

3. Iberdrola's Primary Businesses

3.1 Regulatory Environment

European Union

- The publication of all rules of the *Clean Energy for All Europeans Package* concluded in June 2019. It includes goals to be reached by 2030, both for renewable energy (at least 32% of final EU gross consumption of energy) and energy efficiency improvements (32.5% for the entire Union). There was also a revision to the *Regulation and Directive on the Internal Market in Electricity* to improve the operation thereof, set the foundations for the transition towards a cleaner energy model, and give consumers a more active role.
- Adoption of the *Clean Mobility Package*, which develops measures to reduce emissions from the transport sector during the 2021-2030 period, concluded in 2019. The minimum goals for acquisition, leasing and hiring of clean vehicles by the government have been set out in a Directive and Regulations have been approved with goals to reduce emissions for new cars and vans by 37.5% and 31%, respectively, by 2030 compared to 2021 emissions, and by 30% for new heavy goods vehicles compared to 2019 emissions.
- In December 2019, after the inauguration of the new European Commission, there was publication of the Communication on "A Green New Deal", which consists of a package of measures to be implemented in the next 5 years to transform the European Union into a competitive and efficient economy in the use of resources and with net zero emissions by 2050, promoting a fair and inclusive process for this purpose. The related Investment Plan will mobilise at least 1 billion euros from the EU budget and related instruments in sustainable investments during this decade. The legislative development thereof will take place between 2020 and 2021, beginning in March 2020 with the proposed European "Climate Law" that will enshrine a target of reaching net-zero carbon by 2050. This target would also increase the reduction in emissions by 2030 to -50/-55% and would require the revision of all existing legal provisions as well as the development of new laws.

Spain

- In February 2019 Spain sent to the European Commission its first draft of the *National Integrated Energy and Climate Plan* proposing ambitious national goals for decarbonisation of the economy by 2030, mainly through electrification with renewable energy. It has been supported by Brussels and applauded as an example of good practices. The final document must be approved in 2020.
- As a result of the transfer of powers to the National Markets and Competition Commission (*Comisión Nacional de los Mercados y la Competencia*) (CNMC) pursuant to RDL 1/2019, it has been working on a number of Circulars on issues relating to the market, network remuneration and tolls.
- The government still needs to develop the legal provisions within its purview, including the methodology for calculating and assigning charges and the Statute for Electointensive Customers (*Estatuto de electrointensivos*).

United Kingdom

- In June 2019 the British government amended the Climate Change Act to introduce a new legally binding objective of "net zero emissions" of greenhouse gases by 2050 (the prior goal was a reduction of at least 80% compared to 1990). At the same time, the Scottish government established a "net zero emissions" goal by 2045.
- After the general elections of 12 December 2019, the new Johnson government approved in Parliament the application of the EU bill for the Withdrawal Agreement revised with the EU-27 in October 2019. The United Kingdom left the EU on 31 January 2020, and negotiations regarding the future relationship between the United Kingdom and the EU are expected to move forward during the year. The British government maintains its contingency plans to deal with any risk of a "no deal" situation by the end of 2020, including a plan for the energy sector.

United States and Canada

- On 16 July 2019 the Senate ratified a protocol to the tax treaty between the United States and Spain. The new protocol eliminates the 10% withholding tax on dividends, reduces taxes on interest, royalties and capital gains, and adds provisions for more expeditiously handling tax disputes through binding arbitration. It entered into force on 27 November 2019.
- In June 2019 the Environmental Protection Agency (EPA) published the *Affordable Clean Energy* (ACE) rule, replacing the 2015 *Clean Power Plan* (CPP) that never became effective. It allows the states to develop their own plans to reduce GHG emissions for existing coal plants based mainly on efficiency improvements at the plants and the application of new technologies. The states have three years to develop and submit their plans. This rule is being challenged in the federal courts by more than 20 entities, and a decision is not expected before 2020.
- In 2019 some states like Maryland, New York and Connecticut have updated their long-term offshore wind objectives, thus committing to the development of this technology.

