

FOR IMMEDIATE RELEASE

Hitachi ABB Power Grids partners with Zenobē Energy to develop first of its kind traction power solution for UK railways

Enhancing rail operator performance and flexibility with power conversion technology that enables trackside batteries to provide 25kV traction power

Stone, Staffordshire, August 25, 2020 – Hitachi ABB Power Grids Ltd. is partnering with Zenobē Energy Limited., a leading owner and operator of battery energy storage systems, to deliver a first of its kind system that converts power from batteries to energise the 25 kilovolt (kV) rail traction power system. This will be the first time that batteries will be used to provide traction power for the UK rail network. It will allow train operating companies to maintain their fleets more efficiently and ultimately improve passenger service levels.

Zenobē's batteries will be coupled with Hitachi ABB Power Grids Static Frequency Converter (SFC) technology to power 25kV AC railway overhead lines. The batteries can power depots and sections of overhead lines during 'possessions', when track maintenance and upgrading is taking place. This approach provides significantly more time to maintain sections of track, branch lines and railway infrastructure.

The first planned applications will be to provide 24/7 traction power to depots. The combined battery and SFC solution is a cost effective alternative power supply which is quick to deploy, emission free and complies with railway standards. Benefits range from accessing power when it is normally unavailable at a depot to increasing the length and frequency of planned maintenance.

"Static Frequency Convertors have been used widely in Europe and worldwide, and the first application for use in the UK was successfully implemented by Hitachi ABB Power Grids at the Potteric Carr site on the East Coast Mainline for Network Rail," said Ian Funnell, Country Managing Director for Hitachi ABB Power Grids in the UK. "Using this proven technology, together with battery energy storage, provides a flexible and cost effective solution for powering depots and sections of overhead lines."

"Zenobē Energy brings a strong track record of being the first to apply the benefits of battery storage to the energy and transport sectors," said James Basden, founder director at Zenobē Energy. "Our collaboration with Hitachi ABB Power Grids enables us to bring significant operational and cost efficiencies, as well as environmental benefits to the GB Rail system. Zenobe is committed to owning and operating battery systems on the traction power system and so bring both new third party investment to support the electrification of the rail network."

Notes:

The UK rail system operates at 25KV single-phase alternating current (AC) which is different from any other power system in the UK. The SFC is therefore required to convert direct current (DC) electricity from the batteries for use on the rail traction power system. This will be the first time such an application has been carried out in UK.

About Hitachi ABB Power Grids Ltd.

Hitachi ABB Power Grids is global technology leader with a combined heritage of almost 250 years, employing around 36,000 people in 90 countries. Headquartered in Switzerland, the business serves utility, industry and infrastructure customers across the value chain, and emerging areas like sustainable mobility, smart cities, energy storage and data centers. With a proven track record, global footprint and unparalleled installed base, Hitachi ABB Power Grids balances social, environmental and economic values. It is committed to powering good for a sustainable energy future, with pioneering and digital technologies, as the partner of choice for enabling a stronger, smarter and greener grid. <https://www.hitachiabb-powergrids.com>

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