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FOR IMMEDIATE RELEASE **No. 3890**

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Mitsubishi Electric to Launch Railway Energy Management Solution Proof of Concept for Krakow Tram Network in Poland

Railway data analysis service and energy storage system for optimized electricity usage

Krakow Tram

TOKYO, April 20, 2026 – Mitsubishi Electric Corporation (TOKYO: 6503) announced today that it will launch a proof of concept (PoC) project for a railway energy management solution (railway EMS) to be tested on the tram network in Krakow, Poland, beginning in April 2026. The project will combine Mitsubishi Electric's Serendie™ digital platform and energy storage systems (ESSs) for the efficient capture and use of surplus regenerative braking power during tram operations.

Support for the project will be provided by Miejskie Przedsiębiorstwo Komunikacyjne S.A. w Krakowie (MPK), the public transport provider of the Krakow city; Zarząd Dróg Miasta Krakowa (ZDMK), the tram rail and road authority; and MEDCOM Sp. z o.o., Mitsubishi Electric's capital partner company based in Poland.

Given Poland's rapid economic growth and the resulting expectation of increased electricity demand, the recent surge in fuel prices has raised concerns about rising energy costs. Railway operators are striving to

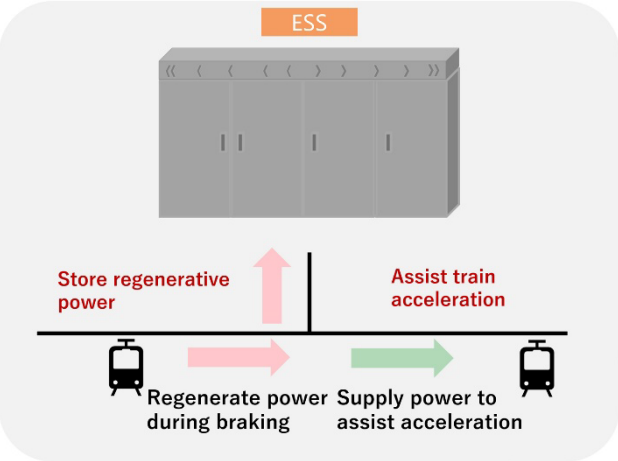
reduce power consumption, including during peak power spikes, as well as reduce carbon emissions, improve energy efficiency and stabilize the voltage supplied to railcars via overhead catenary systems.

In the first stage of the project, Mitsubishi Electric will use its railway EMS to analyze power consumption across the tram network, assess the availability of surplus regenerated power, and evaluate the stability of the overhead catenary voltage. In the second stage, this data will be used to verify reductions in electricity consumption through ESS deployment and stabilization of overhead catenary voltage. The results will be visualized through mapping of surplus regenerated energy, analysis of operational benefits and identification of optimal locations for ESS installations. In the final stage, Mitsubishi Electric will install ESS units along tram lines to store regenerative braking power for redistribution to other trams in operation.

The project will use ESS equipped with the Mitsubishi High Power Battery (MHPB™),[1] an innovative energy storage module. By measuring actual reductions in power consumption and improvements in voltage stability, Mitsubishi Electric aims to verify effective methods for reducing and optimizing electricity usage across the Krakow tram network.

Through this new railway EMS incorporating ESS, Mitsubishi Electric expects to support railway operators in achieving energy efficiency and carbon neutrality.

This PoC project will be supported by the Subsidies for Global South Future-Oriented Co-Creation Project (Ukrainian Reconstruction Support/Strengthening Cooperation with CEE Nations) in the FY2024[2] Supplementary Budget, which is administered by the Ministry of Economy, Trade and Industry of Japan.



