

3.2 Networks

Regulatory environment of the business

Spain

- In 2018 a process began to revise remuneration for the distribution activity for the second regulatory period (2020–2025), which should conclude during this year. The regulator's report and the draft law on remuneration of regulated activities of the Ministry (January 2019) provides a value of 5.58% before taxes, which is based on the weighted average cost of capital (WACC).
- The Order on tolls for 2018, ETU/1282/2017, of 27 December, keeps the figures published for 2016 on remuneration for distribution and transmission, in the absence of publication of the amount for 2018.

United States

- In June 2018 a new 3-year tariff proposal was presented for the gas distribution company CNG (Connecticut). The new tariffs were approved and entered into force on 1 January 2019, with an ROE of 9.3%, an equity percentage of 54% and planned investments of \$150 million annually.
- In May 2018 a new 3-year tariff proposal was presented for the gas distribution company BCG (Massachusetts). The new tariffs were approved and entered into force on 1 February 2019, with an ROE of 9.7% and an equity percentage of 54%.
- In October 2018 a new 1-year tariff proposal was presented for the electricity distribution company CMP (Maine). The final determination is subject to the schedule established by the regulator.
- The tariff conditions for the gas distributors of the State of New York (NYSEG and RG&E), with a recognised ROE of 9.0% are maintained during 2019. \$600 M have been invested annually since the approval of the current regulatory framework in 2016.

United Kingdom

- *Ofgem* continues the process of designing the RII02 regulatory framework, which will enter into force for transmission by 2021 and for distribution by 2023. The new periods will be 5 years instead of the current 8 years, and the proposed CoE would be in a range of 4–5% and linked to the CPIH index (inflation).
- Until then, SP Transmission Ltd. as well as SPD Ltd. and SPM Plc continue to perform their activities under the *RIIO-T1* and *RIIO-D1* tariff frameworks, complying with all investment and quality goals agreed with *Ofgem*.

Brazil

- In April 2018 the tariff revisions entered into force for the distributors Coelba and Cosern, and will be in effect for the next five years. The Regulatory Asset Base (RAB) recognised for the new period is multiplied by 1.9 and 1.7, respectively, as a result of the investment effort made during the last tariff cycle. During the month of August, there was also an annual periodic review of Elektro, which mainly reflected the change in the General Price Index.
- A tariff revision is expected for Elektro in August of this year, which will be in force until August 2023.
- Neoenergia won 4 transmission projects in the auction by the Brazilian regulator ANEEL in December 2018, with a related investment of R\$4,200 million. This new award, added to the two auctions that it won in 2017, will entail an investment of R\$7,000 million.

Objectives, risks and principal activities

Objectives

- Zero accidents.
- Offer our customers excellent service based on the quality of supply and information regarding the network.
- Maximise efficiency in system operations through operational excellence and the digitisation of our assets.
- Lead the transformation towards more efficient integration of distributed energy and the penetration of electric vehicles.

Significant risks

- Risk of occupational and third-party injuries at owned facilities.
- Impacts on supply from meteorological events.
- Technological and cybersecurity risks affecting the security of the facilities and service to our customers.

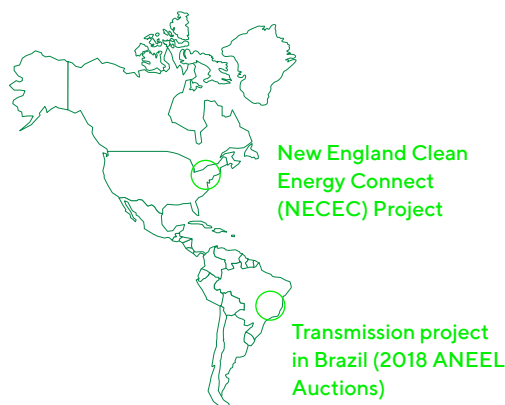
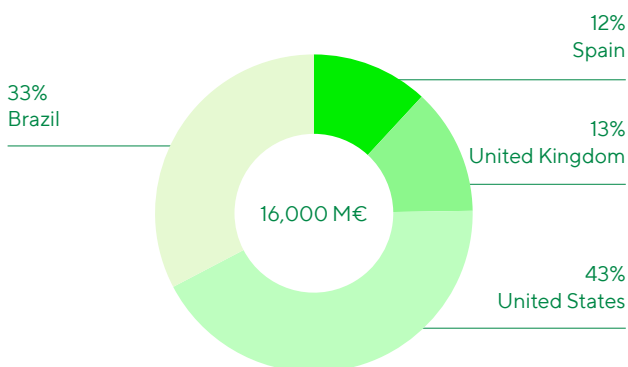
Principal activities 2018

