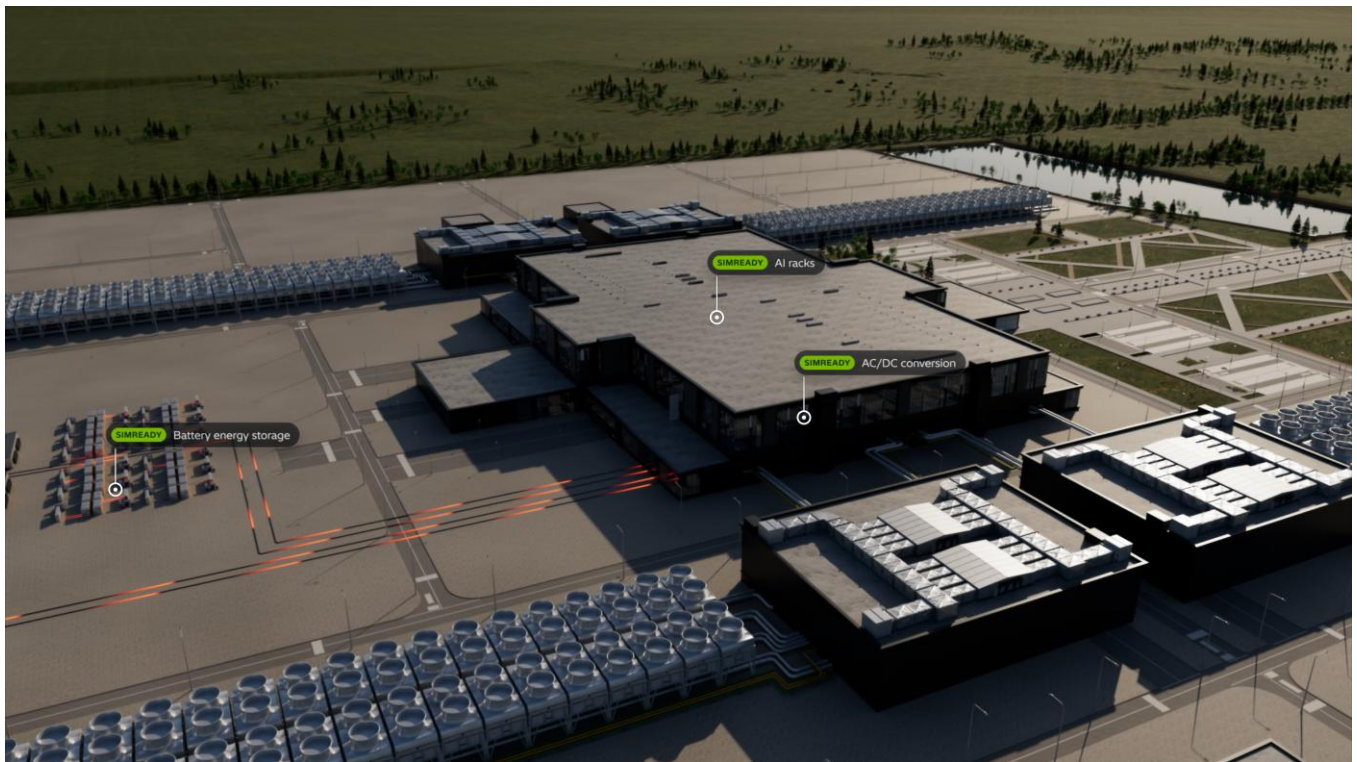


Hitachi Energy develops power system simulation with NVIDIA Omniverse libraries to help accelerate AI factory deployment

