



# Iberdrola's Primary Businesses

**Regulation is a key factor in the performance of Iberdrola's activities.**

**Energy policies must set clear and predictable goals in order to incentivise the investment needed to guarantee a safe, competitive and sustainable supply, developing to the maximum its potential as a source of growth and employment.**

## 3.1 Regulatory Environment

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### European Union

- The European Commission published the *Clean Energy for all Europeans* package in November 2016. Among the more far-reaching measures are those concerning the market design reform, the safety of supply framework and the development of the role of a more active consumer. Proposals have also been submitted to modify the frameworks for renewables and for energy efficiency, in line with the 2030 goals. The process will end during 2018.
- The European Commission, Parliament and Council approved a reform of the Emissions Trading Scheme Directive in 2017. The main developments are a larger cut in new emission rights each year and the creation of a mechanism to stabilise the price of carbon (absorbing surpluses of emission rights in the market).
- In November 2017 the European Commission published its *Clean Mobility Package*, which develops measures to reduce emissions from the transport sector during the 2020-2030 period and adapt European industry to compliance with the Paris Agreement without losing global market share. This process will begin in 2018. It proposes a more stringent emissions standard and encourages the purchase of clean vehicles by public bodies.
- The technical standard to implement the COP21 agreements was developed in 2017. These agreements involve a multilateral commitment to implement emission reduction measures. It should encourage investment in low-carbon technologies.

### Spain

- After a strong tariff deficit during the 2005-2013 period and a slight surplus between 2014 and 2016, the system has reached financial balance. A Ministry Order freezing electricity usage charges for 2018 was published in December 2017.

- In 2017 the Government began preparation of a future *Climate Change and Energy Transition Act*, with a public participation process and the creation of a Commission of 14 experts to advise on potential energy scenarios. There has also been an announcement of a review of the generation capacity payment mechanisms during 2018, and work has begun on a draft Royal Decree that would regulate the shutdown of plants.

### United Kingdom

- On March 29, 2017 the Prime Minister Theresa May officially announced the exit of the United Kingdom from the European Union. Future trade agreements have still not yet been determined, but significant changes are expected in the energy regulatory environment in the short term.
- In November 2017 the government published its *Industrial Strategy*, which is largely based on the vision of a decarbonised economy, wagering on the promotion of electric vehicles, the development of smart systems and a reduction in the costs of energy.
- 2017 saw reforms in the capacity market to ensure a fair auction for all participants. These reforms include:
  1. The decision of Ofgem to reduce hidden subsidies for small diesel generators due to transport charges.
  2. The decision of the Department for Business, Energy and Industrial Strategy (BEIS) to modify the methodology for allocating the costs of the capacity market.
  3. The decision of the BEIS to modify the correction of available capacity in the capacity market for batteries, thereby reflecting their actual contribution to the system.

## United States and Canada

- On August 4, 2017 the Administration notified the UN of the intention of the United States to withdraw from the Paris Agreement. However, a bipartisan climate alliance (coalition of 14 states and the territory of Puerto Rico) has been formed in the country, announcing its intention to meet their part of the U.S. commitment to reduce greenhouse gas emissions.
- Year-end 2017 saw approval of the Tax Cuts and Jobs Act, which reduces the corporate income tax to 21% as from 2018, maintains the tax incentive (PTC/ITC) system for renewables, eliminates the Alternative Minimum Tax (AMT) and includes a Base Erosion Anti-Abuse (BEAT) Tax.

## Brazil

- The Ministry of Mines and Energy has launched a public consultation to analyse the liberalisation of the retail market and improve the Brazilian energy industry in order to carry out a revision of the sector and mitigate the risks facing the players involved.
- The government has taken measures to facilitate the privatisation of certain electric distribution companies forming part of the Eletrobras group.
- Due to the decrease in demand and the migration of customers to the free market, distributors found themselves to have contracted for an oversupply of energy. The regulatory agency and the ministry have approved various regulations to minimise the effects of the 2017 oversupply in the future.
- There have been a number of public consultations in order for the government to make decisions in order to reduce the existing litigation in the Brazilian electricity industry, mainly generated by disputes between hydroelectric generators and the government regarding hydrologic irrigation.

