

## EPS COMMISSIONED FOR ENEL THE WORLD'S FIRST 100% EMISSION-FREE "PLUG AND PLAY" MICROGRID POWERED BY SOLAR PV AND HYDROGEN-BASED STORAGE

**Milan, Calama, 1 June 2017** – Electro Power Systems S.A. ("EPS"), technology pioneer in energy storage systems and microgrids listed on the French-regulated market Euronext Paris (EPS:FP), announces the commissioning of a new energy storage system microgrid in Chile.

EPS realized for Enel Green Power the world's first commercial-scale microgrid 100% emission-free, which is powered by solar energy and coupled with hydrogen and lithium-based storage.

The system is currently meeting part of the energy demand of the camp that hosts over 600 technicians working at the Enel Green Power's geothermal plant Cerro Pabellón, located in Ollagüe, in the Antofagasta region of Chile, in the heart of the Atacama Desert (4500m above sea level).

The microgrid relies on a 125 kWp solar installation, backed by a 450kWh<sup>1</sup> hydrogen and a 132kWh lithium storage technologies. Our system, being able to integrate hydrogen and lithium, enables to cope with, respectively, seasonality and intermittency of power supply.

The combination of different technologies into such hybrid microgrid, whose capacity exceeds 580 kWh, turns intermittent solar power into a stable power source, boosting the microgrid's flexibility and stability. The system is enabled by Hybrid Energy Storage System (HyESS), EPS' technology platform integrated with a unique software for intelligent energy management structured with specific POOL algorithms. HyESS is then vertically integrated with the innovative Energy Management System (EMS), which optimizes the electricity flows produced by the solar energy ensuring the efficient sharing of such flows among the two storage technologies, in order to guarantee continuous availability of the power supply.

As a result, the microgrid is capable of supplying clean energy 24 hours per day and 7 days a week, with no need for support of any diesel generator (unlike most plants of this type) and provides stable power on demand with the same level reliability of the national electrical grid.

Adding the new HyESS will stabilize the microgrid, preventing 36 tons of CO<sub>2</sub> emissions per year on a total energy consumption of 132 MWh per year, with no need for support of any backup diesel generator.

The system is able to switch from on-grid to off-grid seamlessly, depending on operating conditions: it can be connected to a grid, as it is now, supporting the network and delivering electricity to the Cerro Pabellón camp, or alternatively, operate in islanded mode.

In addition, EPS offers a "plug-and-play" solution, as its components can be easily removed, re-assembled and installed into a new location, which is particularly helpful in remote, poorly electrified areas.

This is a disruptive and innovative project. For the first time, this Hybrid Power Plant combines renewables with the complete set of innovative technologies developed by the EPS Group.

*"It's a turning point in the validation from the market of our technology and another milestone in our path to energy transition for mastering the intermittency of renewables" commented Carlalberto Guglielminotti, Chief Executive Officer of EPS "The HyESS, vertically integrated with the EMS and the intelligent software, enables EPS to provide a full technological suite and to gradually displace diesel generation globally".*

*"This project confirms the universality of our technology built to manage any type of renewable energy supply and different storage solutions. EPS is proud of the commissioning of this unique and challenging microgrid in such a remote geographical area and, above all, to have partnered with ENEL, the largest European utility by number of customers".*

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<sup>1</sup>Net energy stored (or 1.1 MWh gross energy stored)

#### **EPS in a nutshell**

EPS operates in the sustainable energy sector, specializing in hybrid-storage solutions and microgrids that enable intermittent renewable sources to be transformed into a stable power source.

Listed on the French-regulated market Euronext (EPS:FP), EPS is part of the CAC® Mid & Small and the CAC® All-Tradable indices and has registered office in Paris and research, development and manufacturing in Italy.

Thanks to technology covered by 125 patents and applications, combined with more than 10 years of R&D, the Group has developed hybrid energy storage solutions to stabilize electrical grids heavily penetrated by renewable sources in developed countries and, in emerging economies, to power off-grid areas at a lower cost than fossil fuels without the need for any subsidy or incentive scheme.

EPS has installed and has under commissioning in aggregate 36 large scale projects, including off-grid hybrid systems powered by renewables and energy storage totalizing over 35 MW of installed power that provides energy to over 165,000 customers every day, in addition to more than 18 MW of grid support systems, for a total capacity output of 47 MWh of systems in 21 countries worldwide, including Europe, Latin America, Asia and Africa.

For more information, visit [www.electropowersystems.com](http://www.electropowersystems.com).

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