- **Spain:** A major digitisation project, the *Star* project, consisting of the installation of more than 10.8 million smart meters, above the regulatory objective and reaching 99% of the total, was completed in 2018.
- **United Kingdom:** The *Western Link* underwater cable project between Scotland and Wales, with more than 2,000 MW of available capacity, was completed in 2018. There was also the start-up of the South West Scotland project, with 6 new substations and 87 km of lines, which will allow the connection of 1,000 new MW of wind power in Scotland.
- **United States:** Award of the *New England Clean Energy Connect* (NECEC) project. With USD 950 million of investment, it involves the construction of a 233 kilometre transmission line between Canada and New England, which will allow for the supply of 1,200 MW of 100% hydroelectric power to Massachusetts beginning in 2022.
- **Brazil:** The 4 transmission projects awarded in the ANEEL auction in December 2018 will involve a total of 3,000 kilometres of transmission lines.

Outlook 2018-2022

- Increase in investments during the 2018-2022 period to €16,000 million, thanks to the award of large transmission projects like the *NECEC* project in the United States and more than 3,000 kilometres of power lines in Brazil.
- The deployment of electric vehicles, the integration of distributed renewable generation and resiliency plans in the United States and Brazil are vectors for growth of the traditional business.
- Operational efficiency improvement plans are being implemented in all countries to achieve the forecasted savings through 2022, to be shared with the customer.
- The Supply Quality indicators in Spain and Brazil in 2018 reached historic records and allow for reaching the operational goals before the end of the period.

Net investment of €16,000 million between 2018 and 2022, mainly in the United States and Brazil



Customer service, operational excellence and digitisation of networks are the strategic pillars of the Networks Business.

Key figures of the Networks Business

Item	Unit	Spain		United Kingdom		United States		Brazil		Total	
		2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
Gross margin	€M	2,003	2,109	1,174	1,222	2,754	2,780	856	1,530	6,786	7,641
EBITDA	€M	1,519	1,709	886	919	1,334	1,331	488	955	4,228	4,915
Electric power distributed	GWh	93,276	93,897	35,003	34,677	38,349	39,579	63,522	65,282	230,151	233,435
Customers (Electricity)	Millions	11.0	11.1	3.5	3.5	2.2	2.3	13.6	13.8	30.3	30.7
Gas supply	GWh	-	-	-	-	59,884	65,139	-	-	59,884	65,139
Customers (Gas)	Millions	-	-	-	-	1.0	1.0	-	-	1.0	1.0
Investments	M€	352	345	561	466	861	930	313	722	2,086	2,463
Workforce	No. of people	4,038	3,739	2,969	2,963	5,410	5,325	9,708	10,202	22,125	22,229

International Financial Reporting Standard (IFRS) 11 has been applied to the financial information.

Customer service

- In Spain, a new historical record in supply quality was reached in 2018. The Installed Capacity Equivalent Interrupt Time (TIEPI) decreased by 15% compared to 2017.
- A record quality level was also reached in Brazil, with a 23% decrease in the Equivalent Duration of Interruption (DEC) compared to 2017.
- 2018 was a year with strong storms in the service areas of the United Kingdom and the United States, with tremendous efforts to restore supply. The Maine company CMP received the *EEI Emergency Recovery Award* for its extraordinary response to the strong storms of October 2017.
- The company has developed a Resiliency Plan, which involves an investment of \$2,500 million over 10 years to strengthen the lines and improve electric supply in the states of Maine and New York, which will allow for improved quality and a reduction in the impact of storms.
- In Brazil, Cosern won the award for best availability of electric service.

Operational excellence

- The adjusted evolution of operating expenses continues in order to improve efficiency ratios in all countries.
- New plans and models have been launched to end electricity fraud in Brazil and Spain.
- Improvement in debt indicators with customers in Brazil thanks to the plan to decrease late payments.

Digitisation of the network

- Spain continued in 2018 with the *Star+* project to automate the medium-voltage network, as well as for the digitisation of the low-voltage network.
- Iberdrola, Ente Vasco de la Energía and the Provincial Government of Biscay signed an agreement in 2018 to continue wagering on the digitisation of the electric grid with *Bidelek 4.0*.
- To support promotion of deployment of electric vehicles, in the United Kingdom *Ofgem* decided to finance the *CHARGE* project in order to accelerate the connection of electric vehicle charging infrastructure to the network of SP Manweb (Liverpool and North Wales) between 2019 and 2022.