## Mexico

- 2017 saw continued development of the energy reform, which encourages private investment in the generation, sale and supply of electric power. It also promotes raising the share of clean energy to 35% by 2024 through the creation of a clean energy certification system that will determine supply obligations.
- One of the most significant milestones of this reform was the publication in 2017 of a new calculation method for the regulated tariff that applies to basic supply. It will be implemented progressively during the first months of 2018, except for domestic consumption, which will remain with the old methodology indefinitely.
- A Clearing House was created in 2017 to serve as a counterparty between buyers and sellers in auctions, reducing the credit risk arising from the liberalisation of the wholesale market. There was also a third long-term Auction, which will add 2.6 GW of new capacity, and the first medium-term Auction, which will award power and capacity contracts in 2018 with terms of 1 to 3 years.
- The liberalisation of the natural gas market commenced in 2017 in order to promote equitable conditions for the participation of new traders in the market and to protect the interests of natural gas end users in the country.





Western Link Project transformer substation  
/ United Kingdom

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## 3.2 Networks

### Regulatory environment of the business

#### Spain

- 2017 was the first year in which facilities that commenced operation in 2015 were evaluated under the new remuneration methodology based on unit costs.
- The Order on tolls for 2017, ETU/1976/2016 of 23 December, keeps the figures published for 2016 on remuneration for distribution (5,175 million euros for the sector and 1,655.5 million euros for IBERDROLA) and transmission (1,709 million euros for the sector), in the absence of a calculation of the amount for 2017.

#### United States

- A new three-year tariff agreement entered into effect for the electricity distribution company UI (Connecticut) in January 2017, with an ROE of 9.1%, an equity percentage of 50% and planned investments of \$105 million annually.
- The new 3-year SCG gas distribution tariff agreement was also approved in Connecticut in November, which will become effective as from 2018. The recognised ROE is 9.2%, equity of 52.4% and planned investments of \$195 million from 2018 to 2020.
- 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 kept the same until April 2019. Forecasted investments are approximately \$700 million annually.

#### United Kingdom

- Ofgem has commenced a public consultation regarding the new RIIO-T2 regulatory framework to enter into force in 2021. Until then, ScottishPower Transmission Ltd. continues to comply with all investment and quality goals agreed to in 2013 with Ofgem within the current RIIO-T1 scheme.
- Distributors ScottishPower Distribution Ltd. and ScottishPower Manweb Plc continue to carry out their activities during the first regulatory period RIIO-ED1, which will extend through March 2023.

#### Brazil

- The new tariff agreement for Celpe came into force in April 2017 and will be in effect for five years. The recognised RAB is 20% thanks to the broad investment programme from the last tariff cycle.
- The tariff agreements for Coelba and Cosern will remain in effect until April 2018, and that for Elektro until 2019.
- The remuneration for the distribution activities of Elektro, Coelba and Cosern has been adjusted based on inflation in Brazil.
- The Brazilian regulator, ANEEL, held two auctions of transmission projects in 2017 in which Iberdrola participated and in which it was awarded six projects. ANEEL auctioned a total of more than 23,000 million reais in transmission projects in the two auctions, in which more than 45 companies from around the world participated.