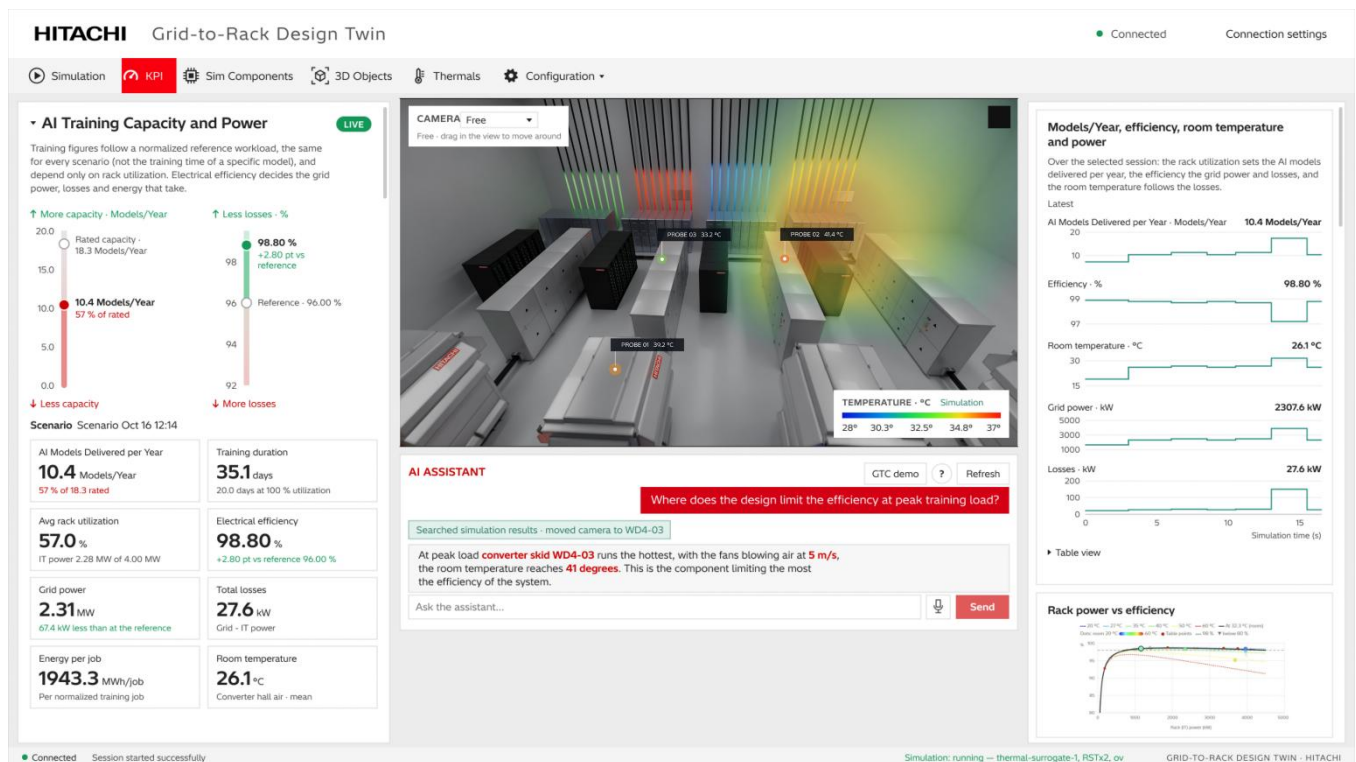
New capability helps evaluate and optimize future power systems from the grid to the rack.

- Demonstrates how Hitachi Energy's electrification expertise and simulation capabilities can evaluate power system designs and improve token per watt efficiency.
- Initial use case focuses on power system simulation and resilience assessment for emerging 800 VDC architectures for next-generation AI factories.
- Supports faster, more reliable deployment of power infrastructure for increasingly energy-intensive AI workloads.



Berlin, October 21, 2026 Hitachi Energy today announced a new simulation capability with integrated NVIDIA Omniverse^{*1} libraries that enables data center teams to evaluate how future AI factory power systems may perform before they are built, adding to the wider NVIDIA DSX Sim partner ecosystem. By bringing together AI load scenarios and power system models in a shared digital environment, the capability helps teams compare alternative designs, assess resilience, and make more informed decisions earlier in the planning process.

^{*1} About [NVIDIA Omniverse](#)



Hitachi Energy's simulation interface integrates an AI assistant, allowing users to explore the digital twin using natural language, retrieve results, and compare scenarios.

Power infrastructure is a critical factor in the speed and scale of AI factory deployment. Electricity demand from data centers increased by 17 percent^{*2} in 2025, while consumption from AI-focused facilities grew even faster, significantly outpacing overall global electricity demand growth. As operators work to accelerate AI infrastructure deployment, they must make critical design decisions that impact the ability to deliver with speed, reliability, scalability, and long-term resilience.

