

FOR IMMEDIATE RELEASE

Hitachi ABB Power Grids to provide energy storage solution for Singapore's first virtual power plant

Exemplary stakeholder collaboration and advanced energy storage system to enable integration and optimization of distributed energy resources

Singapore February 4, 2021 – Hitachi ABB Power Grids has been selected to deploy its innovative energy storage solution to support the development of Singapore's first Virtual Power Plant (VPP) project. The project, launched in 2019, is developed by the Energy Research Institute @ Nanyang Technological University, Singapore (ERI@N) and is jointly funded by Singapore's Energy Market Authority (EMA) and Sembcorp Industries (Sembcorp).

Hitachi ABB Power Grids' e-mesh™ PowerStore™ battery energy storage system (BESS) is a critical part of the VPP infrastructure, providing grid stability by balancing intermittent generation with smart and dynamic loads.

"Singapore operates one of the most reliable electricity networks in the world," said Nirupa Chander, Country Managing Director of Hitachi ABB Power Grids in Singapore. "This project is a good example of how multiple stakeholders i.e. the government (EMA), academia (NTU), industry (Sembcorp) and technology providers like us collaborate to deliver innovative solutions and accelerate the energy transition for a greener future," she added.

"Selecting the right technology partner is crucial for the project's success and we are pleased to work with Hitachi ABB Power Grids, a recognised leader in power technologies," said Mr Matthew Friedman, Sembcorp's Chief Digital Officer. "This marks a key milestone in the VPP project, as energy storage is critical to the efficient integration of green energy into Singapore's power grid," he added.

"To meet the carbon emission standards of the future, Singapore will have to tap on all renewable energy sources, relying on artificial intelligence and smart solutions to better coordinate and manage all its energy sources efficiently," said NTU's Senior Vice President (Research) Professor Lam Khin Yong. "The Virtual Power Plant (VPP) is a key project that will allow efficient modelling and innovative features of these emerging technologies to be validated," he added.

The VPP will enable electricity produced from Distributed Energy Resources (DERs), like solar and other green sources, to be integrated intelligently, simulating a utility scale power system. Using real-time information, the VPP will optimise the power output of these resources located across the island. Energy fluctuations resulting from solar intermittency will be balanced automatically via the VPP.

This project builds on Hitachi ABB Power Grids' global Grid Edge Solutions footprint of more than 500 megawatts (MW) and 200 references. The business' technology has enabled customers to create economic, social and environmental value by unlocking

new revenue streams, maximizing renewable integration, and lowering carbon emissions.

Websites:

- 1) Sembcorp Industries: <https://www.sembcorp.com>
- 2) Energy Research Institute @ Nanyang Technological University: <https://erian.ntu.edu.sg>
- 3) Energy Market Authority of Singapore: <https://www.ema.gov.sg>
- 4) e-mesh PowerStore: <https://www.hitachiabb-powergrids.com/offering/product-and-system/energystorage/powerstore>

About Hitachi ABB Power Grids Ltd.

Hitachi ABB Power Grids is global technology leader with a combined heritage of almost 250 years, employing around 36,000 people in 90 countries. Headquartered in Switzerland, the business serves utility, industry and infrastructure customers across the value chain, and emerging areas like sustainable mobility, smart cities, energy storage and data centers. With a proven track record, global footprint and unparalleled installed base, Hitachi ABB Power Grids balances social, environmental and economic values. It is committed to powering good for a sustainable energy future, with pioneering and digital technologies, as the partner of choice for enabling a stronger, smarter and greener grid. <https://www.hitachiabb-powergrids.com>

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