Enabling resilient and cost-effective access to power

e-mesh PowerStore

Grid-forming battery energy storage system

- Designed for both grid-connected and off-grid applications
- Grid codes and standards compliant
- Pre-configured automation functionalities
- Productised design allows faster implementation

HITACHI ABB POWER GRIDS
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e-mesh PowerStore

Hitachi ABB Power Grids’ e-mesh™ PowerStore™ grid-forming battery energy storage systems are designed for both grid-connected and off-grid applications, ensuring reliable power, seamless renewable integration and grid stability whilst reducing operating costs and complying with main grid codes and standards.

e-mesh PowerStore is available in different sizes and configurations and as integrated and modular versions. In the integrated version, the power conversion system (PCS) and battery modules are integrated into a single outdoor enclosure. In the modular version, the PCS and battery are housed in separate enclosures to achieve flexible power and energy ratings.

Covering a wide range of power ratings, from 250kW up to MW scale, the two versions are designed to provide grid stabilisation with added energy storage benefits for installations across utilities, remote communities, independent power producers, oil & gas and mining companies, defense and commercial and industrial establishments.
Key automation features of the e-mesh PowerStore systems include:

**Peak shaving**
Reduce peak demand from your facility or power system.

**Renewable shifting**
Store excess renewable production to be used during peak demand hours.

**Frequency and voltage support**
Proprietary Virtual Generator Mode algorithms manage frequency and voltage excursions.

**Renewable smoothing**
Smooth out the rapid fluctuations in power output from renewable generators and dynamic loads.

**Microgrid/islanding**
Grid-forming, seamless transition and black start capabilities to provide power in the event of utility disruption.

**Cybersecurity**
Ensures high level of cybersecurity according NERC-CIP and IEEE 1686.