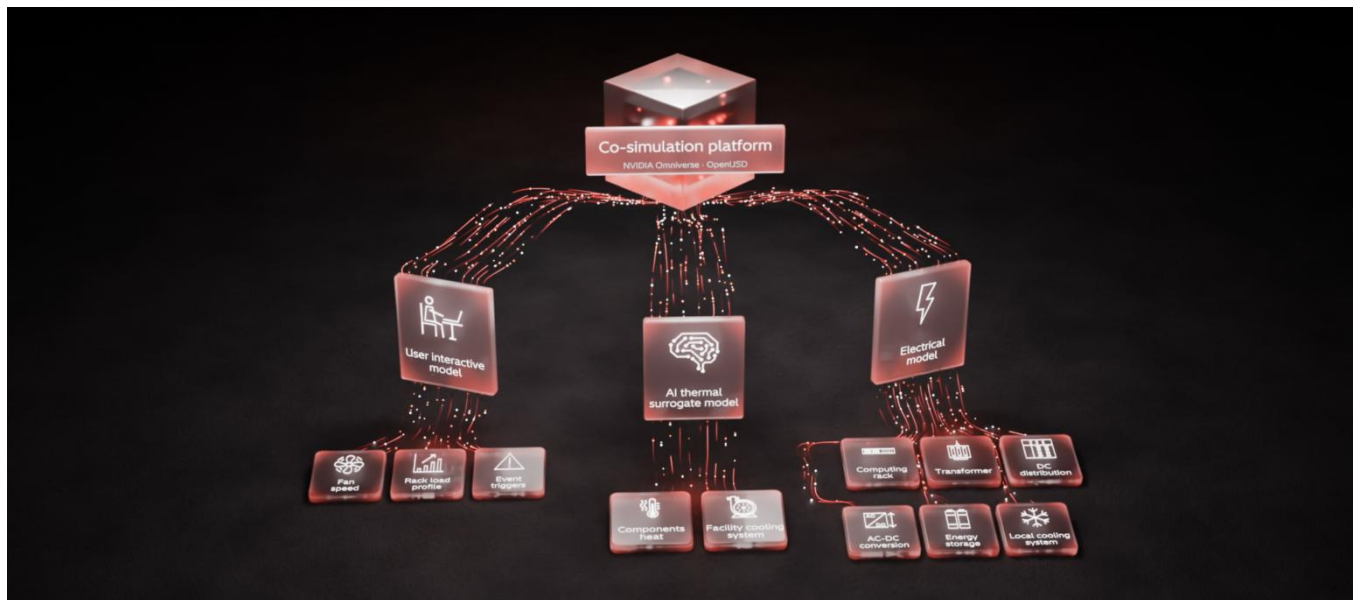
^{*2} [Key Questions on Energy and AI, 2025](#)

Hitachi Energy's new simulation capability initially focuses on 800-volt direct current (VDC) architectures, which are being developed to support the growing power density and efficiency requirements of next-generation AI factories. As the industry explores 800 VDC as a new approach to power distribution, grid-to-rack simulation can help provide insights into system behavior and performance before deployment at scale.

Building on its close collaboration with NVIDIA for 800 VDC^{*3} AI factories, the simulation enables teams to examine how different operating conditions, load profiles and resilience scenarios may affect grid-to-rack system performance before physical assets are adopted. Using OpenUSD-based workflows powered by NVIDIA Omniverse libraries, the shared environment allows engineering data and Hitachi Energy power system models to be evaluated together. The goal is to support comparison of design alternatives, validation of assumptions and more informed infrastructure decisions earlier in the planning process.

^{*3} [Hitachi supports 800-volt architecture for next-generation data centers](#)

"AI is rapidly becoming an infrastructure challenge as much as a computing challenge," said Marco Berardi, Head of Grid & Power Quality Solutions and Service at Hitachi Energy. "As AI factories scale, access to electricity, power system design and the ability to deploy infrastructure at speed are becoming increasingly important. By combining Hitachi Energy's electrification expertise with NVIDIA Omniverse libraries, we enable customers to explore and optimize power architectures across AI factory power chain before deployment, helping accelerate time to power."



AI load scenarios, power system models, thermal effects, and facility data are brought together in Hitachi Energy's OpenUSD-based simulation environment in NVIDIA Omniverse.

The development is part of a broader collaboration between Hitachi and NVIDIA to accelerate digital transformation with generative AI^{*4} and follows the recent qualification of Hitachi Energy's battery energy storage system as NVIDIA DSX Ready BESS^{*5}. That qualification helps customers identify infrastructure building blocks that meet applicable NVIDIA DSX reference design requirements for resilient, reliable and scalable AI factory power systems.

^{*4} [Hitachi Collaborates with NVIDIA to Accelerate Digital Transformation with Generative AI](#)

^{*5} [Hitachi Energy's battery energy storage system qualifies as NVIDIA DSX Ready BESS](#)

About Hitachi Energy

Hitachi Energy is a global leader in electrification, powering the electricity era to meet the energy demands of today, and the next 25 years. As the energy arm of Hitachi Group, over three billion people depend on our pioneering, mission critical technologies to power their daily lives. With over a century of innovation, we are addressing the most urgent energy challenge of our time: driving the evolution of the world's energy system to ensure abundant, secure, affordable, and sustainable power for today's generation and the next. With an unparalleled installed base in over 140 countries, we are the grid ecosystem partner across the utility, industry, data center, and transportation sectors. Headquartered in Switzerland, we employ over 56,000 people in 60 countries and generate revenues of around \$20 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 aims to be a global leader in continuously transforming social infrastructure through digital, contributing to a harmonized society where the environment, wellbeing, and economic growth are in balance.

Hitachi operates worldwide across four sectors – Digital Systems & Services, Energy, Mobility, and Connective Industries – as well as a Strategic SIB Business Unit focused on new growth areas. With Lumada at its core, Hitachi creates value by combining data, technology and domain knowledge to solve customer and social challenges.

Revenues for FY2025 (ended March 31, 2026) totaled 10,586.7 billion yen, with 606 consolidated subsidiaries and approximately 290,000 employees worldwide. Visit us at www.hitachi.com.