as the US.

## 2.3 Operative evolution of the period

### 2.3.1 *Network business*

**A. Spain**

IBERDROLA has approximately 10.9 million managed supply points and total distributed energy 93,736 GWh, a decrease of 0.4% compared to the same period of the previous year (94,113 GWh in 2015).

TIEPI's quality of supply indicator for fiscal year 2016 was 54.1 minutes, with an improvement of 12% over the previous year (61.9 minutes in 2015).

The table shows the values of the TIEPI (interruption time) and NIEPI (number of interruptions) in relation to the previous year:

| Year | Accumulated TIEPI | Accumulated NIEPI |
|---|---|---|
| 2015 | 61.9 | 1.20 |
| 2016 | 54.1 | 1.04 |

The investment made during the year has allowed the following facilities to be put into operation:

| Physical Units | 2016 | Total |
|---|---|---|
| Lines | Overhead (km) | 185 |
| | Underground (km) | 573 |
| Substations | Transformer (units) | 4 |
| | Capacity increase (MVA) | 788 |
| | Substation (units) | 10 |
| Secondary sub-stations | Centres (units) | 411 |
| | Capacity increase (MVA) | 130 |

In addition, during this year, 2.3 million smart meters with a remote management system were installed, within the STAR smart network project.

It is noteworthy that the regulatory requirement to replace 70% of smart-meters before 31 December 2016 has been fulfilled.

**B. United Kingdom**

IBERDROLA has more than 3.5 million supply points in the United Kingdom. The volume of energy distributed during 2016 was 33,482 GWh (34,009 GWh in 2015), a decrease of 1.5% compared to the year 2015.

The average Customer Minutes Lost (CML) and the number of consumers affected by interruptions per every 100 customers (Customer Interruptions, CI) are:

| | 2016 | | 2015 | |
|---|---|---|---|---|
| | CML | CI | CML | CI |
| Scottish Power Distribution (SPD) | 30.7 | 45.3 | 34.7 | 46.6 |
| Scottish Power Manweb (SPM) | 37.2 | 38.9 | 35.2 | 31.5 |

Although Scottish Power Energy Networks' (SPEN) quality indicators have increased due to four incidents that have affected 100,000 consumers in aggregate, the indicators of both companies comply with regulatory limits.

**C. United States**

- **Distribution**

  In the United States IBERDROLA has 2.2 million electricity supply points. The volume of energy distributed in the year was 37,027 GWh, which represents an increase of 15.5% compared to 2015 (32,047 GWh) due to the integration of UIL.

  The System Average Interruption Frequency Index (SAIFI) and the Customer Average Interruption Duration Index (CAIDI) are as follows:

| | 2016 | | 2015 | |
|---|---|---|---|---|
| | SAIFI | CAIDI | SAIFI | CAIDI |
| Central Maine Power (CMP) | 1.78 | 1.89 | 0.72 | 1.70 |
| NY State Electric & Gas (NYSEG) | 1.19 | 2.02 | 0.56 | 2.08 |
| Rochester Gas & Electric (RG&E) | 0.58 | 1.79 | 0.41 | 1.79 |
| United Illuminating Company (UI) | 0.53 | 0.42 | - | - |

The three companies comply with all their quality of service indicators within the limits required by the corresponding commission.

- **Gas**

The number of gas users in the United States at the end of 2016 is approximately one million, which has been supplied with 53,460 GWh, a 68.9% increase over the same period of last year due to the integration of the UIL gas distributors. Discounted this effect, the gas distribution has been 2.3% lower than the previous year, which is due to the mild temperatures recorded in the winter of 2016.

### D. Brazil

The evolution of the demand of distributors in Brazil, COELBA, COSERN, CELPE and ELEKTRO in 2016 has remained at levels similar to those of the previous year, reaching 54,530 GWh (54,000 GWh in 2015).

| Energy distributed (GWh) 100% of business | 2016 | 2015 | % Change |
|---|---|---|---|
| COELBA | 19,549 | 18,871 | 3.6 |
| COSERN | 5,582 | 5,512 | 1.3 |
| CELPE | 13,410 | 13,426 | (0.1) |
| ELEKTRO | 15,962 | 16,191 | (1.4) |
| **Total** | **54,503** | **54,000** | **0.9** |

The number of customers served by the distributors at the end of the year reaches 13.4 million.

| Number of customers (million) 100% | 2016 | 2015 |
|---|---|---|
| COELBA | 5.8 | 5.7 |
| COSERN | 1.4 | 1.3 |
| CELPE | 3.6 | 3.5 |
| ELEKTRO | 2.6 | 2.5 |
| **Total** | **13.4** | **13.0** |

Regarding regulated electricity generation, the power of the projects in operation at the end of 2016 is 5,653 MW (1,059 MW in the IBERDROLA percentage).

As for the projects under construction, the pace of construction follows the planned schedule, so that the scheduled finish dates are maintained. In 2016, several of the groups that account for 78 MW attributable have entered operation in Belomonte.

| Plant | MW | Attributable MW | Year |
|---|---|---|---|
| Baixo Iguaçu | 350 | 137 | 2018 |
| Belo Monte | 9,245 | 360 | 2016-2018 |
| **Total** | **9,595** | **497** | |

### 2.3.2 *Deregulated business*

#### A. Spain and Portugal

##### A.1. Generation

Installed capacity in Spain (without renewables) reaches 19,745 MW, the same as in 2015.

| Installed capacity (MW) | 2016 | 2015 | Change |
|---|---|---|---|
| Hydroelectric | 9,713 | 9,713 | – |
| Nuclear | 3,166 | 3,166 | – |
| Coal | 874 | 874 | – |
| Gas combines cycles | 5,694 | 5,694 | – |
| Cogeneration | 298 | 298 | – |
| **Total** | **19,745** | **19,745** | **–** |

On the other hand, the Energy Balance of the Spanish peninsular system in 2016, is characterized by a high renewable production (40.8% of the total) due to the increase in hydraulic production (+25.3%), especially in the first half of the year, because has been specially rainy. As a consequence, coal production has been reduced comparing to the year 2015, (-30.9%), although gas production rises slightly (+2.3%). In adjusted terms of labor and temperature, the evolution is at 0%.

According to IBERDROLA, during the twelve months of 2016, production increased by 16.7% until reaching 43,338 GWh.

The evolution of the year by technologies is as follows:

| GWh | 2016 | 2015 | % change |
|---|---|---|---|
| Hydroelectric | 18,510 | 12,488 | 48.2 |
| Nuclear | 24,335 | 23,082 | 5.4 |
| Coal | 2,115 | 3,684 | (42.6) |
| Gas combines cycles | 3,724 | 2,293 | 62.4 |
| Cogeneration | 1,875 | 1,791 | 4.7 |
| **Total net production** | **50,559** | **43,338** | **16.7** |

- Hydraulic production reached 18,510 GWh, an increase of 48.2% over the previous year. The level of water reserves stood at 42% (equivalent to 4,774 GWh) at 31 December 2016.
- Nuclear production stands at 24,335 GWh, an increase of 5.4%.
- Coal-fired power stations reached 2,115 GWh, compared to 3,684 GWh the previous year, representing a reduction of 42.6%.
- Production of combined cycle plants, for their part, increased by 62.4%, until reaching 3,724 GWh.
- Cogeneration plants increase their production by 4.7%, until reaching 1,875 GWh.

### A.2 Retailing

Supplied energy (electricity and gas) in Spain came to 60,367 GWh (58,282 GWh in 2015), 51,614 GWh of electricity and 8,753 GWh of gas.

Electricity sales on the deregulated market in 2016 increased by 5.8% amounting to 43,405 GWh compared to 41,008 GWh supplied in the same period of 2015. Regarding the electricity supplied at the PVPC, it amounts to 8,209 GWh.

The gas retailed in the free market in 2016 increased by 4.5% to 8,702 GWh compared to 8,364 GWh supplied in 2015.

In Portugal, IBERDROLA supplied 7,343 GWh during 2016, compared to 6,718 GWh supplied in 2015 (+9.3%), being the second seller in the Medium Voltage industrial clients.

## B. United Kingdom

### B.1. Generation

At 31 December 2016 and 2015, UK installed capacity amounts to 2,531 MW and 4,835 MW, respectively, as a result of the closure of the Longannet coal plant (2,304 MW) at the end of March.

| (MW) | 2016 | 2015 | % change |
|---|---|---|---|
| Hydroelectric | 563 | 563 | – |
| Coal | – | 2,304 | (100.0) |
| Gas combined cycles | 1,967 | 1,967 | – |
| Cogeneration | 1 | 1 | – |
| **UK Total** | **2,531** | **4,835** | **(47.7)** |

With regard to production from traditional electricity generation, in 2016 it decreased by 29.1% to 10,456 GWh compared to the 14,754 GWh of the previous year, due to the aforementioned impact of the closure of the Longannet power plant.

The market share of the generation business in 2016 was 4.2%, compared to 6% in the previous year. By technologies, the most outstanding aspects are the following:

| GWh | 2016 | 2015 | % change |
|---|---|---|---|
| Hydroelectric | 585 | 704 | (16.9) |
| Coal | 1,636 | 7,813 | (79.1) |
| Gas combined cycles | 8,234 | 6,235 | 32.1 |
| Cogeneration | 1 | 2 | (50.0) |
| **UK Total** | **10,456** | **14,754** | **(29.1)** |

### B.2. Retailing

Regarding sales, during 2016 customers have been supplied with 20,951 GWh of electricity and 31,974 GWh of gas (20,458 GWh of electricity and 32,055 GWh of gas supplied during 2015). At 31 December 2016, SCOTTISH POWER had 3.2 million electricity customers and 2.1 million gas customers.

## C. Mexico

IBERDROLA remains the leading private producer in the country with 5,473 MW (5,048 MW in 2015) in installed capacity.

There are in process of execution five new plants, and as an important milestone there must be highlighted the beginning of the commercial operation of the Dulces Nombres 2 plant in Monterrey of 300 MW in the last quarter. This year the 53.3 MW Ramos cogeneration plant has been put in operation, as the extension of 57 MW of Altamira III and IV and the extension of Monterrey I and II 16 MW.

With all that, in 2018 and 2019 in totally consolidated proyects and in the operative thermic power of Iberdrola in Mexico will reach the 7,600 MW, where apart from the long term contracted capacity, already indicated by the CFE, long term contracts with private customers are hold by the company.

The electric energy supplied from the combined cycle and cogeneration plant has been 35,598 GWh (38,128 GWh in 2015), which supposes a charge factor of the 80%, because the generation with natural gas the base of the electric generation in Mexico. The accumulated availability of the plants in Mexico has been 95.8%.

**D. Gas storage in US and Canada**

Gas storage facilities operated by the Company in 2016 totalled 2.4 bcm. In addition, the Company had 1.6 bcm of contracted or managed capacity.

### 2.3.3. *Renewable business*

At the end of 2016, the renewables business had an installed capacity of 14,768 MW (14,184 MW in 2015).

The renewable production increased by 2.2% to 31.917 GWh (31.228 GWh in 2015).

During the last 12 months, IBERDROLA installed 582 MW in new renewable installations.

| Installed MW | 2016 | 2015 | MW change |
|---|---|---|---|
| Wind Energy Spain | 5,508 | 5,508 | – |
| Wind Energy USA | 5,692 | 5,484 | 208 |
| Wind Energy United Kingdom | 1,991 | 1,614 | 377 |
| *Onshore* | *1,797* | *1,420* | *377* |
| *Offshore* | *194* | *194* | – |
| Wind Energy Mexico | 367 | 367 | – |
| Wind Energy Brazil | 187 | 187 | – |
| Wind Energy Rest Of The World | 615 | 615 | – |
| **Total wind energy** | **14,360** | **13,775** | **585** |
| **Other renewables** | **408** | **409** | **(1)** |
| **Total installed capacity** | **14,768** | **14,184** | **584** |

**A. Onshore Wind Energy**

During the last 12 months, Iberdrola has increased its total installed power in 581.81 MW: 585 MW were installed and 2.23 MW dismantled (0.85 MW of wind and 1.38 MW of mini-hydraulic in Spain).

Iberdrola has reached a power of land wind energy of 14,166 MW after 585 MW wind land had been added during the last 12 months.

- Spain

The installed power at the end of 2016 has reached to an amount of 5,508 MW and manages 244 MW throw non-consolidated participated companies.

A work of two wind parks with a total capacity of 32.2 MW in the Tenerife island has been approved: Chimiche II (18.4 MW) and Las Aulagas (13.8 MW).

- USA

The Company has presence in 19 states with a total of 5,692 MW eolians installed and 161 MW aditional are managed throw participated companies.

The constructions Desert Wind (208 MW) with a PPA signed by Amazon in Northern California (all the aerogenerators had been installed, and only the last 8 MW are still missing to start so as to get into their commercial operation), El Cabo (298.2 MW) in Nuevo Mexico, Deerfield (30 MW) in Vermont and Tule (131.1 MW) in California, and the prior phase to the beginning of works in Twin Buttes II (75 MW) in Colorado are in progress.

- United Kindom and Republic of Ireland

The wind land power is 1,796 MW in United Kindom and 15 MW are managed through participated companies.

During the year, work has been done on the construction of 473.78 MW that are subject to ROCs' system. From this proyect portfolios, works had been finished for a total amount of 146,23 MW: 13.8 MW in Ewe Hill Phase 1, 45.6 MW in Black Law Ext. Phase 1.69 MW in Dersalloch and 18.37 MW in Black Law Ext. Phase 2, and works of: 327.55 MW of the wind parks of Killgallioch (239 MW from which 167,5 MW have been installed), Hare Hill extension (29.75 MW from which 23.35 MW have been installed), EWE Hill Phase 2 (36.8 MW from which 25.3 have been installed) and Glen App (22MW from which 14 MW have been installed) the are now in the course phase.

- Brasil

Six proyects for a total of 174 MW eolians were finally winners in the "Leilãos" (competition) which had taken place during 2014. There are in progress the works of the following wind farms: Calango 6 (30 MW), Santana I (30 MW) and Santana II (25 MW).

In Brasil, Iberdrola has 187 MW consolidated and 59 MW managed throw Neoenergia.

In addition, six proyects for a total amount of 178.5 MW winds were finally winners in the "Leilãos" (competition) which had taken place during 2014. There are are finished the works of the following wind farms: Calango 6 (30 MW), Santana I (30 MW) and Santana II (24 MW), even if they will not be consolidated until the first trimester of 2017.

- Mexico

In Mexico, the installed power is 367 MW.

Works for additional 325.5 MW have been approved: wind Santiago (105 MW) in Guanajuato and Pier (220.5 MW) in Puebla.

### B. Offshore Wind Energy

Currently, the renewables business is developing offshore wind projects mainly in the United Kingdom, Germany and France.

In the United Kingdom, in 2014, the Company went into operation of the West of Duddon Sands project located in the Irish Sea with a capacity of 389 MW which is being jointly developed at 50% with Dong Energy (194.5 MW correspond to IBERDROLA).

IBERDROLA continues the Wikinger offshore project development, up to 350 MW in the Baltic Sea (Germany). Pilot installation and jacketing campaigns have been completed.

The cable laying works of the wind farm are also at its completion and are progressing with completion and testing works. The OSS (marine substation) is already installed and is in the phase of completion of the start-up and termination. At the same time, offshore turbine installation operations are underway to start up in 2017.

Iberdrola is developing in the United Kingdom the “East Anglia” project in the North Sea. In February 2015, the East Anglia I project secured a Contract for Difference in the first auction of its kind in the United Kingdom, for a maximum capacity of 714 MW, whose investment of GBP 2,600 million was approved by the Company in February 2016. The project has made progress during 2016, with most of the contracts for the supply of the main packages signed.

It is noted that the contract with Siemens for the supply of 102 wind turbines of 7 MW, contracts with Navantia for the supply of the offshore substation and 42 jackets on which the wind turbines will be based, the contract with Lamprell for the supply of 60 jackets and with Nexans for the supply of the evacuation cable between the substation of the wind farm and the substation onshore. The signing with The Crown Estate of the leasing contract of the maritime domain for the settlement of the farm during its useful life is also remarkable in 2016.

On the other hand, Iberdrola and Vattenfall (partern in the initial development process) finalized the negotiation with The Crown Estate in the first quarter of 2016 for the distribution of the remaining projects in East Anglia. As a result, Iberdrola owns 100% of the rights over 3 projects in different stages of development of accumulative capacity 2,800 MW.

In April 2012, the consortium formed by IBERDROLA and the French company EOLE-RES was awarded by the French Government the exclusive rights for the operation of the offshore wind farm of Saint-Brieuc, with a capacity of 500 MW. In 2013, the project was technically redefined with the aim of using a more modern machine, 8 MW of unit power, made by ADWEN (Joint venture between Areva and Gamesa). In October 2015, the project submitted its application for a construction license. In 2016, the Company will work towards answering the requests from the French administration within the process for approval of the license, as well as on the consolidation of the main supply agreements for the future farm.

### C. Other technologies

The Renewable business has facilities of other renewable technologies in various countries making a total of 409 MW, which breakdown is presented in the following table:

| MW instalados | 2016 | 2015 | Country |
|---|---|---|---|
| Mini-hydraulic special regime | 130 | 130 | Spain |
| Mini-hydraulic ordinary regime | 172 | 173 | Spain |
| Solar thermal hybrid | 50 | 50 | Spain |
| Photovoltaic | 56 | 56 | USA (50MW) Greece (6MW) |
| Waves | – | – | UK |
| **Other Renewables** | **408** | **409** | |

- USA-Avangrid

The construction of a 66 MW with photovoltaic technology has been approved: Gala (56 MW) and W'y East (10 MW), aboth in the Oregon state.

- Mexico

The construction of a 270 MW with photovoltaic technology has been approved: Santiago photovoltaic (170 MW) in San Luis de Potosí and Hermosillo (100 MW) in Sonora.

## 3 LIQUIDITY AND EQUITY RESOURCES

### 3.1 Leverage

Adjusted net financial debt at 31 December 2016 increased by EUR 1,347 million to EUR 29,414 million compared to the EUR 28,067 million at 31 December 2015, as a result of the anticipation of renewable investments (off-shore advanced payments and Safe Harbour). As a result, financial leverage increases to 42% compared to 40.7% in 2015.

| | 2016 | 2015 |
|---|---|---|
| **Equity** | **40,687** | **40,956** |
| Gross Debt | 32,026 | 30,340 |
| Efectivo y equivalentes (Nota 19) | (1,433) | (1,153) |
| Derivados activos y otros | (1,179) | (1,120) |
| **Net debt** | **29,414** | **28,067** |
| **Leverage** | **42.0%** | **40.7%** |

### 3.2 Credit rating of IBERDROLA senior debt

| Agency | Rating [1] | Outlook | Date |
|---|---|---|---|
| Moody´s | Baa1 | Positive | 04/25/2016 |
| Fitch | BBB+ | Stable | 03/25/2014 |
| Standard & Poors | BBB+ | Stable | 04/22/2016 |

(1) Warning: The above ratings may be revised, suspended or withdrawn by the rating agency at any time

### 3.3 Debt structure

Regarding the evolution of the financing cost of the Company, at 31 December 2016 it stood at 3.17% compared to 3.57% in the same period of the previous year (Note 25 of the Consolidated financial statements).

The structure of the debt by interest rate and currency can be seen in Notes 5 and 25 of the Consolidated financial statements.

In accordance with the policy of minimizing the financial risks of the Company, foreign currency risk has continued to be mitigated through the financing of international businesses in local currencies (Sterling Pound, Brazilian Real, US Dollar, etc.) or in their functional currencies (US Dollar, in the case of Mexico).

IBERDROLA has a strong liquidity position at the end of 2016 exceeding EUR 8,000 million, equivalent to more than 24 months of the Company's financing needs (Note 50 of the Consolidated financial statements).

| (Millions of euros) | |
|---|---|
| **Credit line maturities** | **Available** |
| 2017 | 266 |
| 2018 | 1 |
| 2019 and onwards | 6,317 |
| **Total** | **6,584** |
| Cash and Short Term Fin. Invest. | 1,432 |
| **Total adjusted liquidity** | **8,016** |

IBERDROLA has a varied debt maturity profile, with an average maturity of approximately six years, as a result, among other factors, of the active management of liabilities carried out during this financial year. IBERDROLA's debt maturity profile at the end of 2016 can be seen in Note 25 of the Consolidated financial statements.

## 3.4 Working capital

Working capital shows a decrease of EUR 109 million since December 2015 as a result mainly due to several different effects partially offsetting one another:

- A decrease of ''Inventories'' of EUR 163 million reduce the working capital.
- The increase in both the ''Commercial debtors and creditors'' result, all together, in a decrease of working capital of EUR 37 million.
- A decrease of "Provisions'' of EUR 102 million, increase de working capital.

| | 12.31.2016 | 12.31.2015 | Change |
|---|---|---|---|
| Assets held for sale | – | 44 | (44) |
| Nuclear fuel | 323 | 350 | (27) |
| Inventories | 1,634 | 1,797 | (163) |
| Current trade and other receivables | 5,862 | 6,048 | (186) |
| Current financial assets | 781 | 688 | 93 |
| Asset derivative financial instruments (1) | 322 | 339 | (17) |
| **CURRENT ASSETS** [1] | **8,922** | **9,266** | **(344)** |
| Provisions | 144 | 245 | (101) |
| Liability derivative financial instruments | 339 | 324 | 15 |
| Trades and other payables (2) | 8,434 | 8,583 | (149) |
| **CURRENT LIABILITIES** [2] | **8,917** | **9,152** | **(235)** |
| **NETWORKING CAPITAL** | **5** | **114** | **(109)** |

(1) It does not include cash or debt asset derivatives.

(2) It does not include financial debt and debt liabilities derivatives.

## 4 INDUSTRY REGULATION AND FUNCTIONING OF THE ELECTRICITY AND GAS SYSTEM

Both IBERDROLA and some of the fully or proportionately consolidated subsidiaries engage in electricity business activities in Spain and abroad (see the Appendix to these Consolidated financial statements) that are heavily affected by the respective regulatory frameworks. Below there is a description of the main regulations affecting the IBERDROLA Group.

### 4.1 European Union

In the member states of the European Union in which IBERDROLA is present, particularly in the UK and Spain, it should comply with EU regulations.

The aim of the European legislation is the implementations of the single gas and electricity markets in order to facilitate the exchange of energy flows and allow any consumer in the European Union to deal freely with any supplier in the EU. In this respect, there are two types of legislation: the directives, which set out common criteria to be observed in internal markets and which the member states should transpose into national legislation; and the Regulations, which establish norms for the supranational issues, especially those related to the transit of gas and electricity, and are applicable directly.

Another set of regulations that indirectly affects the energy sector are those arising from the energy and climate policy agreed in 2007. It involves the triple objective of reducing emissions of greenhouse gases (GHGs) by 20%, setting a quota of renewable energy of 20% and a target for reducing consumption by 20% vs. “Business as Usual” case, all by 2020. To meet these objectives by 2020 there have been four documents accompanying the legislation: the reform of the Emissions Trading System, EU (EU-ETS), the national targets for emissions from non-EU ETS, and the national objectives on renewable energy.

Since 2009, the EU institutions and Member States have worked to implement the regulation approved in that year related to, on one hand, the internal gas and electricity markets and, on the other hand, to promote renewable energy and to combat climate change. This regulation will be reviewed from 2016 to 2020.

The legislation on infrastructures is also relevant. The European Union has powers with regards to trans-European networks, specifically those of energy. During the last few years, various regulations and programmes have been created to promote a greater connectivity among the Member States. Specifically, programmes like the Trans-European Energy Networks (TEN-E), the European Energy Programme for Recovery (EEPR) and the Connecting Europe Facility (CEF). Lastly, in December 2014, the European Council approved the creation of a Strategic Investment Plan for the European Union, to mobilize EUR 315,000 million in 2015 – 2017. It will be structured as a European Fund for Strategic Investments allocated to investments in infrastructure, including energy and renewable energy networks. In January 2015, the European Commission submitted the proposal of a Regulation on the European Fund for Strategic Investments to create the required legal framework. On 27 May 2015, an agreement was reached between the Council, the Parliament and the European Commission on the proposed Regulation.

In October 2014, the European Council agreed new targets for 2030: a 40% reduction in GHGs compared to 1990, a share of 27% for renewable energy and a reduction in consumption, also of 27% (to be potentially upgraded to 30% following new proposals as explained below regarding the *Clean Energy for all Europeans* package). It also agreed to ensure that in 2020 the electricity exchange capacity among countries was at least 10% of the installed capacity.

On 25 February 2015, the European Commission launched a framework strategy for a resilient Energy Union with a Forward-Looking Climate Change Policy, that includes fifteen action points to be implemented during the mandate of the current European Commission, including, among others, setting out the goals of an energy union and the steps the Commission will take to achieve it, a new legislation to redesign and reform the electricity market, ensure the supply for electricity and gas, EU funding for energy efficiency, a new renewables energy package and a structural reform of EU-ETS, facilitating the compliance of 2030 Targets set by the European Council in October 2014. On 18 November 2015, the European Commission presented its first State of Energy Union reporting advances achieved in 2015 and steps to be undertaken in 2016. A guidance on Governance of the Energy Union process was also provided.

On 15 July 2015, the European Commission (EC) has published a package of documents that anticipated legislative action in the field of energy markets and emissions trading. Through the Communication on Market Design, the EC analysed the functioning of the EU electricity markets, arose key proposals for improvement and opened the discussion on capacity mechanisms. The Communication on retail market ("New Deal" for customers) made proposals to fully liberalise retail markets and facilitate more interaction with customers. It also attached a document on "best practices" in self-consumption.

Regarding the emissions trading, in July 2015 the EC sent its legislative proposal to reform the ETS Directive to the European Parliament and the Council, covering, inter alia, the Market Stability Reserve (MSR) and the protection of sectors in leak of carbon.

As set out in Decision 2015/1814 of the European Union and of the Council, the MSR (Market Stability Reserve) will come into operation on 1 January 2019. The MSR was established to reduce 900 million allowances of the auctioned volumes during the period 2014-2016, reintroducing them in the auctions of 2019 and 2020. Beginning in 2019, an amount of allowances corresponding to 12 % of the number of allowances in circulation should be deducted each year from the auction volumes and placed in the Reserve. If the total number of allowances in the market is less than 400 million, then the MSR releases 100 million into the market.

This mechanism is intended to stabilize the EU ETS (EU Emissions Trading System) and strengthen the carbon price signal reducing gradually the surplus allowances. The MSR is included in the EU ETS review currently in discussion.

Discussions on the review of ETS have been held since July 2015 and overlap debate on Non-ETS sectors (transport, buildings, agriculture, waste, land-use and forestry) since 20 July 2016, when the EC has sent to EU legislative bodies its draft on the Effort Sharing Regulation

On 30 November 2016 the EC has published the package Clean Energy for all Europeans, containing the legislative proposals to complete the implementation of the energy internal market and to achieve the environmental 2030 Targets, materialising the ideas drafted in July 2015 communications. November 2016 package involves the wholesale and retail markets and the frameworks for renewable energy sources and energy efficiency. It assesses the implementation of capacity mechanisms fully compatible with EU State Aid Guidelines on Energy and Environment.

