



## **ENDESA PREVENTS THE EMISSION OF MORE THAN 3,000 TONNE OF CO<sub>2</sub> IN SEVEN YEARS THANKS TO ELECTRIC AND HYBRID VEHICLES**

- **This quantity is equivalent to the carbon dioxide absorbed by a Mediterranean forest of more than 70 hectares in a full year.**
- **Since 2010, the company has replaced 32% of its fleet of short-haul vehicles with pure electric vehicles, the segment that best suits this technology due to its characteristics.**
- **Further, Endesa has renewed and extended the fleet used by its sales network with up to 407 hybrid vehicles since 2008, the largest in Spain.**
- **Endesa has also developed the first smart carpark for electric vehicles in Spain, with charging points for different technologies that can be managed to ensure optimum energy use.**

**Madrid, 16 June 2014.** In line with its policy to fight against climate change, Endesa has successfully managed to prevent more than 3,000 tonnes of CO<sub>2</sub> emissions over the past seven years through the use of pure and hybrid electrical vehicles. This quantity is equivalent to the carbon dioxide absorbed by a Mediterranean forest of more than 70 hectares in a full year.

As part of its fleet renewal programme, since 2010 the company has successfully replaced 32% of its short-haul fuel-run vehicles with pure electric vehicles, as this segment best suits the use of this technology. Endesa currently has a total of 26 electric vehicles in use and plans to include 11 more in the next few months.

Additionally, since 2008 the company has boasted the largest fleet of hybrid vehicles of Spain. These vehicles are used by its sales network and have been increased on a yearly basis to stand at 407 Toyota Prius and Auris hybrids today. Through this initiative alone Endesa has prevented emissions equivalent to the absorption capacity of 30,000 trees. Using these cars will also bring about annual fuel savings of 20-40% and prevent the emission of one tonne of CO<sub>2</sub>, compared to a similar vehicle equipped with a diesel engine.

The use of pure electric vehicles has significant environmental benefits but also saves costs. As a result, the electric vehicles incorporated into the company's fleet over the past four years have enabled Endesa to reduce fuel costs by 50% given that they use electricity instead of petrol. An electric vehicle used in an urban environment consumes an average of 15 kWh to travel 100 km, implying



a cost of Euro 2.10. If this calculation is extrapolated to the average daily distance travelled, savings of approximately Euro 1.50 a day would be made.

### **eParking, a mobility test laboratory**

The deployment of the electrical vehicle has driven the industrial and energy sector to develop the necessary technologies to connect them efficiently to the power grid. Endesa is currently working on a broad range of e-mobility products, including different types of charging infrastructures and microgrid technologies and all these developments will be included in the pioneering e-Parking project installed at the company's headquarters in Barcelona. The e-Parking project has been designed to demonstrate the efficient management of charging for private fleets of electric vehicles and it will also be integrated into the building's management system.

The installation has a surface area of 500 m<sup>2</sup>, and 24 3.7kW conventional charging points that take five to eight hours to fully charge the battery of an electric car. It also features the new FASTO, or Fast Together, charger developed jointly by Endesa and Enel that is equipped with all three connector types currently used in the market. It can therefore charge electric vehicles made by any manufacturer. Vehicle batteries can be almost fully charged in approximately 15 minutes.

Further, the carpark has a bidirectional reload or vehicle to grid (V2G) point. This technology allows the vehicle to be charged normally and also allows the vehicle to return any unused power to the grid thereby providing electricity for the building in a self-perpetuating cycle of efficiency. With this infrastructure, the 16kWh of power normally stored in the battery of an electric vehicle (equivalent to the consumption of an average household in two days) can be used and returned to the grid at a power of up to 10kW.

Another goal of the project is to use renewable energy produced by the solar panels installed on the roof of the building to charge vehicles, which would further reduce the environmental impact. To do this, an energy storage system will be installed to optimise the use of the renewable energy and reduce the impact of vehicle charging on the building's power system.

The e-Parking project is part of the Green eMotion European initiative, a benchmark in driving e-mobility. In this sense, it will serve a test laboratory to study how an electrical carpark of these characteristics can affect the power system of the building and vice versa.



press release



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