



Innovative services for the electricity grid, supporting the energy transition

THE VEHICLE-TO-GRID PILOT PROJECT HAS BEEN INAUGURATED AT MIRAFIORI

FCA, Engie Eps and Terna working together to develop the world's largest sustainable mobility hub

Turin, 14 September 2020 –Today at the headquarters of the Heritage Hub within FCA's Mirafiori industrial district in Turin, FCA, Engie Eps and Terna presented the Vehicle-to-grid (V2G) electric-mobility pilot project, which will be the largest in the world once completed.

The V2G installation, located in the Drosso logistics area, was inaugurated during an international conference in the presence of the Minister of Economic Development, Stefano Patuanelli, the Mayor of Turin, Chiara Appendino and the President of the Piedmont region, Alberto Cirio, along with numerous other institutional guests and journalists from Italy and around the world, with a demonstration of its features and operating methods. The V2G plant at Mirafiori is a project “100% made in Italy”. On the one hand, it is a significant opportunity for the Italian industrial system to take a leading role in the development of the future of sustainable mobility. On the other, it is the result of the joint effort of three companies that lead their sectors. In their use of such an innovative technology, their experiments are now beginning on a bidirectional charging solution that benefits from physical aggregation in a single point of interconnection with the power grid, capable of interacting with the other energy resources on site.

The V2G technology allows vehicles to engage in smart exchange of energy with the grid, making them a precious resource for the national electricity system managed by Terna which, thanks to its networked infrastructure, has a key role in enabling the energy transition.

Vehicle-to-grid technology also represents an opportunity to optimise vehicle running costs, to the benefit of drivers, and a tangible opportunity to contribute towards an increasingly reliable, efficient and sustainable electricity system. Bidirectional technology – which both charges the car and returns power to the grid – can only work efficiently when the car and the charging infrastructure speak a common language. This is the focus of the trial launched with the inauguration of the plant. V2G thus represents a major opportunity, which is why FCA – together with its partners ENGIE Eps, the technicians who built the plant, and Terna, the operator of the high and ultrahigh voltage national

power grid – has committed to a cutting-edge project, an example of genuine innovation. The construction of the plant in just four months, despite the lockdown due to the COVID-19 outbreak, has enabled the transformation of what is typically only a cost (the storage of vehicles waiting to be delivered to the sales network) into a benefit that could be exploited by vehicle fleet managers in the not-too-distant future. Indeed, a (potentially high) number of vehicles parked for long periods in one place represents an opportunity to provide services to the network in an ‘aggregated’ manner.

Phase 1 of the plant’s construction has consisted of the installation of 32 V2G columns capable of connecting 64 vehicles, aimed at piloting the technology and managing the logistics of the storage area. By the end of 2021, the Drosso V2G project will be extended to interconnect up to 700 electric vehicles, making it the largest facility of its kind ever built in the world. The management of phase 2 will be mainly dictated by cost-effectiveness: the objectives will be to provide services to Terna power grid and to ensure a positive economic result for FCA and ENGIE Eps.

To cover the parking spaces for the cars connected to the V2G, ENGIE Italia is a partner in the construction of an enormous roof consisting of around 12,000 solar panels, which will supply the production and logistics facilities with ‘green’ energy. The plant will be able to produce over 6,500 MWh of energy every year, resulting in the offsetting of more than 2,100 tons of CO2 emissions per year, a boon for the environment. The project therefore represents a significant contribution to decarbonization in the industrial sector.

The press conference was divided into two parts, the first structured as a talk show where the three stakeholder companies went into greater detail on their rationale for deciding to become part of this project.

Roberto Di Stefano (Head of e-Mobility for FCA’s EMEA Region) explained: “Vehicle-to-Grid technology represents a significant opportunity to optimize the operating costs of cars for the benefit of motorists, as well as the concrete possibility of contributing to the sustainability of the power grid. However, we need a V2G-friendly regulatory environment. The Ministry of Economic Development has laid down criteria and means to promote the dissemination of Vehicle-to-Grid technology in Italy, with the aim of facilitating the spread of electric vehicles and the increase in flexible resources the electricity system requires for sufficient mainstreaming of renewable sources. A full regulatory framework is now expected to follow, referring to the fair remuneration of network stabilization services and coverage of the additional costs associated with the installation of bidirectional connecting devices and measurement systems, for the provision of ancillary services.”

For **Massimiliano Garri** (Director of Innovation and Digital Solutions, Terna): “The V2G electric mobility project presented today is the result of a positive shared pathway of research and development, which boosts Terna’s central role as an enabler of the energy transition. E-cars represent a highly significant potential source of energy and a great opportunity to help achieve a

more sustainable and decarbonized electricity system. The smart, bidirectional interaction between cars and the grid also gives Terna more flexibility resources and innovative services that, together with our distinctive skill set, ensure increasingly reliable and efficient service operations.”

Finally, **Carlalberto Guglielminotti** (CEO, ENGIE Eps) stated: “in 2030, with the forecast that even if only 5% of vehicles driven in Europe are electric, EVs will become the dominant technology that will revolutionize the power grid and will be decisive for every single balance within the European energy markets.” ENGIE Eps, already a pioneer and leader in microgrids and energy storage, felt compelled to take on the challenge of managing this massive change in the world of energy, by providing an innovative technology solution, as they always do. That’s why, in 2017, ENGIE Eps made major investments in research and development, jointly with FCA, to build Vehicle-to-Grid technology, inaugurated today. In fact, V2G is the solution that will bring about the biggest paradigm shift within the system of electric mobility and the world's electrical systems. At ENGIE Eps, we're extremely proud of having enabled its construction, finally speeding up and increasing the sustainability of the already unstoppable energy transition.

The second part of the event was given over to technical insights and to the conclusions of Pietro Gorlier (Chief Operating Officer of FCA’s EMEA region) and Stefano Patuanelli, Minister of Economic Development.

Pietro Gorlier stated: “sustainable mobility is a key pillar for FCA, one on which all our activities are based. In Italy alone – including with the launch of production related to electric and electrified mobility – FCA is investing €5 billion, affecting every one of our plants, with €2 billion of the total destined for the Mirafiori complex. In this context, several other projects are also taking place in addition to V2G, including the solar panels of the Solar Power Production Units: a surface area of 150,000 square meters, capable of producing 15 MW of power and thus contributing to reducing emissions by over 5,000 tons of CO₂. Or the Battery Hub, where batteries will be assembled using state-of-the-art technology.

It is now vital that the regulatory aspects be set out, now being worked on by the institutions. A national plan for public and private charging infrastructure must also be launched to support the rising number of electrified vehicles.”

With a recorded video message, European Union Commissioner for Energy **Kadri Simson** also wished to be present at the event. She emphasized that “the EU energy systems will benefit significantly from the participation of electric vehicles in all electricity markets as electricity suppliers – either directly or through aggregators. It will allow us to use more renewable electricity for deep decarbonisation”.

In his closing remarks, Minister **Stefano Patuanelli** stated that the Ministry of Economic Development enters into constant discussion and dialog with the parties involved in the construction of the future in this country, and guaranteed the utmost commitment of his department to the building of the regulatory framework and the related incentives required to support the development of enabling technologies for electric mobility. V2G acts as a central solution to increase accessibility to this form of mobility. The implementation of this project places Italy in a leading position in Europe.

The day ended with the inauguration of the plant by Minister Patuanelli and FCA Chairman **John Elkann**, who connected a new Fiat 500e to a bidirectional column in the V2G plant at the Drosso logistics hub at Mirafiori, Turin.

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