The full package represents over 70 documents of which 8 are legislative proposals of high impact on energy markets to be discussed by the European Parliament and Council over the next two years. Practical implementation to market operation is expected to take in place by 2020.

### 4.2 Other EU regulation

The following regulations of significance to the energy sector were approved in 2015 and 2016:

- On 28 November, the Directive 2015/2193 on the limitation of emissions of certain pollutants into the air from medium combustion plants. This Directive establishes the mandatory register of this units, specific limit for certain components (sulphur dioxide, nitrogen oxides, ammonia and volatile organic compounds) and rules to control other pollutants (carbon monoxide). The maximum deadline of adaptation contemplated in the Directive for certain existing plants is 2030.

- In January, the OJEU published *Delegated Regulation 2016/89 amending Regulation 347/2013, concerning the Union's list of projects of common interest*. It is an update of the first list of Projects of Common Interest of 2013. New projects are added and others disappear (basically those for which implementation has begun). This list was published for the first time by the European Commission on 18 November 2015, at the time of the State of the Energy Union Report.

- Paris Agreement: On 11 April, Decision (EU) 2016/590 of the Council was published, regarding the signing, on behalf of the European Union, of the Paris Agreement approved by virtue of the United Nations Framework Convention on Climate Change. The signing took place in New York on 22 April 2016.

  Following the vote of the Plenary Session of the European Parliament of 3 October backing the decision of the Environmental Council of 30 September, the Paris Agreement adopted at COP21 was ratified. On 7 October, the Slovak Presidency submitted the instrument of ratification to the UN. Thus, the EU can attend the summit of Marrakesh from 7 to 18 November (COP22) with full capacity to take part in the conversations regarding the implementation of the Agreement. Notwithstanding, the ratification should be backed by all Member States, a step that has so far only been taken by seven countries (Hungary, France, Slovakia, Austria, Malta, Portugal and Germany). The Paris Agreement enters into force 30 days after being ratified by 55% of countries that make up at least 55% of emissions. Prior to this ratification, 62 countries representing 52% of global $CO_2$ emissions had ratified it.

- On 17 November 2016, the OJEU published the Regulation 2016/1952/EU on European statistics on natural gas and electricity prices and it repeals the Directive 2008/92/EC. This legislation establishes a harmonised framework to elaborate and disclose the statistics on gas and electricity prices, both for residential customers and for companies. The new rules allow more transparent understanding of the different price components, splitting energy, networks and "taxes and other". This last component reflects, inter alia the VAT, other taxes and support to policies through customer charges, particularly the support to renewable energies.

- On 19 December 2016, the OJEU published the Directive (EU) 2016/2284 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC. This new Directive establishes stricter emission limits for each Member State in the period 2020 – 2030 for five pulluants: sulphur dioxide ($SO_2$), nitrogen oxides ($NO_x$), non-methane volatile organic compounds (NMVOC) and ammonia ($NH_3$). Levels for 2020 are equivalent to the adopted by the UE in previous regulations but levels for 2030 are significantly reinforced. The Directive shall be transposed to local regulation by 30 June 2018. Each Member State shall develop a national air pollution control programme by 2019 to ensure the compliance of the targets of this Directive regarding transport, agriculture and energy sectors.

## 4.3 Industry regulation in Spain

The National Commission for Market and Competition (CNMC) is as a public body attached to the Ministry of Energy, Tourism and Digital Agenda and is subjected to parliamentary scrutiny. It has the functions of market regulation and supervision.

### • Industry regulation and functioning of the electric system in Spain

The electric sector is regulated by the Electric Industry Law 24/2013, of 26 December 2013.

The following summarises the principles that rule Law 24/2013.

**1. Activity separation**

The regulation prescribes a separation between the activities carried out in the competitive sector and others that are considered to be regulated activities. Companies that carry out any activities defined by the law as regulated (economic and technical management of the system, transmission and distribution) must have these as their sole corporate purpose and cannot, therefore, engage in unregulated activities (generation, wholsesale and retail or other activities unrelated to electricity or activities abroad). However, a group of companies can carry out incompatible activities provided that these are performed by different companies within it and meet independence criteria. In addition, it prescribes a separation between regulated and deregulated activities for accounting purposes.

**2. Competition in power generation activity through the following measures**

- The production of electricity is developed in a free competition environment.

- Generation dispatch is determined by the daily market. The producers of electricity, except for special cases and exception foreseen by law, tender hourly bids for the selling price of electricity of each of the production units owned by them. The operating order of the production units is established on the basis of the lowest bids made until demand is satisfied in each programming period and the energy produced in each programming period is remunerated at the price matched between supply and demand. There is also the option of going to the intraday markets (six every day), where operators can adjust their positions with respect to their daily programmes. Meanwhile, the production plants contribute to the provision of whatever additional services may be necessary to guarantee supply, obtaining additional remuneration for such services.

- In addition to the market remuneration, the Ministry of Energy, Tourism and Digital Agenda may establish remuneration entailing payment for capacity. In this regard, Orders ITC 2794/2007, ITC 3860/2007 and ITC 3127/2011 regulate payments for capacity, which consist of an investment incentive, an environmental incentive and an availability service. The Royal Decree-law 13/2012 temporarily modifies the investment incentive and the environmental incentive until a new capacity payment system is developed.

- The installation of new generating facilities is considered to be deregulated, without prejudice to the obtainment of the necessary authorisations.

- Producers are entitled to use in their generating facilities the primary energy sources that they deem most appropriate, subject to such restrictions with respect to the environment, as might be stablished in the legislation in force.

- On 10 June 2014, the Royal Decree 413/2014 on electricity generation by means of renewable, cogeneration and waste facilities was published, confirming a new remuneration scheme for those installations that are not able to achieve the minimum level necessary to recover the costs and compete in a equiality manner with the rest of the technologies of the market, obtaining a "reasonable rate of return". The new specific remuneration scheme consists of the sum of:

  - "investment remuneration" (EUR/MW) to cover, where applicable, the investment costs that cannot be recovered from the sale of electricity in market; and

  - "operation remuneration" (EUR/MWh) to cover, where applicable, the difference between the operating costs and income obtained in the electric market.

- This new specific remuneration scheme will be calculated on the basis of a standard installation during its useful regulatory lifetime and referenced to the activity carried out by an "*efficient and well-run company*" according to the following standards:

  - the revenues from the sale of power;

  - the operation costs needed for the activity; and

  - the value of the initial investment.

This remuneration regime will be based on a reasonable rate of return of the investments, defined on the basis of the average yield on 10 year government bonds plus a differential, initially fixed at 300 basis points for the first regulatory period ending on 31 December 2019 (that is, 7.398% before taxes).

Six year regulatory periods and three year regulatory sub-periods have been set. The remuneration parameters related to the market price forecasts may be changed every three years, including the deviations produced in the sub-period. The standard parameters of the installations may be changed every six years, except for the standard initial investment value and the regulatory lifetime, which will remain unchanged during the installations' regulatory lifetime. The reasonable rate of return may be changed by law every six years, but only for remuneration in the future. The return on operation in circumstances where the operating cost of a technology is dependent on fuel prices may be changed at least once a year. The last Order published regarding to update this operational costs is the Order IET/1345/2015.

The standard value of the investment for new installations will be set through a competitive tendering process.

On the other hand, the Royal Decree 413/2014 established that an order from the Ministry of Industry, Energy and Tourism will establish a classification of standard installations in terms of the technology, installed capacity or any another characteristic that may be considered necessary for the application of this remunerative scheme. Hence, on 20 June 2014, the Ministry published the Order IET/1045/2014, of 16 June 2014 approving the remuneration parameters for standard installations already in operation.

The Royal Decree 947/2015 stipulates a call for the granting of the specific remuneration regime to new biomass-based electricity production plants within the peninsular power system and to wind technology farms. A maximum of 200 MW of biomass and 500 MW of wind will be assigned (new or repowered). The allocation procedure and the remuneration parameters are set out in the Ministerial Order IET/2212/2015, of 23 October 2015. The auction was called by the State Secretariat for Energy's resolution of 30 November 2015.

Said auction was held on 14 January 2016. All of the MW, both wind and biomass, were allocated, with the peculiarity that in both technologies, the discount proved to be 100%, so that no awardee will receive remuneration for investment costs.

To date, new auctions of renewable capacity have not yet been called, although it is expected that in 2017 new calls may be made, with the objective of meeting the commitments of 2020.

**3. Guarantee of the proper functioning of the system, by using the following measures**

- Functioning of the system: Red Eléctrica de España, S.A. carries on the transmission management and system operation activities. As system operator, it is responsible for managing the adjustment markets to guarantee a balance between energy demand and generation.

- Functioning of the market: With the creation of the Iberian Electricity Market (MIBEL), since July 2006 the Portuguese and Spanish forward markets operate on an integrated way, and since July 2007 so have the short-term daily and intra-day markets. Currently the Iberian Market Operator (OMI) is responsible for the operation of MIBEL. OMI originated in the fusion of OMI-Spain, responsible for the management of the daily and intra-day markets, and OMI-Portugal, responsible for the forward market.

**4. Legislation in force for regulated activities**

Law 24/2013 establishes that distribution and transmission are classified as regulated activities that are not subject to the free competition and market regime.

The Royal Decree-law 9/2013 fixes the transitory methodology that will rule the transmission and distribution activities until the new royal decrees for these activities are approved. One one hand, it established that, for the revenue of these activities, an "*efficient and well-run* company" will be considered applying uniform criteria throughout the Spanish territory. On the other hand, it established that these economic regimes allow adequate revenue of a low-risk activity. The methodology used to calculate the revenue for the distribution activity defines a "regulatory assets base" for the activity that evolves upwards according to the investments made and downwards according to the related depreciation, in order to fix its revenue. In the application of these principles it established a rate of return on assets linked to government bonds plus a spread.

Subsequently, Law 24/2013, published on 26 December 2013, introduced the following ammendments:

- Introduction of the "*efficient and well-run company*" concept, considering these activities as low risk.

- The regulatory periods extend to six years.

- For regulatory purposes, the accrual and collection of the remuneration generated by the installations that entered into operation in the year n starts in the year n+2.

- The assets in operation not fully depreciated will receive an investment remuneration considering their net value for the financial remuneration. The financial remuneration rate will be based on ten year government bonds plus an appropriate spread for a low risk activity.

On 30 December 2013 two royal decrees regulating the new remuneration methodology of the transmission (Royal Decree 1047/2013) and distribution (Royal Decree 1048/2013) activities were published, following the regulatory and tax measures that started in the second half of 2013.

The methodology set out in the Royal Decree 1048/2013 is based on new standard investment and operation costs. The aim is to reduce costs by introducing efficiency mechanisms and limitations concerning the annual investment volume. The recalculation of the base remuneration will be carried out during its first year of implementation, which includes the initial regulatory asset of the companies that can vary with respect to the one recognised in the Royal Decree-law 9/2013. Investment limits are also established (sector's maximum 0.13% of Gross Domestic Product). The financial remuneration rate of the asset embodies the principles established in Law 24/2013, referenced to ten year government bonds plus an appropriate spread for a low risk activity.

The Royal Decree 1048/2013 includes changes in the existing incentives; in quality (it may fluctuate between +2% and -3% of the company's remuneration) and losses (it may fluctuate between +1% and -2%). A new incentive regarding fight against fraud has been created, which may reach 1.5% of the company's remuneration. For the application of the new remuneration model contained in the Royal Decree 1048/2013, its regulatory development must be published; until then, as established in the Royal Decree 1048/2013, the remuneration scheme of the Royal Decree-law 9/2013 will be maintained.

The remuneration system culminates with Orders IET/2659/2015 for electricity transmission and IET/2660/2015 for electricity distribution, published on 12 December 2015, which determine the type of installations and unit values to consider when calculating the remuneration for 2016 onwards.

Given that the order was approved during December 2015, it was not possible to make the remuneration calculations resulting from the application of the unit values approved in the Order IET/2660/2015, of 11 December. For this reason, the Order IET/2735/2015, of 17 December –by which tariffs for access to electrical energy are established for 2016, and specific standard facilities and remuneration parameters for electrical energy installations from renewable energy, cogeneration and waste sources are approved– established an amount as payment on account until company remuneration was established under the mentioned the royal decree.

Lastly, the Order IET/980/2016, of 10 June, was published, by which remuneration of electrical energy distribution companies is established for 2016. This remuneration, with the exception of the incentive or penalisation for reduction of losses, will be definitive for the year 2016, and will amount to EUR 5,162.6 million, of which the amount of EUR 1,655.5 million corresponds to Iberdrola Distribución Eléctrica.

Transmission Remuneration: That same day, the Order IET/981/2016, of 15 June, was published, by which remuneration of companies owning electrical energy transmission installations is established for 2016. Final remuneration for 2016 for companies that own transmission facilities will amount to EUR 1,710 million.

**5. Access tolls**

Access tolls are uniform across the country and are collected by the distributors, which act as the collector agents of the electric system.

The Royal Decree-law 14/2010, of 23 December 2010, extended the application of access tolls to electricity producers and established that the producers would be regulated taking into consideration the energy fed into the grid. In addition, prior to further tolls being implemented, the Royal Decree-law 14/2010 established that an access toll of EUR 0.5 per MWh fed into the grid will be applied to producers that are connected to the grid.

Subsequently, the Royal Decree 1544/2011, of 31 October 2011 implemented the aforementioned regulation of access tolls for electricity producers.

Law 32/2014, of 22 December 2014, on metrology, modifies Law 24/2013, clarifying that the legal authority to establish the structure and conditions applicable to the access tolls for transmission and distribution networks corresponds to the Government.

The Order IET/2735/2015, of 17 December 2015, establishes the access tolls for 2016.

## 6. Progressive deregulation of electricity supply and introduction of wholesale and retailing activity

The supply of electric power is completely deregulated and all consumers must contract their supply of electricity with a trader. From 1 July 2009, those consumers who fulfil certain criteria have been able to opt to contract the electricity supply with a Last Resort Trader (CUR), which from July 2014 became a Reference Trader (COR), with the Last Resort Rate (TUR), now the Voluntary Price for the Small Consumer (PVPC). The TUR has been maintained for vulnerable consumers and those who do not fulfil the requirements for the PVPC and who temporarily do not have a current contract with a free market trader.

Law 3/2014, of 27 March 2014, obliges CORs to offer contracts in which the price of electric power is fixed for a specific period for consumers with a right to the PVPC.

The Royal Decree 216/2014, of 28 March 2014, established the methodology for calculating the PVPC and their legal regimen for contracting. It determines the structure of the PVPC that will be applicable to low voltage consumers with a contracted capacity up to 10 kW. Similarly, it determines the procedure for calculating the production cost of electric power on the basis of the hourly price in the daily market during the billing period. In addition, as established by Law 3/2014, it provides the option for consumers to contracting an electricity price fixed for a year with the reference trader.

This legislation provides the Spanish electricity sector with three ways in which traders can supply power to consumers:

- Reference supply:
    - PVPC: the method that has been applied by default from 1 July 2014 if the consumer was subject to the previous TUR.
    - Annual fixed price in a regulated market offered by the reference trader.
- Contracting in the deregulated market with a reference trader.
- Last Resort Supply: a form of supply applicable to vulnerable consumers and those who do not fulfil the requirements for the PVPC and temporarily do not have a current contract with a free market trader.

The Resolution of 2 June 2015 of the State Secretariat for Energy, approved six procedures necessary for billing hourly to those consumers covered by the PVPC. This resolution establishes a period of adaptation of IT systems until 1 October 2015. From this date onwards, all consumers having an hourly meter should be billed according to the hourly consumption and price.

On 6 February 2016, the Supreme Court issued a judgment (dated on 3 November 2015) that cancels the commercial fix margin used to establish the PVPC, which is the Reference Trader's remuneration. The Supreme Court overturns the current value of 4 EUR/kW/year with effect from 1 April 2014 and orders the Government to set a new value after establishing a new methodology. Until then, the current value will be used for billing as a temporary value, as it is set out in the Order IET/2735/2015 of electric tolls for 2016.

On 25 November, the Royal Decree 469/2016 was published. It modified the Royal Decree 216/2014 and established the methodology of calculation of the Voluntary Price for the Small Consumer of electric energy (this royal decree established a Reference Trader's remuneration of EUR 4 /kW). It also established its contracting legal regime.

The methodology included the recognition of the costs to carry out the reference retail activity, taking as reference the costs of the three most efficient reference trader and excluding the face-to-face channel, plus a fee for the exercise of the activity (1.05% on energy price). The reference traders must keep a cost accounting, according to criteria and rules to be determined by Ministerial Order.

On 24 December, a Ministerial Order was published with the concrete values, both for the past (from 1 April 2014) and the future (until 2018), establishing a fixed and variable term for the allocation of the Reference Trader´s margin.

The reference traders will regularize the past through a customer rebilling in the 9 months after the publication of the Ministerial Order (consumptions made from 1 April 2014 to the publication of the order). In the billings made by each reference traders prior to that date, the value of EUR 4 per kW and year established in Royal Decree 216/2014, (annulled by the Supreme Court rulings), will continue to be applied on a transitional basis.

**7. Price formation and tariff structure**

Law 24/2013 regulates the aspects relating to the PVPCs, which are defined as the maximum prices that the suppliers that assume the reference supply obligations will be able to charge.

They will be calculated as the sum of the following items:

- the production cost of electricity, based on market mechanisms, taking account of the average price set in the production market during the billing period;
- the corresponding access tolls and fees; and
- the corresponding supply costs.

**8. Social tariff**

The Royal Decree-law 9/2013 sets out the social tariff for consumers with certain social, consumption and purchase power characteristics supplied at the TUR at their normal residence, and the financing of the social tariff costs. This tariff is calculated as 25% of the PVPC. Until the social and economic indicators are developed for application, the social tariff will apply to individuals in their normal residence supplied under the last resort scheme with contracted capacity of less than 3 kW, to large families or families whose members are all unemployed and to certain pensioners 60 years old or older receiving minimum pensions.

Such costs shall be borne by the parent company of the vertically integrated companies. The allocation of the social tariff costs among such companies will be made according to the number of supplies connected to the distribution network and the number of customers of the retail business of the group.

In the Royal Decree 968/2014, of 21 November 2014, the methodology for fixing the distribution percentage of the amounts to be financed with regard to the social tariff is developed. These percentages will be calculated annually by the CNMC for each business group, as the relation between (i) the sum of the annual averages of the number of feeds connected to the distribution networks of the distributors and of the number of customers of the distributors in which the group participates, and (ii) the sum of all the annual average values of feeds and customers of all the business groups that should be considered for the effects of this sharing.

On 20 October 2015, the Ministry published the Order IET/2182/2015, of 15 October, which set the percentage of the amounts to be financed with regard to the social tariff for 2015. According to this order, Iberdrola should finance 38.26%.

On 10 September, the Order/IET/1451/2016 was published. This order establishes the distribution percentages of the amounts to be financed regarding the Social tariff corresponding to 2016. This order assigns a 37.951119% to Iberdrola España, S.A.U., to be applied as from settlement number 8 of the Social tariff (August). Up until the publication of the order a provisional percentage of 37.97% was applied.

On 30 November, the judgments of the appeals filed by the companies Viesgo, Endesa, Iberdrola and Gas Natural against the Royal Decree 968/2014 were published. This Royal Decree developed the methodology for setting the percentages of Social tariff´s finance. In the aforementioned judgments, the Supreme Court recognizes the claim of the companies and annuls the system of financing the Social tariff as discriminatory. The financing companies must be compensated for the amounts contributed in 2015 and 2016 (affected by the annulled articles of RD 2014), with their corresponding interests. As a result, the last settlement of Social tariff made in 2016, (up to the closing date of the year), was the settlement 8 for the period January – August.

Subsequently, on 24 December, the Royal Decree-law 7/2016 was published, which regulates the mechanism for financing the cost of Social tariff and other measures to protect vulnerable electricity consumers. This royal decree-law establishes a new mechanism for financing the Social tariff, charging to the commercialization activity, with immediate entry into force. Until the regulatory development, the trading companies of Iberdrola would finance 35.5% up from 37.97% attributed to the Iberdrola Group in the previous system.

In addition, it creates a second group of "severe vulnerable consumers" who must not have their supply interrumpted, as well as co-financing their invoices by the “competent Administrations” and by the same Social tariff funders. This measure must be developed by regulation in 3 months.

## 9. Load Manager

The Royal Decree-law 6/2010 introduced the load manager as another agent in the electrical system.

The Royal Decree 647/2011, which was approved in May 2011, regulates the functions of load managers, defined as “*companies that, as consumers, are authorised to resell electricity for power recharging services. Load managers are the only subjects with wholesale customer character under the terms provided for the applicable community regulations.*” The Royal Decree 647/2011 sets forth the requirements and obligations of load managers. It also created a new super off-peak tariff applicable to contracts of up to 15 kW, thereby creating a third hour period (from 1 a.m. to 7 a.m.) aimed at encouraging the charging of electric vehicles in this period.

## 10. Emission allowances

Regarding environment regulations, the issue of $CO_2$ emissions allowances is critical. This concerns the obligation placed on industry and electricity companies by Directive 2003/87/CE to deliver an emission allowance for each ton of $CO_2$ emitted by a plant, and the cap is reduced over time so that total emissions fall. In 2020, emissions from sectors covered by the EU ETS will be 21% lower than in 2005.

In 2009, within the European Union's Green Package for energy and climate change, Directive 29/2009/CE was approved, introducing changes and extending the European Union emissions trading system beyond 2012. Phase 3 (2013-20), significantly different from previous phases, is based on rules which are far more harmonised than before. The main changes in the directive were: the default method of allocating allowances is auctioning, not free allocation, although transitional free allocation is envisaged in some cases; extension of the periods of compliance to be followed by consecutive periods in which the amount of rights is determined on an European Union-wide scale; it also provides that allowances can be carried over one period to the next. As a result of the new rules, since 2013, IBERDROLA has no longer had the right to receive any free allocation.

The auctioning of allowances is governed by the EU ETS auctioning Regulation. This covers the timing, administration and other aspects of auctioning to ensure it is conducted in an open, transparent, harmonised and non-discriminatory manner. Two auction platforms are in place: European Energy Exchange (**EEX**) (common platform for the large majority of countries participating in the EU ETS) and Futures Europe (**ICE**) (acts as the United Kingdom's platform). The Member States' shares in the auctioning volume in 2013 to 2020 are distributed as follows: (i) 88% on the basis of their share of verified emissions in 2005 or the average of the 2005-2007 period, (ii) 10% are allocated to the least wealthy EU member states as an additional source of revenue to help them invest in reducing the carbon intensity of their economies and adapt to climate change, and (iii) the remaining 2% is given as a 'Kyoto bonus' to nine EU Member States, which by 2005 had reduced their greenhouse gas emissions by at least 20% of levels in their Kyoto Protocol base year.

A surplus of emission allowances has built up in the ETS since 2009, largely due to the economic crisis (which has reduced emissions more than anticipated) and high imports of international credits. This has led to lower carbon prices and thus a weaker incentive to reduce emissions. The European Commission (EC) is addressing this through short- and long-term measures. As a short-term measure the European Commission postponed in February 2014 the auctioning of 900 million allowances until 2019-2020 ("backloading").

As a long-term solution, changes will be introduced to reform the ETS by establishing an MSR as of 2018, operating from 1 January 2019. The reserve will address the current surplus of allowances and improve the system's resilience to major shocks by adjusting the supply of allowances to be auctioned. It will operate entirely according to pre-defined rules. The 'backloading' was also amended by MSR Decision, passed in October 2015: backloaded allowances will not return to the market in 2019-20, instead they will be introduced in MSR.

## 11. Toll balance

Electricity Industry Law 54/1997, of 27 November, introduced the liberalisation of electricity generation and retailing activities. The difference between the access toll revenue established by the Government and real costs related to these tolls resulted in a revenue shortfall which led to problems and modifications in the functioning of the system.

To fund this shortfall, which is deferred through the recognition of long-term collection rights recovered by the annuities incorporated in annual fees, a series of measures have been adopted.

The first measure was the Royal Decree-law 6/2009, of 30 April 2009, that set limits to the increase of the shortfall and defined a framework for the gradual sufficiency of the access tolls. It also addressed the mechanism for funding the toll shortfall through a securitisation fund set up for this purpose: Electricity system deficit securitisation fund (**FADE**).

As measures adopted since 2009 proved to be insufficient throughout 2013, the Government carried out a process of regulatory and tax reform for the electricity sector. As a step prior to this reform, the Law 15/2012 established new tax measures and the Royal Decree-law 9/2013, was approved, adopting urgent measures to guarantee the financial stability of the electric system and modified the methodology for the calculation of the remuneration of the transmission and distribution activities, special regime and capacity payments, among other measures.

Finally, Law 24/2013 is governed by the principle of economic and financial sustainability of the electricity system, meaning that any regulatory measure which causes an increase in costs or a reduction in income for the electricity system should incorporate an equivalent reduction of other cost items or an equivalent increase in income that ensures the equilibrium of the system. Thus, the possibility of new deficits accumulating, as have occurred in the past, is ruled out.

This principle is reinforced with the obligation to automatically review the tolls and fees if the temporary imbalances between revenues and costs of the electricity system exceed the following limits from 2014 onwards:

- 2% of the income estimated for the system in a given year.
- The accumulated debt due to imbalances in preceding periods may not exceed 5% of the income estimated for the system in a given year.

The part of the imbalance that, without exceeding such limits, is not compensated by increases in tolls and fees will be financed by the parties to the settlement system in proportion to the remuneration that corresponds to them for their activities.

The amounts thus contributed will be returned in the corresponding settlements during the following five years together with an interest rate equivalent to the market rate.

In contrast to the previous system, these imbalances will not be financed exclusively by large companies and the collection rights corresponding to income deficits may not be assigned to the Securitisation Fund of the electricity system debt after 1 January 2013.

With regard to the excess income that could arise, it will be used to compensate imbalances from previous years and, as long as there are debts pending from previous years, the access tolls and fees may not be revised downward.

The Royal Decree 680/2014, of 1 August, regulates the procedure of budgeting, recognition, settlement and control of the surcharges on the production of electric power in the isolated electricity systems of the non-peninsular territories charged to the Central State Budgets, thus developing the provisions of Law 24/2013, which established that from 1 January 2014, 50% of these surcharges would be financed against the Central State Budgets.

At the end all these measures have enabled the final statements of 2014 and 2015 to be closed with a surplus of EUR 550.3 million and EUR 469.3 million respectively. This surplus will not be used as an income in the regulated settlement of the current financial year.

## 12. Self-consumption

Self-consumption is regulated for the first time in the Law 24/2013 and defined as the electric energy provided by generation installations associated with a consumer. Self-consumers must pay the same access toll for the consumed energy as other customers (from the network or from your own installation). In addition, a mandatory register for self-consumption installations is created.

Later, the Royal Decree-law 9/2015 of 10 July modified Law 24/2013 to establish the possibility of setting reductions in tolls, fees and costs for certain categories of consumers for which the maximum contracted power consumption and generation installed shall not exceed 10 kW. This measure is exceptionally and it will be implemented as long as the safety and economic and financial sustainability of the system is ensured.

Finally, the Royal Decree 900/2015 of 10 October regulated the administrative, technical and financial conditions of the self-consumption modalities. It differentiated between two types of self-consumption:

- Supply with self-consumption: a consumer in a single electricity supply point or installation, with an internal network of one or more installations to generate electricity for self-consumption, which were not registered as generation facilities. In this case, the consumer is a single subject. The contracted power shall not exceed 100 kW and discharges of energy to the grid do not receive monetary compensation.