## 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 2017

- Spain: the Star network digitisation and automation project, with the installation of more than 10.3 million meters (97.6%) and the digitisation of more than 73,800

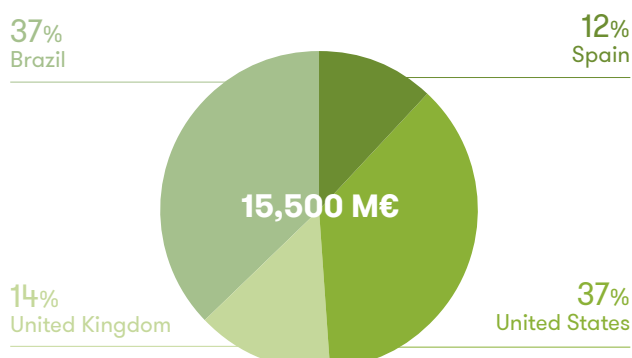
transformer centres (88%), is nearing completion.

- United Kingdom: there is continued compliance with the investment targets contained in RIIO-T1 and RIIO-ED1. The *Western Link HDVC* project entered into operation in monopole configuration in December. The double circuit will be available in 2018.
- United States: November saw the start-up in Woodbridge (Connecticut) of a micro-grid, which will guarantee the supply of critical facilities using a 2.8 MW fuel cell. A project to install approximately 1.8 million smart meters in the State of New York is expected to be approved in 2018.
- Brazil: operational strengthening of Neoenergia's distributors, improving all parameters: quality of supply, late payments and losses. ANEEL's Quality Plan was finalised. Award of 6 transmission projects in ANEEL's auctions in the total amount of 2,800 millions reais.

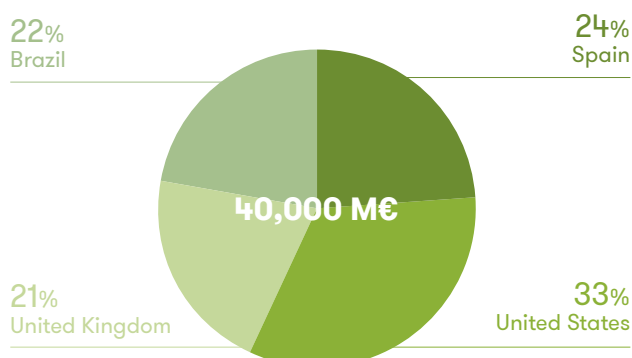
## Outlook 2018-2022

- Increased regulatory visibility in all countries, with investments of €15,500 million during the period, in order to obtain growth in EBITDA of €1,000 million and RAB of €11,000 million by 2022.
- Improvement in operating efficiency, achieving cumulative savings through 2022 of €700 million, to be shared with the customer.
- €3,900 million investment in digitisation for the growth and expansion of our technological platform, increasing service quality by 20% and reducing the "cost-to-serve" by 18% during the 2017-2022 period.
- Opportunities for growth in transmission in Brazil and the United States, taking advantage of synergies with our traditional transmission and distribution business.

Net investment of €15,500 million between 2018 and 2022, mainly in the United States and Brazil



€11,000 million growth in RAB, reaching a value of €40,000 million by 2022



# Key figures of the Networks Business

Item	Unit	Spain		United Kingdom		United States		Brazil <sup>(1)</sup>		Total	
		2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Gross margin	€M	2,029	2,003	1,267	1,174	2,537	2,754	328	856	6,160	6,787
EBITDA	€M	1,603	1,520	976	886	1,270	1,334	233	488	4,082	4,228
Electric power distributed	GWh	92,307	93,284	35,734	34,967	39,120	38,349	62,759	63,522	229,920	230,122
Users (Electricity)	Millions	10.9	11.0	3.5	3.5	2.2	2.2	13.4	13.6	30.0	30.3
Gas supply	GWh	-	-	-	-	59,585	59,880	-	-	59,585	59,880
Users (Gas)	Millions	-	-	-	-	1.0	1.0	-	-	1.0	1.0
Investments	€M	389	352	628	561	752	861	76	313	1,845	2,086
Workforce	No. of people	3,887	4,038	2,819	2,969	5,734	5,410	9,111	9,708	21,551	22,125

International Financial Reporting Standard (IFRS) 11 has been applied to the financial information.  
 (1) 2016 operational information is deemed to be 100% from Neoenergia.