Brazil

- The Ministry of Mines and Energy (MME) diagnosed the needs for modernisation of the electricity sector during 2019. It has analysed everything from the formation of prices in the market in the short term to capacity mechanisms to encourage the expansion of generation and the sustainability of distribution. Beginning next year, it is expected that measures will be developed allowing for implementation of the required changes.
- In August 2019 the MME confirmed the schedule for implementation of hourly spot prices in the Brazilian market. Beginning in January 2020 the hourly spot price formation model will be used to guide the programming of the system's operation, although it will not be used for the formation of settlement prices in the short-term market until 2021.

- The regulator has approved an 8% increase in the Energy Development Account (CDE) budget to R\$21.9 thousand million for 2020. This account is used to finance, among other things, programmes like the *Light for All Programme* to aid vulnerable groups or support for buying fossil fuels by the generators in isolated regions.
- Legislative and court initiatives continued during 2019 to reduce the litigation in the Brazilian electric sector due to disputes between the hydroelectric generators and the government regarding hydrological risk. Given that certain generators continue to be supported under court measures exempting them from payment for the costs of hydrological risk between July 2015 and February 2018, a deficit is occurring in the short-term market settlements, and therefore in the income of the distributors. Neoenergia has a net creditor position.

Mexico

- In March 2019 SENER changed the Terms for the strict legal separation of CFE. On 25 November the Terms were published to define the generation assets and contracts that the CFE must reassign to each of the Generation Subsidiaries (*Empresas Productivas Subsidiarias de Generación*).
- On 26 November 2019, the *National Investment Agreement in Infrastructure by the Private Sector*, with an investment of 859 thousand million pesos over the six-year period in 147 private investment projects was approved in order to maintain the confidence of domestic and foreign investors. 6 electric energy projects with an investment equal to 63 thousand million pesos will be announced in 2020.



3.2 Networks

Regulatory environment of the business

Spain

- 2019 saw the conclusion of the process to revise remuneration for the distribution activity for the second regulatory period (2020-2025). The new circulars approved by the CNMV provide a new methodology for calculating the continuing financial remuneration rate (WACC), based on remunerating audited investments, recognising efficient operating expenses and establishing incentives to improve losses and the quality of supply. The remuneration rate for the distribution activity is set at 6.003% for 2020 and 5.58% for the remaining years.
- In December 2019 a Ministerial Order was published extending the electricity access tariffs beginning 1 January 2020 on a temporary basis until the publication of new network tariffs and new charges.

United States

- New tariffs entered into force in January 2019 for the gas distribution company CNG (Connecticut), and will be in effect for the next 3 years, with financial profitability (ROE) of 9.3%, an equity percentage of 54% and planned investments of \$150 million.
- New tariffs entered into force in February 2019 for the gas distribution company BCG (Massachusetts), and will be in effect for the next 3 years, 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 by the regulator and the entry into force is expected during the first quarter of 2020. The same conditions set in 2014 were maintained during 2019, with an ROE of 9.45% and an equity percentage of 50%.
- The tariff conditions for the gas distributors of the State of New York (NYSEG and RG&E) were maintained during 2019, with a recognised ROE of 9.0%. In May 2019 a new 1-year tariff proposal was presented and is now being negotiated with the regulator and would enter into force in April 2020.

United Kingdom

- Ofgem continues the process of designing the RII02 regulatory framework. The new periods will be 5 years instead of the current 8 years, and the cost of equity, which will be decided in 2020, is linked to the CPIH (inflation) index. RII0-T2 for transmission is in a more advanced state of development and will enter into force in 2021, while RII0-D2 relating to distribution will apply beginning in 2023.
- Until then, SP Transmission Ltd. as well as SPD Ltd. and SPM Plc continue to perform their activities under the RII0-T1 and RII0-D1 tariff frameworks, complying with all investment and quality goals agreed with Ofgem.