- Production with self-consumption: a consumer in an electricity supply point or installation associated with one or several production facilities duly registered in the administrative record of energy production facilities. In this case there are two subjects - the consumer and the producer.

Regarding the economic regime, and until charges associated with system costs are approved, the self-consumer must pay a fixed charge and a variable charge applicable to the self-consumed energy. However, those consumers who fall into the supply with self-consumption modality and have contracted power less than or equal to 10 kW will be exempt from the temporary charge for the self-consumed energy, the insulated electrical systems (Canarian Island, Ceuta, Melilla, Ibiza and Formentera), and cogeneration until 31 December 2019. Self-consumers also pay network tolls for the use of the network, like other consumers.

## 13. Interruptibility

The interruptibility service for a consumer consists in the reduction of its contracted capacity in response to a reduction order from the system operator. This order will be given taking account of the needs that arise in the operation of the electricity system, according to criteria of security and lowest cost.

The system operator will request the execution of the capacity reduction option, following economic and technical criteria:

- Economic criteria: In situations where the application of the service has a lower cost than that of the adjustment services of the system.

- Technical criteria: As a rapid response mechanism in emergency situations in the operation of the system.

To execute the option, the system operator will send a power reduction order to the service providers who will reduce their active power demanded until the committed residual power values are fulfilled.

The allocation of the interruptibility service will be carried out through an auction procedure managed by the system operator, as established in the Order IET/2013/2013, guaranteeing the effective provision of the service and its execution at the lowest cost for the electricity system.

Finally, the resolution published on 12 August 2016 approves the rules of the competitive procedure of auctions for the allocation of the service of interruptibility. It also approves the model of adhesion to the legal framework (established for participation in the auctions). On 12 October was published the resolution approving the calendar and characteristics for the 2017 electric season of the competitive auction procedure. These auctions took place during the week of 14 to 18 November. The total cost amounted to EUR 524.8 million with a total allocated power of 2,975 MW and an average price of EUR 176,420 / MW.

Relating to the interrupbility, a resolution has been published which sets the average price of energy to be applied in the calculation of the remuneration of the service of interruptibility offered by consumers of non-mainland electric systems to which it is applicable Order ITC/2370/2007, of 26 July, during the foruth quarter of 2016. Its value is fixed at EUR 42.40 / MWh.

**14. Energy efficiency**

Energy efficiency is an essential aspect of the European 2020 strategy for sustainable growth and one of the most effective forms of strengthening the security of energy supply and reducing emissions of greenhouse gases and other pollutants. In this sense, the European Union has set itself the target of achieving a 20% improvement in energy efficiency by 2020.

Law 18/2014, of 15 October, approving measures for growth, competitiveness and efficiency, contains a set of mechanisms designed to achieve the energy saving targets established in the Energy Efficiency Directive. To this end, it created the National Energy Efficiency Fund, managed by the Institute for the Diversification and Saving of Energy (*Instituto para la Diversificación y Ahorro de la Energía*) and financed by an annual contribution from all suppliers of gas and electricity, wholesalers of oil products and of liquid petroleum gases, according to their sales. The Order IET/289/2015, of 20 February, established the contribution obligations for 2015.

Law 8/2015, of 21 May, modified Law 18/2014 and established that the obliged entities must make an annual contribution from 2016 onwards to the National Energy Efficiency Fund in four instalments: on 31 March, 30 June, 30 September and 31 December of each year. In addition, in order to establish the annual contribution for each obliged entity, positive or negative adjustments can be made, resulting from data provided by the obliged entities, such as sales and other variables, and data set out by the relevant ministerial order of the previous year.

Finally, the Order IET/359/2016 of 17 March established the contribution obligations for 2016.

- **Industry regulation and functioning of the gas system in Spain**

The natural gas sector in Spain has undergone significant changes in its structure and operation in the last ten years, from a monopoly to a fully open market, driven mainly by the deregulation measures about natural gas intern market in European directives (2009/73/EC Directive is currently in force) aimed at opening up markets and creating a single European gas market.

These liberalised principles have been incorporated and developed in Spanish law through the Hydrocarbon Industry Law 34/1998, which began the deregulation process and, more recently, through the Law 12/2007 and the Royal Decree-law 13/2012 which completed this process.

The Hydrocarbon Industry Law of 1998 laid the foundations for the new gas system, particularly with regard to the separation of activities (regulated and deregulated), the introduction of third-party access to the regulated network, the abolition of the former concessions for piped gas supply and their conversion into regulated administrative permits, and the establishment of a timetable for progressive market deregulation.

In line with these principles, the gas system has been structured around two types of activities: regulated activities (regasification, basic storage, transmission and distribution) and deregulated activities (trading and supply).

The Hydrocarbon Industry Law 34/1998 provided for the legal separation of deregulated and regulated activities and the segregation for accounting purposes of the various regulated activities. In addition, with the publication of Law 12/2007, Spain moved a step closer to achieving functional separation between network activities and deregulated activities and between network activities and technical system management. In 2012, the Royal Decree-law 13/2012 was approved, transposing Directive 2009/73/EC, and establishing further measures of separation in management of the transmission network.

Although the Hydrocarbon Industry Law established the general principles of the new Spanish gas system, the sector's deregulation did not come into practice until 2001, after the publication of the Royal Decree-law 6/2000, on urgent measures to intensify competition in the goods and services markets, and the Royal Decree 949/2001, regulating third party access to gas installations and establishing an integrated economic system for the natural gas sector.

The first of these decrees enacted certain elements of the Hydrocarbon Industry Law with the aim of fostering measures that would facilitate the elimination of entry barriers for new supply companies. In particular, it created the technical system manager (ENAGAS, S.A.), provided for a 25% gas release under the contract for natural gas brought from Algeria through the Maghreb pipeline, and brought forward the timetable for deregulation.

The second, the Royal Decree 949/2001, established firstly the specific terms and conditions for third-party network access and, a remuneration system for regulated activities and a cost-based system of tariffs, tolls and fees structured according to pressure levels and consumption bands.

The remuneration assigned to each company as well as the tariffs, tolls and fees are updated periodically by ministerial orders and resolutions.

The economic system also established a settlement procedure that would allow for redistribution of revenues collected in the form of tariffs, tolls and fees between the various regulated activities in accordance with the remuneration method established. The body responsible for effecting this redistribution is the Ministry of Energy, Tourism and Digital Agenda.

Other issues related to the regulation of the transmission, distribution and supply businesses, the administrative authorisation procedures for natural gas facilities and the regulation of certain aspects of the supply business are dealt with in the Royal Decree 1434/2002.

As for the technical operation of the system, the operating regulations are established in the Order ITC 3126/2005 enacting the gas system technical management rules. Inter alia, these regulations established that each operator is individually responsible for maintaining its liquidity and enacts specific protocols for the conduct of the technical system manager in exceptional operating circumstances.

Despite the sector's progressive deregulation, prevailing regulation upholds the state's obligation to ensure the safety and continuity of supply. To this end, the Royal Decree 1766/2007 stipulates that direct market suppliers and consumers must maintain minimum security stocks equivalent to 20 days' consumption. In addition, it limits the maximum percentage of gas supplies that may be sourced from a single country to 50%.

The state also maintains responsibility for obligatory planning work for certain infrastructures (for example, gas pipelines forming the core transmission network, the secondary transmission network, determining the total liquid natural gas regasification capacity necessary to supply the system and core natural gas storage facilities). For all other infrastructures, the state's planning work is indicative only. In 2012, the Royal Decree-law 13/2012 enacted a series of measures to halt the construction of new infrastructure in a context of falling demand for gas.

As mentioned above, in Spain the deregulation process was completed with Law 12/2007 transposing Directive 2003/55/CE. The two key changes enacted by this law were the elimination of regulated supply and the functional separation between network activities and deregulated activities.

In the Spanish electric system, the market deregulation process was completed on 1 July 2008 with the elimination of regulated supply for customers and the creation of last-resort supply. Currently, low-pressure customers with annual consumption of less than 50,000 kWh who do not choose another supply option shall be supplied by a last-resort supplier at a price calculated automatically. This additional rate is called the last resort tariff.

Law 18/2014, on measures for growth, competitiveness and efficiency, previously the Royal Decree-law 8/2014 established the principle of economic and financial sustainability for the gas system. This principle is reinforced with the obligation to automatically review tolls and fees if the annual imbalance between revenues and costs of the gas system exceeds the following limits:

- 10% of the income receivable for the year; or
- 15% of the sum of the annual imbalance plus annual payments recognised and pending amortisation.

The part of the imbalance that, without exceeding the above limits, is not compensated by the increase in tolls and fees, will be financed by the parties to the settlement system in proportion to their remuneration. The amounts contributed will be returned in the following five years and will earn an interest rate equivalent to the market rate.

The deficit accumulated as at 31 December 2014 will be financed by the owners of the installations during a period of 15 years.

On the other hand, the remuneration of the regulated activities will be based on the costs necessary for an efficient and well-managed company to carry out the relevant activity, following the principle of performing the relevant activity at the lowest cost for the gas system. In addition, the remuneration of regulated activities will be on the basis of six-year regulatory periods. The first regulatory period ends on 31 December 2020.

The remuneration system for distribution is based on the remuneration of the previous year, adjusted for changes in productivity and new customers.

The remuneration system for transmission, storage facilities and regasification is based on the net value of the associated assets. In addition, the associated operating and maintenance costs and premiums for continuity of service are also factored in to calculate the remuneration system.

The Hydrocarbon Industry Law has been modified by Law 8/2015, 21 May 2015.

The main aspects introduced by Law 8/2015 regarding the gas system are:

- The creation of an organised wholesale gas market.
- The designation of the operator of the regulated gas market.
- Some measures relating to minimum security stock levels are adopted.
- CORES (*Corporación de Reservas Estratégicas de Productos Petrolíferos*) is enabled to constitute, maintain or manage natural gas and liquefied natural gas strategic stocks.
- With respect to the Efficiency Fund (*Fondo Nacional de Eficiencia Energética*) the law permits the refund of contributions when necessary (in case of mistake, for example).

- A new fiscal regime is established, benefiting the landowners and regions (*Comunidades Autónomas*) where the activities of exploration, investigation and production with conventional and non-conventional (including fracking) techniques are developed.

- Inspections may be carried out by any natural gas installation company (not only distribution companies).

Finally, the Royal Decree 984/2015 of 30 October 2015 regulated the organised wholesale gas market and the third party access to the facilities of the natural gas system. This market will initially include the negotiation of short-term standardised products by an electronic platform managed by the Market Operator (MIBGAS - OMEL). In addition, this market will centralise the hiring capacity through an electronic platform managed by the Technical System Operator (ENAGAS), with standardised products and auction procedures.

- **Alternative energies for transport**

The Royal Decree 639/2016, of 9 December, establishes a framework of measures for the implementation of an infrastructure for alternative fuels. This is the transposition of the Directive, which requires each State to set specific objectives and measures to foster infrastructures that allow the deployment of alternative mobility to oil. It contemplates the use of electricity for transportation by road and the supply in ports and airports. It also contemplates the use of natural gas (CNG or LNG) in transport by road or ports.

### 4.4 Industry regulation in the UK

The principal laws that govern Scottish Power Ltd.'s (hereinafter, **SCOTTISH POWER**) activities are the Electricity Act 1989 (**Electricity Act**) and the Gas Act 1986 (**Gas Act**), as substantially amended and supplemented by numerous subsequent enactments, including the Gas Act 1995, the Utilities Act 2000, the Energy Act 2004, the Energy Act 2008, the Energy Act 2010, the Energy Act 2011, the Energy Act 2013, the Energy Act 2016 and various EU Directives (subject to any changes arising from the UK's forthcoming exit from the EU). These specific energy laws are implemented by UK and EU legislation relating to competition and consumer protection.

1. **The Regulatory Authorities**

The principal regulatory authority for utilities is the Gas and Electricity Markets Authority (**GEMA**), comprising a chairman and other members appointed by the Secretary of State for Business, Energy and Industrial Strategy (**BEIS**). GEMA is supported by the Office of Gas and Electricity Markets (**OFGEM**). The main instrument of regulation used by GEMA is the licensing regime which in most cases requires the various aspects of the energy industry to be carried out under a licence to which standard conditions apply. In addition, there are a number of statutory obligations, known as relevant requirements, which are enforced by GEMA as if they were licence conditions.

GEMA's principal objective is to promote the interests of present and future consumers and promote effective competition. Under the Energy Act 2010, the interests of such consumers must be taken as a whole, including their interests in the reduction of greenhouse gases and in the security of the supply of gas and electricity to them.

In furthering this objective GEMA must ensure that all reasonable demands for electricity and gas are met, ensure that licence holders are able to finance the activities they are obliged to undertake, and contribute to the achievement of sustainable development. Further provisions concerning the duties of GEMA have been made by the Energy Act 2013, but the provisions in question are yet to be implemented.

GEMA's functions include the granting of licences (and their revocation in certain limited circumstances), the making of changes to licence conditions (including the operation of price controls for the monopoly network functions), the review of industry code modifications, operating schemes for promoting renewable electricity and energy efficiency, and the enforcement of the industry's obligations.

GEMA has the power to impose monetary penalties for past and ongoing breaches of licence conditions and relevant requirements and it can order that redress is provided to consumers. Fines and redress orders for a particular breach can in aggregate be up to 10% of the licensee´s applicable turnover.

The principal Regulatory Authority for competition matters is the Competition and Markets Authority (**CMA**). They can undertake general market investigations and, working concurrently with GEMA, can investigate potential breaches of competition law in the utility field. Consumer protection matters are enforced by the CMA, OFGEM and Local Authority Trading Standards departments.

**2. Licences**

Companies within the SCOTTISH POWER Group hold licences for various functions including:

- the supply of electricity;
- the generation of electricity;
- the distribution of electricity in the South Scotland area, in the Merseyside and North of Wales area;
- the supply of gas;
- the shipping of gas (that is, arranging for the insertion, the transmission, and the removal of it from the public network); and
- the transportation of gas to certain specific sites (such as proposed new gas fired power stations).

The third package of European Union Directives on Electricity (2009/72/EC) established additional restrictions to the ownership of transmission companies. On 19 June 2012, Scottish Power Transmission Limited (SPTL) was certified by OFGEM, in accordance with the Directive's Article 9, with the European Commission approval, on the basis that SPTL's arrangements guarantee more efficient independence than the ITO provisions under the Directive's Chapter V. As a result, the provisions relating ownership separation do not apply to SPTL.

The conditions of licences regulate such matters as:

- for network licences: the quality of service and the charges that can be made.
- for supply to domestic consumers: consumer protection provisions including rules on standards of conduct, provision of information, debt and disconnection, cost reflective pricing, in relation to payment methods, information supply to customers and on treating customers fairly.
- for most types of licence: rules requiring adherence to industry codes that set down the detailed technical rules for operating the industry, and providing for OFGEM to determine whether proposed changes to the codes should go ahead.

The Gas Act 1995 and Utilities Act 2000 introduced standard licence conditions to ensure that all holders of a particular licence type are subject to the same conditions. Under the Electricity and Gas Regulations 2011 (Internal Markets), modifications of individual or standard licencing terms no longer require the holders´ consent. However, affected licence holders and other parties can appeal to the CMA on both procedure and substance, except where legislation allows the Secretary of State to modify licence conditions for certain specified purposes (typically the delivery of industry wide reforms). In most cases, these powers are time limited. Changes to licence conditions can also currently be made without the right of appeal in pursuance of a European Union obligation, using powers in the European Communities Act 1972. A market investigation was initiated on 26 June 2014 by GEMA. The investigation was into the operation of retail gas and electricity markets for domestic and small business consumers, and the wholesale markets that support such supply. In June 2016, the CMA published its Final Report which set out the findings from its investigation and its decision on remedies. The report concluded that competition in the wholesale gas and electricity markets works well and that the presence of vertically integrated firms does not have a detrimental impact on competition. No strong case was found for returning to the old "pool" system for the Wholesale Electric Market.

However, a number of adverse effects on competition were identified in the retail market, some due to ill-conceived regulation, but mainly focussed on the 'weak customer response' from the ~70% of customers who are on standard variable tariffs (SVT) and who lose out through lack of engagement in the market. Most of the CMA's remedies are focussed on increasing competition in the SVT segment, including creating a database of disengaged customers (those who have been in tehe SVT for more than 3 years) which could be used by rival suppliers for marketing, and a programme of trials to develop more effective customer prompts. However, in the case of customers with prepayment meters the CMA decided to impose a transitional safeguard tariff cap, to be set above the "efficient" level of pricing, with the aim of mitigating the damage to competition that might otherwise arise. Other remedies include location-dependent charging for transmission losses, changes to industry settlement processes and code governance, and recommendations to the Government on a number of subjects including GEMA's duties.

The CMA made a number of orders in December 2016 to implement relevant remedies, ahead of its statutory deadline of 23 December to complete implementation. It will remain involved to monitor the implementation and effectiveness of remedies.

### 3. EU Regulation on Energy Market Integrity and Transparency (REMIT)

GEMA also enforces REMIT in the United Kingdom. It has the power to levy unlimited fines for breaches and since 13 April 2015 can initiate criminal prosecutions for breach of the market manipulation element of REMIT against both companies and the individual employees involved. In the case of individuals, the penalty can include imprisonment for up to two years.

### 4. Price controls

Prices for the sale of electricity and gas by utilities to final consumers are not currently controlled in the United Kingdom but as a result of a remedy imposed by the CMA, prices for supply to customers with prepayment meters will be subject to a transitional safeguard cap between 1 April 2017 and 31 December 2020. Although there is no controlled tariff for consumers with specific characteristics, all the major suppliers must offer special discounts for certain disadvantaged customers under the Warm Homes Discount programme. The total cost of discounts of the Warm Home Discount programme for SCOTTISH POWER in 2015-2016 was about GBP 6.40 per customer (counting gas and electricity separately) and, like any other costs, suppliers are free to pass on the cost to their tariffs. OFGEM has implemented licence modifications requiring any price variation by payment method to be cost reflective.

Similarly, there are currently no controls other than those established in the Competition Act 1998 and the Transmission Constraint Licence Condition (TCLC), on prices charged to commercial customers or on other prices in the wholesale electricity and gas markets.

TCLC prohibits electricity generators from making excessive profits resulting from actions in balance markets. OFGEM has published guidelines on the interpretation and application of the TCLC. Enforcement decisions under the framework of the TCLC are subject to review by the Competition Appeal Tribunal, rather than the review by the courts applicable to other GEMA enforcement decisions. The condition expires five years after its enactment, having been implemented on 29 October 2012, and is renewable for another two years. OFGEM consulted in April 2016 on renewing TCLC, but no decision has been announced at this stage.

OFGEM has implemented electricity market liquidity obligations for large integrated retail and generation businesses, including SCOTTISH POWER. These include obligations to facilitate trading with smaller companies and also an obligation to create market in a number of wholesale products during two specified “windows” in each business day. Although the prices of bids and offers are not regulated, the licence condition limits the spread between them. There are rules designed to give some protection to obligated licensees in fast or volatile markets. To date, we have incurred some limited costs in complying with this obligation.

Following its Retail Market Review (RMR), OFGEM has imposed in 2013 a number of rules restricting the products that could be sold in the domestic energy market including restrictions on the number and composition of tariffs. Following a recommendation from CMA these restrictions were removed in 2016. Other RMR remedies including information requirements, requirements for notifying customers of lower tariffs and standards of conduct for customer treatment remain in place.

The networks are considered to be a natural monopoly. Therefore, their revenues have been controlled and this is now achieved through the new RIIO framework (Revenues = Incentives + Innovation + Outputs). This involves setting a revenue profile for an eight year period (with a limited revision every four years) based on the regulator’s assessment of the costs of an efficient network operator and the likely capital programme (based on a business plan submitted by the Company) in order to calculate the revenue needed to meet a target return on investments. The formula uses a Market Indicator for setting the debt cost, and phases in (for electricity) an asset depreciation period of 45 years, replacing the 20 year period used previously. Various incentives have been added to the formula which also takes account of inflation in order to calculate the permissible revenues for the network.

Under the RIIO framework, there is a greater emphasis on outputs and innovation, as well as on the role that network companies can play in developing a sustainable energy sector.

In the transmission business, SPTL’s new RIIO T1 framework became effective in April 2013. In distribution, the new RIIO-ED1 for the Scottish Power network in the South of Scotland and in the Manweb area came into force on 1 April 2015. Following an appeal made to the CMA by British Gas Trading Ltd, a small adjustment was made, which affected the prices set for 2016/17 and later years. The net effect on Scottish Power’s distribution licenses is a revenue reduction of GBP 19 million over the 8 years RIIO ED1 period.

OFGEM has brought forward proposals for competitively tendering the construction of large, new and separable transmission projects. This may lead to a few transmission developments being taken forward by others.

### 5. Other issues

Other key elements of the regulatory regime in the United Kingdom include:

**The Renewables Obligation (RO)**

For some time, the United Kingdom Government has intended to source at least 30% of electricity from renewable sources by 2020 as part of its commitment to meeting its obligations under the EU Renewables Directive. To this end, the RO Orders (which apply separately to different parts of the United Kingdom within a unified scheme) place obligations on suppliers of electricity to source an increasing proportion of their electricity from renewable sources (based on the expected level of renewable energy production in each year plus a 10 percent spread in order to prevent certificate prices from falling sharply). Suppliers meet their obligations by presenting sufficient Renewables Obligation Certificates (ROCs) or by paying an equivalent amount into a fund.

The proceeds of the fund are paid back to those suppliers that have presented ROCs in proportion to the number of ROCs presented. Since April 2009, the RO has been banded so that differing technologies receive different levels of support depending on the expected costs. The revision of this framework concluded in 2012 and, as a result, projects starting after 1 April 2013 (or later for some technologies) received revised levels of support.

The RO will close for new projects no later than 31 March 2017 and Government has implemented the Contract for Difference (CFDs) mechanism that was part of Electricity Market Reform (EMR). For solar photovoltaic generation plants above 5MW, the RO closed in April 2015. The RO closed in March 2016 for solar photovoltaic plants at 5 MW or below and in May 2016 for onshore wind, in both cases subject to grace periods. The wind farms in Scottish Power's onshore renewables pipeline that received planning permission in time to qualify for the relevant grace period, will be eligible to accredit under the RO so long as they commence generation 31 March 2017. The RO remains in place for facilities entering the scheme before the relevant closure date; payments will continue until 31 March 2027 for projects that started generation before 1 April 2009 and for 20 years after entry into the RO for later dated projects. The Energy Act 2013 foresees changing from the RO to a premium payment on substantially similar terms.

**Electricity Market Reform (EMR)**

The principal elements of the United Kingdom Government's EMR programme are:

- a new incentive scheme, based on CFDs to support low carbon generation; and
- a Capacity Market to support security of supply (market-wide auction mechanism).

The CFD allocations to date have taken place within the constraints of a budget for low carbon support measures known as the Levy Control Framework (**LCF**). An initial tranche of contracts were approved during 2014 by the United Kingdom Government as part of a transitional "Final Investment Decision Enabling Process". The first Allocation Round took place on 4 February 2015 in two "pots"; one for established technologies (mainly onshore wind and solar) and a second one for less established technologies (mainly offshore wind). Scottish Power's 714 MW East Anglia ONE offshore Wind Farm achieved a contract in the auction at a price of GBP 119 per MWh. The Government has now announced another CFD Allocation Round for less established technologies which is due to commence in April 2017. A budget allocation of GBP 290 million (2011/12 prices) has been made for this competitive auction within an overall budget of GBP 730 million for up to three Allocation Rounds before May 2020 subject to satisfactory evidence of cost reductions over time. The Government is also currently considering the nature of any future cost control mechanism such as the LCF after the current LCF end date of 2020/21. A further announcement may take place on 8 March 2017 at the time of the Spring Budget.

Annual Capacity Market auctions took place in December 2014, 2015 and 2016, for capacity delivery in winter 2018, 2019 and 2020, respectively. The most recent of these auctions cleared at a price of GBP 22.50 per kW/year. A new Capacity Market Early Auction was held in early 2017 for delivery in Winter 2017/18; this cleared at a lower price of GBP 6.95 per kW/year.

**EU-ETS and United Kingdom Carbon Price Support**

As in all EU Member States, generators in the United Kingdom participate in the EU-ETS. Since 2013, the Government is required to auction all allocations to the power sector. The Climate Change Act 2008 sets out a trajectory towards reducing $CO_2$ emissions from 1990 levels by at least 80% by 2050, with interim reduction targets. The Carbon Price Support mechanism is a United Kingdom tax imposed on fossil fuels used for electricity generation at differential rates which simulate a charge on the $CO_2$ emissions. It was intended to smooth the path of carbon prices in the United Kingdom power sector in the event of instability in the EU-ETS, by topping up the EU-ETS price to a pre-set trajectory. In practice, the EU-ETS price is much lower than expected and in order to mitigate the impact on electricity prices, the United Kingdom Government has capped the Carbon Price Support tax at GBP 18 per tonne $CO_2$ until at least 2020. At Budget 2016 it was decided to roll forward this tax rate (uprated for inflation) to 2020/21 and this decision was confirmed at the Autumn Statement.

**Climate Change Levy (CCL) exemption**

As announced in summer budget 2015 the exemption for renewable electricity from the Climate Change Levy (a tax on non-domestic electricity users) ended on 1 August 2015. This has removed a small additional revenue stream for renewable generators though its value was expected to decline in any event around 2020.

**Energy Companies Obligation (ECO)**

Energy suppliers who supply over 250,000 domestic customers are required to achieve energy efficiency improvements among their customers. As with any other cost, the costs of making those improvements can be incorporated by suppliers into tariffs, subject to the need to remain competitive in the market. ECO ran from 1 January 2013 to 31 March 2015. A separate phase runs from 1 April 2015 to 31 March 2017. The Government has said that from April 2017, ECO will be replaced by a cheaper scheme costing GBP 640 million a year (based initially on a transition scheme). Details were confirmed on 30 January 2017.

**Coal closure**

In November 2015, the former Secretary of State Amber Rudd announced plans to consult on requirements for all coal power stations without CCS to close by 2025 (subject to any security of supply issues). In late 2016 the Government published a consultation on possible regulatory options to facilitate this. The impact of any such measures on Scottish Power is limited due to the closure of Longannet.

**Pollution Control**

The Integrated Pollution Prevention and Control (IPPC), the Large Combustion Plant Directive (LCPD) and the Industrial Emissions Directive (IED) cover the regulatory regime for controlling the pollution from certain industrial activities, including thermal combustion generation, and impose limits on various categories of emissions. In particular, the LCPD limits the emission of sulphur dioxide ($SO_2$), oxides of nitrogen ($NO_x$) and particles from power plants, whereby operators of such plants have the option of meeting those requirements or accepting a limited hour derogation prior to their closure by the end of 2015. The IED puts in place a similar regime for 2016 and beyond, with more stringent standards. The IED is transposed into United Kingdom's law through the Pollution Prevention and Control (Scotland) Regulations 2012 and amendments to the Environmental Permitting (England and Wales) Regulations 2010. These controls are enforced by the Environment Agency or, in Scotland, the Scottish Environmental Protection Agency.

