

*Iberdrola's distribution business is extending the possibilities of its digital network, which it will continue to develop, and equip with greater intelligence, over the next ten years*

## **i-DE is to invest €600m to convert Spain's main urban hubs into smart cities**

- It is working with them in four areas that are strategic for a smart city, namely electrical mobility, grid infrastructures, efficient energy use and raising public awareness
- Six Electric Mobility Control Centres are being created to monitor and assess the impact of electric vehicles on its distribution network
- The electricity grids are configured as part of the new energy model's circulatory system and the smart platform necessary for the transition towards a decarbonised economy

**Madrid.** **i-DE**, the new branding for Iberdrola's distribution activity in Spain is extending the possibilities of its smart and digitalised network with investments totalling over €600m during the next ten years aimed at helping the country's main urban areas to move forward in their transition towards becoming "smart cities".

The investments in this project will be mainly earmarked for improved grid developments in order to integrate key energy resources for the development of a smart city, as well as going towards raising the intelligence of the distribution grid by boosting digitalisation and thereby improving the quality of information and service.

### **Optimum "smart city" model for more than 40 Spanish cities**

i-DE, which is already working on this initiative with a number of Municipal Councils and Autonomous Regions, expects to extend the project to over 40 Spanish towns and cities during 2019, including provincial capitals and cities of over 100,000 inhabitants, in the regions where it operates as distributor.

"Smart grids have become one of the keys in the process of decarbonising our economy and in the energy transition, paving the way for the integration of electric mobility and renewable energy for a cleaner and more centralised energy mix", explains Juan Ríos, director of Planning and Regulation for i-DE. The deployment of our smart electricity grid is allowing us to incorporate 'neural tracking' of the grid to provide the public with a better service.

The work of i-DE, in collaboration with local and regional administrations, is centred on 4 strategic areas for a smart city, from the perspective of the electricity grid, which include electric mobility, grid infrastructures, efficient energy use and raising public awareness:



- *Mobility.* i-DE is sharing its knowledge of electricity grids with Municipal Councils to drive forward a plan for the deployment of efficient and economical electric charging stations accessible to all the public;
- *Infrastructure.* Boosting of the development, innovation and digitalisation of networks to continue improving those aspects that affect supply quality and customer service.
- *Energy.* Searching for sustainable energy solutions and improvements in efficient energy use, based on the value of the data that the smart grid provides to citizens and administrations.
- *Culture.* Generating content and, through IT, data at local level about the grid, with regard to (1) electricity consumption both in the city and of electric vehicles; (2) renewable generation and (3) the penetration of electric mobility; all with a view to encouraging optimal management and contributing to raising public awareness.

### **Monitoring and assessment of the impact of electric vehicles on the grid**

Iberdrola's distribution arm's initiatives to promote a cleaner, more efficient and sustainable energy model also favour the integration of the electric vehicle.

i-DE has integrated Electric Mobility Control Centres into its 6 Distribution Control Centres in Spain with which to monitor and assess the impact of electric vehicles on its distribution network.

The centres provide real-time information about charging points: locations by zones, distribution of consumption by province, hourly charge curve of charging points, and CO<sub>2</sub> emissions avoided. Likewise, it will be possible to track the progress of charging points and of energy demand. In the near future, as well as analysing the status of the electric vehicle charging points connected to the grid, the integration of data analysis tools will make it possible to predict the impact of electric vehicles.

In line with its smart city strategy, the Electric Mobility Control Centres will allow i-DE to work with Municipal Councils and Autonomous Regions, providing them access to local information about the development of electric vehicles in their communities.

“This data will help in the integration of the electric vehicle into the grid, and enable the rationalisation of investment in new infrastructure and the provision of flexible grid services, as well as maintaining the security and quality of supply”, explains Ríos.

### **Smart grids and the energy transition**

Electricity distribution networks are the circulatory system of the new energy model and the platform necessary for the transition toward a decarbonised economy based on renewable and competitive energy.

The transformation of networks towards a smart, more reliable and safer infrastructure will provide a response to the challenges of this transition towards the electrification of the economy, with a higher presence of renewables, sustainable

mobility, smart cities, decentralised consumption (self-generation) and a consumer with greater decision-making capability and connectivity.

Iberdrola has installed almost [11 million smart meters in Spain](#) together with their supporting infrastructure, as well as adapting around 90,000 transformer centres, where remote management, supervision and automation capabilities have been incorporated.

### **i-DE, Smart Electricity Grids**

The activities of [i-DE](#) - the new name for Iberdrola's electricity distribution arm - include the planning, construction and maintenance of power lines, substations, transformer centres and other infrastructure, as well as operating the system in a way that efficiently distributes energy among the various agents that produce and consume it.

i-DE operates a distribution system consisting of 270,000 km of power lines in Spain and is present in 10 Autonomous Regions serving a population of 17 million. In 2018, Iberdrola's distribution business invested almost €500m in Spain in projects designed to improve its procedures and customer service channels; the completion of the roll-out of nearly 11 million smart meters and the supervision and automation of the grid.

Iberdrola's network business is a significant driver of the Spanish economy, generating more than 10,000 jobs in total (both direct and through its suppliers). In 2018, the company made purchases to the value of €500m from 2,000 local companies.