Brazil

- In August 2019 the 5th Tariff Review of Elektro was approved and will be in effect for the next 4 years beginning on 27 August 2019. The regulatory asset base (RAB) is R\$3,900 million and is expected to increase to R\$5,800 million by the end of the regulatory period, with an investment effort of R\$2,800 million during the period.
- In April there was an annual period adjustment for Coelba, Cosern and Celpe that mainly reflects the change in the General Price Index and recognises the improvement in supply quality.
- Neoenergia won a transmission projects in the auction by the Brazilian regulator ANEEL in December 2019 for the construction of a 210 km line and a 1,000 MVA substation.
- Neoenergia has been awarded a total of 11 projects in auctions from 2017, 2018 and 2019 for a total investment of approximately R\$8,000 million.
- The Energy Research Office (*Empresa de Pesquisa Energética*) has also published the schedule of new auctions (two per year), which will take place until the end of 2021.

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 energy transition towards a cleaner model favouring a more efficient integration of renewable energy (centralised and distributed) and the penetration of electric vehicles through the use of smart grids.

Significant risks

- Operational risks: impacts on supply as a result of meteorological events and work-related and third-party accidents at owned facilities.
- Technological and cybersecurity risks affecting the security of the facilities and service to our customers.

Principal activities 2019

- **Spain:** After the deployment of 10.8 million smart meters, which was completed in 2018, the digitisation of the low-voltage network is being extended to favour the penetration of renewables, which extension is expected to be completed in 2020.
- **United Kingdom:** Implementation of investments set out in RIIO-T1 and RIIO ED1. Joined the *Low Carbon Strategic Partnership*, focused on the role of electricity networks in favouring the energy transition. Investment of £20 million within the *Green Economy Fund* to finance 33 local projects in Scotland to favour decarbonisation and £8 million to accelerate the deployment of electric vehicle recharging infrastructure.
- **United States:** Progress in obtaining permits for the *New England Clean Energy Connect (NECEC)* project awarded in 2018, with a planned investment of \$950 million, for 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:** Progress as planned in the construction of 10 transmission projects awarded in the 2017 and 2018 auctions, completing the startup of one of these projects in 2019.

Customer service

- In Spain, the new brand *i-DE Redes Eléctricas Inteligentes, S.A.U.* has been launched to favour identification by customers and avoid confusion with the retailers of the group. The digital channels have also been renewed, providing customers with all of their consumption information in real time.
- A record quality level was once again reached in Brazil, with a 10% decrease in the Equivalent Duration of Interruption (DEC) compared to 2018.
- 2019 was a year with strong storms in all of our distribution areas, which required tremendous efforts to restore supply. The good performance of the electric grid in view of the strong "cold drop" (*gota fría*) in the southeast of Spain during September is noteworthy.
- The companies UI and CMP received the *EEI Emergency Recovery Award* for their extraordinary response to the strong storms of May 2018 and October 2019, respectively.
- SPEN achieved the prestigious BSI (British Standards Institution) Kitemark quality certification mark, becoming the first utility to receive this mark. At the end of November 2019, SPD and SPM are in 1st and 3rd place in customer service among UK distributors, according to the regulator.

Operational excellence

- The adjusted evolution of operating expenses continues in order to maintain and improve efficiency ratios in all countries.
- New plans and models have been launched to end electricity fraud in electricity consumption in Spain and Brazil, and also to comply with the parameters defined by the regulators.
- They improve the loss indicators in Brazil as a result of the fraud reduction plan.

Digitisation of the network

- In Spain the *Smart Cities* initiative has launched in order to contribute to the country's main municipalities advancing in their transition towards smart cities. Collaboration agreements have been reached with eight government administrations, including the municipalities of Madrid and Murcia and the Provincial Council of Castellón, to expand the possibilities of a smart and digitalised grid.
- Six Electric Mobility Control Centres have also been created to monitor and evaluate the impact of electric vehicles on the distribution network.