## Industry regulation in USA

### Electricity and natural gas distribution

Some of the most important specific regulatory processes that affect AVANGRID Networks, Inc. (hereinafter, AVANGRID NETWORKS) include the New York rate settlement for NYSEG and RG&E, the Connecticut United Illuminating distribution rate case decision, the Maine and Connecticut transmission Federal Energy Regulatory Commission (FERC) Return on Equity (ROE) case and the Reforming Energy Vision (REV) process of New York.

The revenues of AVANGRID NETWORKS are essentially regulated, being based on tariffs established in accordance with administrative procedures set by the various regulatory bodies. The tariffs applied to regulated activities in the United States are approved by the regulatory commissions of the different States and are based on the cost of providing service. The revenues of each regulated utility are set to be sufficient to cover all its operating costs, including energy costs, finance costs and the costs of equity (the last one reflects the Company's capital ratio and the reasonable return on equity).

Energy costs that are set on the New York and New England wholesale markets are passed on to consumers. The difference between energy costs that are budgeted for and those that are actually incurred by the utilities is offset by applying compensation procedures that result in either immediate or deferred tariff adjustments. These procedures apply to other costs, which are in most cases exceptional (effects of extreme weather conditions, environmental factors, regulatory and accounting changes, treatment of vulnerable customers, etc.) that are offset in the tariff process. Any delivery profit from New York and Connecticut that allows a service company exceeds its profitability objectives (usually due to a better than expected cost efficiency), is shared among the service company and its clients, resulting in a decrease in the future tariff.

Each of the eight supply companies in AVANGRID NETWORKS, must comply with regulatory procedures that differ in form but in all cases conform to the basic framework outlined above. As a general rule, tariff reviews cover various years (three in New York and Connecticut) and provide reasonable returns on equity, protection and automatic adjustments for exceptional costs incurred and efficiency incentives.

#### 1. New York

New York State Electric & Gas Corporation (NYSEG) and Rochester Gas and Electric Corporation (RG&E) Rate Plans:

- **2015 NY Rate Filings**

On 20 May 2015, NYSEG and RG&E filed electric and gas rate cases with the NYPSC. The companies are requesting rate increases for NYSEG Electric, NYSEG Gas and RG&E Gas, while for RG&E Electric are requesting rate decreases.

NYSEG Electric requested USD 126 million (7% overall) in additional annual delivery revenue to recover prior storm costs, move to a full cycle vegetation management trim programme in line with best industry practice, and earn an adequate return on its investment. RG&E Electric proposed a USD 10 million rate decrease (1% overall) reflecting the return to customers of funds collected during its 2010 rate plan associated with management efficiencies and costs lower than set levels. NYSEG Gas and RG&E Gas are requesting additional revenues of USD 38 million (8% overall) and USD 20 million (5% overall), respectively.

The companies requested a 10.06% return on equity and a 50% equity ratio. The rate filings are for one year but the companies have indicated their interest in pursuing a multi-year settlement.

The NYPSC staff and other parties filed testimony in September 2015 opposing the rate increase requests. The NYPSC Staff proposed a delivery increase of USD 11.8 million for NYSEG Electric, a delivery rate decrease for RG&E Electric of USD 23.4 million, a delivery decrease of USD 2.8 million for NYSEG Gas and a delivery decrease of USD 2.9 million for RG&E Gas. The NYPSC proposed an 8.7% ROE and a 48% equity ratio. NYPSC also proposed to offset the NYSEG Electric storm deferral balance of USD 262 million with excess depreciation reserve amounts which NYPSC staff claims is USD 665 million at NYSEG Electric and USD 129 million at RG&E Electric. The NYPSC stated it was open to discussing a multi-year rate plan for the companies.

On 19 February 2016, the NYSEG, RG&E and other signatory parties filed a Joint Proposal, or the Proposal, with the NYPSC for a three-year rate plan commencing on 1 May 2016. The Proposal balances the varied interests of the signatory parties including but not limited to maintaining the companies' credit quality and mitigating the rate impacts to customers. The Proposal reflects many customer attributes including: acceleration of the companies' natural gas leak prone main replacement programs and enhanced electric vegetation management to provide continued safe and reliable service. The delivery rate increase can be summarized as follows:

| | 1 May 2016 | | 1 May 2017 | | 1 May 2018 | |
|---|---|---|---|---|---|---|
| | Rate Increase | Delivery Rate Increase | Rate Increase | Delivery Rate Increase | Rate Increase | Delivery Rate Increase |
| Utility | Millions USD | % | Millions USD | % | Millions USD | % |
| NYSEG Electric | 29.6 | 4.10 | 29.9 | 4.10 | 30.3 | 4.10 |
| NYSEG Gas | 13.1 | 7.30 | 13.9 | 7.30 | 14.8 | 7.30 |
| RG&E Electric | 3.0 | 0.70 | 21.6 | 5.00 | 25.9 | 5.70 |
| RG&E Gas | 8.8 | 5.20 | 7.7 | 4.40 | 9.5 | 5.20 |

The allowed rate of return on common equity for NYSEG Electric and NYSEG Gas is 9.00%. The equity ratio for both Electric and Gas is 48%. The Proposal includes an Earnings Sharing Mechanism (ESM) applicable. The customer share of earnings would increase at higher earnings levels, with customers receiving 50%, 75% and 90% of earnings over 9.5%, 10% and 10.5% of ROE, respectively, in the first year. Earnings thresholds would increase in subsequent years.

The Proposal reflects the recovery of deferred NYSEG Electric storm costs of approximately USD 262 million, of which USD 123 million will be amortized over 10 years and the remaining USD 139 million will be amortized over five years. The Proposal also continues reserve accounting for qualifying Major Storms (USD 21.4 million annually). Incremental maintenance costs incurred to restore service in qualifying divisions will be chargeable to the Major Storm Reserve provided that they meet certain thresholds.

The Proposal maintains current electric reliability performance measures (and associated potential negative revenue adjustments for failing to meet established performance levels) which include the system average interruption frequency index and the customer average interruption duration index. The Proposal also modifies certain gas safety performance measures at the company, including those relating to the replacement of main leak prone, leak backlog management, emergency response, and damage prevention. The Proposal establishes threshold performance levels for designated aspects of customer service quality and continues and expands bill reduction and arrears forgiveness Low Income Programs at increased funding levels. The Proposal provides for the implementation of NYSEG's Energy Smart Community ("ESC") Project in the Ithaca region which will serve as a test-bed for implementation and deployment of Reforming the Energy Vision (REV) initiatives. The ESC Project will be supported by NYSEG's planned rollout of Distribution Automation and Advanced Metering Infrastructure (AMI) to customers on circuits in the Ithaca region. REV-related incremental costs and fees will be included in the Rate Adjustment Mechanism (RAM) to the extent cost recovery is not provided for elsewhere. Under the Proposal, we will implement a RAM, which will be applicable to all customers, to return or collect RAM eligible deferrals and costs, including: (1) property taxes; (2) Major Storm deferral balances; (3) gas leak prone pipe replacement; (4) REV costs and fees which are not covered by other recovery mechanisms; and (5) Electric Pole Attachment revenues.

The Proposal provides for partial or full reconciliation of certain expenses including, but not limited to: pensions, other postretirement benefits; property taxes; variable rate debt and new fixed rate debt; gas research and development; environmental remediation costs; Major Storms; nuclear electric insurance limited credits; economic development; and Low Income Programs. The Proposal also includes a downward-only Net Plant reconciliation. In addition, the Proposal includes downward-only reconciliations for the costs of: electric distribution and gas vegetation management; pipeline integrity; and incremental maintenance. The Proposal provides that we continue the electric RDMs on a total revenue per class basis and the gas RDMs on a revenue per customer basis.

A hearing on the Proposal was held on 7 April 2016 and a NYPSC order adopting the Proposal was issued on 15 June 2016, with retroactive application beginning on 1 May 2016. The Commission also provided for additional modifications including a timeline for developing the Earnings Adjustment Mechanism described in the Commission's REV Track 2 Order.

- **Reforming the Energy Vision:**

In April 2014, the NYPSC commenced a proceeding titled Reforming the Energy Vision (REV), which is an initiative to reform New York State's energy industry and regulatory practices. REV has followed several simultaneous paths: Track 1 deals with market design and platform technology and Track 2 deals with the regulatory reform. REV's objectives include the promotion of more efficient use of energy, increasing the utilization of renewable energy resources such as wind and solar power (in support of New York State's renewable energy goals) and a wider deployment of "distributed" energy resources, such as micro-grids, in-situ power supplies, and storage.

REV is also intended to promote greater use of advanced energy management products to enhance demand elasticity and efficiencies. Track 1 of this initiative involves a collaborative process to examine the role of distribution utilities in enabling market based deployment of distributed energy resources to promote load management and greater system efficiency, including peak load reductions. We are participating in the initiative with other New York utilities and are providing our unique perspective. The NYPSC has issued a Track 1 Order in 2015, which acknowledges the utilities' role as a Distribution System Platform (DSP) provider, and requires the utilities to file an initial Distribution System Implementation Plan (DSIP) by 30 June 2016. The DSIP was filed on 30 June 2016 and included information regarding the proposed deployment of Automated Metering Infrastructure (AMI). Various proceedings have also been initiated by the NYPSC which are REV related, and each proceeding has its own schedule. These proceedings include the Clean Energy Fund, Demand Response Tariffs, Net Energy Metering/Value of Distributed Energy Resources and Community Choice Aggregation.

Track 2 of the REV initiative is also underway, and through a NYPSC Staff Whitepaper review process, is examining potential changes in current regulatory, tariff, market design and incentive structures which could better align utility interests with achieving New York state and NYPSC's policy objectives. New York utilities will also be addressing related regulatory issues in their individual rate cases. A Track 2 Order was issued in May 2016. The Track 2 Order includes requirements for all electric utilities to file: a system efficiency proposal, an interconnect survey process and proposed Earnings Adjustment Mechanism (EAM), a progress report on aggregated data reporting, an aggregated data privacy policy statement, revisions to their standby service tariffs, a review of their standby rate allocations and proposed revisions, one or more Smart Home Rate demonstration proposals, and revisions to voluntary time of use rates, as well as to propose EAMs for Energy Efficiency and Customer Engagement. Additionally, the order requires electric utilities to participate in a scorecard metric collaborative and a stakeholder process to develop Clean Energy Standard EAM(s). On 1 December 2016, NYSEG and RG&E filed their proposed EAM. On 20 December 2016, NYSEG and RG&E filed a petition for the full deployment of Automated Metering Infrastructure (AMI) with the Commission. The AMI petition requests authorization to implement full-scale AMI at NYSEG Electric, NYSEG Gas, RG&E Electric and RG&E Gas. Approximately 1.8 million electric AMI meters and gas modules will be deployed. The companies also requested to implement a surcharge to recover the investment until such values can be included in base delivery rates in their next rate cases. The Companies expect the Commission to address their petition in 2017.

- **Reliability Support Service Agreement in the Ginna Nuclear Power Plant**

Ginna Nuclear Power Plant, LLC (GNPP), which is a subsidiary of Constellation Energy Nuclear Group, LLC (CENG), owns and operates the R.E. Ginna Nuclear Power Plant, a 581 MW single-unit pressurized water reactor located in Ontario, New York. In May 2014, the New York Independent System Operator (NYISO) produced a reliability study, confirming that the Ginna Facility needs to remain in operation to avoid bulk transmission and non-bulk local distribution system reliability violations in 2015 to 2018.

On 11 July 2014, GNPP filed a petition requesting that the NYPSC initiates a proceeding to examine a proposal for the continued operation of the Ginna Facility. Ginna asserted that in the two preceding calendar years, 2012 and 2013, it had sustained cumulative losses at the Facility of nearly USD 100 million (including the allocation of CENG corporate overhead) and that CENG had not been compensated for any operational risk or an appropriate return on its investment over this period. Based on the results of the 2014 Reliability Study, GNPP requested that: 1) the NYPSC determines that the continued operation of the Ginna Facility is required to preserve system reliability; and 2) the NYPSC issues an order directing RG&E to negotiate and file a Reliability Support Services Agreement (RSSA) for the continued operation of the Ginna Facility.

In November 2014, the NYPSC ruled that GNPP had demonstrated that the Ginna nuclear plant was neccesary to maintain the system's reliability and that its actions regarding the relevant retirement notice requirements were satisfactory. The NYPSC also accepted the findings of the 2014 reliability study and stated that it established "the reliability need for continued operation of the Ginna Facility that is the essential prerequisite to negotiating an RSSA." As such, the NYPSC ordered RG&E and GNPP to negotiate an RSSA.

On 13 February 2015, RG&E submitted to the NYPSC RSSA between RG&E and GNPP. RG&E requested that the NYPSC accepted the RSSA and approve cost recovery by RG&E from its customers of all amounts payable to GNPP under the RSSA utilizing the cost recovery surcharge mechanism.

On 21 October 2015, RG&E, GNPP, New York Public Service Commission, Utility Intervention Unit and Multiple Intervenors filed a Joint Proposal with the NYPSC for approval of the RSSA, as modified. The Joint Proposal provides a term of the RSSA from 1 April 2015 through 31 March 2017. RG&E shall make monthly payments to Ginna in the amount of USD 15.4 million. RG&E will be entitled to 70% of revenues from Ginna's sales into the NYISO energy and capacity markets, while Ginna will be entitled to 30% of such revenues. The signatory parties recommend that the NYPSC authorize RG&E to implement a rate surcharge effective 1 January 2016 to recover amounts paid to Ginna pursuant to the RSSA. RG&E's payment obligation to Ginna shall not begin until the rate surcharge is in effect and FERC has issued an order authorizing the FERC Settlement agreement in the Settlement Docket. RG&E will use deferred rate credit amounts (regulatory liabilities) to offset the full amount of the Deferred Collection Amount (including carrying costs), plus credit amounts to offset all RSSA costs that exceed USD 2.3 million per month, not to exceed a total use of credits in the amount of USD 110 million, applicable through 30 June 2017. To the extent that the available credits are insufficient to satisfy the final payment from RG&E to Ginna then the RSSA surcharge may continue past 31 March 2017 to recover up to USD 2.3 million per month until the final payment has been recovered by RG&E from ratepayers. In the month following the expiration of the term on 31 March 2017, Ginna shall prepare and issue an invoice to RG&E for, and RG&E shall pay to Ginna, a one-time payment in the amount of USD 11.5 million. This amount is being accrued pro-rata over the term of the agreement and will be recovered from ratepayers. On 23 February 2016, the NYPSC unanimously adopted the Joint Proposal in the Ginna RSSA proceeding as in the public interest.

- **New York Transco**

Networks holds an approximate ownership of 20% in the New York Transco. The New York Transco was established by the New York transmission utilities to develop, own, and operate the electric transmission in New York. In December 2014, New York Transco filed for regulatory approval of its tariffs, terms, and conditions with FERC. The filing requests a base ROE of 10.6%, plus 150 basis points as incentives, recognition of construction work in progress, a tariff formula mechanism, and a proposed cost allocation. Various parties, including the NYPSC, have protested the filing with FERC, including the base ROE, the ROE incentives, and the cost allocation. The New York Transco will not make final decisions on transmission project development until a FERC decision.

On 2 April 2015, the FERC issued an order granting, inter alia, the New York Transco's owners' request for a 50 basis points adder for NY Transco's membership in the NYISO RTO, subject to the adder being capped within the zone of reasonableness after a determination of where within that zone its base level ROE should be set. The FERC also set the formula rate and base ROE issue for hearing and settlement judge procedures. In addition, the FERC rejected the New York Transco's owners' cost allocation method for the Transmission Owner Transmission Solutions, or TOTS, Projects because it would allocate costs to Power Supply Long Island and New York Power Authority that they did not voluntarily agree to pay.

On 5 November 2015, the New York Transco's owners, filed the Settlement with the FERC to resolve all outstanding issues associated with the TOTS Projects, including issues related to the TOTS Projects that were set for hearing and issues pending on rehearing. The issues regarding certain other projects remain pending. The Settlement addressed the financial terms that are components of New York TransCo's revenue requirement for the proposed Transmission Owner Transmission Solution (TOTS) Projects, including the base ROE of 9.50%, and a 50-basis point ROE adder, the capital structure of 53%, and the cost allocation under the New York Independent System Operator, Inc. (NYISO) Open Access Transmission Tariff (OATT) for the TOTS Projects. On 17 March 2016, the FERC approved the Settlement.

- **Net Energy Metering**

On 16 October 2015, the NY Commission issued an Order Establishment Interim Ceilings on the Interconnection of Net Metered Generation (the Floating Cap Order). There the Commission directed that net metering limitations should "float" until completion of a proceeding to develop an interim method of evaluating the benefits of distributed energy resources. The New York Joint Utilities petitioned for rehearing of the Floating Cap Order, expressing concern that an unlimited number of resources could materialize absent a cap, leading to unanticipated and unbounded bill increases for customers. The Commission has not yet acted upon that rehearing request.

Following the issuance of the Floating Cap Order and the launch of the CDG program, the Joint Utilities experienced a surge in new applications for net metered resources, ultimately leading to more than 4,000 MW of interconnection applications. The Commission instituted the Value of DER proceeding in response to the decision to float the net metering cap and the promise to adopt a "new regulatory approach" for DER valuation,

On 28 October 2016 in Case 15-E-0751, In the Matter of the Value of Distributed Energy Resources ("Value of DER Proceeding"), NYPSC Staff issued its Report and Recommendations. The Staff Report contained a number of recommendations. The Joint Utilities' filed comments on 5 December 2016 along with 32 other parties. The Comission is expected to rule of the proceeding in 1Q2017.

**2. Connecticut**

- **UI rate case**

On 1 July 2016, UI filed an application with the Connecticut Public Utilities Regulatory Authority, or PURA, requesting approval of a three-year rate plan commencing 1 January 2017, and extending through 31 December 2019. UI's application requests an increase of USD 65.6 million in 2017, an additional USD 21.1 million in 2018, and an additional USD 13.4 million in 2019, totaling USD 100.1 million over the three years. During the litigation of the case, the three-year cumulative request was modified to USD 98.3 million. The original application includes a rate levelization proposal to moderate the customer impact of the necessary revenue increases. The proposal defers a portion of the first and second year increases and spreads recovery of the overall increase by approximately equivalent amounts over the three years of the rate plan with carrying charges included. The proposal results in levelized revenue requirement increases of USD 40.7 million in 2017, USD 47.4 million in 2018 and USD 39.1 million in 2019, followed by an offset of USD 25.6 million at the end of the three year rate plan to equate the levelized recovery to the non-levelized revenue requirement increase.

UI's rate request is attributable primarily to the amount of capital expenditures devoted to its electric distribution system for the purpose of reliability and system resiliency, both in relation to routine operations and during major storm events. UI's application also proposes continuation of its revenue decoupling mechanism and proposes a new Earnings Sharing Mechanism (ESM). Under the proposed ESM, 50% of UI's earnings in excess of the allowed ROE, plus a deadband above the allowed ROE, would be flowed through to the benefit of customers. The proposed ESM includes a 20-basis point deadband in 2017 above the authorized ROE, within which there would be no sharing. This deadband would be 30 basis points in 2018 and 40 basis points in 2019. UI proposes to continue applying any Dollars due to customers to reduce the storm regulatory asset, if one exists. If none exists, then the customer share would be provided through a bill credit.

On 15 December 2016, the PURA issued its Final Decision authorizing a cumulative three year rate of USD 57 million for the years 2017, 2018 and 2019. The 2017 rate increase is USD 43.0 M, an additional USD 11.5 million in 2018, and an additional USD 2.9 million in 2019. The PURA provided a 9.10% return on equity and 50% equity ratio. The three year rate plan retains the existing earnings sharing level whereby earnings above the allowed ROE are shared equally between customers and shareholders. The Company's revenue decoupling mechanism continues. The PURA did reduce the residential basic service charge to USD 9.65 per month.

**3. Maine**

CMP's and UI's transmission tariffs are determined by a tariff regulated by the FERC and administered by ISO New England (ISO-NE). Transmission rates are set annually pursuant to a FERC authorized formula that allows for recovery of direct and allocated transmission operating and maintenance expenses, as well as the return on assets invested. Prior to 16 October 2014, the FERC provided a base ROE of 11.14% and additional ROE incentives applicable to assets based upon vintage, voltage and other factors.

On 30 September 2011, the Massachusetts General Attorney, Massachusetts Department of Public Utilities, Connecticut Public Utilities Regulatory Authority, New Hampshire Public Utilities Commission, Rhode Island Division of Public Utilities and Carriers, Vermont Department of Public Service, numerous New England consumer advocate agencies and transmission tariff customers collectively filed a complaint (Complaint I) with the FERC pursuant to sections 206 and 306 of the Federal Power Act. The filing parties seek an order from the FERC reducing the 11.14% base return on equity (ROE) used in calculating formula rates for transmission service under the ISO-New England Open Access Transmission Tariff (OATT) to 9.2%. CMP and UI are New England Transmission Owners (NETOs) with assets and service rates that are governed by the OATT and will thereby be affected by any FERC order resulting from the filed complaint.

On 19 June 2014, the FERC issued its decision in Complaint I, establishing a methodology and setting an issue for a paper hearing. On 16 October 2014, FERC issued its final decision in the Complaint I setting the base ROE at 10.57% and a maximum total ROE of 11.74% (base plus incentive ROEs) for the October 2011 – December 2012 period as well as prospectively from 16 October 2014, and ordered the NETOs to file a refund report. On 17 November 2014, the NETOs filed a refund report.

On 3 March 2015, the FERC issued an order on requests for rehearing of its 16 October 2014 decision. The March order upheld the FERC's 19 June 2014 decision and further clarified that the 11.74% ROE cap will be applied on a project specific basis and not on a transmission owner's total average return. In June 2015 the NETOs filed an appeal in the U.S. Court of Appeals for the District of Columbia of the FERC's final order. The appeal is currently pending.

On 26 December 2012, a second, ROE complaint (Complaint II) for a subsequent rate period was filed requesting the ROE be reduced to 8.7%. On 19 June 2014, FERC accepted Complaint II, established a 15-month refund effective date of 27 December 2012, and set the matter for hearing using the methodology established in the Complaint I.

On 31 July 2014, a third ROE complaint (Complaint III) was filed for a subsequent rate period requesting the ROE be reduced to 8.84%. On 24 November 2014, FERC accepted the Complaint III, established a 15-month refund effective date of 31 July 2014, and set this matter, consolidated with Complaint II, for hearing in June 2015. Hearings were held in June 2015 on Complaints II and III before a FERC Administrative Law Judge, relating to the refund periods and going forward period. On 29 July 2015, post-hearing briefs were filed by parties and on 26 August 2015 reply briefs were filed by parties. On 13 July 2015, the NETOs filed a petition for review of FERC's orders establishing hearing and consolidation procedures for Complaints II and III with the U.S. Court of Appeals. The Initial Decision determined that, 1) for the 15-month refund period in Complaint II, the base ROE should be 9.59% and that the ROE Cap (base ROE plus incentive ROEs) should be 10.42% and 2) for the 15-month refund period in Complaint III and prospectively, the base ROE should be 10.90% and that the ROE Cap should be 12.19%. The Initial Decision is the Administrative Law Judge's recommendation to the FERC Commissioners. The FERC is expected to make its final decision in early 2017.

CMP and UI reserved for refunds for Complaints I, II and III consistent with the FERC's 3 March 2015 final decision in Complaint I. The CMP and UI total reserve associated with Complaints I, II and III is USD 21.4 million and USD 4.2 million, respectively, as of 30 September 2016. If adopted as final, the impact of the initial decision would be an additional aggregate reserve for Complaints II and III of USD 17.1 million pretax and USD 10.2 million, net of tax, which is based upon currently available information for these proceedings.

On 29 April 2016, a fourth ROE complaint (Complaint IV) was filed for a rate period subsequent to prior complaints requesting the base ROE be 8.61% and ROE Cap be 11.24%. On 20 June 2016, FERC accepted the Complaint IV, established a 15-month refund effective date of 29 April 2016, and set the matter for hearing and settlement judge procedures.

On 6 December 2016 a three judge panel of the D.C. Circuit Court of Appeals heard oral arguments to FERC's final order in this complaint. A decision is expected by Q2 2017.

- **Net Energy Metering**

On 14 September 2016, the MPUC issued a Notice of Rulemaking regarding Ammendments to the Net Energy Metering Rule. The Commission initiated a rulemaking to consider several proposed amendments to its net energy billing rule (Chapter 313). First, the proposed amended rule would increase the maximum size for an eligible generating facility from 660 kilowatts to one megawatt. Second, the proposed amended rule would gradually reduce the T&D portion of a customer's bill which is eligible to be netted against the generating facility's output, while netting of the supply portion of the bill will remain largely unchanged. Third, the proposed amended rule would grandfather existing NEB customers for a fifteen year period. Fourth, the proposed amended rule would add specific provisions that allow and provide consumer protections for community net energy billing and net energy billing leases. As noted by the Commission in its Notice of Rulemaking, these proposed amendments would do little to impact existing NEB customers.

CMP filed initial and reply comments in response to the Commission's Notice of Rulemaking. Other parties, including industry experts also provided comments. The MPUC made a decision on its Notice of Rulemaking on 31 January 2017. The MPUC has not yet issued the final rule but did issue a notice stating that the resulting rule a) grandfathers existing customers for fifteen years, b) for new entrants it locks in the phase down level, at the year in which they enter, for fifteen years, and c) maintains incentive margins consistent with the declining costs of solar technology. Below is additional detail of the ruling.

- Grandfathering of existing NEB Customers. All existing customers and new customer installations that occur prior to 1 January 2018 will be grandfathered for fifteen years. This means those customers will receive the current incentives and terms as they exist today.

- Grandfathering of New Entrants to NEB. As new customers sign up over the next 10 years, netting of the transmission and distribution (T&D) portion of the bill will be gradually decreased to reflect reductions in the costs of small renewable generation technology. For example, in the first year NEB customers will receive the full value of the supply portion, and 90% of the T&D portion for each year of the fifteen years.

- Maintaining Incentive Levels. The incentives to NEB customers under the new Rule should not change the length of time it takes for a customer to recoup their investment. The estimated payback for new installations will be similar to what it has been historically. As noted above, for a customer installation signed in year one, the full incentive for supply and 90% of the incentive for T&D is received for fifteen years. As the cost of technology declines, the incentive for T&D also declines for new entrants. For a new customer installation in year two, for example, the cost of the solar panels will have declined but the incentive will also decline to 80% for T&D and the full incentive for supply.

- The rule only applies to residential solar installation on roofs. Many projects are being built across the state today based on existing market mechanisms. The Commission decided not to address larger scaled projects and community projects as part of the NEB rules to ensure we stayed within our regulatory function, and in light of legislative initiatives in these areas.

- Includes Renewable Energy Credit (REC) Based Revenue Stream. The new Rule allows to a NEB customer to choose to monetize the value of their solar generation and receive a credit for that value. NEB installations will be automatically classified as a Maine Class I Renewable Resource.

