

Enel Green Power, ENERTRAG, Leclanché Inaugurate 22 MW Cremzow Battery Energy Storage System in Germany

The construction of the battery energy storage system (BESS) involved an investment of approx. 17 million euros and it is contributing to German network's stability providing frequency regulation services to the country's Primary Control Reserve market

ROME and BERLIN, May 16, 2019 - Today, Enel's subsidiary Enel Green Power Germany (EGP Germany), the German renewable energy company ENERTRAG and the Switzerland-based energy storage solutions company Leclanché inaugurated the 22 MW Cremzow Battery Energy Storage System (BESS), located in Cremzow, in the German state of Brandenburg.

The system, which involved a total investment of approximately 17 million euros, is supporting the stability of the German electricity network by providing frequency regulation services to the country's Primary Control Reserve (PCR) market.

"The Cremzow project demonstrates how storage is increasingly becoming an integral part of renewable energy systems due to its enabling role in making them more reliable, flexible and stable," said **Antonio Cammisecra**, Head of Enel Green Power. *"Leveraging on our expertise in the storage segment and the fruitful collaboration with our project partners, we launched this innovative storage system which allows us to contribute to the stability of the electricity transmission network around the clock in Germany, the heartland of the European PCR market."*

Jörg Müller, CEO of ENERTRAG, highlights not only the project's daily contribution to the primary balancing purposes but also its possible contribution to security of supply. *"Cremzow BESS allows us to back up the renewable energy system in case a black start is necessary. Our consortium demonstrates that battery energy systems are profitable without subsidies. Renewable energy systems are mature."*

Anil Srivastava, CEO of Leclanché, said: *"Cremzow is a landmark project which clearly demonstrates how energy storage solutions are solving some of the key challenges faced by our electricity grids today. We are delighted to be working with forward looking partners Enel Green Power and ENERTRAG, to deliver this important energy storage project which ensures the grid's stability and reliability, with the ambition of increasing the level of renewables in the grid and reducing curtailment."*

The Cremzow BESS is providing the grid with a real-time primary frequency regulation service contributing to its stability. When the grid's frequency decreases due to high power demand, the battery is able to deliver its stored energy within 30 seconds, while in response to frequency increases due to low demand, the battery is charged with the surplus energy. Furthermore, the possibility to integrate the BESS with ENERTRAG wind farms, using the wind energy surplus to charge the batteries avoiding curtailments, is currently being studied.

The BESS is owned by a special purpose vehicle (SPV) in which EGP Germany holds a 90% majority stake and ENERTRAG the remaining 10% stake. Leclanché acts as the engineering, procurement and construction (EPC) contractor for the project, in charge of integrating battery and power conversion systems and energy management software.

The German PCR market has evolved greatly in recent years with the early 2017 auction of approximately

600 MW of FCR attracting bidders from Austria, Belgium, France, Netherlands and Switzerland, thereby confirming the market's cross-border appeal. As of May 2019, the tendered PCR capacity in Germany amounts to 605 MW. The introduction of battery storage systems is an important development in the German PCR market: in 2017, BESS provided about 200 MW of PCR, equal to about 31% of the market.

Enel Green Power is the Enel Group's business line dedicated to the development and operation of renewables across the world, with a presence in Europe, the Americas, Asia, Africa and Oceania. Enel Green Power is a global leader in the green energy sector with a managed capacity of over 43 GW across a generation mix that includes wind, solar, geothermal and hydropower, and is at the forefront of integrating innovative technologies into renewable power plants.

ENERTRAG provides all services related to renewable energy. We efficiently bring together electricity, heat and mobility for all areas of life. As an energy producer with an annual production of 1.5 million MWh and a service network with over 1,120 wind turbines, we know from personal experience what is important for our customers. With more than two decades of experience in Europe, our 540 employees combine all the skills required for the successful operation and efficient maintenance, as well as citizen-oriented planning and reliable construction of wind turbines, grids, and even complete integrated power plants. We are always one energy ahead - whether in sector coupling, local stakeholder investment models or need-based night-beaconing.

Leclanché SA is a leading provider of high-quality energy storage solutions designed to accelerate our progress towards a clean energy future. Headquartered in Switzerland, Leclanché's history and heritage is rooted in over 100 years of battery and energy storage innovation and the Company is a trusted provider of energy storage solutions globally. This coupled with the Company's culture of German engineering and Swiss precision and quality, continues to make Leclanché the partner of choice for both disruptors, established companies and governments who are pioneering positive changes in how energy is produced, distributed and consumed around the world. Leclanché is at the heart of the convergence of the electrification of transport and the changes in the distribution network. Leclanché is the only listed pure play energy storage company in the world and is listed on the Swiss Stock Exchange (SIX: LECN).

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