Key figures of the Networks Business

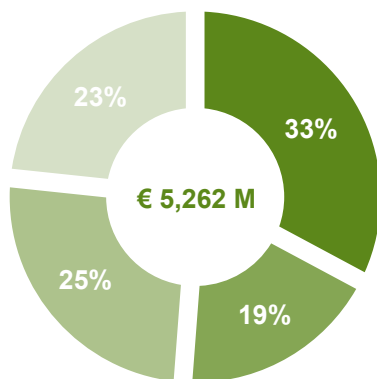
Item	Unit	Spain		United Kingdom		United States		Brazil		Total	
		2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Gross margin	€M	2,117	2,109	1,311	1,222	2,875	2,780	1,828	1,530	8,131	7,641
EBITDA	€M	1,711	1,709	987	919	1,330	1,331	1,234	955	5,262	4,915
Distributed electricity	GWh	93,516	93,881	33,670	34,659	38,441	39,579	67,875	65,290	233,502	233,409
Supply Points (Electricity) ¹	Millions	11.1	11.1	3.5	3.5	2.3	2.3	14.1	13.8	31.0	30.7
Gas supply	GWh	--	--	--	--	64,234	65,140	--	--	64,234	65,140
Supply Points (Gas)	Millions	--	--	--	--	1.0	1.0	--	--	1.0	1.0
Gross investments	€M	537	458	736	625	1,435	1,165	916	811	3,624	3,059
Workforce	No. of people	3,574	3,743	3,000	2,963	5,375	5,325	11,310	10,360	23,259	22,391

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

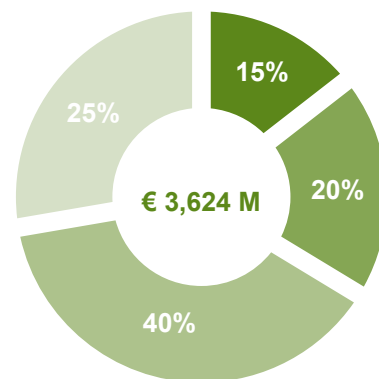
(1) Supply points in Spain include Conquense and other small distributors.

EBITDA of the Networks Business by geographical area 2019



■ Spain ■ United Kingdom ■ United States ■ Brazil

Gross investments of the Networks Business by geographical area 2019



■ Spain ■ United Kingdom ■ United States ■ Brazil



3.3 Renewables

Regulatory environment of the business

Spain

- In November the Ministry for the Ecological Transition published Royal Decree Law 17/2019, which establishes the remuneration rate for renewable facilities based on the weighted average cost of capital (WACC). The current pre-tax rate of 7.389% for facilities prior to RDL 9/2013 will remain in effect until the end of 2031, provided that the developer thereof does not have existing litigation or commits to end any such litigation. Otherwise, or for facilities after RDL 9/2013, a value of 7.09% is set until 2025. The approval of the other remuneration parameters is expected during 2020.

RDL 17/2019 also provides that if facilities are closed, sustainability and employment standards will be taken into account for awarding permits for new projects.

United Kingdom

- 12 Contracts for Difference (CfD) were awarded in September for a total capacity of 5.8 GW. 5.46 GW (6 contracts) were awarded to offshore wind and 300 MW to other renewable technologies.

United States

- At the federal level, a one-year extension of tax credits for wind was approved in December 2019. Facilities that begin construction in 2020 can choose between a 60% Production Tax Credit (PTC) or an 18% Investment Tax Credit (ITC).
- The industry also maintains clean energy incentives at the state level, with various states increasing their Renewable Portfolio Standard (RPS) targets.

Brazil

- The construction of the Oitis Wind Farm Complex, located in the States of Piauí and Bahía, was approved in 2019. It will consist of 12 wind farms with an installed capacity of 566 MW. 30% of all energy generated by these two wind farms was awarded in an "A-4" auction held on 28 June 2019.