- **MNG Rate Case**

On 5 March 2015, MNG filed a rate case in order to further recover future investments and provide safe and adequate service. MNG requested a 10.0% ROE and 50.0% equity ratio. The MPUC Staff recommended a separate revenue requirement for MNG's Augusta customers and MNG's non-Augusta customers. The MPUC also recommended a USD 19.95 million disallowance of the Augusta Expansion investment based upon the Staff's conclusion that MNG's management of the Augusta Expansion Project was imprudent.

On 6 November 2015, a stipulation was filed with the MPUC, which was executed by MNG, the Office of Public Advocate and the city of Augusta. The stipulation contained a combined revenue requirement for Augusta and non-Augusta based on a 9.55% ROE and 50% equity ratio. The stipulation also provided for an initial Augusta investment disallowance of USD 6 million and an investment phase-in of USD 10 million. On 22 December 2015, the MPUC rejected the proposed stipulation as not in the public interest. In January 2016, the Administrative Law Judge established a new litigation schedule. The litigation was suspended at the end of January 2016 for settlement discussions. We reserved USD 6 million for this case at the end of 2015.

On 3 May 2016, all active parties to the case filed a stipulation that settled all matters at issue in the case and reflected a 10-year rate plan through 30 April 2026. The MPUC approved the stipulation on 17 May 2016, for new rates effective 1 June 2016. The settlement structure for non-Augusta customers includes a 34.6% delivery revenue increase over five years with an allowed 9.55% ROE and 50% common equity ratio. The settlement structure for Augusta customers includes a 10-year rate plan with existing Augusta customers being charged rates equal to non-Augusta customers plus a surcharge that increases annually for five years. New Augusta customers will have rates set based on an alternate fuel market model. In year seven of the rate plan MNG will submit a cost of service filing for the Augusta area to determine if the rate plan should continue. This cost of service filing will exclude USD 15 million of initial 2012/2013 gross plant investment, however the stipulation allows for accelerated depreciation of these assets. If the Augusta area's cost of service filing illustrates results above a 14.55% ROE then the rate plan may cease, otherwise the rate plan would continue. A disallowance for the initial 2012/2013 gross plant investment is not part of the approved stipulation. The reserve of USD 6 million for this case was reversed in May 2016.

**Electricity generation from renewable energy resources**

Numerous State Governments and the Federal Government have adopted measures and implemented numerous regulations designed to foster the development of electricity production from renewable resources. State programmes have generally come in the form of: 1) Renewable Portfolio Standards (RPS's) that usually require utilities to generate or purchase a minimum amount of renewable electricity; and 2) tax incentives. To date, the Federal Government has primarily supported renewable energy development through tax credits for production and investment as well as accelerated tax depreciation.

Twenty-nine states and the District of Columbia have adopted mandatory RPS requirements, which vary across the states but will generally range from 15-33% of the generation by 2025. The requirements are typically implemented through a system of tradable renewable energy certificates that verify that a kWh of electricity has been generated from a renewable resource. Several state legislatures have debated whether to repeal or roll back significantly their RPS requirements. In 2014 Ohio enacted legislation to freeze its RPS programme until 2017; in 2015, Kansas replaced its mandatory RPS with a 20% voluntary standard as part of a compromise that retained existing property tax exemptions. In contrast, California in 2015 and Oregon in 2016 enacted legislation to increase the state RPS to 50%.

Most states also offer a variety of tax incentives to promote investment in renewable energy resources. For instance, Washington and Colorado, among other states, exempt the sale and use of renewable energy equipment from taxation, which reduces development costs substantially. Several states reduce property tax requirements on renewable generation facilities through enterprise zones or similar designations, while Minnesota has substituted a property tax in lieu of fix production tax. Other states, such as Texas, boost the construction of electrical infrastructure (Competitive Renewable Energy Zones) to ease the transportation of renewable electricity towards load points.

In 1992, the US Congress enacted legislation that established a Production Tax Credit (PTC) of USD 15 per MWh (adjusted for inflation) for the production of electricity from wind power facilities for the first ten years of a project's operation. This programme has been renewed on several occasions and has been expanded to include the production of electricity from several other renewable resources, including biomass, geothermal, solid urban wastes and hydroelectric power. In 2005, Congress established a 30% investment tax credit (ITC) for solar power projects. The PTC, which is currently valued at USD 23 per MWh, was extended and phased out by the Congress on 18 December 2015. Developers that start construction on a wind project before 2017 will qualify for the full credit, while those starting construction between 2017 and 2019 will qualify for a reduced-value credit. These qualifying facilities may also elect to take a 30% ITC rather than the PTC. Solar ITC was also extended and phased out by Congress on 18 December 2015. Developers that start construction on a solar project before 2020 will qualify for a 30% investment tax credit (ITC). Projects for which construction begins after 2019 are eligible for a lower ITC. The purposes of the PTC and ITC are to make electricity production from renewable resources more competitive relative to fossil fuel and nuclear power facilities.

In addition to the PTC and ITC, renewable energy facilities are eligible for accelerated five-year tax depreciation on their investments. This programme is known as the Modified Accelerated Cost Recovery System. As a result of legislation enacted in 2008, 2009, 2013 and 2014, many facilities placed in service between 2008 and 2014 qualified for bonus depreciation which allowed 50% depreciation deduction in the year a facility was placed in service. In December 2015, Congress enacted legislation to extend and phase out bonus depreciation. Companies can through 2017 deduct 50% of certain capital investments during the year the investment is made. If the investment occurs in 2018, companies can deduct 40% and if it occurs in 2019 only 30% of deduction is allowed.

With respect to interstate transmission networks, the FERC has adopted a series of requirements on transmission operators to improve access and reduce costs for variable generation like wind and solar power. FERC Order 764 is driving changes in scheduling practices and other activities that will increase forecasting accuracy and reduce needed reserves, resulting in lower technology integration costs.

### 4.5 Industry regulation in Mexico

The Mexican Energy Reform, which began at the end of 2013 with the amendment of Mexican Constitution, set in motion the deep transformation of the electric sector, through the creation of a completely new regulatory framework. As a consequence of this constitutional reform, nine new laws were enacted during 2014 and 2015 and 25 regulations were either created or reformed.

Although the energy reform is aimed mainly at the hydrocarbons sector, it will also offer new business opportunities in the generation, transmission, distribution and management of electricity infrastructure. This transformation opens the energy sector to private investment in activities that were previously reserved to the Government.

The Hydrocarbons Law (LH) regulates activities like petroleum treatment and refining natural gas processing export and import of hydrocarbons and petroleum products; transportation, storage, distribution, compression, liquefaction, decompression, re-gasification, marketing and sale to the public of natural gas, hydrocarbons, petroleum products and petrochemicals, along with the management of integrated systems. All these activities are now open to private investment and subject to the Hydrocarbons Law.

One of the goals of the industry restructuring is to improve the competitiveness of low-carbon power generation. Concurrently with the COP 21 in Paris, the Mexican Congress and Senate passed the Energy Transition Law (*Ley de Transición Energetica* - LTE), which creates binding obligations for clean energy generation and emission reductions targets for the future, bringing a strong legal framework to the development of clean energy projects in Mexico.

The previous regulatory framework will continue being applicable to existing businesses and facilities, before the Enegy Reform (among them, Iberdrola's businesses), which provides stability and legal certainty in the Mexican regulatory context.

### 1. The Electric Reform

The Mexican Constitution, amended in December 2013, states that the planning and control of the National Electrical System (SEN), as well as the energy distribution and transmission public service are competency of the Government of Mexico. Power generation, excluding nuclear, is open to private investment, as well as power sales to the end users.

The transmission and Distribution networks (T&D) will remain under State ownership as regulated activities, but the Mexican Government may grant service contracts to private companies, creating opportunities to participate in the construction, operation and maintenance of T&D infrastructure.

The Electricity Industry Law (*Ley de la Industria Eléctrica* - LIE) regulates activities in the electricity sector in Mexico. According to the LIE, the private companies can now generate and sell electricity under an organised Wholesale Electric Market, and also invest in transmission and distribution infrastructure, under specific Public-Private Associations and other legal structures described therein.

From the regulatory side, three agencies will have primary responsibility for the sector. The Energy Secretariat ("SENER") will have the policy function; the Energy Regulatory Commission ("CRE") will have the regulatory function; and the National Energy Control Center ("CENACE"), a new decentralized agency, will manage the power grid and the wholesale electric market.

### 2. Energy Secretariat

As part of the Energy Reform, the Energy Secretariat (*Secretaría de Energía* - SENER) has been empowered to coordinate the centralised planning and coordination of the energy policy, both for hydrocarbon and electric subsectors. SENER is also in charge of guaranteeing the implementation of the laws derived from the reform including the LTE issued recently for the transition to clean energy and emission reduction.

During the first half of 2015, SENER issued the mandatory requirement of Clean Energy Certificates (CECs) for year 2018, with a target of 5% of the total consumption. In March 2016, it established a target of 5.8% for 2019. Penalties for non-compliance with the requirements of CECs have been issued.

During the second half of 2015, SENER issued the Wholesale Electric Market guidelines and called for the first long term auction for CECs, capacity and energy; eleven companies awarded contracts to develop more than 1.8 GW of new solar and wind capacity.

Through the first half of 2016 SENER called for the second long term auction, and twenty three companies were awarded contracts to develop 2.8 GW of the renewable capacity; the energy-CECs cost was 30% lower than the first auction.

Regarding the coordination and planning of the National Electric System, SENER has issued, in 2015 and 2016, the yearly versions of the National Electric Grid Development Programme (*Programa de Desarrollo del Sector Eléctrico Nacional* - PRODESEN) including projections of power generation, demand and infrastructure requirements from 2016 to 2029.

### 3. Regulatory Body

As part of the energy reform in Mexico, the country enacted the Regulatory Body Law in August 2014. The regulatory bodies in charge of coordinating activities in the energy field are the National Hydrocarbons Commission (*Comisión Nacional de Hidrocarburos* - CNH) and the Energy Regulatory Commission (*Comisión Reguladora de Energía* - CRE).

CRE and the CNH are the two most relevant regulatory authorities in the energy sector. They have their own legal status, budget, technical and governance autonomy. Both commissions have a similar governance authority of seven commissioners and an executive secretary.

CRE has existed since 1995 as a public body with power and authority to grant permits and issue administrative provisions in the fields of electricity, gas transport and some regulated tariffs for natural gas and liquefied petroleum gas.

As a result of the Energy Reform, CRE's field of authority was expanded significantly, to transportation and commercialisation of hydrocarbon and derivatives, such as gasoline, petrol, diesel fuel oil, etc.

Regarding the electricity sector, the main faculties of CRE are to define terms and conditions of auctions and bidding processes; to supervise the wholesale market operation; to authorise the contract and auction models; to regulate reliability, capacity requirements and operational costs; to determine the regulated tariffs and contract models for services involving transmission, distribution and basic supply of electricity, to authorise models related to technical specifications for connecting power stations and users, intelligent networks, etc. Other roles of CRE include granting permits to market participants and the CECs registry as well as to resolves controversies and to enforce fines related to non-compliance of market participants.

Regarding the hydrocarbon sector, the CRE regulates and promotes the development of transportation, storage, distribution, compression, liquefaction and regasification activities of all hydrocarbons.

The CNH has the fundamental task of regulating and supervising the exploration and extraction of hydrocarbons. It is responsible for the promotion, tendering and undersigning of contracts for this activity.

**4. National Agency for Energy Control**

Mexico created the National Agency for Energy Control (*Centro Nacional de Control de Energía* - CENACE) as a decentralised public body with authority to perform the operational control of the National Electricity System and the wholesale electric market. CENACE has full autonomy and acts under the authority of SENER and CRE, in order to control the participation of generators and suppliers in the market; acquire and provide electricity and capacity under competitive basis; and summon and manage the auctions of capacity, energy and CECs.

CENACE guarantees open access to the transmission and distribution facilities to all market participants, public and private.

Additionally, CENACE also operates and oversees the preparation of proposals for planning and expansion of the entire national electricity grid through its development programme (PRODESEN), which is then supervised and issued by SENER and thereafter by CRE.

During the first half of 2015, CENACE received from CFE all the relevant assets related to its roles, issued its internal organisational by-laws, delivered the draft of the PRODESEN to SENER and issued the first version of interconnection criteria.

During 2016, CENACE launched the first phase of the Wholesale Electric Market, conducted the second auction for CECs, Clean Energy and Capacity and issued the first result of the Capacity Balance Market process.

**5. CFE´s Law**

The CFE's Law, issued in August 2014, states that CFE becomes a productive state-owned production company wholly owned by the Federal Government. The new CFE has budgetary and governance autonomy, with Board of Directors formed by members of the incumbent secretariats (SENER, Treasury, etc.) and independent board members. This law aims to regulate the organisation, administration, operation, control, evaluation and accountability of CFE and to establish the special regime for productive enterprises subsidiaries and subsidiaries, compensations, acquisitions, leases, services and works, assets, liabilities, state dividend, budget and debt.

The new CFE will operate though separate affiliated companies that will participate in generation, transmission, distribution and supply, so that other parties will have open access to the grid and levelled play roles for the wholesale electricity market. In the second half of 2016 CRE assigned CFE's electric power plants through its six different generation companies. Also, CFE informed that its transmission, distribution and domestic supply affiliated companies are already working independently.

During 2016, CFE performed the legal separation and asset restructuring, and cautiously commenced the operation of the newly created subsidiaries as separated entities in the wholesale electric market. The process was significantly delayed, especially due to the complexity of the asset, labour and management separation.

A very significant success of CFE during 2016 was the renegotiation of the Labour Union Contract, which significantly reduced the burden of the pension liability in CFE's Balance Sheet.

**6. Transmission and Distribution**

As ruled by the LIE, the Mexican Government will continue performing electric transmission and distribution (T&D) as a strategic regulated public service through state-owned production company CFE, or its subsidiaries. CFE´s legal separation allows to create these entities as regulated open access companies. The LIE provides opportunity for T&D activities and related services to be subcontracted with private companies through public-private agreements, so that financing, installation, maintenance, management, operation, expansion, rehabilitation, surveillance and preservation of the required infrastructure can be performed as services provided to the T&D regulated companies.

One of the key elements in this matter is the implementation of a high voltage direct current transmission line that will connect Ixtepec (one of the most important renewable energy generation zone in Mexico) with the central area of the country; the bidding request and the preliminary bidding package was issued in the last quarter of 2016.

**7. Generation and Retail**

The LIE provides that generation and retail can be performed by any private or public entities subject to the compliance of permitting and market rules. Generation plants 0.5 MW or larger require a permit from the CRE.

These are two types of permits required for electric retail: 1- basic supply with regulated tariff (for those consumers with a lower demand of 1 MW from August 2016) or 2- qualified supply through the wholesale electricity market at liberalized conditions for consumers with a demand of 1 MW or upper.

SENER may revise and reduce the threshold of 1 MW for the possibility of qualifying consumers for the liberalised conditions. However, becoming a qualified consumer is optional, only mandatory for new costumers.

**8. Geothermal energy**

The Geothermal Energy Law regulates the exploration and use of underground geothermal resources to generate electricity. The private sector can participate through auctions to obtain exploitation rights of geothermal resources. Additionally, the National Water Law was also amended in order to provide special status to the "geothermal water" compatibly with the explotation of your thermal resources under the Geothermal Energy Law.

**9. Wholesale electricity market**

The wholesale electric market commenced operation during January 2016 as provided under LIE. It is a nodal marginal price market operated by CENACE, where generators, suppliers and qualified costumers of the electric energy can interact to buy and sale the energy, capacity, ancillary services, CECs and financial transmission rights in Day Ahead, Hour Ahead and Real Time.

The Market Rules are still being developed and issued. The Market Basis were issued during 2015, and based on them, several Manuals have been issued, such as: the Manual for Long Term Auctions, the Manual for Short Term Energy Market, the Manual for Registration of Market Participants, the Manual for Financial Transmission Rights, the Manual for the Market Information System, the Manual for the Capacity Balance Market and the Manual for Distributed Generation.

**10. National content**

The LIE does not demand a minimum percentage of national content in the infrastructure of the Electric Industry. However, it points out that SENER will establish the minimum percentages and other conditions for national content in terms of the contracts it generates. The Secretary of Treasury will establish the criteria to measure and the targets of domestic content levels for the electricity sector.

**11. Surface use and occupancy**

The LIE provides that transmission and distribution, being for public service, must be treated as strategic activities in terms of rights of way. This allows greater access to the facilities and rights of way to the national electricity grid. The CRE will issue provisions that will secure access to the power lines and fair compensation to the land owners.

**12. Previous regime for permits, plants and electric industry contracts**

All the permits and contracts granted and executed under the previous Public Power Service Law (*Ley del Servicio Público de Energía Eléctrica* - LSPEE) will remain under the same terms and conditions, and can be amended as provided there. Once the market starts operating, the holders of these legacy contracts - self supply and Independent Power Producers ("IPP") have the alternative to migrate partially or completely to the new LIE. Existing IPP will remain in effect to the end of their contractual term prior to the migration and Legacy Connection Contracts (*Contratos de Interconexión Legados* - CIL) of the self-supply projects will not be renewed upon their termination.

Permit requests for self-supply, co-generation, small-scale production, imports or exports made before August 2014 were resolved under the LSPEE terms and conditions, provided that the facilities under such permits must start operation before 31 December 2019.

**13. Electricity tariffs**

The transition of CRE as the new entity responsible of issuing the regulated electricity tariffs (transport, distribution, basic supply and last reserve supply) is still in progress, mainly delayed by the legal separation of CFE and the complexities of the cost allocation associated with it. All the Regulated Tariffs issued during 2015 and 2016 are portions of the additive regulated tariff yet to be totalized. The principle of the new tariffs is to be based on the recovery of all generation costs, connection services, transport and distribution costs, clean energy certificates and other recoverable costs and collection targets.

It is expected that these tariffs will use similar formulas related to the previous regime during a transitory period from 2016 to 2018.

As the main mechanism to promote the reduction of non-technical losses arising from customer's fraud, CRE has imposed collection targets on the T&D companies.

**14. Natural Gas Transportation System**

As part of the Energy Reform, the former owner of the Natural Gas Transportation System, PEMEX, has been split in the following subsidiaries: Pemex exploration and production, Pemex industrial transformation, Pemex perforation, Pemex logistics, Pemex co-generation and services, Pemex fertilisers and Pemex ethylene, as provided under the PEMEX Law enacted in August 2014.

This law transformed PEMEX into a state-owned production company which performs business activities and aims to profitability goals. Concurrently with this transformation, the natural gas transportation system was transferred from PEMEX to CENAGAS, the National Operator of the Natural Gas Pipeline Grid in order to promote an open market for its transportation, distribution and commercialisation. According to the principle of asymmetrical regulation, PEMEX cannot integrate transportation and commercialisation of gas under the same company anymore.

CENAGAS has issued the 5 year strategic natural gas development programme. CENAGAS formally started to operate during 2016.

As part of the programme to reduce fuel oil consumption, CFE called for several bidding processes to contract natural gas transportation services from pipelines to be owned by private companies. The majority of these pipelines will be operational by 2018, thus increasing the natural gas fired power generation, and reducing $CO_2$ emissions from the fuel oil based generation. Simultaneously, the Government is promoting multiple gas pipelines intended to expand the existing gas transportation system through CENAGAS.

The natural gas transport and storage systems incorporated into the new integrated tariff scheme must meet the criteria of forming part of an interconnected system, thus providing benefits, improving the safety, continuity, redundancy levels and efficiency of integrated systems.

The Legacy Transportation Permits (permits given before the electric reform) for self-supply and the long term natural gas supply contracts with Pemex required by the electric plants will remain in effect and will not be adversely affected by these changes in the regulatory framework.

During the second half of 2016 CENAGAS was empowered to conduct the future bidding processes for natural gas transportation auctions, (no longer CFE or Pemex). Additionally, all capacity rights of the SISTRANGAS were transferred to CENAGAS to control manage.

SENER issued a Public Policy to create a Natural Gas Open Market by 2018, in order to promote new players and to reduce the role of Pemex in the commercialization.

As part of this public policy, CENAGAS issued an Open Season for Transportation Capacity in the SISTRANGAS, which will grant firm capacity rights to the winning bidders for year 2017 and will help to identify the sections that need to be expanded in the future. The Open Season is for all the capacity available that has not been reserved or contracted under pre-existing long term supply agreements.

## 4.6 Industry regulation in Brazil

### 1. Tariffs

Electricity distribution activity carried out by joint ventures, such as Companhia de Eletricidade do Estado da Bahía, S.A. (COELBA), Companhia Eletricidade do Rio Grande do Norte, S.A. (COSERN), Companhia Energética de Pernambuco, S.A (CELPE) and Elektro Electricidade e Serviços, S.A. (ELEKTRO), which operate in Sao Paulo and Mato Grosso do Sul, is subjected to federal regulation in Brazil.

The Brazilian regulatory framework is based on a system of price cap that is revised every four or five years, depending on each company's concession contract and is updated annually by the regulator. COELBA and COSERN have a five-year term and CELPE and ELEKTRO have a four-year term.

Tariffs are updated annually by the Electric National Energy Agency (*Agência Nacional de Energia Elétrica* - ANEEL), through the annual adjustment process that considers inflation, an ex-ante efficiency factor and variations on non-manageable costs components, such as energy purchase costs and transmission tolls.

Tariffs have two components:

- **Plot A**: corresponding to energy purchases, power transmission services contracts and to other costs that are out of a distributor company administration and passed through to the end tariff.

- **Plot B:** determined as the sum of (i) the return on the non-depreciated regulatory remuneration base (regulatory WACC applied to the replacement cost of non-depreciated distribution installations and other assets), (ii) the return on capital (a depreciation index applied to the gross asset base) and (iii) the operation and maintenance expenses, and the expense for the uncollectible turnover (the regulator defines late payment rates depending on the kind of grant). This last subcomponent is calculated through a benchmarking model which compares all power distributors in the country and determinates efficient cost levels.

In June 2014, ANEEL opened the first debate on the Fourth cycle of tariff review in a public hearing, discussing proposals to change the methodology used to calculate operating costs, cost of capital (WACC), regulatory asset base (RAB), along with uncollectable revenues and distribution losses.

In May 2015, methodologies dealing with Fourth tariff review cycle were approved and applied to ELEKTRO in its tariff review in August 2015. The main points, in summary, are:

- **WACC:** approved regulatory WACC for Fourth cycle is 8.09% real after taxes. This is higher than Third cycle's 7.5%.

- **OPEX:** The OPEX to be used in the first year of the cycle was confirmed and represents a positive margin to efficient companies.

- **Non-technical losses:** In the case of efficient companies, the target will be defined by the historical average instead of the historical minimum.

- **Uncollectable revenues:** benchmarking approach defines the uncollectable, wherein it is used the bad debt database of 49-60 months. Pass through of uncollectable revenues related to sector fees and tariff flags revenues. The result represented an improvement from what was proposed.

- **Third-party assets (special obligations):** inclusion of a fee to operate third-party assets. This is an important improvement compared with previous cycles.

- **X Factor:** The approved X factor for the sector is 1.53% (versus 1.91% from ANEEL's first proposal).

- **Regulatory Asset Base (RAB) and Non-Electrical Assets:** The new methodology for RAB was not applied in ELEKTRO's review but will be applied to NEOENERGIA's distribution companies. According to the new methodology, the values of assets' additional costs and minor components are now given by a reference price database. Also, non-electrical assets' methodology had a data update and it is expected to better reflect companies' costs.

On 25 August, ANEEL approved ELEKTRO's Fourth tariff review, which raised its tariffs in 4.2% on average (0.68% for residential clients and 9.32% for industrial clients). Some highlights of Fourth cycle are: all investments made were recognized in the RAB, higher remuneration rate (from 7.5% to 8.09%, after taxes), positive OPEX margins, third party asset's remuneration and smaller X factor.

The aim of the annual review is to ensure that component A´s costs are passed on to consumers and that component B´s costs perform in line with inflation and with the pre-determined efficiency factor. An annual tracking account mechanism is used to register component A's unbalances, which should be passed through to tariffs in the following tariff process.

Also regarding distributors' financial exposure due to a rise in costs in early 2015, an extraordinary tariff review occurred in order to preserve financial and economical balance.

On 23 August 2016, ANEEL approved ELEKTRO's annual review, which decreased its tariffs in -13.40% on average (-12.28% for residential clients and -15.02% for industrial clients). The main highlights concerned the reduction of component A's in -4.53%, due to CDE charge decreasing, once the hydrological situation got better in comparison to 2015, and Itaipu power purchase tariff reductions. However, component B had an increase of 9.11%, adjusted by IGP-M inflation index minus X factor.

**2. Energy Purchase**

For the business of power generation, the review of the sector model introduced in 2004 brought new guidelines for planning responsibilities and expansion generation fleet, significantly reducing risk of further rationing. This expansion is being pursued via public tendering of generation projects in which the successful bidder is the supplier that offers the lowest price in Brazilian Reals per MWh generated, in exchange the successful bidder is awarded a concession or permit of 20 to 35 years (depending on the technology) to operate a power station under a Power Purchase Agreement (PPA) at a price that is an outcome of the tender.

Since 2013, Brazil has undergone some important structural changes in electricity regulation.

In Law 12.783 (the former Provisional Act 579) of 11 January 2013, the Federal Government made official a decrease in electricity tariffs (which led to an extraordinary tariff revision applied on 24 January 2013) and established standards for the renewal of concessions for generation, transmission and distribution expiring between 2015 and 2017. This law allowed power companies to extend their concessions by early renewal of their contracts under specific conditions. As a result of these new rules some generators decided not to renew their concessions. The energy from generators that decided to renew concessions was allocated to Distribution System Operators (DSOs) through quotas, which, however, were not sufficient to meet market needs. Additionally, some PPAs from new energy auctions were suspended or postponed due to delay of construction schedules or revocation by ANEEL.

Thus, mismatches between energy requirements (load) and resources (PPAs) led DSOs to purchase energy in the spot market, raising their costs and significantly affecting their cash flow. In addition, hydrologic conditions have been unfavourable since the final quarter of 2012, with low reservoir levels together with poor performance of rainfalls and inflows, which increased substantially the spot price and thermoelectric generation. The corollary was a significant increase in energy costs, which temporarily impacted earnings of distributors.

Part of this rise in costs was compensated for using funds managed by Government through energy development account and by means of loans underwritten by various financial institutions, centralised in ACR (Account for Regulated Environment) Accounts. These resources were approximately BRL 10,000 million to cover non-recurring expenses incurred in 2013 and BRL 18,800 million to cover those during 2014. The remaining part of non-recurring costs, which wasn´t covered by these funds, was passed through to consumers in the annual adjustment of the tariffs.

These financial resources helped to minimise distributors' liquidity problems in 2013 and 2014, but according to International Financial Reporting Standards (IFRS), DSOs were not allowed to recognise regulatory assets and liabilities on their balance sheets. ANEEL therefore opened Public Hearing 61/2014 to discuss whether distributors' concession agreements should be amended allowing the compensation of regulatory assets and liabilities at the end of the concession period, in order to allow its recognition in the distributors' financial statements. This amendment was signed by distributors in November 2014, and these assets and liabilities are presently recognised according to IFRS.

During Public Hearing 64/2014, ANEEL discussed quotas allocation criterion, regarding the energy from generators whose concessions had expired. Federal Decree 7805/2012 established the allocation of new energy quotas in conformity with the size of the market (except the allocation that happened in 2013, which didn't follow this guideline in order to achieve equal tariff reductions between DSOs). As a result, ANEEL approved an allocation criterion that favours exposure to the spot market in 2015 but that follows the proportion of market size in the following years.

