July 7, 2025

Press Release

Electric Power Development Co., Ltd.
Hitachi, Ltd.

J-POWER and Hitachi to Collaborate in Exploring the Construction of J-POWER AI Data Centers

Targeting Construction of Sustainable Data Centers That Are Carbon Neutral and Feature Highly Reliable and Secure Environments

Electric Power Development Co., Ltd. (“J-POWER”) and Hitachi, Ltd. (“Hitachi”) have concluded a memorandum of understanding (MOU) for the construction of AI data centers (“AI-DCs”) for operators of critical social infrastructure such as electricity, gas, railways, water and sewerage.

Japan is increasingly looking to AI as a technology that can resolve social issues such as a declining birthrate, an aging population and a shrinking workforce. Social infrastructure operators therefore have a growing need for reliable and secure AI-DCs to handle vast amounts of highly confidential data. J-POWER is involved in critical social infrastructure businesses, and will work with Hitachi to address industry needs by constructing and operating AI-DCs. The two companies will leverage J-POWER’s carbon-neutral energy sources throughout Japan, which encompass hydroelectric, wind, geothermal and solar, and the advanced knowledge Hitachi has gained in integrating AI into its operation technology (OT) for monitoring and controlling physical equipment and processes.

Based on the MOU, the two companies will set requirements and verify technologies for AI-DCs with reference to AI use cases in critical social infrastructure projects as well as the AI lifecycle, including training and inference. For example, the companies will explore the use of carbon-neutral, regionally decentralized power sources to sustainably meet the massive energy requirements of AI-DC operation, and the use of AI to support and optimize the operation of power plants.

These initiatives will contribute to the Watt-Bit Collaboration[1] policy that promotes the decentralization of data centers, and will also help achieve green transformation (GX) and digital transformation (DX) in support of regional coexistence.

Division of Responsibilities

This initiative will combine J-POWER’s carbon-neutral energy sources with Hitachi’s expertise in data center IT equipment and operation and its extensive AI use cases that include Lumada[2] to explore AI-DCs in critical social infrastructure projects.

J-POWER	Provision of land, buildings and electricity for AI-DCs, and provision of data required for technology verification
Hitachi	Provision of IT equipment such as servers and storage for AI-DCs, and provision of AI and digital technologies