Mexico

- The mechanism for the purchase and sale of Clean Energy Certificates (*Certificados de Energías Limpias*) (CELs) continues in effect to encourage new clean power generation projects, but in October 2019 the Secretary of Energy approved changes to the requirements for granting CELs in order for the CFE's clean generation plants in existence before the Reform to be able to verify CELs for generation. This measure eliminated in practice the need for CFE Suministro Básico to purchase CELs in the Long-Term Auctions, in order not to increase the Basic Supply tariffs for domestic customers.

The business will engage in sustainable growth, mainly based on onshore wind, offshore wind, solar, hydroelectric and pumped storage investments in the countries that are most important to the group.

Objectives, risks and principal activities

Objectives

- Occupational Safety and Health.
- Efficiency in operations to optimise the operation of the assets.
- Efficiency in development and construction costs to maximise the competitiveness of all renewable projects.
- Profitable growth from various technologies in the countries that are strategic for the group, and in new countries of interest.
- Develop a robust portfolio that covers the company's growth plan.

Significant risks

- Regulatory risk: changes in regulations in the countries in which it operates.
- Operational risk: availability rate of facilities and potential incidents with environmental impact.
- Market risk: changes in prices of energy in short-term markets.
- Risk of access to evacuation networks and limits on production due to technical restrictions of the networks.
- Technological and cybersecurity risks affecting the facilities.

Principal activities 2019

- 2,791 MW of installed capacity was added during the year:
 - Onshore wind: 235 MW in Spain, 186 MW in Mexico, 832 MW in the United States and 4 MW in Greece.
 - Offshore wind: 420 MW in the United Kingdom.
 - Photovoltaic solar: 500 MW in Spain.
 - Hydroelectric: 612 MW in Brazil and 2 MW in Spain.
- More than 7,000 MW are also under construction, of which more than 2,500 MW are onshore wind in Spain, the United States, Brazil and Mexico, and more than 3,500 MW are photovoltaic solar in Spain, Mexico, the United States and Portugal. Construction of the Tâmega hydroelectric complex, with 1,158 MW, continues in Portugal.
- Growth continues in offshore wind with the construction of the 714 MW *East Anglia ONE* project in the United Kingdom and the development of the 800 MW *Vineyard* project in the United States, 496 MW *St. Brieuc* project in France and 476 MW *Baltic Eagle* project in Germany. Iberdrola was also recently awarded the 804 MW *Park City* project in Connecticut.

Load factor

Maximising the load factor of facilities and availability, through operating and maintenance measures, as well as other external factors, optimising generation with renewable sources.

Operation and maintenance costs

Continuous improvement in efficiency through global standardisation and systematisation processes, exploiting digitisation opportunities.

Project portfolio

Development of the portfolio of onshore wind and photovoltaic projects in Spain, the United Kingdom, the United States, Brazil, Mexico and International (Continental Europe, Australia and South Africa) and offshore wind projects in France, Germany, the United Kingdom and the United States.

Key figures of the Renewables Business

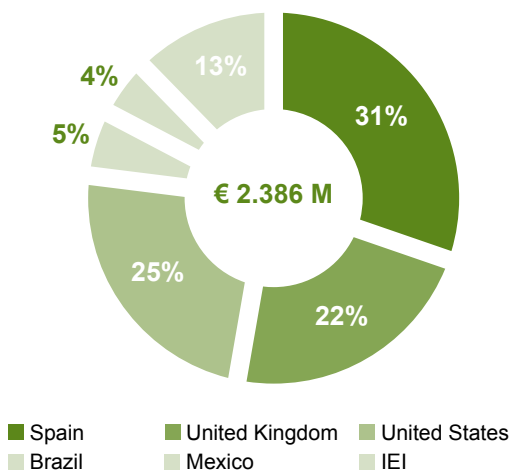
Item	Unit	Spain		United Kingdom		United States		Brazil		Mexico		IEI		Total	
		2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Gross margin	€M	1,251	1,580	678	644	852	835	174	178	113	88	378	286	3,446	3,611
EBITDA	€M	736	919	525	518	591	573	125	129	86	65	323	241	2,386	2,445
Load factor ¹	%	15.9	18.7	24.8	22.1	29.1	29.7	29.0	31.3	29.5	31.2	31.6	26.9	21.3	22.6
Gross investments	€M	778	375	907	427	1,396	386	102	180	93	291	50	141	3,326	1,800
Workforce	No. of people	1,567	1,537	418	355	752	710	225	192	136	125	257	166	3,355	3,085