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

## Customer service

- More than 50,000 people, including employees and subcontractors, committed to the restoration of service lost due to extreme weather events in Spain (heavy rains in January, storms Ana and Bruno in December), the United Kingdom (storms Doris in February, Aileen in September and Ophelia in October) and the United States (summer storms in New York).
- In Brazil, ANEEL recognised the efforts and progress made by Celpe and Coelba on Quality of Supply in 2017. Elektro was awarded for its excellence in supply by the Brazilian Distributors Association (ABRADEE).
- More than 600,000 homes have already benefited from the *Light for Everyone* programme.

## Efficiency

- Controlled increase in operating expenses despite strong increase in activity.
- Reduction in energy losses thanks to the fight against electricity fraud in Brazil and Spain.
- Improvement in debt indicators with customers in Brazil thanks to the plan to decrease late payments.

## Digitisation

- The 2018-2022 Digital Plan launched in 2017 with a planned investment of more than 3,900 million euros in digital solutions for customers. The Plan includes projects to increase the automation of the medium-voltage network as well as the digitisation of the low-voltage network in Spain.
- Iberdrola is the top distributor in remote meter reading quality in Spain (according to CNMC report of 23 February 2017).
- Measures to protect against cybersecurity risks associated with new grid management technologies have been strengthened.
- Promotion of the deployment of electric vehicles through active management of the network and improvements ensuring greater efficiency for the system.



Dulces Nombres Combined Cycle Plant  
Monterrey / Mexico

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## 3.3 Wholesale and Retail

### Regulatory environment of the business

#### Spain

- In October 2017 there was approval of Royal Decree 897/2017 and Order ETU/943/2017, which regulate: vulnerable consumers, subsidised rates and other measures to protect domestic electricity consumers. They establish various discounts off the price, based on family unit size and income level. The discount increases for special groups. All suppliers are required to fund it based on their number of customers.
- In November 2017 Order ETU/1133/2017 was approved to extend the availability incentive for thermal generation plants during half the year (from January to June 2018), and hydroelectric plants are excluded from this incentive beginning on 1 January 2018. The concept of interruptibility was also modified, establishing an auction award period for the first 5 months of 2018.
- Order ETU/754/2017 denying renewal of the authorisation for operation of the Santa María de Garoña nuclear power plant was published in August 2017.

#### United Kingdom

- The T-1 capacity auction for 2017/2018 was held in February 2017, resulting in the award of a total of 2,255 MW to Iberdrola at a price of 6.95 £/kW. The T-4 capacity auction for 2021/2022 was also held in February 2018, resulting in the award of a total of 2,300 MW to Iberdrola at a price of 8.40 £/kW. Existing plants as well as demand management assets participated in both auctions.
- Following the plan for implementing the measures recommended by the CMA in June 2016, Ofgem announced the application of a price limit on pre-paid contracts as from April 2017, which has been extended to vulnerable customers since February 2018.

#### Mexico

- In March 2017 Iberdrola was awarded the Topolobampo III plant in the last auction under the PIE model, which involves a long-term contract with the Federal Energy Commission (regulated generation). It is a 779 MW combined cycle plant located in the state of Sinaloa.

## Objectives, risks and principal activities

### Objectives

- Competitive supply and excellence in service to customers.
- Occupational safety.
- 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.

### 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.
- Credit, exchange-rate and interest-rate risks.

- Technological and cybersecurity risks affecting the security of the facilities or the information of our customers.

