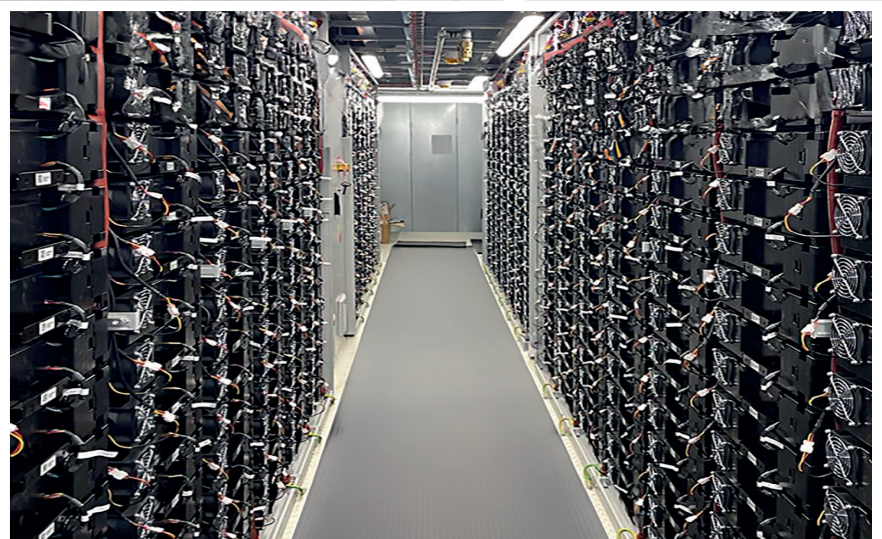


# Levice BESS Project

Levice, Slovakia



  
**STATIONARY  
SOLUTIONS**

Reducing the response time of a gas turbine for  
grid ancillary services

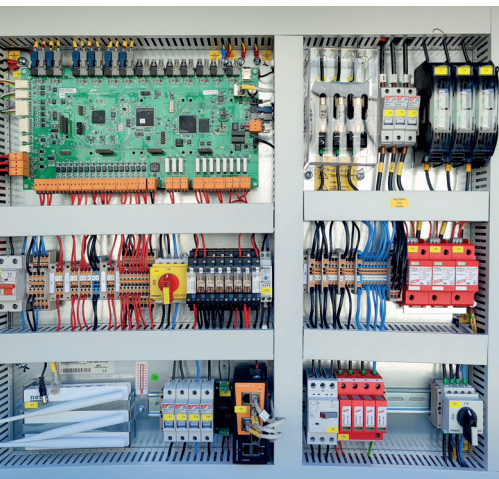
## The Challenges



A major energy company, **Veolia**, faces a significant challenge in meeting the new European secondary frequency control regulations for automatic frequency restoration reserve (aFRR) at one of its natural gas-fired power plants. It requires the plant to deliver its full power to the grid with a maximum reaction time, known as Full Activation Time (FAT), of just 7.5 minutes, instead of the previous 15 minutes once requested by the transmission system operator (TSO).

At the end of 2024, the FAT requirement may also be lowered to five minutes under certain conditions, which, if met, provides the plant operator with potential for additional revenue. This poses a technical hurdle for the gas turbine, which is not designed to ramp up in time to meet the new regulation, exposing the plant operator to a risk of loss of revenue from grid ancillary services.

## The Solution



### Leclanché's advanced Battery Energy Storage System (BESS) provides the solution to this challenge.

By installing 5.2 MW of energy storage operating at a high C-rate, the power plant can now meet the reduced reaction time requirements of aFRR. The BESS acts as a buffer while the gas turbine ramps up in power. This innovative solution enables the plant to maintain grid stability and ensure a reliable supply of electricity.

The Leclanché energy storage system features 2.9 MWh of LG batteries housed in a container, two Power Electronics inverters, and Leclanché's advanced energy management system (EMS), which operates based on setpoints received from the plant's SCADA system.

This project demonstrates Leclanché's expertise in designing and delivering energy storage solutions that meet the complex needs of grid operators and power plant operators. The successful integration of this system enables the power plant to comply with European secondary frequency control regulations, improve grid stability and reliability, and enhance the overall efficiency of the power plant.



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