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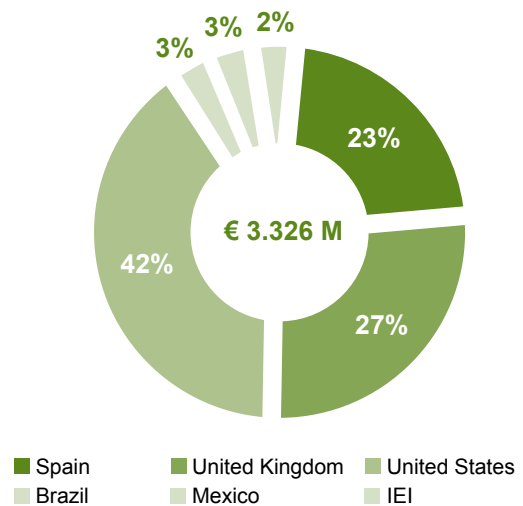
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(1) The load factor includes all renewable technologies.

EBITDA of the Renewables Business by geographical area 2019



Gross investments of the Renewables Business by geographical area 2019





3.4 Wholesale and Retail

Regulatory environment of the business

Spain

- Royal Decree 750/2019, establishing a fixed unit rate of €7.98/MWh for the public non-tax financial obligation by means of which ENRESA's service to the nuclear plants in operation is funded, was published in December 2019.
- Royal Decree 244/2019, which governs the administrative, technical and financial conditions for the self-consumption of electric power, was published in April 2019. This Royal Decree expanded the definition of self-consumption, including the concept of "facilities close through the network", developed collective self-consumption, simplified government procedures and allowed for the remuneration of surpluses for small facilities.

Mexico

- The methodology for determining the values of the electricity tariff beginning in 2020 was approved on 16 December 2019 without changes, for which reason tariffs are expected to remain stable in comparison with the figures for 2019. The resolution determining the transmission and distribution tariffs was also published.

United Kingdom

- In June 2019, Ofgem published new market access requirements for incoming retailers relative to their financial capacity, ability to comply with legal provisions and market rules, willingness to provide a high-quality service to customers and management capacity of the management team and the main shareholders.
- In October 2019 the government re-established the capacity mechanisms after the European Commission concluded its investigation holding that the mechanism complies with the rules on State Aids, because it is necessary to guarantee supply, is in line with the energy policy goals of the EU, and does not distort competition within the single market.

Brazil

- *Portaria* (Implementing Regulation) No. 389, establishing the guidelines for the auctions of exclusive A-4 and A-5 generation for thermal plants to be held in 2020, was published in October 2019. The supply period is 15 years, beginning in January 2024 and January 2025, respectively.
- *Portaria* No. 465, which provides that consumers with a capacity above 1.5 MW since January 2021, above 1 MW since January 2022 and above 0.5 MW since January 2023 can purchase conventional energy from any retailer, was published in December 2019. ANEEL and CCEE must submit a study before 31 January 2022 on the regulatory measures required to allow the opening to the free market of consumers with a capacity below 0.5 MW beginning in 2024.

