

Hitachi supports 800-volt architecture for next-generation data centers

Global leader in electrification leverages expertise to accelerate the AI boom

Zurich, October 13, 2025 - Hitachi, Ltd. (TSE:6501, “Hitachi”) and Hitachi Energy, a global leader in electrification, today announced support for the [800-volt direct-current \(VDC\) power architecture announced by NVIDIA](#), by developing a cleaner, more efficient way to power the next-generation artificial intelligence (AI) infrastructure. This power architecture paves the way for larger, more energy-efficient “AI factories” at a global scale.

Modern AI workloads are pushing data centers beyond the limits of traditional power architectures, which were designed for much smaller compute loads. Hitachi Energy’s advanced grid-to-rack architecture supports the 800 VDC rack design and streamlines how electricity flows from the grid into servers. The result is a simpler, more efficient, and more sustainable power system built for modern data centers that cuts energy waste, reduces cooling needs, and accelerates the deployment of hyperscale AI facilities.

“As the energy arm of the Hitachi Group, Hitachi Energy brings over a century of expertise in grid technologies and power electronics to this collaboration,” said Jun Taniguchi, Senior Vice President and Executive Officer, CEO of Strategic SIB Business Unit, Hitachi, Ltd. “Through our wider focus on the data center industry, the Hitachi Group’s combined expertise enables clean and sustainable development of the AI factories of the future.”

It is forecasted that up to 125-gigawatt (GW) of AI data center capacity could be developed globally between 2025 and 2030¹, comparable to Spain’s total installed generation capacity². Meeting this demand requires unprecedented investment and advances in both computing and energy infrastructure.

¹ [The cost of compute power: A \\$7 trillion race | McKinsey](#)

² [Installed capacity | System reports, Red Electrica, January 2024](#)

As the global market leader in transformers, high-voltage technology, digitalized grids, and service, Hitachi Energy is investing \$9 billion USD globally, the largest in the industry, to expand manufacturing, R&D, engineering, and partnerships. This includes a historic \$1 billion USD investment to advance the production of critical grid solutions in the U.S. The investments will be critical to meeting energy needs, including AI data centers and supporting a robust, future-ready electric grid.

Note to editors

Hitachi’s Strategic Social Innovation Business (SIB) Business Unit leverages resources across the entire Hitachi Group to capture new growth opportunities, including data centers. Jun Taniguchi, Senior Vice President and Executive Officer, CEO of Strategic SIB Business Unit, Hitachi, Ltd., will lead the Social SIB BU from Silicon Valley, where new technologies and businesses are constantly emerging.

In 2024, Hitachi announced a collaboration with NVIDIA to accelerate digital transformation with generative AI. [Hitachi Collaborates with NVIDIA to Accelerate Digital Transformation with Generative AI: March 19](#)

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 & 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. 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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