



## **ELECTRIC MOBILITY: ENEL X, NISSAN AND RSE LAUNCH ITALY'S FIRST TEST OF VEHICLE-TO-GRID TECHNOLOGY APPLIED TO INNOVATIVE SERVICES**

- *A centre for testing V2G technology, equipped with Nissan LEAF cars and charging infrastructure developed by Enel X, has been established in collaboration with Nissan and Enel X at the RSE facilities in Milan*
- *Through V2G, electric vehicles can exchange electricity with public and domestic grids with numerous benefits for the community, energy operators and customers*

**Milan, May 24<sup>th</sup>, 2019** - Enel X, Nissan and RSE have launched the first testing programme in Italy for the development and demonstration of vehicle-to-grid (V2G) technology, which enables electric vehicles (EV) to store and deliver electricity to help stabilise the electricity grid. The project involves the use of two Enel X bi-directional recharging systems, installed in the experimental RSE micro-grid, which, using a specific control platform, enables the use of Nissan LEAFs for grid stabilisation. The comprehensive range of functions that will be tested, which include a broad range of ancillary services, such as the optimisation of user electricity flows, makes this project a first in Europe as well.

Today, EVs are increasingly integrated into the energy ecosystem, moving from their traditional role as a means of transport to one in which they are energy vectors, playing an important part in the transition from fossil fuels to renewable resources.

The objective of the project is to test V2G functionalities based on the habits of private users and those who use corporate fleet vehicles. During recharging, the batteries will be used as energy storage systems connected to the grid, offering a range of advantages to the electricity system and car owners.

More specifically, V2G technology will make it possible to maximise the self-consumption of renewable energy generated by domestic systems, optimise the flows of power generated and consumed locally and ensure the continuity of electricity supply in the event of interruptions. An additional benefit for electric car owners is that they can earn money for the services provided to the electricity system, maximising the environmental and economic benefits of zero-emission mobility.

The possibility of using batteries for multiple purposes through V2G will give car owners a domestic or corporate power storage system at no extra cost and, in addition, will make an important contribution to the stability and efficiency of the electricity system: a tool that can further promote the take-up of electric vehicles in Italy.

The spread of non-schedulable renewable sources, especially solar and wind power, requires new flexibility systems, among which electricity storage technologies will play an essential role in this area. The expected growth in the number of EVs in Italy will provide, through vehicle-to-grid technology and smart charging, such a large storage capacity that will decisively contribute to the effective integration of renewables in the electricity system at a relatively low cost.



**Enel X** is the global business line of the Enel Group dedicated to the development of innovative products and digital solutions in sectors where electricity is showing the greatest potential for transformation. One of Enel X's main missions is the promotion of electric mobility by creating a public and private recharging infrastructure that generates sustainable and shared value for all stakeholders and explores the new opportunities represented by grid balancing and flexibility services.

**Nissan**, among the world's leading automotive groups, is strongly committed to the development of electric cars. Its participation makes it possible to interact effectively with the on-board batteries and to access to the associated data, both when the car is moving and when it is charging/discharging on the grid.

**RSE**, a public research company for the electricity and energy sector, has a comprehensive understanding of the functioning of the current and future electricity system. The company has gained broad experience in energy management and in controlling distributed electricity generation and storage resources.

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