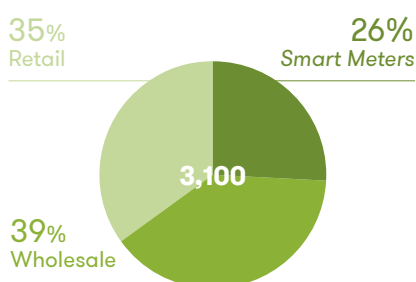
### Principal activities 2017

- Spain: On-going development of products and services adapted to the needs of customers (Customised Plans, Iberdrola Smart Home, Smart solar, etc.).
- United Kingdom: The increase in dual tariffs for domestic customers (7.8%) became effective in March 2017. At year-end 2017 a cumulative total of 738,184 smart meters had been installed, meeting the goal set by Ofgem.
- Mexico: Installation of 403 MW (Baja California III 324 MW CC, Altamira 57 MW cogeneration, 22 MW repowerings). Approximately 3,600 MW thermal under construction.
- Italy: Commencement of commercial activities. Almost 6,000 contracts in portfolio reached during 2017.

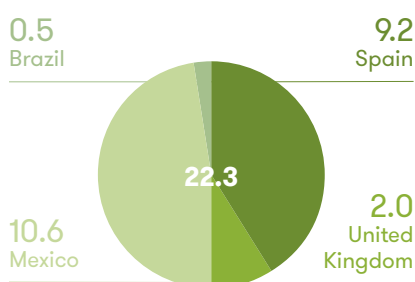
## Outlook 2018-2022

- Net investments of €4,200 million during the period, with 75% (€3,100 million) allocated to growth in order to increase installed capacity in Mexico, continue with the deployment of meters in the United Kingdom, maintain retail growth in the core markets, and expand retail activities.
- 4.8 GW will enter into service during the period, reaching a total capacity of 22.3 GW by 2022. In Retail, Smart Solutions and cost efficiencies will allow for 32 million contracts with customers to be reached by 2022.
- Efficiencies deriving from digitisation, the deployment of smart meters and preventative maintenance based on artificial intelligence and data analytics.

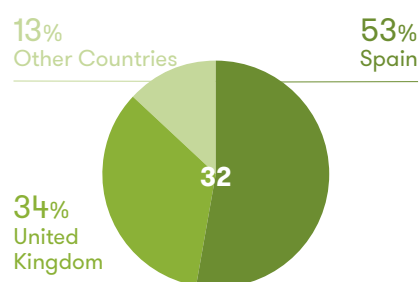
**Net investment growth  
2018-2022 (€M)**



**Installed Capacity  
in 2022 (GW)**



**Contracts with customers  
in 2022 (M contracted)**



# Key figures of the Wholesale and Retail Business

Item	Unit	Spain		United Kingdom		United States and Canada		Brazil		Mexico		Total	
		2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Gross margin	€M	3,072	2,690	1,000	796	48	17	6	89	509	646	4,634	4,238
EBITDA	€M	1,521	902	294	139	6	-26	-3	60	436	525	2,253	1,601
Electricity contracts	Millions	10.3	10.2	3.2	3.1	-	-	-	-	-	-	13.5	13.3
Gas contracts	Millions	0.9	1.0	2.1	2.0	-	-	-	-	-	-	3.0	3.0
Products and services contracts	Millions	5.0	5.3	0.1	0.9	-	-	-	-	-	-	5.1	6.2
Total retail contracts	Millions	16.3	16.5	5.4	6.0	-	-	-	-	-	-	21.7	22.6
Investments	€M	240	351	134	225	5	5	0	48	341	694	720	1,323
Workforce	No. of people	3,164	3,592	2,254	2,023	110	103	55	298	491	711	6,074	6,727

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

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The Wholesale and Retail Business concentrates its efforts on the safety of operations, environmental management, operational efficiency, customer loyalty, development of new products and services, and growth in Mexico, which will provide stability in results and the generation of funds for the group.

## Efficiency

- Optimisation of thermal production.
- Facilitating operations in complementary markets.
- Operating improvements and increase in availability and energetic yield of the thermal facilities in Mexico and Spain.

## Prices

- Management of risks through appropriate hedging of all generation, including renewable generation.