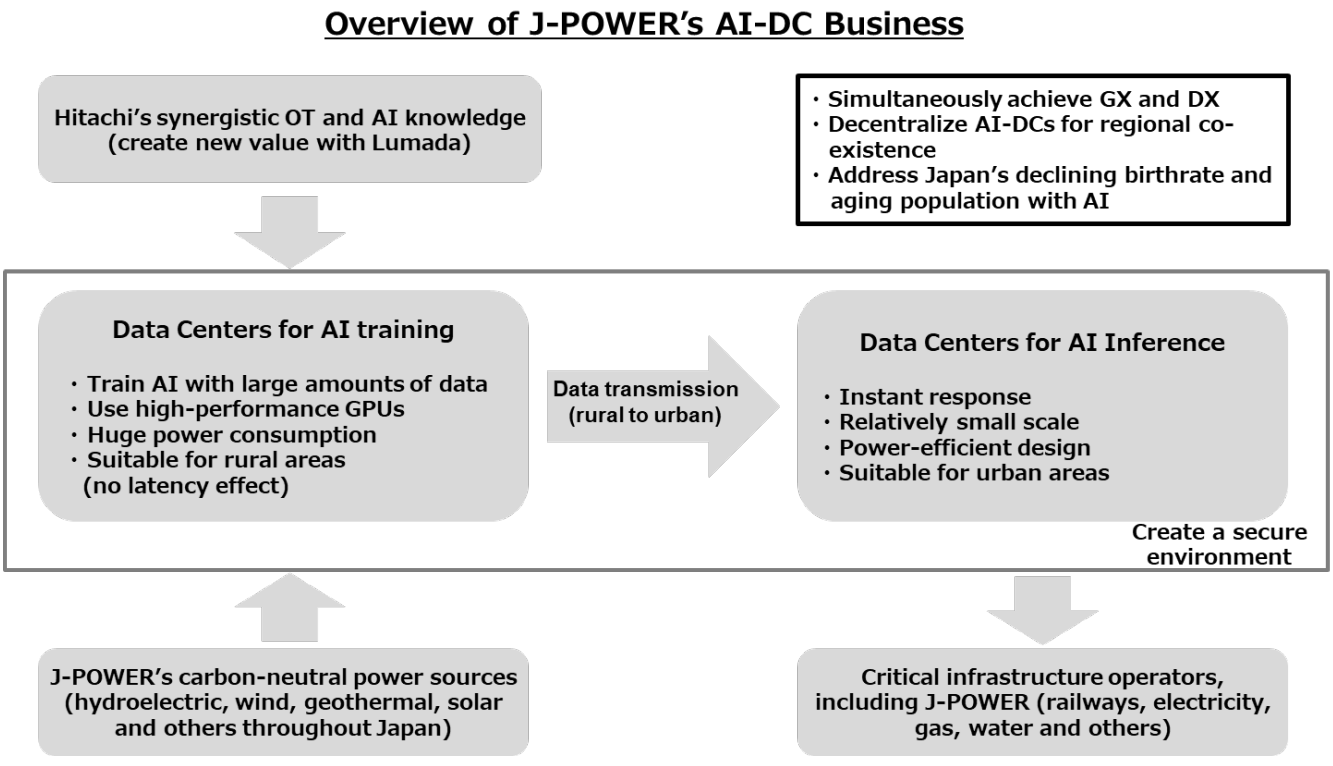
Exploration Themes

(1) Energy optimization achieved through decentralization of AI-DCs

The AI lifecycle requires a training environment for building generative AI models and an inference environment for executing them. The two companies envision AI-DCs for the training and inference environment in separate locations. This will enable the use of carbon-neutral power sources such as renewable energy and transitional thermal power plants, and we will explore energy optimization at AI-DCs. We will also explore the use of technology that enables large-volume, low-latency, low-power data transmission between DCs to enable the decentralization of AI-DCs.

(2) Creation of a highly reliable and secure environment

We will build a secure AI-DC environment using a private cloud to establish the highly reliable, high-quality digital infrastructure required for critical social infrastructure. Critical social infrastructure operations that underpin society handle highly confidential data in the OT domain, so a secure operating environment is essential in the use of generative AI. Therefore, we plan to use generative AI at J-POWER's power plants to create an environment with features such as strict access restrictions that enable secure use among a diverse range of companies.



1. Watt-Bit Collaboration: A coined term combining watt, a unit of electricity; with bit, a unit of information and communications. It is a concept for building a sustainable and efficient social foundation by promoting the integrated development of electricity, information and communications infrastructure through public-private collaboration.
2. Lumada: Hitachi's advanced digital solutions, services and technologies for creating value from customer data and accelerating digital innovation.

About J-POWER

J-POWER is an electric power company established in 1952. The J-POWER Group's mission is to provide the energy people need and contribute to the sustainable development of Japan and the world. In pursuit of this mission, the Group has been engaged in hydroelectric, thermal, wind, geothermal and solar power generation, as well as transmission and other projects in and outside Japan.

To achieve this mission, we announced J-POWER BLUE MISSION 2050 in February 2021, and are working to make our power generation business carbon neutral by 2050. We have set targets to reduce CO_2 emissions by 9.2 million tons in FY2025,[3] 22.5 million tons in 2030,[3] and virtually zero in 2050 by accelerating the development of CO_2-free power sources, upcycling existing thermal power plants and promoting initiatives to generate, produce and supply CO_2 free hydrogen.

3. J-POWER's power generation business in Japan. All figures are in comparison with FY2013.

About Hitachi

Hitachi contributes to the realization of a society in which the environment, happiness and economic growth are in harmony through its social innovation business (SIB) that employs IT, OT and products. Its Strategic SIB Business Unit, which creates new growth businesses, operates globally to complement the four segments of Digital Systems & Services, Energy, Mobility and Connective Industries. Hitachi focuses on the utilization of Lumada in creating value from data to resolve the issues facing customers and society. Revenues for the fiscal year ended March 2025 were ¥9,783.3 billion. As of March 31, 2025, the Hitachi Group had 618 consolidated subsidiaries and approximately 280,000 employees worldwide. Please visit https://www.hitachi.com/en/ for more details.