Press Release
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Hitachi Energy expands zero-emission power portfolio with HyFlex Compact

- Hybrid generator and flexible power hub that combines hydrogen fuel cells with high-performance batteries to deliver an emission-free alternative to diesel generators
- Provides stable AC power whenever and wherever it's needed, with configurable input modules to connect multiple energy assets

Introducing HyFlex Compact from Hitachi Energy

London, June 11, 2026 Hitachi Energy, a global leader in electrification, has introduced HyFlex® Compact – a hybrid generator and flexible power hub that provides zero-emission electricity for temporary and off-grid applications such as construction projects and other infrastructure. The configurable system combines hydrogen fuel cells with high-performance batteries and can integrate additional power sources, delivering stable AC power as a clean alternative to diesel generation.

As electricity demand rises, companies across industry and infrastructure are electrifying operations and cutting emissions, often in locations where grid connections are limited or unavailable. This is increasing demand for flexible power solutions that can perform reliably across a wide range of operating conditions, from remote sites to grid-connected environments.

Addressing these requirements calls for power solutions that go beyond single technologies, supported by robust system expertise and integration capabilities. Designed for standalone or grid-connected operation, Hitachi Energy's HyFlex Compact combines hydrogen fuel cells, batteries, power electronics, cooling, and auxiliaries in a single, portable enclosure, all managed by an optimized control system. The system converts hydrogen into clean electricity using fuel cells, producing power, heat, and water with no harmful emissions.

With optional AC and DC input modules, Hyflex Compact can operate as a mobile microgrid, connecting multiple energy assets, providing stable AC power whenever and wherever it is needed. This enables more efficient operation and reduces reliance on hydrogen when additional power sources are available.

“The energy system is being asked to deliver more electricity, with lower emissions and higher resilience, often in places where the grid was never designed for today’s demands,” said Marco Berardi, Head of Grid & Power Quality Solutions and Service at Hitachi Energy. “HyFlex Compact brings together different technologies through system integration expertise to support a secure electricity supply as energy systems evolve, while helping companies move toward lower-emission power.”

HyFlex Compact is suitable for applications across a wide range of operating environments, from construction sites and temporary infrastructure such as events and festivals to electric vehicle charging, mining operations, remote industrial sites, critical infrastructure, and hard-to-abate operating environments.

The introduction of the flexible power hub marks an evolutionary step, building on Hitachi Energy’s earlier HyFlex developments. Initial pilots explored hydrogen-to-power applications and provided valuable insight into integrating fuel cells, power electronics, and control systems in real-world operating environments[1].

Hitachi Energy continues to bring flexible, low-emission solutions to market, underpinned by its expertise in power electronics and system integration. Recent investments in power electronics capabilities, including the inauguration of the Grid & Power Quality Solutions and Service Test Center in Västerås, Sweden, and the announcement of a new Power Electronics Center of Competence in the United States[*1], underscore the company’s focus on strengthening the technologies needed to support secure, affordable, sustainable and resilient electricity systems.

*1 Hitachi Energy expands its U.S. footprint with $10 million USD investment in North Carolina to meet surging electricity demand

Some of HyFlex pilot projects

1. Hitachi Energy and Air Products pioneer zero-emission construction site in the Netherlands
2. Hitachi Energy’s pioneers HyFlex hydrogen-powered generator with shore power system for ships at berth
3. Hitachi Energy enables decarbonization of construction site in Sweden

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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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.