In 2015, minimum and maximum limits for spot prices were changed, after discussion within the Public Hearing, these values went from BRL 15.62 and BRL 822.83 per MWh in 2014 to BRL 30.26 and BRL 388.48 per MWh in 2015. This change allowed a significant reduction in the exposure of DSOs´ cash flows.

After great tensions related to the lack of rainfall in 2014 and early 2015 (which raised the imminent possibility of rationing), storage reservoirs, especially in Southeast and Midwest, were able to recover and close the month of November at 27.55% of capacity, well above the recorded for the same period of 2014. The year's closing forecast is 33.8% of its capacity.

Despite improved hydrological conditions, economic slowdown observed for three consecutive quarters had significant negative effects on the distribution market. Given that prospects for 2016 are a negative growth of Brazilian GDP, it is expected that the decline in the energy sector's market continues, especially affected by the drop in industrial demand. Thus, the distributors are facing a plausible scenario of overcontracting (above 105%) for the next year. By December 2013, all energy contracts for the year 2016 had already been carried out with completely different projections of the ones checked today, and therefore variations on events outside the managerial scope of distribution combined with unfavourable market conditions have resulted in overcontracting (despite the Company's efforts to mitigate them). The main factors responsible for this scenario are the quotas, migration of potentially free and special customers to free market and other variations resulting from higher market fall than frustration of the energy auctions. Once DSOs have identified difficulties, negotiations have started with MME and ANEEL to counteract the unmanageable effects and neutralize the risks.

In 2016, with political crises and the Impeachment process occurred against former President Dilma Rouseff, the economic situation deteriorated, and the country faced a drop on GPD of -4.0% in the third quarter and an increasing on inflation indexes, such as IPCA and IGP-M. However, by the end of the year, after Michel Temer became president, IGP-M and IPCA had a recover, but GPD is still expected to decrease considering the whole year. These conditions contributed to a drop on energy consumption, worsening distributors overcontracting situation. Elektro surplus position was above 105% that are covered by tariffs. Many actions were taken to mitigate this position in 2016 together with ABRADEE and ANEEL that are listed as following:

- As a result of a Public Hearing 04/2016 that discussed energy surplus due to quotas' contracts, any quota's volume above reposition volume should be considered as involuntary contracting, which mitigated the over-contracting regarding this issue, reducing Elektro exposure in 6.9%.

- ANEEL announced the result of the Public Hearing 085/2013 that dealt with the reduction of distributors (Power Purchase Agreements – PPAs) due to the migration of special customers to Free Energy Market, and approved the reduction of future PPAs due to the migration of special customers.

- Possibility to sign Bilateral agreements between distributors and generators, with temporary suspension of PPAs.

- Minister of Mines and Energy published the Decree nº 8.828, which suspends the requirement to replace the minimum contracted amount for overcontracted distributors. The measure provides more flexibility to them, since now overcontracted distributors will not be penalized if they do not purchase energy to replace contracts about to expire. For Elektro, there will be direct impacts from 2020 onwards (once we have quotes already allocated in this replacement).

- Elektro and ABRADEE are discussing with ANEEL, as an extension and consequence of Decree 8.828, an adjustment in calculation of "quotas step", considering that overcontracted distributors are no longer penalized for not purchasing the replacement amount.

- In August, the Chamber of Electricity Trading (CCEE) started the execution of New Energy Relocation Mechanism (MCSD Energia Nova) that enables the overcontracted distributors to negotiate contractual reductions with generators. There were already processed three mechanisms for 2016, with supply period of July to December, August to December, and October to December. The results of these three processing allowed Elektro to reduce 2.3% of its energy surplus.

- Retroactive reprocessing of MCSD Energia Nova for the months of July and August 2016, allowing the participation of generators that could not participate previously. The result is expected to be release in February 2017.

In addition, there are other actions that still depend on publication of resolution by ANEEL and MME, and the expectation is that it would be published by the beginning of 2017:

- Consider overcontracting related with the migration of special clients to free market in 2016 as involuntary.

- Adequate the tariff calculation of overcontracting not to consider the amounts of energy contracted by distributors with Belo Monte power plant, once they have delayed the delivery of energy due to problems during the power plant construction.

Beyond the actions mentioned for 2016, there is an action plan to mitigate overcontracting expected to 2017: (1) conversion of capacity contracts into reserve energy contracts; (2) physical guarantee revision of power plants that sell their energy in quota's; (3) possibility to sell interruptible energy with discount; (4) New MCSDs Energia Nova and bilateral agreements; (5) energy trade between distributors and free consumers (allowed by Law 13.360/2016).

After Michel Temer took place as President, many reforms were proposed in order to recover the economy and investor confidence, such as the approbation of public expenses reduction plan. Additionally, in the power sector, were announced the privatization of Eletrobrás distributors, which are expected to be concluded by the end of 2017. However, the CELG's auction was already concluded on 30 November, after the first attempt got frustrated, and the purchase price reduced from 2,800 million to 1,700 million. The winner was the Italian company ENEL, which presented the only proposal, with a goodwill of 0.5 billion.

In October 2016, the transmission auction was also concluded, and 21 from 24 enterprises were contracted. This was possible after ANEEL changed the rules of interest rate of annual allowed revenue (RAP), considering that the first edition of this auction, before Michel Temer's assumption, had only 10 from 24 enterprises contracted.

The GPD expectation for 2016, according to Focus market expectations report on 30 December, is a retraction of -3.49%. For 2017, is expected an increase of 0.5%, and IPCA inflation index is expected to reduce to 4.87%, almost reaching the target of 4.5%.

### 3. Other Regulatory Changes

On 29 December 2014, by virtue of Resolution 4947/2014, the introduction of the system of tariff flags was approved starting in January 2015. The procedure provides for short-term adjustments to be made to tariffs through the use of triggering indicators in the energy cost component in final tariffs. Tariff flags are determined on a monthly basis and their purpose is to mitigate the exposure of distributors' cash flows to high energy prices by reducing the difference between the price paid for energy by distributors and the price paid by consumers to distributors through tariff. A green flag signals low energy purchasing costs and does not change tariffs paid by consumers. A yellow flag signals that power generation costs are rising due to use of thermal energy in the generation mix and leads to a BRL 25 MWh increase in price. A red flag signals a situation where the costs of providing electrical utilities are becoming even more expensive due to the use of inefficient thermal power stations and results in a BRL 55 MWh increase in tariff. The values of each tariff flag are revised annually or when necessary. In December 2015, since the most expensive thermal plants were shut down, therefore lowering generation costs, ANEEL ruled that red flag would have its additional cost divided in two levels, in which level 2 adds BRL 55 MWh and level 1 adds BRL 45 MWh. From April to December 2016, except for November, it was applied green flag, with no additional value to the tariff.

On 27 August 2015, the Public Hearing to set ABRACE's associates' tariffs (Brazilian Large Industrial Energy Consumers and Free Consumers Association) was opened. CDE ("*Conta de Desenvolvimento Energético*") charge is calculated proportionally to the level of consumption for all the consumers, which means that the largest consumers pay consequently more. ABRACE disagrees with CDE's calculation method and has won an injunction that allows the association not to pay a part of the charge. The result of this Public Hearing will not have impacts in ELEKTRO's results, but is a temporally cash flow mismatch. On 24 September 2015, ANEEL's board meeting discussed the results of the Public Hearing. ANEEL's decision is to publish the new tariff value of ABRACE's associates according to what the injunction determines. The impacts will be retroactive to the injunction date; 3 July 2015. ANEEL is trying to revert the judicial decision. ABRADEE (Brazilian Electricity Distributors) has filled an injunction in order to protect distributors from any effects. There is still no judicial decision; therefore ABRACE's injunction is still in play. In December 2015, ABRADEE won the injunction to allow distributors to discount from CDE quota the amounts uncollected by the new tariffs published.

In June 2016, ANACE's associates (National Energy Consumers Association) won another injunction, which took effect since January 2016 that discharge then to pay CDE. On 12 June 2016, ANEEL published Dispatch 1576, regulating the operationalization of the process and allowing distributors to discount of CDE the uncollected revenues since the beginning of ABRACE's injunction effect, in 3 July 2015.

With regard to the sub-transmission assets transfer, in 2015, a Public Hearing was opened in order to collect subsidies from agents to the proposal designed by ANEEL. However, the proposal placed by ANEEL displeased many of the agents involved, and there is still strong resistance to the transfer by the transmission agents. In 2016, the Public Hearing came to a second phase, with a new proposal, less wide than the previous one and easier to be implemented. It is still pending ANEEL's final position about the subject.

On 24 May 2016, ANEEL opened a public hearing to propose an amendment to the concession contract of the distributors who still have not renewed its concession, under the terms of the Law nº 12.783/2013, such as Elektro. ANEEL claims that the newly approved rules for Tariff Adjustment processes are more adequate and, if the concessionaire agrees, the agency can allow the signature of an addendum that incorporates these changes into the concession contract. By the proposal, only the economic clauses regarding distribution tariffs would be discussed. Some proposed changes are:

- The substitution of the IGPM index for the IPCA when updating Parcel B (distribution costs).
- Full neutrality on Parcel A (power purchase and grid costs and regulatory charges), and the migration of the bad debt allowance from Parcel A to Parcel B.
- Extension of the Tariff Revision interval to 5 years.

On 6 September 2016, ANEEL opened another public hearing to discuss improvement of the tariff procedures to be applied to distributors which already renewed their concessions and to companies that choose to adhere to the tariff terms of the new contract. The goal is to define the methodology and formulas of the new tariff calculation rules (PRORET).

In July 2016 ANEEL published a public call for the strategic Research & Development Project entitled: "Improvement of the power sector's business model". The proposal aims to review and discuss the sector's market and business model as a whole. The Project is expected to begin in 2017 and finish in the middle of 2018. Elektro demonstrated interest and is participating together with ABRADEE Institute. Bain & Company was chosen by the R&D participants to development, and COELBA will be the project coordinator (Elektro was not eligible, once it has already coordinated a Tariff Structure Strategic R&D in 2014). The project of development was already sent to ANEEL evaluation, and is expected to begin in March 2017.

On 6 September 2016, ANEEL approved the regulation for the white hourly tariff for low voltage clients. This allows different tariff prices for customers, and stimulates consumption out of peak hour. The application depends on voluntary adhesion by consumers. The application of white tariff to interested consumers will start in January 2018 and will be gradually applied to customers until 2020.

On 5 October, the Ministry of Mines and Energy (MME) opened a Public Consulting aiming to gather agents' perceptions about the free market environment. MME wants to analyze the impacts concerning market liberalization, such as: population information about the subject, whether binomial tariffs are a requisite to its expansion, possible changes in contracts between generators and distributors and needs of improvement in the current regulation, among others.

On 18 November, the Provisional Measure 735 was converted into Law 13,360 by President Michel Temer. The main changes established are:

- From May 2017, the managing role of the CDE, the RGR (Global Reversion Reserve) and the CCC (Fuel Consumption Account) will be transferred from Eletrobras to CCEE (Chamber of Electricity Trading).

- The apportionment of CDE quotas between distributors will gradually adjust from 2017 to 2030, when the quotas will finally be apportioned proportionally to each distributor's energy market.

- Alters CDE's allocation between clients: Consumers with Social Energy Tariff (low income consumers) won't pay the charge, and Medium and High Voltage clients will pay gradually less each year.

- Increases in Itaipu's Tariff: The additional cost that was paid by the National Treasure to Paraguay for its energy surplus will now be included in the tariffs.

- Grants permission for distributors to negotiate their energy surpluses with free clients: still must be regulated by MME and ANEEL;

- Allow the transfer of control of the company instead of concession termination in certain cases - this should facilitate the privatization of Eletrobras' distributors and the sale of Abengoa's assets;

- New generation projects could sell energy in A-5 and A-7 auctions.

- Existing generators can participate in new energy auction until two years after construction.

- For delay in the beginning of operation in generation and transmission enterprises, there is the possibility of extending the contract in case of excluding of responsibility. The law defines which causes could be classified as excluding of responsibility.

The changes established by Law 13.360 still depend on regulation by ANEEL, and most of the rules will be applied in 2017. There is no impact to Elektro, although this changes could cause an increase of tariffs to consumers.

## 5. MAIN RISKS AND UNCERTAINTIES

### 5.1 Risk Management System

The IBERDROLA Group is exposed to various inherent risks in the countries, industries and markets in which it operates and the businesses it carries out, which could prevent it from achieving its objectives and executing its strategies successfully.

The Company's Board of Directors, aware of the importance of this matter, promotes the necessary mechanisms so that the risks relevant to all of the Group's activities and businesses are appropriately identified, measured, managed and controlled, and has established, through the Group's general risk control and management policy, the basic mechanisms and principles necessary for the appropriate management of risk-opportunity with a level of risk which allows:

- attain the strategic objectives formulated by the Group with controlled volatility;
- provide the maximum level of assurance to the shareholders;
- protect the results and reputation of the Group;
- defend the interests of shareholders, customers, other groups interested in the progress of the Company, and of the society in general; and
- ensure corporate stability and financial strength in a sustained manner over time.

For the development of the aforementioned commitment, the Board of Directors and its Executive Committee have the cooperation of the Audit and Risk Supervision Committee, which, as a consultative body, monitors and reports upon the appropriateness of the assessment system and internal control of significant risks, acting in coordination with the audit committees existing in other companies of the Group.

Every action aimed at controlling and mitigating risks will consider the following basic action principles:

a) Integrate the risk-opportunity vision into the Company’s management, through a definition of the strategy and the risk appetite and the incorporation of this variable into strategic and operating decisions.

b) Segregate functions, at the operating level, between risk-taking areas and areas responsible for the analysis, control, and monitoring of such risks, ensuring an appropriate level of independence.

c) Guarantee the proper use of risk-hedging instruments and the maintenance of records thereof as required by applicable law.

d) Inform regulatory agencies and principal external players, in a transparent way, regarding the Group risks and the operation of the systems developed to monitor such risks, maintaining suitable channels that favour communication.

e) Ensure appropriate compliance with the corporate governance rules established by the Company through its Corporate governance system and the update and continuous improvement of such system within the framework of the best international practices for transparency and good governance, and implement the monitoring and measurement thereof.

f) Act at all times in compliance with the law and the Company's corporate governance system and, specifically, with the values and standards of conduct established in the *Code of Ethics*, and pursuant to the principle of zero tolerance of illegal acts and fraud set forth in the *Crime Prevention and Anti-Fraud Policy*.

The *Control and risk management general policy* and its basic principles are implemented by means of a comprehensive risk control and management system, supported by a Corporate Risk Committee and based upon a proper definition and allocation of duties and responsibilities at the operating level and upon procedures, system methodologies and tools suitable for the various system stages and activities including:

a) The ongoing identification of significant risks and threats based on their possible impact on key management objectives and the financial statements (including contingent liabilities and other off-balance risks).

b) The analysis of such risks, both at each corporate business or function and taking into account their combined effect on the Group as a whole.

c) The establishment of a structure of policies, guidelines, and limits, as well as of the corresponding mechanisms for its approval and implementation, which effectively contribute to risk management being performed in accordance with the Company's risk appetite.

d) The measurement and controlling of risks by following procedures and standards which are homogeneous and common to the Group as a whole.

e) The analysis of risks associated with new investments, as an essential element of decision-making based upon profitability-risk.

f) The maintenance of a system for internal controlling of compliance with policies, guidelines and limits, by means of appropriate procedures and systems, including the contingency plans needed to mitigate the impact of the materialisation of risks.

g) The periodic monitoring and control of profit and loss account risks in order to control the volatility of the annual income of the Group.

h) The ongoing evaluation of the suitability and efficiency of applying the system and the best practices and recommendations in the area of risks for its eventual inclusion in the model.

i) The audit of the system by the Internal Audit.

In addition, the *Control and risk management general policy* is further developed and supplemented by the *Risk corporate policies* and the *Risk specific policies* established in connection with certain businesses and/or companies of the Group, which are listed below and are also subject to approval by the Company's Board of Directors.

Corporate risk policies structure:

a) Control and risk management general policy.

b) Corporate credit risk policy.

- Corporate credit risk policy.
- Corporate market risk policy.
- Operational risk policy in market transactions.
- Insurance policy.

- Investment policy.
- Financing and financial risk policy.
- Treasury share policy.
- Risk policy for equity interests in listed companies.
- Reputational risk framework policy.
- Purchasing policy.
- IT policy.
- Cybersecurity risk policy.

c) Risk policies for the various businesses of the Group:

- Risk policy for the deregulated business of the IBERDROLA Group.
- Risk policy for the renewables business of the IBERDROLA Group.
- Risk policy for the network business of the IBERDROLA Group.
- Risk policy for the Real Estate business of the IBERDROLA Group.
- Risk policy for the engineering and construction business of the IBERDROLA Group.

The *Control and risk management general policy*, as well as the *Summary of the corporate risk policies* and the *Summary of the Risk specific policies* for the various businesses of the Group are available on the corporate website (www.iberdrola.com).

In order to align the risk impact with the established risk appetite, the Executive Committee of the Board of Directors, acting at the proposal of the business or corporate divisions involved and upon a prior report from the Group's Risk Committee, annually reviews and approves specific guidelines regarding the Group's risk limits.

Pursuant to established guidelines, the competent administrative bodies of each company of the Group, within such company's area of responsibility, reviews and approves the specific risk limits applicable to each of them.

The companies and corporate functions of the Group are responsible for implementing, within their areas of activity, the control systems required for compliance with the *Control and risk management general policy* and with the limits thereunder.

The risk factors to which the Group is generally subject are listed below:

a) Corporate Governance Risks: the Company assumes the need to safeguard the social interest of the Company and the strategy of sustained maximisation of the economic value of the Company and its long-term success, in accordance with social interest, culture and the Group's corporate vision, taking into account the legitimate public and private interests that converge in the conduct of all business activities, particularly those of the various stakeholders and communities and regions in which the Company and its employees act. A fundamental requirement for the foregoing is compliance with the Company's Corporate governance system, comprising the By-Laws, the Corporate policies, the internal corporate governance rules and the other internal codes and procedures approved by the competent decision-making bodies of the Company and inspired by the good governance recommendations generally recognised in international markets.

b) Market risks: defined as the exposure of the Group's results and equity to changes in market prices and variables, such as exchange rates, interest rates, commodity prices (electricity, gas, $CO_2$ emission rights, other fuel, etc.), prices of financial assets and others.

c) Credit risks: defined as the possibility that a counterparty fails to perform its contractual obligations, thus causing an economic or financial loss to the Group. Counterparties can be final customers, counterparties in financial or energy markets, partners, suppliers, or contractors.

d) Business risks: defined as the uncertainty regarding the performance of key variables inherent in the business, such as the characteristics of demand, weather conditions, the strategies of different players, and others.

e) Regulatory and political risks: defined as those arising from regulatory changes made by the various regulators, such as changes in compensation of regulated activities or in the required conditions of supply, environmental regulation, tax regulation including risks relating to political changes that might affect legal security and the legal framework applicable to the businesses of the Group in each jurisdiction, the nationalisation or expropriation of assets, the cancelation of operating licenses and the early termination of contracts with Government.

f) Operational, technological, environmental, social and legal risks: defined as those related to direct or indirect economic losses resulting from inadequate internal procedures, technical failures, human error, or as a consequence of certain external events, including the economic, social, environmental, and reputational impact thereof, as well as legal and fraud risks. The said risks include those associated with information technology and cybersecurity, as well as the risk of technological obsolescence, among others.

g) Reputational risks: potential negative impact on the value of the Company resulting from Company's behaviour below the expectations created among various stakeholders: shareholders, customers, media, analysts, Government, employees, and society in general.

Due to its universal and dynamic nature, the system allows for the consideration of new risks that may affect the Group as a consequence of changes in its operating environment or revisions of objectives and strategies, as well as adjustments resulting from ongoing monitoring, verification, review and supervision activities.

The Audit and Risk Supervision Committee of the Board of Directors periodically monitors the evolution of the Company's risks:

- It reviews the Group's risk quarterly reports, which include monitoring compliance with risk limits and indicators and updated key risk maps, submitted by the Group's director of corporate risks.

- It coordinates and reviews risk reports sent periodically, at least semi-annually, by the audit and compliance committees of the main subsidiaries of the Group, being included the subholding companies of the main countries where the Group operates that, along with the risk director appearances are used to prepare a risk report for the Board of Directors at least twice per year.

For further details, see the section *Control systems and risk management of the Corporate Governance Report 2016*.

## 5.2 Credit risk

The IBERDROLA Group is exposed to credit risk arising from its counterparties (customers, suppliers, financial institutions, partners, etc.) default on their contractual obligations. The exposure may arise with regard to unsettled amounts, the cost of substituting products not supplied and also, in the case of dedicated plants, outstanding amounts.

The credit risk is managed and limited in accordance with the type of transaction and the creditworthiness of the counterparties. A specific corporate credit risk policy is in place which establishes criteria for admission, approval systems, authorisation levels, scoring tools, exposure measurement methodologies, etc.

With regard to credit risk on trade receivables, the historical cost of defaults has remained moderate and stable at close to 1% of total turnover of this activity, despite the current difficult economic environment. Regarding other exposure (counterparties in transactions with financial derivatives, placement of cash surpluses, transactions involving energy and guarantees received from third parties), no significant defaults or losses were incurred in 2016 or 2015.

At 31 December 2016 and 2015, there is no significant credit risk concentration in the IBERDROLA Group.

## 5.3 Financial risks

### *5.3.1 Interest rate risk*

The IBERDROLA Group is exposed to the risk of fluctuations in interest rates affecting cash flows and market value in respect of items in the balance sheet (debt and derivatives). In order to adequately manage and limit this risk, the IBERDROLA Group manages annually the proportion of fixed and variable debt and establishes the actions to be carried out throughout the year: new sources of financing (at a fixed, floating or indexed rate) and/or the use of interest rate derivatives.

Debt arranged at floating interest rates is basically tied to Euribor, Libor-GBP and Libor-USD and to the most liquid local reference indexes in the case of the borrowings of the Latin American subsidiaries.

The debt structure at 31 December 2016, once considered the hedge provided by the derivatives traded, is included in the Note 5 of the Consolidated financial statements.

### *5.3.2 Foreign currency transaltion risk*

As the IBERDROLA Group's presentation currency is the euro, fluctuations in the value of the currencies in which borrowings are instrumented and transactions are carried out with respect to the euro, mainly the Sterling Pound, the US Dollar and the Brazilian Real, may have an effect on the finance costs, profit and equity of the Group.

The following items could be affected by foreign currency translation risk:

- Collections and payments for supplies, services or equipment acquisition in currencies other than the local or functional currency.
- Income and expenses of certain foreign subsidiaries indexed in currencies other than the local or functional currency.
- Debt denominated in currencies other than the local or functional currency of the IBERDROLA Group companies.
- Profit or loss on consolidation of foreign subsidiaries.
- Consolidated carrying amount of net investments in foreign subsidiaries.

The IBERDROLA Group reduces this risk by

- Ensuring that all its economic flows are carried out in the currency of each Group company, provided that this is possible and economically viable and efficient, through the use of derivatives if not.

- As far as possible, this covers the risk of transfer of earnings scheduled for the current year, thereby limiting the ultimate impact on Group earnings.
- Mitigating the impact on the consolidated net asset value of a hypothetical depreciation of currencies due to Group's investment in foreign subsidiaries by maintaining foreign currency debt, as well as through financial derivatives.

The debt structure at 31 December 2016, once considered the hedge provided by the derivatives traded, is included in the Note 5 of the Consolidated financial statements.

### *5.3.3 Liquidity risk*

Exposure to adverse situations in the debt or capital markets or in relation to the IBERDROLA Group's own economic-financial situation may hinder or prevent the IBERDROLA Group from obtaining the financing required to properly carry on its business activities.

The IBERDROLA Group's liquidity policy is aimed at ensuring that it can meet its payment obligations without having to obtain financing under unfavourable terms. For this purpose, various management measures are used such as the arrangement of committed credit facilities of sufficient amount, deadline and flexibility, diversification of the coverage of financing needs through access to different markets and geographical areas, and diversification of the maturities of the debt issued.

The sum of cash, liquid assets and committed undrawn credit facilities would sufficiently cover the Group's expected liquidity requirements for a period of over 24 months, excluding the arrangement of any new credit.

The figures relating to changes in the Company's debt are included in Notes 25 and 50 to the Consolidated financial statements.

## 5.4 Country risk

The activities of the different businesses that the IBERDROLA Group developed are submitted, in greater or lesser extent depending on their characteristics, to various risks inherent to the country where they operate:

- Imposition of monetary and other restrictions on the movement of capital
- Changes in the trade environment
- Economic crisis, political instability and social riots affecting operations
- Nationalisation or expropriation of assets
- Exchange rate fluctuations
- Cancelation of operating licenses
- Anticipated termination of Government contracts
- Changes to administrative policies and regulations in the country

The results of our international subsidiaries, their market value and their contribution to the Group may be affected by such risks.

The IBERDROLA Group's main operations are focused on Spain, United Kingdom, USA, Brazil and Mexico, countries with low or moderate risk, whose credit ratings are as follows:

| Country | Moody´s | S&P | Fitch |
|---|---|---|---|
| Spain | Baa2 | BBB+ | BBB+ |
| United Kingdom | Aa1 | AA | AA |
| USA | Aaa | AA+ | AAA |
| Brazil | Ba2 | BB | BB |
| Mexico | A3 | BBB+ | BBB+ |

The presence in countries other than the ones mentioned above is not significant at Group level from an economic point of view.

## 5.5 Activity risks

The activities of the various businesses developed by the IBERDROLA Group are subject to various risks including market, credit, operational, business, regulatory and reputational risks arising from the uncertainty of the main variables that affect them.

### 5.5.1 *Regulatory and political risks*

Companies in the IBERDROLA Group are subject to laws and regulations concerning prices and other aspects of their activities in each of the countries in which they operate. The introduction of new laws and regulations or amendments to the already existing ones may have an adverse effect on the Group's operations annual results and economic value of businesses.

The following paragraphs are a few of the new major regulatory measures that were approved in 2016 or are due to be implemented in 2017:

*Spain:*

- Approval on 17 June 2016 of the Order IET/980/2016 establishing remuneration for electricity distribution companies in 2016, stipulating total remuneration for the Iberdrola Group of EUR 1,655 million (up by 2.7% against 2015) and a regulatory asset base (RAB) for the Group's distribution assets of EUR 8,694 million, thereby removing any uncertainty.

*United Kingdom:*

- Pulication of the final report and conclusions of the Competition Market Authority (CMA) about the gas and electricity retail market analysis in UK with moderate impact for Scottish Power. Its main measures include:
    - The application of a price cap for prepaid customers.
    - The creation of a database shared with customer information in order to encourage competition.
    - The elimination of certain tariff limitations.
- Economic, political and regulatory uncertainty arising from the outcome of the referendum on the exit of the United Kingdom from the European Union, held in June 2016.

*United States:*

- Approval of rate cases by the regulator of the Estate of New York RG&E and NYSEG, valid from July 2016 for a period of three years, in satisfactory terms for the Company.

