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Press release

Successful launch of the first high-capacity battery park connected to the Belgian high-voltage electric grid

Since becoming operational in December 2021, the EStor-Lux battery park has supplied almost 16,000 MWh of balancing capacity to Belgian high-voltage transmission system operator, Elia



Bastogne, 18 February 2022 – On 9 December 2021, the EStor-Lux consortium (SRIW, Ackermans & van Haaren, CFE, BEWATT, SOCOFE, IDELUX, SOFILUX) launched the full commercial activity of the first battery storage park connected to the Belgian high-voltage grid. With an installed power of 10 MW and a storage capacity of 20 MWh, the 480-module lithium-ion battery park, installed on the site of a Kyndryl data centre in Bastogne, is the largest active battery site in Benelux in terms of storage capacity. Moreover, it is one of the first battery parks in Europe to offer a longer storage duration of 2 hours, which is 2 to 4 times more than most existing systems. Such longer duration offers decisive advantages to the power system, since the much more frequent and longer activations the battery can deliver allow to compensate imbalances before they translate into frequency deviations, whereas shorter duration systems can only kick in at a later stage to compensate for such frequency deviations once they have occurred.

In two months of operations, Centrica Business Solutions, which is in charge of the optimisation of EStor Lux on the electricity markets, has successfully participated in most of the automatic Frequency Restoration Reserve (aFRR) auctions organised by Elia on a daily basis. The battery park in Bastogne, integrated in a virtual portfolio with other flexible capacity sources, has thereby provided Elia an average balancing capacity (upwards or downwards) of 10.2 MW contributing to the stability of the Belgian electricity network.

Key for energy transition

The development of renewable energies, which fluctuate and are not perfectly predictable, will drive a tremendous increase in flexibility needs. Part of this flexibility requires very quick activation (within an hour, a minute or even 30 seconds) to compensate for forecast errors and unplanned outages of power plants.

Gas power plants currently deliver most of those fast flexibility sources. Because of their start-up and load control processes, these conventional flexibility sources are becoming increasingly costly both in financial and environmental terms. Battery electricity storage projects have the advantage of delivering immediate reaction, of not having a minimum charge threshold to supply fast flexibility and of emitting no CO₂. EStor-Lux demonstrates that the business model is profitable and that it does not require subsidies, as long as it is structured in a pertinent way.

According to Pierre Bayart, CEO of Rent-A-Port Green Energy (Ackermans & van Haaren, CFE, BEWATT): "The EStor-Lux model is a great boost for the energy transition. We supply balancing capacity



to the grid under much more advantageous conditions than the conventional sources of flexibility. In the end, this benefits the consumer. But it also benefits the planet. The capacity we have supplied in two months already represents a saving of 18,000 tonnes of CO₂ compared to what would have been supplied by gas power plants¹. Apart from the immediate benefit, this solution also constitutes an important step towards complete energy transition. Over time, the multiplication of this type of projects will allow us to entirely forgo fossil-fuel power plants to ensure grid balancing, which is vital to be able to cover electricity demand with a 100%-renewable mix."

Cédric Legros, Coordinator of the SRIW Energy platform explains: "With the anticipated growth in renewables, low-price periods can only become more frequent. In these conditions, forcing thermal power plants to operate at a loss with the sole aim of ensuring balancing represents an elevated cost for the system. And when these power plants do no longer supply enough flexible capacity, there is no other choice but to remunerate consumers for not consuming or renewable producers for not producing: something that makes no economic sense, and which batteries can help avoid."

Growth ambitions and industrial diversification

One of the keys to EStor-Lux's success was the agreement with Kyndryl to install the project on the site of their data centre in Bastogne. Liesbet D'hoker, Managing Director of Kyndryl for Belgium and Luxembourg: "We are delighted to be able to participate in this project by providing access to our infrastructure and our connection to the high-voltage network. This ties in perfectly with our wish to develop smart and sustainable solutions."

Relying on the experience with EStor-Lux, the project owners want to replicate the model on a larger scale. The aim is also to offer industrial consumers third-party financing solutions such as 'batteries as a service' for smaller-sized capacity. This will enable them for example to maximise their self-consumption of locally generated renewable electricity.

Cédric Legros concludes: "Our priority remains to develop capacity that contributes to market and grid balancing with a target of 150 MW by 2024. Over time, when the future offshore wind farms will be connected to the grid and renewables get close to 50% of the electricity mix, our ambition is to develop even larger projects that contribute to production capacity itself by transferring the electricity produced during peak generation of renewable production towards periods of peak electricity consumption."

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¹To obtain a balancing capacity equivalent to that supplied by EStor-Lux, a gas power plant with a capacity equivalent to 30 MW would have had to be kept operating constantly.