Objectives, risks and principal activities

Objectives

- Occupational Safety and Health.
- Competitive supply and excellence in service to customers.
- Environmental management and protection of biodiversity
- Operational excellence and continuous improvement in efficiency.
- Risk identification and minimisation.
- Development of growth opportunities and new energy solutions.

Principal activities 2019

- **Spain:** Continued development of products and services adapted to the needs of customers (*Customised Plans, Smart services, Smart mobility, Smart solar, Smart home*).
- **United Kingdom:** At year-end 2019 a cumulative total of 1.5 million smart meters had been installed.

- **Mexico:** Entry into commercial operation of 2,655 MW (878 MW Escobedo CC, 911 MW Topolobampo II CC and 866 MW El Carmen CC). Approximately 1,300 MW thermal under construction.
- **Europe:** Growth of retail activity and connection to customers through *Smart Solutions*. 1.5 million contracts in portfolio reached during 2019.

Significant risks

- Regulatory risk: Changes in regulations in the countries in which it operates.
- Operational risks: Availability rate of facilities and potential incidents with environmental impact.
- Market risk: Fuel prices and competition levels in liberalised markets.
- Technological and cybersecurity risks affecting the security of the facilities or the information of our customers.

Efficiency

- Optimisation of production and increase in availability of thermal facilities.
- Facilitating operations in complementary markets.
- Operational improvements in the customer service and management processes.

Prices

- Management of fuel price risks through appropriate hedging of all generation.

Growth

- Mexico: upon startup of the Topolobampo III CC in 2020, the company will have an installed capacity of more than 10,000 MW, strengthening its position as the largest private producer of electricity in the country.
- United Kingdom: Continued widespread deployment of smart meters that began in 2016.

Customers

- Loyalty-building and development of new digital products and smart solutions adapted to the needs of customers, which promotes efficiency and the consumption of renewable energy.
- Retail development in Mexico concurrently with the energy reform.
- Sustained growth of retail activities of electricity, gas and *Smart Solutions* in the rest of Europe.

Key figures of the Wholesale and Retail Business

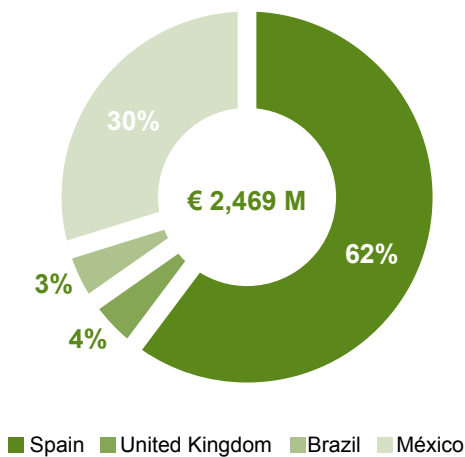
Item	Unit	Spain		United Kingdom		Brazil		Mexico		IEI*		Total	
		2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Gross margin	€M	2,932	2,396	684	863	92	134	935	756	45	19	4,688	4,168
EBITDA	€M	1,558	1,001	110	307	64	92	762	638	(25)	(26)	2,469	2,038
Electricity contracts	Millions	10.1	10.1	2.8	3.0	0.0	0.0	0.0	0.0	0.6	0.3	13.5	13.5
Gas contracts	Millions	1.0	1.0	1.9	2.0	0.0	0.0	0.0	0.0	0.2	0.1	3.1	3.1
Smart solutions contracts	Millions	5.7	5.3	1.9	1.4	0.1	0.1	0.0	0.0	0.7	0.4	8.4	7.1
Contracts total	Millions	16.8	16.5	6.6	6.4	0.1	0.1	0.0	0.0	1.5	0.7	25.1	23.7
Gross investments	€M	318	218	218	201	31	12	380	682	85	26	1,032	1,139
Workforce	No. of people	2,646	2,695	1,552	1,588	128	98	997	855	191	122	5,514	5,358

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EBITDA by geographical area 2019



Gross investments of the Wholesale & Retail Business by geographical area 2019