- The approval in the United States of the new tax incentive scheme for the development of renewable energy Production Tax Credits, valid until 2020.

*Brazil:*

- Approval of Elektro's four-year tariff review, by the Brazilian regulator ANEEL, valid up to August 2019, in satisfactory terms for the Company.

*Mexico:*

- Possible impact on the Mexican economy of some of the new political and economic measures, announced during the recent election campaign in the US, by the new Trump administration, such as the introduction of trade tariffs.

- Uncertainties about the Energy Market Reform currently being drawn up which, according to the best information available, could affect the profitability of assets dedicated to selling electricity to private partners and the outlook for plants currently under construction.

### 5.5.2 *Network business risk*

The regulations of each country in which the IBERDROLA Group's network businesses operate establish regularly revised frameworks, guaranteeing that these businesses will receive reasonable and predictable returns. These frameworks include penalties and bonuses for efficiency, service quality and, eventually, for default management, which have a minor, immaterial impact overall. Significant structural amendments to these regulations could supose a risk to these businesses.

In general, the profitability of the IBERDROLA Group's network businesses is not exposed to demand risk, except for the Brazilian subsidiaries.

The IBERDROLA Group's network businesses in Spain and in the United Kingdom are not exposed to any market risk associated with energy prices.

The network businesses in Brazil and some of the businesses in the USA sell energy to regulated customers at a price determined by certain previously approved tariffs. In the case of a prudent procurement management and as established by the regulator, the regulatory frameworks in both countries guarantee sums will be collected in subsequent tariff readjustment reviews for possible purchase price deviations from those previously recognised in the tariff.

Given the above, in the case of extraordinary events (extreme drought in Brazil as happened in 2014, catastrophic storms in USA, etc.), occasional temporary gaps between payments and collections may arise with an impact on the cash flows of some of these businesses and eventually on profits recognised under IFRS.

- ***Spanish Networks:***

The present regulatory model is based on Electric Industry Law 24/2013 of 26 December, establishing regulatory six-year periods and profitability for distribution activity calculated as the yield on government bonds plus 200 basis points. Profitability was set at 6.5% for the first regulatory period.

The Royal Decree 1048/2013 of 27 December establishing the methodology to calculate remuneration for electricity distribution activities defines a methodology based on standard unit costs of investment and operation. The remuneration of facilities will be calculated on the basis of the real audited cost and the standard cost recognised for each investment, and therefore profitability will depend on the constructive efficiency achieved.

In terms of distribution incentives, the Royal Decree 1048/2013 modifies the definitions of current quality incentives and losses, and establishes a new anti-fraud incentive.

Moreover, in accordance with current regulations, the distribution company does not sell any energy to customers, and it is therefore not exposed to market risk at the present time. This means that fluctuations in demand have no direct impact on the income statement.

- ***United Kingdom Networks:***

The group operates in the United Kingdom through its subsidiary Scottish Power Ltd and the following licences:

- SP Distribution PLC (SPD)
- SP Manweb PLC (SPM)
- SP Transmission PLC (SPT)

The current regulatory model for SPD and SPM is based on the RIIO ED1 framework, and on the RIIO T1 framework in the case of SPT. The latest tariff review for electricity distributors (RIIO ED1), including SPD and SPM, is valid from April 2015 to April 2023. The SPT review (RIIO T1) is valid from April 2013 to April 2021.

The weighted average cost of capital or WACC is set for each tariff period. The current real WACC after tax recognised for distribution activities was 3.4% from January to March, and 3.67% from April to December. In the case of transport business it was 4.27% from January to March, and 4.46% from April to December.

The regulator (OFGEM) also establishes incentives/penalties for safety, environmental impact, consumer satisfaction, social obligations, connections and quality, which may have an effect on the income statement.

- ***United States Networks:***

The Iberdrola Group operates in the USA through its listed subsidiary Avangrid, which in turn has the following subsidiary network companies:

- New York State Electric & Gas (NYSEG), New York, with a 3-year rate case valid until 2019 (base ROE 9% for distribution).
- Rochester Gas and Electric (RG&E), New York, with a 3-year rate case valid until 2019 (base ROE 9% for distribution).
- Central Maine Power (CMP), Maine, conducting electricity distribution business with an annual extendable rate case (base ROE 9.15% for distribution), and transmission business (base ROE 10.57%).
- United Illuminating (UI), Connecticut, conducting electricity distribution business with a rate case currently undergoing an advanced review, and transmission business (base ROE 10.57%).
- It also has the following natural gas distribution companies: Maine Natural Gas Corporation (MNG), Connecticut Natural Gas (CNG), Southern Connecticut Gas (SCG) and Berkshire Gas (BG).

Companies carrying on regulated business in the USA are exposed to risks associated with the regulations of a number of federal regulatory bodies (FERC, CFTC, DEC) and state commissions, responsible for establishing the regulatory frameworks of the companies regulated (tariffs and other conditions).

The distributors' tariff plans have been designed to reduce the risk to which business is exposed through mechanisms for deferral, reconciliation and provisions for costs. Regulated distributors pass on the costs of gas and electricity to end customers, thereby mitigating any impacts of fluctuations in demand.

- ***Brazilian Networks:***

The Iberdrola Group conducts its network business in Brazil through Elektro Redes, S.A. in the state of São Paulo, and the network business of its investee Neoenergia (39% Iberdrola Group), which has the electricity distributors Coelba, Celpe and Cosern in the respective states of Bahía, Pernambuco and Rio Grande do Norte.

Brazilian legislation applicable to regulated electricity distribution business establishes two types of costs: i) "Parcel A", which includes the costs of energy, transport and other obligations and regulatory charges, which can be recovered through tariffs ("pass through") as part of the conditions and limits imposed by ANEEL, except for other obligations and regulatory charges which can always be recovered through tariffs, and ii) "Parcel B", which includes remuneration for investment and the costs of operation and maintenance, which generate either an incentive or a risk for the investor.

ANEEL also acknowledges other smaller incentives to minimise default and impairment of quality and customer satisfaction that can affect the income statement.

Pursuant to current legislation, electricity distribution companies:

a) transfer the cost of supplying electricity to the end customer through the regulated tariff, provided the energy contracted is between 100% and 105% of the demand required.

b) risk penalties imposed by the regulator ANEEL, when this is less than 100% due to the exclusive responsibility of the distributor.

c) risk price fluctuations when it is above 105%.

The dates of the next tariff reviews are as follows: Elektro: August 2019, Celpe: April 2017, Coelba and Cosern; April 2018.

### 5.5.3 *Renewables business*

The regulations of each country in which the Group operates establish regulatory frameworks aimed at promoting the development of renewable energies based on formulas which may include premiums, green certificates, tax or regulated tariff deductions, which allow investors to obtain sufficient and reasonable return. Any change to the aforementioned regulation may represent a risk for said business.

In addition to the aforementioned regulatory risk, Group's renewable energy businesses may be subject, to a greater or lesser extent, to wind resource risk and market risk.

The Group considers that the wind resource risk is mitigated through the high number of wind power farms available and their geographic diversification, and the trend to compensate less wind energy periods with those with high wind energy on the medium term.

Regarding the electricity price risk the following should be mentioned:

- ***Renewables business – Spain***

The Group currently has a renewable installed capacity in Spain of: 5,507 MW wind farms, 303 MW mini hydro, 50 MW solar thermal and 0.09 MW photovoltaic.

Subsequent to the approval of the new regulatory framework (the Royal Decree-law 9/2013, of 12 July, Law 24/2013, of 26 December, the Royal Decree 413/2014, of 6 June, and the Ministerial Order

IET/1045/2014, of 16 June), all renewable energy generated is remunerated at market price plus a premium per MW. This guarantees a reasonable regulated return based on a recognised standard investment. This return is readjusted every three years within predetermined bands to cover any possible deviation in market price. This premium per MW is not applicable for wind farms brought on line during and before 2004. As a result, initially all output would be fully or partially exposed to market risk.

- ***Renewables business – United Kingdom***

The Group's current renewables installed capacity in the UK is: 1,619 MW in onshore wind plants and 195 MW in offshore wind plants, operational under current "Renewables Obligation" legislation. This means that income is partially exposed to the risk of the market price for electricity in the UK, as the revenues obtained comprise income from the price of the energy produced and the sale of renewables obligation certificates (ROC certificates).

UK regulations impose minimum ROC obligations per MWh sold on sellers of electricity, 10% more than the system envisages producing, and determine the price at which the rest must buy, which in practice amounts to a floor price at the price of the ROCs.

New renewable technology plants, implemented as of 2016 and 2017 (onshore wind plants, implemented sicne 12 May 2016, and the rest as of 1 April 2017), are subject to the new "Contract for Difference" remuneration scheme, or CfD, which eliminates market risk for 15 years.

The fixed prices for these projects are established on a project-by-project basis through public tenders. The counterparty guaranteeing this price, "The Low Carbon Contracts Company", finances its potential payments by charging a fee to distributors depending on their market share, and therefore the credit risk with the counterparty is practically zero.

The East Anglia offshore plant, currently under construction, has been awarded a CfD contract.

*German offshore wind plant*

The renewables division in the UK also manages offshore wind business in other European countries, among which the Wikinger offshore plant (Germany), currently under construction.

Pursuant to German regulations, the new Wikinger plant will have a fixed price for the energy it produces over the first 15 years of operation on a CfD contract, similar to the aforementioned setup in the UK.

The positions exposed to market risk of the renewables businesses in Spain and the UK are managed and included in their position in the Deregulated businesses in these countries, to be hedged in the most efficient manner possible.

In relation to electricity price risk in other countries, mention should be made of the following:

- ***Renewables United States***

The Iberdrola Group conducts its renewables business in the US through its listed company Avangrid, which has an installed capacity of 5,588 MW in onshore wind plants, and 50MW in operational photovoltaic plants.

At the present time, approximately 67% of the energy produced is sold on fixed-price long-term contracts with third parties, and some 33% of the energy produced is sold to the market on more short-term arrangements.

With electricity prices around USD 30 per MWh, a 5% change in prices could give rise to an impact of EUR ±8 million on operating results.

- ***Renewables Mexico***

  In Mexico the business now has an installed capacity of 367 MW in operational onshore wind plants, with two sale schemes: a) fixed-price sale to the CFE on a long-term contract and b) sale to third parties with a discount on the official price published by the CFE.

- ***Renewables Brazil***

  In Brazil the business now has an installed capacity of 187.3 MW in onshore wind plants, all operating on long-term contracts (PPAs) with a fixed price for the country's distributors. Excesses and shortages in the production contracted with the distributor are settled over periods of four years, and excesses must be offered and shortages purchased at market prices.

- ***Renewables business in other European countries***

  Installed capacity is currently 615 MW in wind plants and 6.17 MW in photovoltaic facilities operational in Greece, Portugal and other European countries.

  Regulations in these countries make a distinction between two energy sale schemes: sales at the tariff (Portugal, Greece, Cyprus and Hungary), or sales at market price plus green certificates (Italy and Romania).

### 5.5.4 *Deregulated electricity and gas generation and retailing businesses Commodity price risk*

The activities of the Group's deregulated businesses are subject to a range of market, credit, operating, business and regulatory risks, coming from the uncertainty of the main variables that affect them, such as: fluctuations in commodity prices, changes in hydroelectric and wind energy production (of both the Group's and of third parties), changes in electricity and gas demand, and plant availability.

The main variable that affects IBERDROLA's result in terms of raw materials' market price is the electricity price. However, in many countries, electricity prices are strongly correlated with the price of the fuels used in its production. Therefore, risk studies are carried out on fuel price trends.

In the case of fuel and $CO_2$ emission allowances, these risks are evident in:

- The electricity generation and retailing business, in which the IBERDROLA Group is exposed to variations in the price of $CO_2$ emission allowances and in the sale price of electricity, as well as to variations in fuel costs (mainly gas and coal).

- The gas retailing business, in which a large portion of the IBERDROLA Group's operating expenses relate to the purchase of gas for customer supplies. The IBERDROLA Group is therefore exposed to the risk of variations in the price of gas.

- Unhedged energy transactions (discretionary trading).

To a large extent, the mutual closing out of positions by the generation business and retailing business mitigates the market risk to which the Group is exposed. The remaining risk is mitigated by diversifying sale and purchase agreements, and specific clauses therein, as well as by arranging derivatives.

- ***Deregulated business in Spain***

*Commodities' Price risk*

Given current market conditions, the production price of the coal-fired power plants defines, to a large extent, the price of electricity in Spain since coal is the marginal technology necessary to cover electricity demand. Consequently, the price of coal conditions revenues from the other less expensive technologies which are used to cover demand. With coal prices around USD 68 per tonne, a 5% change in the prices could give rise to an impact of EUR ±15 million on operating results.

The price of $CO_2$ influences the cost of production in coal-fired power plants. With coal prices around EUR 4.85 per tonne, a 5% change in the prices could give rise to an impact of EUR ±3 million on operating results.

The majority of gas supplied in Spain is paid indexed to the price of oil by means of complex formulas. IBERDROLA has these types of agreements for the supply of gas, as well as other types of fixed-price supply and with prices not indexed to the market price of oil. These agreements are used for electricity generation, for the consumption of its final customers and for sale to other intermediaries. Due to the fact that the electricity generation margin is covered by the contracting formulas of the system operator, only residual risk remains in sales to final customers and third parties. The risk assumed is reduced and depends on the correlation between the price of oil and the European and international gas prices. In the event of a 5% fluctuation in the oil price, the risk would be EUR ±1million.

*Hydraulic risk*

Despite having a large water storage capacity, IBERDROLA's results depend significantly on the flow contributions. The changes in output with respect to the average value can be up to -4,000 GWh in a dry year and +5,000 GWh in a wet year, the variability would be between EUR ±135 million. The loss of profit is not covered as it is an IBERDROLA's inherent risk.

*Demand risk*

Given the current market condition, where price is primarily determined by the generation cost of coal-fired plants, which make up around 15% of the generation mix, it is not considered that demand fluctuations will impact on marginal technology in the market. The impact on the market price of a 1% change in demand is therefore limited, amounting to approximately EUR 0.25 per MWh.

A moderate drop in demand in Spain does not affect the scheduled output of the Group's nuclear, hydroelectric and wind power plants, since there is a mandatory electricity market in Spain guaranteeing the efficient dispatch of output from all technologies.

Nevertheless, there could be an impact if a drop in electricity demand entails an equivalent reduction in the Group's retail sales and consequent narrowing of margin. This is mitigated to some extent by increasing sales of own energy on the wholesale market.

Taking both effects into account, it is estimated that a 1% fluctuation in demand would have an impact of EUR ±8.5 million overall.

*Operational risk*

From the perspective of its impact on business results, the main risk arises from nuclear power plant outages (due to stoppages for fuel reloading, in accordance with a pre-established schedule) and hydroelectric power plant outages which are not associated with a large storage reservoir (flow facilities, in which water is not storable). As a result of such outages, production and, therefore, the margin associated with this production are lost. This risk is managed through excellence in the operating and maintenance practices of the plants and a culture focused on total quality and the reduction of operational risks, which allow the impact of this risk to be kept low.

- ***Deregulated business – United Kingdom***

*Commodity price risk*

The IBERDROLA Group does not count on having coal plants in the UK after the closure of current plant Longannet at the end of March 2016.

In the British market, geared towards thermal power generation, the clean spark spread has become the appropriate index to follow the uncertainty of the margins of coal-fired power plants. Despite the fact that commodities (coal, $CO_2$ and electricity) are listed separately, the uncertainty of the unit margin is studied since it has been detected that it is a better indicator of the uncertainty of the results. With clean spark spread levels around GBP 3 per MWh, a 5% change in the spreads could give rise to an impact of EUR 5 million on operating results.

The IBERDROLA Group does not already have long-term gas contracts at fixed price.

*Demand risk*

Electricity consumption demand is usually one of the most significant risk factors for any company. However, IBERDROLA currently purchases from third parties a significant portion of the energy it sells (1,800, 2,500 and 4,100 GWh in 2015, 2014 and 2013, respectively, of a total amount of electricity sold of 22,000 GWh/year), since it is more profitable to do so under current market conditions than IBERDROLA producing it and using its own thermal power plants. From a business perspective, fluctuations in electricity demand mean that additional amounts of electricity need to be purchased or that these acquisitions need to be reduced. In any case, the profit or loss IBERDROLA obtains from this intermediation is low and much lower than that obtained from its own output. Thus, demand fluctuations have a small impact on profit or loss of EUR ±10 million for every 1% fluctuation in customer demand.

*Operational risk*

From the perspective of its impact on business results, the main risk arises from the combined cycle power plants outages. With regard to these outages, all profit or loss obtained from production is committed, although the high operating and maintenance standards of the plants and a culture focused on total quality and the reduction of operational risks, allow the impact on this risk to be kept low. Loss of profit from this type of events (material damages or machinery malfunctions) is covered by an insurance policy after a certain deductible level, which is marked by the risk retention level that IBERDROLA can assume and the insurance conditions that the market offers for risks of these types.

- ***Deregulated business – Mexico***

*Commodity price risk*

Electricity generation at Iberdrola Generación Mexico is gas-intensive. Gas prices therefore comprise an essential component of this risk.

Approximately 83% of the electricity generated in Mexico is sold through long-term sales agreements (to CFE and, to a lesser extent, other major industrial customers), whereby the risk associated with the price of gas for generating this electricity is passed on.

The remaining energy is sold to customers at a price linked to the official tariffs published by CFE. These tariffs depend on the price of various fuels, specially fuel-oil, diesel, natural gas and coal.

As a result, there is a risk associated with the price of these fuels on the international markets, which is properly managed through operations in derivatives markets. These operations reduce the risk, with a lower final risk as a result.

- A 5% change in fuel-oil or diesel prices (which are closely linked) would give rise to a EUR ±3 million change in results.
- A 5% change in the natural gas price would give rise to a EUR ±1 million change in results.
- A 5% change in the price of coal would give rise to a EUR ±1 million change in results.

*Demand risk*

The structure of the agreements IBERDROLA has entered into in Mexico isolates the business results from electricity demand fluctuations. Revenues come mainly from plant availability and only the sales indexed at the official Mexican tariff are subject to a certain extent by the fluctuation in demand. Nonetheless, most of the plants have committed sales exceeding their production capacity and therefore a shift in demand would not have an impact on their operations or results as the electricity generated would be sold to another customer. Changes in electricity demand in Mexico therefore have no effect on results.

*Operational risk*

From the perspective of its impact on business results, the main risk arises from combined cycle power plant outages. With regard to these outages, all profit or loss obtained from production is compromised, although the high operating and maintenance standards of the plants and a culture focused on total quality and the reduction of operational risks, allow the impact of this risk to be kept low. Loss of profit from this type of event (material damages or machinery malfunctions) is covered by an insurance policy after a certain deductible level, which is marked by the risk retention level that IBERDROLA can assume, and the insurance conditions that the market offers for risks of these types.

- ***Deregulated business – United States and Canada***

*Commodity price risk*

IBERDROLA's business in the United States and Canada is geared towards natural gas transport and storage. As a result, the risk assumed mainly arises from fluctuations in the price of natural gas over time. There is no risk arising from the price levels but rather from the difference in the price of natural gas between the period of high prices (winter) and the period of low prices (summer). In the event the difference between both periods is USD 0.21 per MWh, if the aforementioned difference were to fluctuate by 5%, the uncertainty of the results would be EUR ±1 million.

*Operational risk*

The business's gas storage facilities are exposed to operational risks associated with outages impeding the injection or extraction of gas, gas storage leaks and shifts in geological structures that hinder recovering injected gas.

IBERDROLA mitigates such risk by conforming to the highest standards of predictive and corrective maintenance, and permanently monitoring the geological parameters of the storage facilities. This will enable it to respond quickly to any potential threats that may be identified.

- ***Gas supply operations***

The IBERDROLA Group maintains an adequate balance in the global mix, both in terms of the number of supplier countries and the type of supply (gas via pipelines or GNL), which is demonstrated in that it has five suppliers from different areas (Norway, Nigeria, Algeria and Qatar, among others).

In the Spanish case, gas supply is guaranteed through long-term agreements. The 23% of this mix of agreements is at a fixed price and the remainder is linked to the prices of various fuels on international markets.

Gas supply in Mexico is secured through long-term agreements with PEMEX and CFE at a price linked to international natural gas prices in the US and, therefore, with price that depends on the same gas prices in that country.

The gas business in the United States and Canada involves natural gas storage, whereby net gas purchases are not necessary over and above the fuel needed for the transfer, injection and extraction thereof. These quantities are small and procured gradually on local gas markets without the existence of long-term supply agreements.

- ***Unhedged energy transactions (discretionary trading)***

Discretionary trading of electricity, gas, emissions allowances and other fuels and associated products performed by some of the Group's businesses is residual and the overall risk thereof is mitigated using individual stop-loss limits, whose total aggregate can never exceed 2% of the Consolidated net profit for the period, pursuant to the market risk policy approved by IBERDROLA, S.A.'s Board of Directors.

IBERDROLA has reduced discretionary trading in recent years in line with the widespread move away from market speculation. At 31 December 2015, the notional value of derivatives used in speculative trading (calculated in accordance with the criteria set forth in the European Market Infrastructure Regulation (EMIR)) was below EUR 135 million versus EUR 135 million at 31 December 2015. In any case, these values are much lower than EUR 3,000 million thereshold that is set for non-financial companies in the European regulation (EMIR).

### 5.5.5 *Other operational risks*

During all of the IBERDROLA Group's activities, direct or indirect losses may arise as a result of inadequate internal procedures, technical failures, human error or external factors.

Any of these risks could cause damage or destruction to the IBERDROLA Group's facilities, as well as injuries to third parties or damage to the environment, along with the ensuing lawsuits, especially in the event of power outages caused by accidents at our distribution networks and possible penalties imposed by the authorities.

Although many of these risks are unpredictable, the IBERDROLA Group mitigates them by carrying out the necessary investments, implementing operation and maintenance procedures and programmes (supported by quality control systems), planning appropriate employee training, and taking out the required insurance covering both material damages and civil liability.

In relation to the insurance cover, IBERDROLA has international insurance programmes to cover equity (insurance for material damages, machinery breakdowns, loss of profits, damages from natural disasters and risks arising from construction work) and third-party liabilities (general civil liability, liability for environmental risks, professional civil liability, etc.).

However, this insurance does not completely eliminate operational risk, since it is not always possible, or it is not in its interest to pass such risk on to insurance companies and, in addition, cover is always subject to certain limitations.

Specifically, the IBERDROLA Group is also exposed to the following operational risks:

- Risk of malfunctions, explosions, fire, toxic spillages or polluted emissions in gas and electricity distribution networks and generating plants. Risks in connection with cybersecurity. Threats or vulnerabilities concerning data, control systems or Group information and communications systems, and any consequences arising from access to, use, disclosure, deterioration, interruption, unauthorised modification or destruction of information or information systems.
- Risks concerning extreme meteorological conditions and other instances of force majeure.
- Risk of sabotage and/or terrorism.

- ***Risks in connection with nuclear business***

The IBERDROLA Group's nuclear power plants in Spain are also exposed to risks relating to their operations and risks arising from the storage and handling of radioactive materials.

- Constitutional Spanish law caps the liability of nuclear power plant operators in the event of a nuclear accident at EUR 700 million. This liability for a nuclear accident must be compulsorily insured by the operator of Spanish nuclear power plants. The IBERDROLA Group meets this obligation by taking out Nuclear Civil Liability insurance policies for each plant. However, Law 12/2011, of 27 May, concerning civil liability for nuclear damage or damage caused by radioactive materials, will increase the operator's liability ceiling and the consequent ceiling on mandatory insurance to EUR 1,200 million for nuclear power plants. The law will enter into force when all signatories of the Paris and Brussels Agreements ratify the 2004 Amendment Protocols, as established in these agreements.

- Accordingly, it is important to point out the indirect economic risk to which the aforementioned power plants are exposed as a result of a possible serious incident in Spain or in other country could affect the periodic renewals of their compulsory operating licences and the increase in their safety investments.

- ***Environmental risks***

IBERDROLA accepts that the environment places constraints on all human activities and is a factor of companies' competitiveness, and it is committed to promoting innovation in this field and also ecoefficiency, to gradually reducing the environmental impact of its activities, facilities, products and services, and striving to ensure that its activities' development is congruent with future generations' legitimate right to an appropriate environment.

The Group undertakes and promotes this commitment through its policies. IBERDROLA currently has three specific policies in order to manage environmental issues: environmental policy, anti-climate change policy and biodiversity policy, which set forth the principles through which the Company will continue to improve its environmental management.

IBERDROLA was also included, for the twelfth consecutive year, on the global Dow Jones Sustainability Index, a worldwide benchmark for recognition of companies' contributions to sustainable development, as well as on other prestigious international sustainability indexes. It becomes the unique utility in the index since its creation in 1999.

- ***Operational risk of operations in markets***

Market trading conducted by the Group's various energy trading desks and treasury dealers is also exposed to operational risk due to possible inappropriate processes, technological faults, human error, fraud or any other external or internal event.

This risk is mitigated by following the operational risk policy when trading on the market based on a robust risk control culture, a proper segregation of duties, the publication of clear processes and policies and secure and flexible information systems. This policy sets specific thresholds and guidelines applicable to all trades performed in accordance with the principle of proportionality.

- ***Risks in connection with cybersecurity***

IBERDROLA Group companies may be affected by threats and vulnerabilities in connection with information, control systems or information and communications systems used by the Group, or by any consequences of unauthorised access to or the use, disclosure, degradation, interruption, modification or destruction of information or information systems, including the consequences of acts of terrorism.

These risks are managed in accordance with the basic principles of the cybersecurity policy, which takes the necessary measures to guarantee secure usage of information and communications systems and other cyber-assets, bolstering detection, prevention, defence and response capacities to counter cyberattacks.

### 5.5.6 *Legal risks*

The IBERDROLA Group companies are part of a certain in-court and out-of-court disputes within the ordinary course of their activities, the final result of which, in general, is uncertain. An adverse result, or an out-of-court resolution thereof or other proceedings in the future could have a material adverse effect on our business, financial situation, operating results and cash flows. However, the Group's legal advisers believe that the outcome of the aforementioned disputes will not have a significant effect.

Note 43 of the Consolidated financial statements contains a more detailed description of the most significant matters regarding "Contingent liabilities".

## 5.6 Risks materialised during the year

See *Risk management and control systems* of the *2016 Corporate governance report*.

# 6. SIGNIFICANT SUBSEQUENT EVENTS TO YEAR END

Subsequent events to year end are described in Note 50 of the Consolidated financial statements.

# 7. RESEARCH AND DEVELOPMENT ACTIVITIES

- Iberdrola believes that innovation is a strategic variable which affects all areas of business and all our activities. We intend to lead innovation within the energy sector, focusing on sustainable development, promotion of renewable energies, utilisation of the opportunities presented by digitalisation in all areas, automation and a focus on technology and new business models. In 2016 more than EUR 211 million were invested in R+D+i, especially projects related to smart grids, clean energy generation, offshore wind facilities and new technologies and business models. More than 200 R+D+i projects, all of which are expected to have an effect on business in the short/medium term, are now ongoing thanks to the involvement of all Group employees.

- Thanks to a constant commitment to innovation, Iberdrola is now a world leader of the energy sector that has kept ahead of the energy transition to address the challenges of climate change and the need for clean energy, and has been acknowledged as Spain's most innovative utility and the third most innovative in Europe in the European Commission's classification.