## Growth

- Mexico: Approximately 3,600 MW under construction, with the most significant projects including:
  - Escobedo I CCGT (878 MW).
  - Noroeste CCGT (911 MW).
  - El Carmen CCGT (866 MW).
  - Topolobampo III CCGT (779 MW)
- United Kingdom: Continued widespread deployment of smart meters that began in 2016.

## Customers

- Loyalty-building and development of new products and personalised services adapted to the needs of customers.
- Retail development in Mexico pursuant to changes in legal provisions on energy reform.
- Leaders in industrial customers in Portugal.
- Commencement of sales of electricity, gas and products and services in Italy in the residential segment.



Andalusia Substation Wiking Offshore  
Wind Farm / Germany

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## 3.4 Renewables

### Regulatory environment of the business

#### Spain

- There were two auctions of renewable capacity in Spain during 2017, with the award of a total of 4,100 MW of wind power and 3,900 MW of photovoltaic power. The winners must commence operations of the facilities before the end of 2019. The possibility of holding a new capacity auction in 2018 has been announced.
- Royal Decree-law 10/2017 was approved in June 2017, with measures to alleviate the drought at certain basins, increasing the hydraulic fee to 25.5% of revenues obtained from hydroelectric production, with no time limit.

#### United Kingdom

- The British government continues to encourage decarbonisation of the economy, and has confirmed the existing budget of £557 million for auctions in the coming years, although none are expected to be held until 2019.
- There is clear support for offshore wind technology. There could also be opportunities for onshore wind, yet to be confirmed.

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

#### United States

- The tax reform approved in December 2017 did not change the PTC/ITC rules, although it extended the period for monetising tax credits.
- The States continue with their renewables support systems through the Renewables Portfolio Standard (RPS), and the policies are expected to remain stable.

#### Mexico

- A new long-term auction took place in 2017 for the sale of 20-year Clean Energy Certificates (*Certificados de Energía Limpia*) (CELs), with the award of 5.95 million certificates.
- The CEL goals were defined in March, doubling to 14% between 2020 and 2022, as were the respective penalties for non-compliance.

#### Brazil

- The country, which is leaving behind the recession of 2015 and 2016, has returned to renewables auctions, with two auctions in December. In the A-6 auction, Neoenergia Renewables was awarded 295 MW in wind projects. New auctions are expected in 2018.

#### Continental Europe

- The German electricity network has been connected to the Wikinger offshore wind farm, with an installed capacity of 350 MW, capable of supplying renewable energy to approximately 350,000 homes.

## Objectives, risks and principal activities

### Objectives

- Safety in operations.
- Efficiency in operations to maximise the profitability of the assets.
- Efficiency in construction costs, with a particular emphasis on offshore wind projects.
- Profitable growth in various technologies in the countries that are strategic for the group, and in new countries of interest.

### Significant risks

- Competitive auction processes in the markets in which it operates.
- Prices of energy sold in short-term markets.
- Risk of access to evacuation networks and limits on production due to technical restrictions of the networks.
- Operational and technological risk.
- Limitations on operation due to environmental risks.

