

Hitachi to deliver the world's first 550 kV gas-insulated switchgear in which the entire equipment is SF₆-free to Chubu Electric Power Grid

Hitachi Energy's EconiQ[®] GIS will enhance the sustainability of Japan's power grids

Tokyo, March 12, 2026 – Hitachi, Ltd. announced today that it has received an order from Chubu Electric Power Grid for Hitachi Energy's EconiQ[®] 550 kilovolt (kV) sulfur hexafluoride (SF₆)-free gas-insulated switchgear (GIS). This is set to be the world's first project with 550 kV GIS*¹ in which the entire equipment is SF₆-free.

*¹ In gas-insulated switchgear, all components are housed in fully sealed gas-insulated compartments to reduce the substation size and protect the equipment from storms and other external interference.

The EconiQ 550-kV GIS reduces CO₂-equivalent emissions from the insulating gas by 99 percent compared with conventional SF₆-insulated equipment. By delivering this technology, Hitachi will support Chubu Electric Power Grid in making Japan's transmission network sustainable.

For decades, SF₆ gas has been widely used in power grids due to its excellent insulation properties and switching performance. However, it has a global warming potential 24,300 times higher than CO₂ and remains in the atmosphere for more than 1,000 years if released. Many governments are now introducing regulations to phase out new SF₆-based equipment to address climate change. Currently, Japan has no regulations on eliminating SF₆ gas equipment.

As Japan's electricity demand rises with increased electrification and the growth of data centers, the need to reinforce the grid while reducing greenhouse gas emissions becomes more urgent. SF₆-free switchgear, such as Hitachi Energy's EconiQ technology, offers the solution to this two-fold challenge – combining proven reliability and compact design with the lowest carbon footprint.

In 2024, Chubu Electric Power Grid announced its policy on adopting SF₆-free equipment for each voltage class and decided to introduce SF₆-free GIS for voltages up to 77 kV, as well as SF₆-free circuit breakers rated 275 kV and above. In line with the adoption policy defined in 2024, and with the aim of accelerating its efforts toward achieving carbon neutrality, Chubu Electric Power Grid has now chosen to deploy SF₆-free equipment for 550 kV GIS. This equipment will be used in its backbone transmission network.

Hitachi Energy launched its EconiQ high-voltage portfolio in 2021 to support the industry's transition to SF₆-free technologies. EconiQ products eliminate greenhouse gas emissions by replacing SF₆ gas with an eco-efficient alternative while maintaining the same performance, size, safety, and reliability as conventional SF₆-insulated equipment.

About Hitachi, Ltd.

Through its Social Innovation Business (SIB) that brings together IT, OT (Operational Technology) and products, Hitachi contributes to a harmonized society where the environment, wellbeing, and economic growth are in balance. Hitachi operates globally in four sectors – Digital Systems & Services, Energy, Mobility, and Connective Industries – and the Strategic SIB Business Unit for new growth businesses. With Lumada at its core, Hitachi generates value from integrating data, technology and domain knowledge to solve customer and social challenges. Revenues for FY2024 (ended March 31, 2025) totaled 9,783.3 billion yen, with 618 consolidated subsidiaries and approximately 280,000 employees worldwide. Visit us at www.hitachi.com.

About Hitachi Energy

Hitachi Energy is a global technology leader in electrification, powering a sustainable energy future with innovative power grid technologies with digital at the core. Over three billion people depend on our technologies to power their daily lives. With over a century in pioneering mission-critical technologies like high-voltage, transformers, automation, and power electronics, we are addressing the most urgent energy challenge of our time – balancing soaring electricity demand, while decarbonizing the power system. With an unparalleled installed base in over 140 countries, we co-create and build long-term partnerships across the utility, industry, transportation, data centers, and infrastructure sectors. Headquartered in Switzerland, we employ over 50,000 people in 60 countries and generate revenues of around \$16 billion USD.

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