- Iberdrola Ventures – PERSEO is IBERDROLA's corporate risk capital programme for investing in innovative technologies and business models to guarantee a sustainable energy model. On the international front, in 2016 a Silicon Valley company known as STEM, in which Perseo holds a stake, consolidated its position as leader of the distributed storage market, with more than 200 storage facilities operational. A Salamanca company in which Perseo likewise holds a stake, Arbórea Intellbird, is also expanding. Arbórea uses drones to inspect all kinds of energy infrastructures, and in 2016 it embarked upon international expansion, having surpassed the milestone of inspections of over 600 wind turbine blades in Spain and Mexico.

Under a clear strategy, which is set out in the 2015-2017 Innovation Plan, innovation is IBERDROLA's primary tool to guarantee the Company's sustainability, efficiency and competitiveness, focusing on three main issues:

- Efficiency, geared towards a continuous streamlining of our operations, managing the useful lives of facilities and equipment, cutting operation and maintenance costs, and reducing our environmental footprint with the aim of adapting to an environment which is more and more demanding and strives to improve constantly from the technological, processes and operations point of view.

- New products and services, in response to customers' needs in an increasingly global and competitive market. These projects deploy existing technology to produce business models offering power supply, facilities and technologies that are increasingly more efficient and environment-friendly such as energy efficiency, electric vehicles, smart grids and distributed energy resources.

- Disruptive business models and technologies that assist us in undertaking the energy challenges ahead, and adapting to the changes that are arising from the electric sector. Through PERSEO, IBERDROLA's corporate venture capital programme, we invest in new disruptive technologies and areas of business focusing on making the energy model sustainable.

Thanks to our human and economic resources allocated to innovation (EUR 211 thousand at 2016), we are now at the forefront of development of new products, services and business models that are transforming the energy sector.

Some of the most innovative ventures by major area are as follows.

### 7.1 Renewable energies

In 2016, Innovation activities in Renewables have focused primarily on:

- Improving the efficiency of our operating assets,
- Improving the integration of renewable energies,
- Developing new designs or processes for construction in progress or for future or ongoing projects associated with offshore wind power, highlighting the ones applicated to Wikinger project (Germany) and East Anglia I (United Kingdom).

Efficiency improvement in Wind Farms is aimed at reducing operating and maintenance costs and improving production.

The field of energy resources continues with the development of an internal model for the design of wind farms based on fluid dynamics and the use of supercomputers.

The best use of the oils used in the gearbox of wind turbines is being analysed in order to extend its useful life and optimize the maintenance operations. The company is also involved in the joint Europe/Brazil HPC4E project (High Performance Computing for Energy) to prepare computational fluid dynamics (CFD) for tomorrow's "exascale" supercomputers.

Extending the lifespan of facilities, reducing costs and guaranteeing reliability are other challenges which are using large amounts of resources and labour on a yearly basis. For example, work continues on the OLEO and MINEROIL projects for the long-term analysis of the behaviour of lubrication oils in different models of machinery. The use of drones for visual thermographic inspections of wind turbine blades in situ at plants ensures early detection to prevent future large-scale damage or more expensive repairs (the Arbórea project). Finally, in a bid to boost production without overloading certain components, an analysis was conducted and new control strategies were implemented for wind turbines.

Among the available tools to manage the exploitation of the wind farms, it is working on the continuous optimization of the production prediction to reduce the deviations from the actual production (Meteoflow), and work is also being carried out to monitor the main machinery of turbines and their throughputs for early detection of faults in components or reductions in output, through the use of artificial intelligence and big data.

One of the projects undertaken to integrate renewable energies is ESS2Wind, which sets out to analyse the possible application of battery storage systems for wind plants to provide them with ancilliary services. Surveys have also been conducted on hybrid wind/solar/storage integration.

Innovation in offshore wind projects is essential to reduce costs and to limit risks in ongoing and future projects. The piles and jacket foundations for the Wikinger offshore wind plant were assembled in 2016. This is the first Iberdrola wind plant to use this kind of foundations. The substation has a ground-breaking design with a 6-legged jacket foundation, and it was also built in two separate blocks (to make it easier to transport to the location), which were assembled afterwards in situ. The MARINEL project analysed an optimised design of the location of the substation's electrical equipment, with features such as alternatives for self-installable substations.

Work was also completed on the Flidar project, the main objective of which is to replace offshore meteorological towers which require costly foundations for their installation with floating stations with an alternative measuring system known as LIDAR (Light Detection and Ranging). Work continued to develop the Leanwind project, the main objective of which is to reduce costs over the plant's lifespan and the supply chain through the principles of "lean" application and the development of innovative solutions and tools. These solutions may be applied to all kinds of offshore facilities, including those with floating foundations, such as those being analysed in the Lifes50+ project.

IBERDROLA continues to work on the European Project Best Paths, which analyses the HVDC (High Voltage Direct Current) multiterminal networks from different suppliers to observe interactions with electrical equipment in wind turbines in a scenario in which offshore wind will be connected to the network. In the same area, work started on the European project "Promotion", which seeks to develop the technology of a number of HVDC systems (converters, protection devices and switching gear).

Finally, initiatives specifically orientated to sustainability such as BRIO project, should be highlighted, which aims to analyse the wind farm after its useful life and the valuation of the high value-added components of the wind turbine blades.

### 7.2 Clean generation technologies

During 2016, efforts in the area of generation focused on operating efficiency and flexibility, environmental protection, and the improvement of plant safety.

Operating efficiency and flexibility and plant safety: Following completion of the HOREX project a few years ago, work continued on the line of research into the chemical expansion of concrete with the PREXES project, focusing on development of a model to predict expansion in hydraulic concrete structures. With respect to safety at facilities, work started in 2016 on the VIDAGEN project to design and develop a tool to manage the global lifespan of pressurised equipment, with the possibility of adding a structural analysis module subsequently.

In the UK a project was carried out to inspect and repair low-pressure turbine rotor blades at the Rye House combined-cycle facility, using robotised tools, and the design and installation of an uninterruptible battery power supply system at Lanark & Galloway. Research was also conducted into pole fatigue in the Cruachan hydraulic generator.

In the area of nuclear generation, the prominent projects are FILTRONUC and RESONUC. The goal of this first project is to research and develop a new containment filtered venting system for maximising filtering performance on the venting line without compromising the safety and integrity of the facilities. The RESONUC project focuses monitoring and characterizing the resonances in critical systems to establish a solution, thereby ensuring they perform as well as possible as a significant contributor to nuclear plant safety and reliability.

Environmental: Iberdrola remains firmly committed to reducing the environmental impact of its generating plants, backing an ambitious project entitled CO2FORMARE to find a solution to the problem of macrofouling in the cooling systems of electricity generating plants in a sustainable manner and mitigating the environmental impact both emissions into the atmosphere and the aquatic environment.

During 2016, the technical expertise generated in COEBEN-II and implemented at Velilla del Rio Carrion served as a basis to launch the QUEMANOx and REMINOx projects, which use new designs for burners and a combination of technologies already developed to adapt our Lada and Velilla facilities to increasingly stringent environmental requirements, offering an alternative to high-cost commercial solutions.

### 7.3 Commercial Area - New projects and services

Innovation is essential in commercial activity, in order to offer customers the products and services best suited to their needs. Thus in 2016 IBERDROLA launched the following:

- New initiatives to boost the customer experience:

  Innovative campaigns and projects were carried out in 2016, focusing on greater customisation of contents and offers, real-time dispatch of proactive communications, and a better online self-service, for a better and more homogeneous customer experience throughout the entire lifespan, thereby boosting customer engagement. Some of the initiatives were as follows:

  - Optimum tariff: Iberdrola advises its customers on the "*Plan a Tu Medida*" (Plan to Suit You), so that they pay less when they use less power. Here Iberdrola analyses the hourly consumptions of millions of customers to offer them the plan which best suits their consumption, with no need to change their habits. The plans were originally launched in 2015, and were the first plans launched in the sector to adapt the company to customers, instead of customers having to adapt to energy offers.

  - "Tu Asesor Energético" (Your Energy Advisor): this is an online portal which gives comprehensive advice to both individuals and businesses, regardless of whether or not they are customers, on all energy-saving aspects of power bills: optimisation of the economic offer, power output optimisation, advice on energy savings and energy efficiency, callback service to address any queries, and an omnichannel advice service (website, phone and in situ channels).

- New Smart Home products: Consumption Monitors and Smart Lamps:

  Iberdrola now has a range of home energy management products using facilities with an Internet connection, providing customers with more information on the power they use, and enabling them to manage their consumption and save energy. A smart thermostat has been available since the beginning of 2015, and sales of the Consumption Monitor began in 2016 - this is an electric meter which can provide a breakdown of the consumptions of the main domestic appliances, and Smart Lamps, or smart LED bulbs which can be controlled by a mobile phone.

Iberdrola is also still involved in Green Mobility R+D+i projects, an area of business to meet the demands of customers and society in general concerning electrical mobility. In 2016 Iberdrola continued to work on innovation projects, among which REMOURBAN and AZKARGA. The CIRVE project also began in 2016, in which Iberdrola assists with the development of rapid-recharge infrastructure corridors for electric cars, to boost electric mobility and connect Spain to France and Portugal.

A pilot project is ongoing in the UK to assess the benefits of using batteries associated with photovoltaic micro-generation. Work is also being carried out to analyse customers' consumption data to give them energy efficiency advice and assistance. Finally, a proactive demand management programme is being offered to larger customers. With respect to new digital products, the new PowerUp platform enables consumers to buy gas or electricity in advance in one-day packages, one-month packages or packages of up to 180 days, at a pre-set price.

### 7.4 Smart grids

Iberdrola, a leader in digitalisation and automation of assets and infrastructures, is a pioneer developer of smart networks in Spain and Europe, with a constant commitment to safety, the environment and better supply quality. The following are a few of the main initiatives in 2016:

In Europe, Iberdrola leads the UPGRID project, with the goal of reinforcing its capability as an integrator of active demand and distributed generation in low voltage. The IGREENGrid project has been successfully concluded, aimed at finding innovative solutions to integrate renewable generation in the power distribution grid; as has been the DISCERN project, which compares different smart solutions for the grid with a view to achieving the most optimised set of architectures. Work continued on the GRID+STORAGE project to integrate storage solutions in electricity grids.

Spain is working on the LAYCA project to develop a system to locate breakdowns and characterise faults in medium-voltage systems. With respect to the standardisation and maintenance of overhead power lines, Iberdrola leads the MATUSALEN project to develop a tool which determines the aging of voltage cables in underground lines and is a partner on the SILECTRIC project, developing new insulators for overhead lines and high voltage switchgear. Work was completed on the TABON project to develop a verification technology and inspection line. In terms of operational systems, work continued on the development and validation of the new remote management system to provide immediate reliable access to the information required, integrating a number of modules for efficient management of the electricity grid and its meters. The BIDELEK project completed its innovative work on the development and industrialisation of new applications and devices.

A project known as FITNESS was carried out in the UK to demonstrate a new digital substation concept, in addition to the PHOENIX project, which aims to develop a new synchronous hybrid compensator to enable larger amounts of renewable energy to be used in situations when conventional power production is restricted, the POWER2TOWER project to investigate the feasibility of a system to monitor transport networks via wireless communication towers on the supports, and the VWAM project, which analyses virtual models of overhead power lines, developed using LiDAR technology.

Innovative projects are being carried out in Brazil in five main areas: smart systems, network quality and reliability, safety at facilities, loss reduction and sustainability. Two of the projects to develop domestic technology for smart networks were BID MONITOR, a backup system for decision-making concerning sales of electricity, and CIUDADE INTELIGENTE, to implement an urban reference model based on Smart Grids.

Initiatives in the US were deployed in the Energy Smart Community programme (ESC), which sets out to provide an efficient connection for consumers, the local community and the market for distributed energy resources. ESC has projects to improve efficiency, the consumer experience, smart grids and distributed energy resources. Another project, AMI, focuses on the automation of measurement infrastructures, while the ARIES project is an integrated overhead system to assess damage caused by meteorological phenomena, using LIDAR technology. The use of drones to detect damage caused to distribution and transmission lines by snowstorms is also remarkable.

Iberdrola's Technology Centre in Qatar focuses on the development of innovative solutions in three key areas of digitalisation of the electricity system: (1) smart grid measurement and automation, (2) integration of distributed renewable energy and (3) demand management. A number of R+D projects were started up with local universities and research centres, and the company also entered into consultancy projects with other electricity companies in the Middle East, transferring best practices in the design and deployment of smart grids.

### 7.5 IBERDROLA Ventures – PERSEO

IBERDROLA Ventures – PERSEO is IBERDROLA's Corporate Venture Capital programme, which has a budget of EUR 70 million for investing in innovative technologies and business models that guarantee a sustainable energy model. Since it was established in 2008, over EUR 50 million have been invested in start-ups which are developing technologies and new businesses in the global energy industry. Through this programme, IBERDROLA offers entrepreneurs, especially in the UK, the US and Spain, its investor support, its business knowledge, its base of 32 million customers and more than 45 GW of installed capacity. Additionally, it contributes to develop an innovative and dynamic business network in the energy sector.

The company focuses on several areas of interest including:

- Customer Oriented Solutions: energy efficiency, active demand management, digital solutions, etc.).
- Distributed Energy Resources: generation and storage innovative solutions.
- Renewable Energies: technology related to renewable generation (solar, eolic, offshore, etc.
- New technologies for the O&M of energy infrastructures (robotics, sensors, software, drones, etc.).

The current investment portfolio covers a wide and diverse range of projects under the umbrella IBERDROLA Ventures-PERSEO, together with other funding programmes for technology suppliers and projects with a high social component.

The most notable activities in 2016 included:

- On the international front, consolidation as the leader of the distributed storage market by Silicon Valley Company Stem. This start-up helps commercial and industrial customers save money with a solution for the meter using SW (big data and cloud) and batteries. During 2016, Stem notched up 200 distributed-storage facilities, and has attracted investment of more than USD 110 million since it was created.
- On the domestic front, growth and development of Arbórea Intellbird (a company from Salamanca) in which Perseo holds a stake, which sells drone inspection services for all kinds of energy infrastructures. Arbórea is now undergoing a major phase of international expansion and growth, in which it is being assisted by Iberdrola, and in 2016 it inspected more than 600 wind turbine blades of the company, carrying out preventive detection of anomalies to reduce the cost of repairs and improving plans for corrective maintenance.

## 8. ACQUISITION AND DISPOSAL OF TREASURY SHARES

The Group's treasury share policy establishes the following:

> Treasury share transactions are considered those transactions carried out by the Company, whether directly or through any of the Group's companies, the object of which are Company shares, as well as financial instruments or agreements of any type, traded or not in the stock market or other organised secondary markets, which grant the right to acquire from, or the underlying security of which are, Company shares.

Treasury share transactions will always have legitimate purposes, such as, among others, to provide investors with liquidity and sufficient depth in the trading of Company shares, to execute treasury share purchase programmes approved by the Board of Directors or General Shareholders' Meeting resolutions, to fulfil legitimate commitments undertaken in advance or any other acceptable purposes in accordance with applicable regulations. Under no circumstances shall the purpose of the treasury share transaction be to interfere with the free establishment of prices. In particular, any conduct referred to in article 83.ter.1 of the Securities Market Law and article 2 of the Royal Decree 1333/2005, of 11 November, implementing the Securities Market Law related to matters of market abuse.

The Group's treasury share transactions will not be carried out, under any circumstances, based on insider information.

Treasury shares will be managed providing full transparency as regards relationships with market supervisors and regulatory organisations.

Note 20 of the Consolidated financial statements presents the movements of IBERDROLA's shares in the Group companies' portfolios in the last years. Likewise, other information on transactions in 2016 and 2015 is presented in the following table:

| Treasury shares | Number of shares | Nominal value (thousands of euros) | Cost of treasury shares (thousands of euros) | Average price (euros) | Total shares | % shareholding |
|---|---|---|---|---|---|---|
| **12.31.2014** | **60,985,277** | **45,739** | **334,014** | 5.48 | **6,388,483,000** | **0.95** |
| Acquisitions | 162,118,086 | 121,589 | 938,283 | 5.79 | | |
| Disposals | (148,483,000) | (111,362) | (827,884) | 5.58 | | |
| Redemption | (6,984,197) | (5,238) | (38,956) | 5.58 | | |
| **12.31.2015** | **67,636,166** | **50,728** | **405,457** | 5.99 | **6,336.870,000** | **1.07** |
| Acquisitions | 247,226,143 | 185,420 | 1,450,724 | 5.87 | | |
| Disposals | (157,197,000) | (117,898) | (946,566) | 6.02 | | |
| Redemption | (6,440,532) | (4,830) | (40,679) | 6.32 | | |
| **12.31.2016** | **151,224,777** | **113,420** | **868,936** | **5.75** | **6,362,079,000** | **2.38** |

| Treasury shares of Scottish Power | Number of shares | Nominal value (thousands of euros) | Cost of treasury shares (thousands of euros) | Average price (euros) | Total shares | % shareholding |
|---|---|---|---|---|---|---|
| **12.31.2014** | **1,996,422** | **1,497** | **11,705** | 5.86 | **6,388,483,000** | **0.03** |
| Acquisitions | 438,580 | 329 | 2,759 | 6.29 | | |
| Scrip | 66,375 | 50 | – | – | | |
| Redemption | (862,814) | (647) | (4,301) | 4.98 | | |
| **12.31.2015** | **1,638,563** | **1,229** | **10,163** | 6.20 | **6,336,870,000** | **0.03** |
| Acquisitions | 404,154 | 303 | 2,464 | 6.10 | | |
| Scrip | 56,040 | 42 | – | – | | |
| Redemption | (724,352) | (543) | (3,047) | 4.21 | | |
| **12.31.2016** | **1,374,405** | **1,031** | **9,580** | **6.97** | **6,362,079,000** | **0.02** |

In 2016 and 2015, treasury shares held by the IBERDROLA Group were below the legal limit established.

Finally, the conditions and time periods of the current mandate of the Board of Directors to acquire or transfer treasury shares are detailed below.

At the General Shareholders' Meeting on 28 March 2014, shareholders expressly agreed to delegate powers to the Board of Directors, with powers of substitution, pursuant to the provisions of the Spanish Corporations Law, to carry out derivative acquisition of shares in Iberdrola, S.A. under the following conditions:

a) Acquisitions may be made directly by IBERDROLA or indirectly through its subsidiaries. The process excludes any subsidiaries carrying out regulated business pursuant to the provisions of the Electricity Sector Law and the Hydrocarbons Law.

b) Acquisitions may be made by purchase transactions, swaps or any other form permitted by law.

c) Acquisitions may be made up to the maximum legal threshold (i.e. 10% of share capital).

d) Such acquisitions may not be made at a price higher than the market price or lower than the nominal value of the share.

Authorisation was granted for a maximum period of five years since approval of the resolution.

e) A restricted reserve shall be created in equity in the purchasing company equivalent to the value of the parent's shares under assets. This reserve must be maintained as long as the shares are not disposed of or cancelled in accordance with the Spanish Corporations Law.

Shares acquired under these powers can be transferred or cancelled or used for the compensation systems as provided for in the Spanish Corporations Law. They may also be used to develop programmes that encourage participation in the Company's share capital such as the dividend reinvestment plan, loyalty bonuses and other similar instruments.

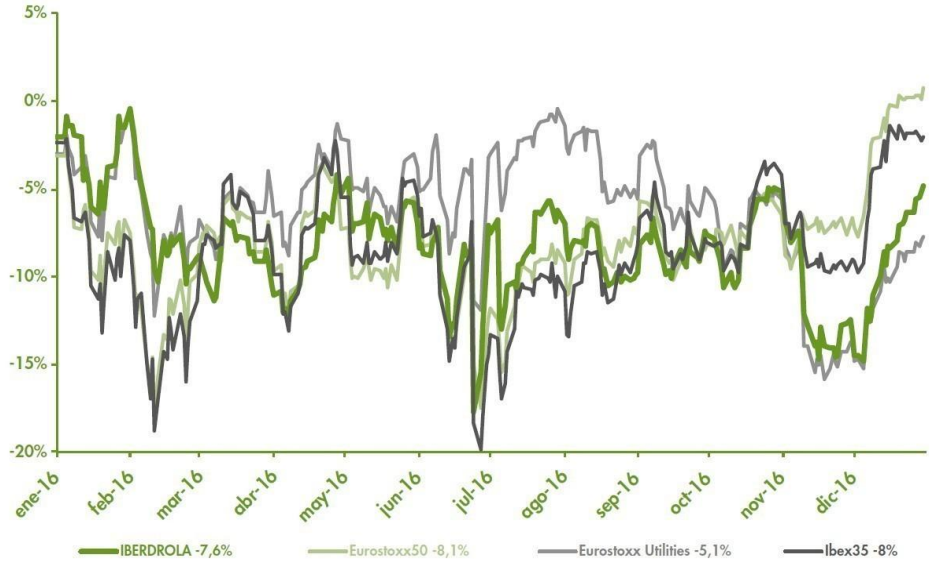
- **Stock market data**

| | | 2016 | 2015 |
|---|---|---|---|
| Stock market capitalisation (*) | Millions of euros | 39,661 | 41,506 |
| Earnings per share | Euros | 0.421 | 0.381 |
| P.E.R.<br>(share price at year end/profit per share) | Times | 14.81 | 17.19 |
| Price / Carrying amount (capitalisation on carrying amount at year end) | Times | 1.08 | 1.12 |

(*) 6,362,079,000 shares at 12/31/16 a 6,336,870,000 shares at 12/31/15

- **The IBERDROLA share**

Stock market performance of IBERDROLA compared to the indexes:




| | 2016 | 2015 |
|---|---|---|
| Number of shares outstanding | 6,362,079,000 | 6,336,870,000 |
| Share price at year end | 6.23 | 6.55 |
| Average share price for the year | 6.01 | 6.12 |
| Average daily volume | 25,843,622 | 31,140,116 |
| Maximum volume (12/16/2016 - 06/26/2015) | 117,034,016 | 90,216,773 |
| Minimum volume (05/16/2016 - 12/24/2015) | 4,444,650 | 4,571,334 |
| Dividends paid (euros) | 0.286 | 0.276 |
| - Gross interim dividend (01/29/2016 - 12/19/2014) (1) | 0.127 | 0.127 |
| - Gross complementary dividend (07/08 y 07/22/2016 - 07/03 y 07/22/2015) (2) | 0.154 | 0.144 |
| Attendance bonus | 0.005 | 0.005 |
| Dividend yield (3) | 4.59% | 4.21% |

(1) Purchase price of rights guaranteed by IBERDROLA.

(2) Complementary dividend in cash (07/08/2016 and 07/03/2015 = EUR 0.03 and purchase price of rights guaranteed by IBERDROLA: 07/22/2016 = EUR 0.124 and 07/22/15 = EUR 0.114).

(3) Interim dividend, complementary dividend and attendance bonus for attending the General Shareholders' Meeting/share price at period end.

# 9. FURTHER RELEVANT INFORMATION

## 9.1 Environmental issues and sustainability

### 9.1.1. *Environmental issues*

IBERDROLA accepts that the environment places constraints on all human activities and is a factor of companies' competitiveness, and it is committed to promoting innovation in this field and also eco-efficiency, to gradually reducing the environmental impact of its activities, facilities, products and services, and striving to ensure that its activities are congruent with future generations' legitimate right to an appropriate environment.

The Group undertakes and promotes this commitment through its policies, IBERDROLA currently has three specific policies in place to manage environmental issues: its environmental policy, its anti-climate change policy and its biodiversity policy, which set forth the principles through which the Company will continue to improve its environmental management.

Moreover, for the thirteenth consecutive year IBERDROLA featured on the global Dow Jones Sustainability Index, a worldwide benchmark for recognising corporate contributions to sustainable development, and also on other internationally renowned sustainability indexes. It is the only utility to have earned this distinction since the Index was created in 1999.

### 9.1.2. *Sustainability*

IBERDROLA's contribution to sustainable development takes form in certain social responsibility practices which address the needs and expectations of their stakeholders, with which the Company maintains a series of lines of communication and dialogue open through which it is able to: communicate objectives, initiatives and achievements obtained in the three areas of sustainable development (economic, environmental and social) and receive evaluations and requests from the interested parties.

| Sustainability indicators | 2016 | 2015 |
|---|---|---|
| Contribution to GDP (Gross Margin) (*) | 0.54% | 0.55% |
| Contribution to GDP (Revenue) (*) | 1.23% | 1.39% |
| Net profit (millions of euros) | 2,705 | 2,422 |
| $CO_2$ Emissions in the period (gr. $CO_2$/kWh): Total | 176 | 225 |
| $CO_2$ Emissions in the period (gr. $CO_2$/kWh): Spain | 84 | 103 |
| $CO_2$ Emissions in the period (gr. $CO_2$/kWh): SPW | 328 | 530 |
| $CO_2$ Emissions in the period (gr. $CO_2$/kWh): Avangrid | 58 | 64 |
| Total production free of emissions (GWh) | 78,413 | 67,868 |
| Production in Spain free of emissions (GWh) | 58,400 | 46,658 |
| Production free of emissions out of total production (%) | 57% | 52% |
| Production in Spain free of emissions out of total production (%) | 87% | 86% |
| Total installed capacity free of emissions (MW) | 29,826 | 27,744 |
| Total installed capacity in Spain free of emissions (MW) | 19,229 | 18,741 |
| Total installed capacity free of emissions (%) | 66% | 62% |
| Total installed capacity in Spain free of emissions (%) | 74% | 73% |
| Specific $SO_2$ emission Global mix (g/kWh) | 0.052 | 0.108 |
| Specific particles emission Global mix (g/kWh) | 0.005 | 0.007 |
| Specific $NO_x$ emission Global mix (g/kWh) | 0.19 | 0.25 |

## 9.2 IBERDROLA Foundation

In 2016, the Group allocated EUR 11,645 thousand to financing the various foundations (EUR 18,985 thousand to Group foundations and EUR 6,584 thousand to associations and entities whose goals are in the interest of the general public).

The main recipient of the funding was Iberdrola Foundation, which received EUR 7,825 thousand. Information on its goals and activities is available at: www.fundacioniberdrola.org. IBERDROLA Foundation is a private, non-profit, cultural foundation, founded by the Company. Its mission is to develop initiatives which effectively contribute to improving the quality of life of the people in the regions and countries where the Group acts, especially in the areas of energy sustainability, art and culture, as well as solidarity and social initiatives. The foundation may act independently to achieve its goals and is fully functional and autonomous. Without prejudice to its collaboration with other entities, Iberdrola Foundation coordinates and executes the Group's corporate social responsibility strategy, so that it is in line with the purpose for which it was created and as assigned there to by the Board of Directors.

Iberdrola Foundation coordinates its welfare work in the United Kingdom through the Scottish Power Foundation, which was granted EUR 1,765 thousand. In the United States, this work is carried out through the Avangrid Foundation with a budget of EUR 2,269 thousand, and in Brazil through the Instituto Iberdrola Brasil, receiving EUR 542 thousand.

In 2016, the Group intends to follow a policy aimed at financing activities of interest to the general public in line with that followed in 2016 as regards amount and allocation.