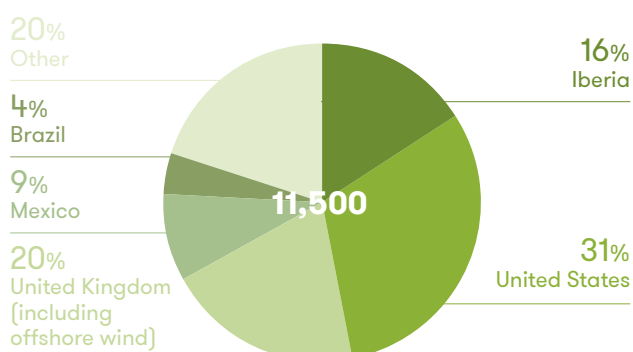
### Principal activities 2017

- 1,164 MW of new installed capacity was added during the year:
  - Onshore wind: 590 MW in the United States, 95 MW in Brazil, 94 MW in the United Kingdom, 43 MW in Mexico, 2.3 MW in Spain and -10 MW due to the sale of the company Lucana in Italy.
  - Offshore wind: 350 MW in Germany.
- 1,485 MW of onshore wind power is under construction: 846 MW in the United States, 326 MW in Mexico, 295 MW in Brazil and 18 MW in Spain.
- There is 10 MW of photovoltaic solar capacity under construction in the United States and 227 MW in Mexico.
- There is continued growth in offshore wind capacity with the construction in the United Kingdom of the East Anglia I project with 714 MW of capacity and commencement of the St. Brieuc (France) project.
- Work is underway on the construction of hydroelectric plants in Brazil and construction continues on the Tâmega hydroelectric project (1,158 MW) in Portugal.

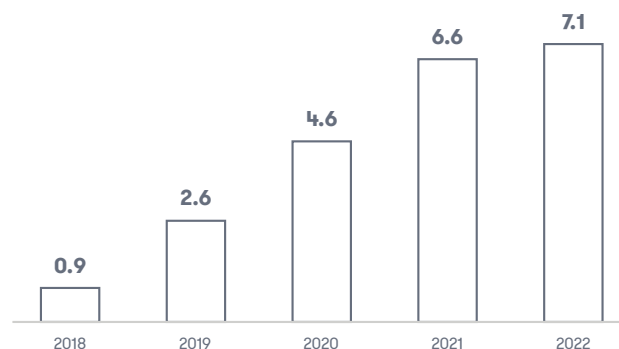
## Outlook 2018-2022

- Investments of €11,500 million, mainly to increase installed capacity in the United States, the United Kingdom, Spain, Portugal, Brazil and Mexico, generating additional EBITDA of €1,200 million by 2022.
- Installed capacity of 7.1 GW is expected to be installed during the 2018-2022 period, including the 714 MW East Anglia I offshore wind farm and the 1,158 MW Tâmega hydroelectric plant.
- Operational excellence achieved through management of the life cycle of assets via digitisation, maximising revenues and continuing with the advanced O&M model.

Investment plan of €11,500 million over the period, of which €10,200 million are for growth



New additional aggregate capacity during the 2018-2022 period (GW)





# Key figures of the Renewables Business

Item	Unit	Spain		United Kingdom <sup>(1)</sup>		United States		Brazil		Mexico		Other <sup>(2)</sup>		Total	
		2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Gross margin	€M	764	777	385	493	802	783	37	78	69	71	123	125	2,180	2,327
EBITDA	€M	497	493	267	361	564	530	25	57	52	53	95	99	1,500	1,592
Load factor <sup>(3)</sup>	%	22.4	21.9	21.0	24	29.9	29	38.8	46.9	34.7	30	25.0	25.6	25.8	25.8
Investments	€M	20	18	391	399	735	857	4.8	105	5	323	502	677	1,658	2,380

Notes:

International Financial Reporting Standard IFRS-11RRe has been applied in the preparation of this table.

(1) The figures for the United Kingdom include those of the offshore wind division, except for Wikingen.

(2) Other includes Wikingen as it is an offshore wind farm outside of the United Kingdom.

(3) The load factor includes all renewable technologies.

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The business will focus on sustainable development, mainly based on investments in onshore and offshore wind and in photovoltaic in the countries most important to the group, and in the safety of operations. Efficiency is a key factor for business sustainability in the medium and long terms. Iberdrola will take technological advances into account and will act on the supply chain to encourage greater efficiency in the coming years.

## Load factor

Maximising the load factor of facilities, while minimising downtime through operating and maintenance measures, as well as other external factors.

## 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 projects in Spain, the United Kingdom, the United States, Brazil and Mexico, the photovoltaic projects in Spain, the United States and Mexico, and the East Anglia 3 offshore wind project (United Kingdom).