Concept of ESS installation in stage 3 of PoC project

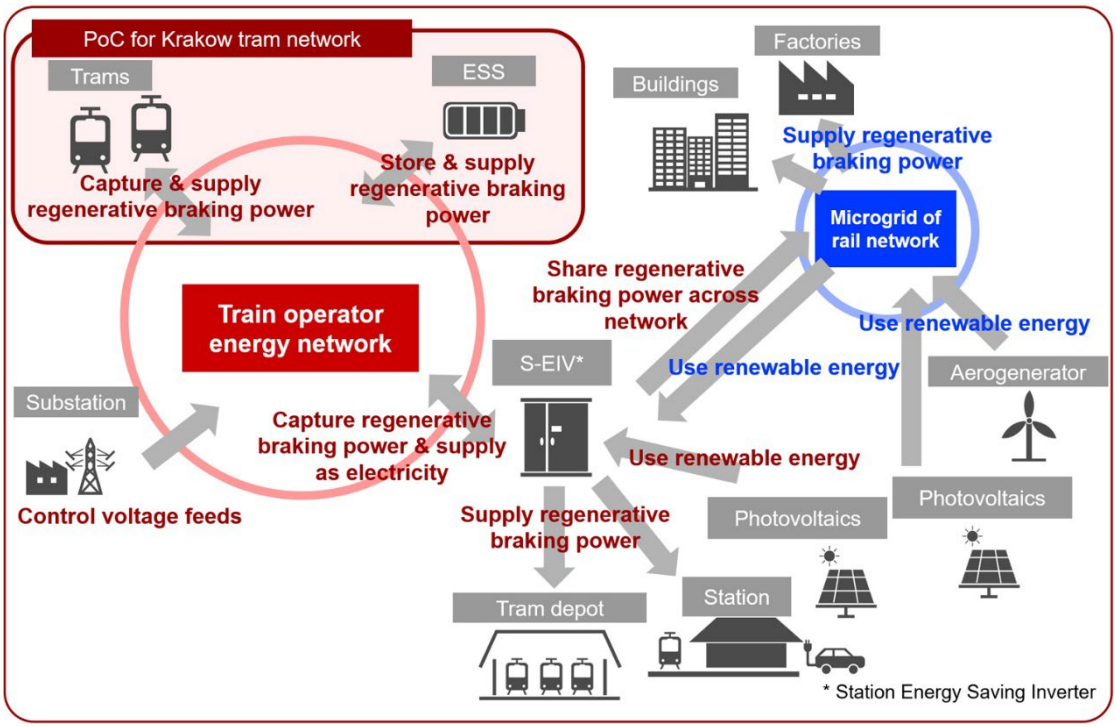
[1] This storage module, which is being co-developed by Mitsubishi Electric and Musashi Energy Solutions Co., Ltd., achieves high energy density suitable for storing and discharging the regenerative power of railcars. It was announced on May 15, 2024: https://www.MitsubishiElectric.com/en/pr/2024/pdf/0515.pdf

[2] From April 2024 through March 2025.

Summary of PoC Project

Duration	April 2026 – September 2028
Location	Multiple lines of the Krakow tram network in Poland
Details	- Collect data on electricity usage and overhead catenary voltage. - Analyze power consumption, regenerative braking power and voltage fluctuations; verify energy savings and voltage stabilization from ESS deployment; and identify optimal ESS installation locations. - Install ESS and supply stored regenerative power to operating trams. - Measure resulting reductions in energy use and voltage fluctuation.
Responsibilities	Mitsubishi Electric - Overall project management; and design and manufacture of MHPB and battery management system equipped with ESS. MEDCOM - Design and manufacture of DC/DC converters and ESS modules; and ESS system design, assembly and on-site construction management.

About Mitsubishi Electric's Railway EMS



Future concept of railway EMS

Mitsubishi Electric is advancing its railway EMS to improve energy efficiency in rail operations. Using the company's Serendie digital platform, the solution collects and analyzes power-consumption data from trains, stations and substations, while providing insights to optimize asset utilization. Going forward, Mitsubishi Electric aims to expand deployment of this solution beyond Krakow, enhance railway resilience to disasters, and contribute to more sustainable communities.

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About Mitsubishi Electric Corporation

Guided by its corporate philosophy, Mitsubishi Electric Corporation (TOKYO: 6503) places sustainability at the core of its operations and values stakeholder trust—encompassing society, customers, shareholders and employees. In pursuing profitability, capital efficiency and growth, Mitsubishi Electric works closely alongside customers to develop value-added solutions that address today's complex challenges while enhancing the company's sustainable corporate value.

Founded in 1921, Mitsubishi Electric has over a century of experience in delivering reliable, high-quality products and solutions. With over 200 group companies and approximately 150,000 employees worldwide, the company is a recognized global leader in manufacturing, marketing and selling electrical and electronic equipment and systems across a broad range of sectors, including public utility systems, energy systems, defense and space systems, factory automation systems, automotive equipment, building systems, air conditioning systems & home products, digital innovations, and semiconductor & devices.

Mitsubishi Electric recorded consolidated revenue of 5,521.7 billion yen (U.S.$ 36.8 billion*) in the fiscal year that ended on March 31, 2025. For more information, please visit www.MitsubishiElectric.com

*JPY 150=USD 1, the approximate rate on the Tokyo Foreign Exchange Market on March 31, 2025