



PRESS RELEASE



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GridMotion Project: reducing electric vehicle usage cost thanks to smart charging process

Groupe PSA, Direct Energie, Enel, Nuvve, Proxiserve and the Technical University of Denmark have launched the GridMotion project with the aim of evaluating possible savings achieved by real-life electric vehicle (EV) users through the implementation of smart charging and discharging strategies for EVs.

An electric driver's electricity bill could be reduced, with no impact on transportation use, by shifting charging times from periods when electricity prices are higher to periods when electricity prices are lower. Even further savings could be achieved by providing grid balancing services through a Vehicle to Grid (V2G) system.

GridMotion partners have just combined their complementary expertise to launch a 2-year demo project. The project is intended to evaluate the savings EV users could achieve under real-life conditions with the implementation of smart charging and discharging.

The project will be carried out with two complementary types of users:

- 50 Peugeot iOn, Partner Electric, Citroën C-ZERO or Berlingo owners will test "smart" unidirectional charging, in line with their mobility needs, when electricity prices are generally lower, such as night-time in France;
- a fleet of 15 B2B EV Peugeot iOn or Citroën C-ZERO vehicles with Enel bidirectional charging stations testing "smart" charging and discharging (V2G services). This fleet will provide grid balancing services through short charging and discharging¹ cycles, again carried out in line with mobility needs. Charging is expected to be carried out when there is surplus electricity supply on the grid, while discharging is expected to be carried out when there is surplus electricity demand on the grid.

Project partners are looking for volunteers to start the experiment. Participants should be based in France and own a Peugeot or Citroën electric vehicle produced from January 2015 onwards.

The role of each partner is detailed below:

- Groupe PSA is in charge of recruiting customers and managing the project;
- Direct Energie will act as an aggregator towards RTE² and will make bids in the electricity and reserve markets by taking advantage of EV battery flexibility;
- Nuvve will be in charge of controlling the charging/discharging patterns of electric vehicles;

¹ Discharging is the electricity flow to the grid from the EV battery.

² The French Transmission Grid Operator



- Enel will provide the bidirectional charging stations and its expertise in smart grids;
- Proxiserve will install the B2C and B2B charging stations;
- DTU will provide academic support and testing systems.

Plug-in vehicle (PEV) sales grew by 42% between 2015 and 2016 worldwide³. This growth, fostered by technological improvements, falling prices and increasing pressure on air pollution, is expected to accelerate in the coming years. The GridMotion project is seeking to demonstrate how PEVs harness demand response and ancillary services to have a beneficial impact on grid stability and user income.



Contact Information

If you are interested in joining the project, please contact us at: GridMotionProject@mpsa.com



³ <http://www.ev-volumes.com/>



About Groupe PSA

With sales and revenue of €54 billion in 2016, Groupe PSA designs unique automotive experiences and delivers mobility solutions that provide freedom and enjoyment to customers around the world. The Group has three car brands, Peugeot, Citroën and DS, as well as a wide array of mobility and smart services under its Free2Move brand, to meet the evolving needs and expectations of automobile users. The automobile manufacturer PSA is the European leader in terms of CO₂ emissions, with average emissions of 102.4 grams per kilometre in 2016, and an early innovator in the field of autonomous and connected cars, with 2.3 million such vehicles worldwide. It is also involved in financing activities through Banque PSA Finance and in automotive equipment via [Faurecia](#). Find out more at www.groupe-psa.com/en

Media library: <https://medialibrary.groupe-psa.com/> | Twitter: [@GroupePSA](#)

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About Direct Energie

Third-largest French electricity and gas provider, the Direct Energie Group has already acquired and earned the trust of more than 2.1 million residential and professional customer sites in France and Belgium (under the Poweo brand). As an integrated energy provider, Direct Energie is involved in power generation, supply of electricity and gas, as well as the sale of energy services to its customers.

In 2016, the Group generated consolidated revenue of €1.692 Bn and supplied 19.8 TWh of energy.

For more information: www.direct-energie.com

About Enel

The Enel Group operates in over 30 countries across five continents, producing energy through a managed capacity of approximately 85 GW. Enel distributes electricity and gas through a network of over 2 million kilometres, and with over 65 million business and household customers worldwide, the Group has the largest customer base among European competitors. Enel is the largest integrated utility in Europe in terms of market capitalisation and figures among Europe's leading power companies in terms of installed capacity and reported EBITDA. Enel's green energy division Enel Green Power (EGP), the world's number one multinational renewable energy player, manages 38 GW of wind, solar, geothermal, biomass and hydropower plants in Europe, the Americas, Asia, Africa and has just arrived in Australia.

For more information: www.enel.com Twitter: [@EnelGroup](#) Media contact: +39 06 8305 5699 ufficiostampa@enel.com

About Nuvve

Nuvve Corp. is a San Diego based company, whose mission is to lower the cost of electrical vehicle (EV) ownership while supporting the integration of renewable energy sources, such as wind and solar. Our Grid Integrated Vehicle platform GIVe™ transforms EVs into grid assets when charging while guaranteeing the expected level of charge when the vehicle owner needs it. The aggregation of thousands of electric vehicles into a virtual power plant using the GIVe platform, allows Nuvve to participate in electricity markets with a power capacity comparable to traditional generators. Based on vehicle to grid technology or V2G, the GIVe platform gives benefits to public organisations, businesses and homes by reducing the cost of electric infrastructure and reducing CO₂ emissions. www.nuvve.com / Twitter: [@Nuvve_Europe](#)

About Proxiserve

The Proxiserve Group is an independent medium-sized French company leader in residential services and in particular in the installation and maintenance of electric vehicle supply equipment. The group achieved a turnover of € 345 million in 2016. It has 3,200 employees and a network of 100 branches in France. Media contact: Agence Les Communicants: Thomas Mesnil – t.mesnil@acommauto.com tél +33 (0) 1 40 89 92 86

About the Technical University of Denmark

For almost two centuries DTU, Technical University of Denmark, has been dedicated to fulfilling the vision of H.C. Ørsted—the father of electromagnetism—who founded the university in 1829 to develop and create value using the natural sciences and the technical sciences to benefit society. Today, DTU is ranked as one of the foremost technical universities in Europe



continues to set new records in the number of publications, and persistently increase and develop our partnerships with industry, and assignments accomplished by DTU's scientific advice.