## 3.5 Regulatory Positioning

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Iberdrola shares its Regulatory Positions, which are valid for all countries and businesses, as part of its desire for transparency and in accordance with the *Stakeholder Relations Policy*. Iberdrola provides public access to complete information, along with informational videos, on its website.

### General Regulatory Positioning

#### Decarbonisation of the economy

- Renewables and firm capacity facilities require remuneration schemes that complement the price of electricity.
- A strong signal that represents the price of CO<sub>2</sub> is required.
- All energies (gas, electricity, petrol) should assume the cost of their emissions and of the renewables that must be developed to offset such emissions.

#### Electricity sector of the future

- The grid is the backbone of the electricity sector of the future.
- Network tariffs must be upgraded.
- The climate action costs should be removed from tariffs to encourage competition between energy types and between suppliers of electricity.

All sectors should contribute to the decarbonisation of the economy according to the environmental harm they produce.

Electrification of the economy is key to achieving decarbonisation; it is therefore essential for tariffs to exclude costs other than the cost of supply.

### Internal consumption

- Distributed generation and internal consumption from renewable energy sources contribute to a reduction in emissions and help create a more sustainable system.
- Distributed generation should make overall economic sense:

The net balance or excess premiums could bring economic sustainability problems in the electricity system.

Rates should be upgraded, so all customers pay for grid costs under equal conditions.

- Distributed generation is not a source of efficiency (it doesn't reduce the amount of energy consumed), but rather an electricity production source.

### Climate action

- Electrification of the economy is the path to achieving its decarbonisation.
- The electricity sector is the energy vector that can incorporate renewable energies most effectively, which is why it is the sector that has made the biggest effort to develop them as well as to meet emission reduction goals.
- The penetration cost of renewable energies should be shared between electricity, gas, petrol and diesel oil, under the "polluting party pays" principle.

## Market design

- The current energy markets in Europe were designed 20 years ago.
- The challenge is decarbonisation.  
By 2050 there will be a high penetration of renewable energies and a very low use of thermal power plants, which will exist only to guarantee supply if renewable resources fail.
- Iberdrola supports a remodelling of the market design, which:
  - Introduces revenue stabilisation mechanisms for renewable energies.
  - Introduces capacity mechanisms for power plants to guarantee firm capacity.

## The price of CO<sub>2</sub>

- To progress with decarbonisation, all energies (gas, electricity, petrol) should assume the cost generated by their emissions.
- The European Emissions Trading System (EU ETS) is a key element to reduce emissions more efficiently.
- Currently, the price of CO<sub>2</sub> in the EU ETS does not support investment in clean and/or low-carbon technologies.
- Iberdrola proposes a minimum price for emission rights of €20-30/t CO<sub>2</sub>.

The market must evolve to encourage and maintain investments in both firm generation and flexible generation like renewable generation. Properly designed auction mechanisms are a good regulatory practice.

A signal is required to encourage the replacement of carbon-based generation with other energies.

## Value of the grid

- The grid provides value to its users and increases the efficiency and safety of the system.
- Grid tariffs must be upgraded, avoiding cross-subsidies, and sending proper price signals to each grid user type.
- The grid remuneration model should incentivise the optimum use of both existing and new infrastructures, as well as distributed resources.

## Electric vehicle

Given the environmental sustainability of electricity generated from renewable sources, which will constitute the majority of primary energy in the coming decades, the electric vehicle is the most efficient and viable way to transform transportation.

Iberdrola supports the electrification of transportation. This alternative this alternative requires for its development:

- Reducing economic and regulatory barriers within a level playing field.
- Ensuring that electric vehicles represent a reasonable share of the total number of new vehicles purchased.
- Ensuring the deployment of a basic charging network on public roads.

The grid is a key element for evolution towards the electricity sector of the future, with increased development of new technologies and distributed generation.

The regulation of distribution should incentivise technological innovation and digitisation of the grids of the future.

Deployment of the electrical vehicle requires a basic charging network that is trusted by potential users.