

FOR IMMEDIATE RELEASE

Hitachi ABB Power Grids and Tensio TN AS to deliver Norway's first fully digital, eco-efficient substation

Virtual Reality designed, fully digitalized substation to reduce the environmental impact whilst enabling a more resilient and sustainable grid around Trondheim

Zurich, 13 October, 2020 – Hitachi ABB Power Grids is collaborating with the Norwegian power grid operator Tensio TN AS on the delivery of a new, eco-efficient, digital, 145 kV substation at Sutterø. The project will extend and increase the reliability of the electricity grid around Stjørdal, outside Trondheim in Central Norway. The substation delivery is expected by June 2021.

In response to the growing population, increased demand for electric vehicle (EV) charging and the electrification of regional rail services, the region needs to boost its eco-efficient power supply. As Norway moves towards ending the sale of fossil-fuel-powered cars from 2025, EVs make up half of all new cars sold, now accounting for one in 10 vehicles on the country's roads.

To help meet this upsurge in electricity demand, Hitachi ABB Power Grids is collaborating with Tensio TN, using virtual reality design and engineering tools to co-create an integrated substation solution with a reduced physical and environmental footprint. This solution includes an eco-efficient gas-insulated switchgear (GIS), with AirPlus™ gas, replacing the industry standard sulfur hexafluoride (SF6), with fiber optic cables instead of traditional copper cables, where possible. This innovation is in line with Hitachi ABB Power Grids' commitment to work with alternative eco-efficient gasses to reduce carbon footprint.

“Working closely with customers to create and deliver effective, environmentally-friendly solutions is of strategic importance to us,” said Niklas Persson, Managing Director of the Grid Integration Business Unit at Hitachi ABB Power Grids. “Our collaboration with Tensio TN on this project exemplifies this approach and we are very excited to be piloting this new and innovative solution to help facilitate a stronger, smarter and greener grid in the Stjørdal area.”

“With a growing population and associated electrification demands, Stjørdal requires increased power capacity and a rock-solid grid, now and for the future,” said Tensio CEO Trygve Kvernland. “We are committed to streamlining through digitalization, to simplify control and operation, while minimizing our physical and environmental footprint and reducing operational expenditure.”

The project brief emphasized safety, eco-efficiency and a compact footprint, in addition to enhancing the substation design and operations through digitalization. The compact design of Hitachi ABB Power Grids' GIS solution, together with the digitalized design of the automation system, enables a reduction of up to 70 percent in space compared to a conventional air-insulated switchgear substation.

This substation also includes extensive digital technology offering, enabling data collection and sharing, resulting in fast decision-making support to operators in critical

situations. This comprises Hitachi ABB Power Grids' industry-leading Station Automation System (SAS) with MicroSCADA X, Relion® 670 series Intelligent Electronic Devices (IEDs) for enhanced asset protection as well as advanced communication and security systems. In addition, RelCare™ service will embed a state-of-the-art, digital Reliability Centered Maintenance (RCM) application, and Transformer Analyzer will reduce the risk of transformer failure by intelligent analysis of transformer protection data.

The full integration and delivery of this substation solution utilizes highly skilled engineering and project management resources, trained and with deep knowledge of these advanced technologies to ensure smooth execution and timely delivery.

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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