

## Hitachi Energy to deliver the world's first SF<sub>6</sub>-free 550 kV gas-insulated switchgear

Innovative EconiQ technology at the Central China Branch of State Grid Corporation of China will accelerate the decarbonization of the power grid.

- EconiQ SF<sub>6</sub>-free 550 kV gas-insulated switchgear underscores Hitachi Energy's pioneering leadership in developing eco-efficient technologies for the highest voltage substations
- New switchgear technology will significantly reduce environmental impact and ensure greater grid reliability
- Hitachi Energy continues to collaborate with customers and partners to drive sustainable, eco-efficient energy solutions and contribute to China's ambitious carbon-neutrality goals



The world's first SF<sub>6</sub>-free 550 kV GIS, a breakthrough in grid decarbonization, drives sustainable energy solutions for China's carbon-neutral ambitions.

**Zurich, May 7, 2025** – Hitachi Energy today announces it will deliver the world's first sulfur hexafluoride (SF<sub>6</sub>)-free 550 kV gas-insulated switchgear (GIS) to the Central China Branch of the State Grid Corporation of China (SGCC). This pioneering achievement marks a significant step toward decarbonizing the power grid and contributes to China's target of achieving carbon neutrality by 2060.

SGCC is the world's largest utility company, serving over 1.1 billion people across 88 percent of China's national territory. As a leader in the energy sector, SGCC is firmly committed to sustainability and has developed an ambitious action plan for carbon neutrality.

The SF<sub>6</sub>-free 550 kV GIS is part of EconiQ®, Hitachi Energy's eco-efficient portfolio for sustainability, where products, services, and solutions are scientifically proven to deliver exceptional environmental performance. This technology strengthens critical infrastructure while significantly reducing the environmental impact of the power system.

By replacing SF<sub>6</sub> with a sustainable gas mixture, this GIS eliminates the greenhouse gas emissions caused by SF<sub>6</sub> while maintaining the same reliable performance and compact design as the conventional solutions. Replacing SF<sub>6</sub> is crucial for protecting the environment because it has a global warming potential 24,300 times higher than CO<sub>2</sub> and remains in the atmosphere for over 1,000 years if it leaks from the equipment.

An official from the Central China Branch of SGCC said, "In recent years, SGCC has been comprehensively promoting the emission reduction of power grid equipment and its clean and low-carbon development. Using an alternative gas to replace SF<sub>6</sub> can effectively reduce the consumption and emission of greenhouse gases.

This project is the world's first pilot application of 550 kV SF<sub>6</sub>-free GIS, which is of great significance to the Central China Branch of SGCC and will contribute to the clean transformation of the electrical industry to achieve the dual carbon goals."

Markus Heimbach, Managing Director of Business Unit High Voltage Products at Hitachi Energy, commented, "The world's first SF<sub>6</sub>-free 550 kV GIS represents a major milestone in our journey to provide sustainable and efficient power grid solutions, and we're pleased to collaborate with SGCC on this pioneering project. By leveraging our expertise in high-voltage technology, we are addressing the industry's demand for reliable and eco-efficient high-voltage switchgear and helping to accelerate the transition to a more sustainable, flexible, and secure energy system."

Hitachi Energy has been providing SGCC with 145 kV EconiQ eco-efficient GIS and live tank circuit breaker LTA products since 2022. With a growing portfolio of eco-efficient high-voltage products, Hitachi Energy is well-positioned to meet the increasing demand for sustainable and reliable power grid solutions. The EconiQ high-voltage series includes SF<sub>6</sub>-free LTA, GIS, gas-insulated lines (GIL), dead tank circuit breakers (DTB) for various voltage levels, and retrofill for GIL.

This comprehensive portfolio empowers utilities to integrate sustainability into their existing infrastructure or new installations, paving the way for a truly decarbonized future.

#### **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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#### **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](http://www.hitachi.com).

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