



Slovakia energy storage for load shifting

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As part of its strategic vision for Slovakia's energy future, ENGIE launched a multi-phase project to drive renewable energy growth, ensure grid stability, and provide energy flexibility. ENGIE required a solution capable of delivering Frequency Control Reserve (FCR), integrating intermittent renewables like photovoltaics, wind and biogas, and managing imbalance, with the ability to expand as future energy demands evolve.

ENGIE deployed a 1.25 MW Pixii BESS at the Veľká Ida Industrial Park. Built using Pixii's modular PowerShaper technology, this system connects directly to the 110 kV substation, providing real-time frequency regulation by supporting Frequency Control Reserve (FCR) for SEPS, Slovakia's Transmission System Operator.

The BESS can adjust its power output within 30 seconds to maintain grid stability, a critical requirement for effective FCR services.

"The project of constructing and operating ENGIE's first battery storage in Slovakia is a significant milestone for our company. As one of the European leaders in energy transformation, we have long aimed to approach this segment comprehensively. We have transitioned from a heat supplier to a provider of comprehensive energy services, focusing on achieving decarbonization goals."

Pixii's PowerShaper technology delivers both immediate and long-term benefits for ENGIE. The system ensures grid stability with its rapid response capabilities, meeting SEPS's FCR requirements and managing fluctuations caused by renewable energy sources. Its modular design allows ENGIE to expand capacity as more renewable energy is integrated, smoothing out supply-demand imbalances and reducing reliance on fossil fuels during high-demand periods.

Pixii's dynamic value stacking, which allows the system to perform multiple services simultaneously, enables the BESS to participate in energy markets, opening revenue opportunities in demand response and energy arbitrage. This multi-functional capability enhances grid performance and maximizes the return on investment. Pixii's solution also positions ENGIE to offer energy flexibility services, allowing customers to better manage their energy consumption while advancing Slovakia's clean energy transition.

"Our PowerShaper technology is designed to meet the evolving needs of energy leaders like ENGIE. By enabling flexible, scalable energy storage, we are proud to support ENGIE's multi-phase project and help Slovakia accelerate its path to a sustainable energy future."

Since its launch in January 2024, ENGIE's battery storage system has been successfully stabilizing the grid and supporting the integration of renewable energy sources. With phase one completed, ENGIE is already

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laying plans to expand the system as energy demands grow and new opportunities arise. The collaboration with Pixii ensures that ENGIE remains at the forefront of Slovakia's energy transformation, equipped with the tools needed to adapt to a rapidly changing energy market.

ENGIE is a global leader in the energy sector, specializing in providing low-carbon energy and services. With a focus on sustainability and innovation, ENGIE operates across multiple areas, including power generation, natural gas, and energy efficiency services. The company's mission is to accelerate the transition toward a carbon-neutral world by addressing energy, industrial, and digital transitions.

MTS spol. s r.o. is a key partner for Pixii, acting as both a contract manufacturer and the exclusive sales representative in Slovakia, the Czech Republic, and Hungary.

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