ABB announced today that it received a significant order for two blocks of frequency converter systems for the Higashi Shimizu project in Japan from Chubu Electric Power Co., Inc. ("Chubu Electric"). The order has been placed through the established Hitachi-ABB joint venture, Hitachi ABB HVDC Technologies, Ltd.

In this project, the system to be delivered uses Voltage Source Converter (VSC) High-Voltage Direct Current Transmission (HVDC) power transmission technology, enabling interconnection between systems, with different frequencies implemented by converting alternate current into direct current. Hitachi will construct the system using an AC/DC converter, including the combination of an ABB Control and Protection System and a Hitachi converter transformer, based on the strategic partnership with ABB.

HVDC (high-voltage direct current) is a highly efficient alternative to alternating current (AC) for transmitting large amounts of electricity with higher efficiency and lower electrical losses. HVDC enables a secure and stable interconnection of power networks that operate on different voltages and frequencies (asynchronous). HVDC also provides an instant and precise control of the power flow and can increase the AC grid capacity by its stabilizing features.

The Higashi-Shimizu project will reinforce the connection between the 50 Hz network in Eastern Japan and the 60 Hz network in Western Japan. The connection is expected to significantly strengthen and help develop electricity transfer and increase power reliability.

The Organization for Cross-regional Coordination of Transmission Operators in Japan, which supervises the power interchange among power companies, has been advancing a priority project to increase the interconnection capacity between the 60 Hz area of Chubu Electric and the 50 Hz area of Tokyo Electric Power Company ("TEPCO") from the current 1,200 MW to 3,000 MW. Chubu Electric has been developing an important project for increasing the interconnection capacity of the Higashi Shimizu Substation from 300 MW to 900 MW, which is scheduled to commence operation in FY2027.

“The Higashi-Shimizu HVDC project is very important for our 2015 established HVDC joint venture in Japan. Our global pioneering HVDC technology, combined with Hitachi project capability, will significantly strengthen the Japanese power grid, thus bringing tangible benefits to Japanese consumers and the society at large,” said Claudio Facchin, President of ABB’s Power Grids business.

ABB will supply ABB system engineering, Voltage Source Converter (VSC) technology called HVDC Light®, digital solution with well proven ABB Ability MACH™ control and protection system. Two new back-to-back blocks of 300 MW each will be built on an existing site with an existing HVDC back-to-back.

ABB pioneered HVDC technology and remains the world leader in this highly-efficient technology, having completed more than 120 HVDC projects around the world.
Joint venture - Hitachi ABB HVDC Technologies, Ltd.

Established in 2015. Joint venture company for high-voltage direct current (HVDC) transmission in Japan. Hitachi owns 51% of the joint venture and ABB owns 49%.

The joint venture is based in Tokyo and provides ABB’s latest technology to HVDC projects on which Hitachi is the prime contractor, taking full responsibility for all aspects of direct current (DC) systems from design to engineering and equipment supply, as well as after-sales service. The intention is to contribute to wide-area electric power distribution networks in Japan by combining Hitachi’s sales network, project management know-how, and quality assurance processes with leading-edge HVDC technology and system integration capability from ABB.

In December 2018, ABB announced the divestment of an 80.1% shareholding in its Power Grids division to Hitachi for an enterprise value of approx. $11 billion. The transaction is expected to be completed in the first half of 2020.

ABB (ABBN: SIX Swiss Ex) is a pioneering technology leader with a comprehensive offering for digital industries. With a history of innovation spanning more than 130 years, ABB is today a leader in digital industries with four customer-focused, globally leading businesses: Electrification, Industrial Automation, Motion, and Robotics & Discrete Automation, supported by its common ABB Ability™ digital platform. ABB’s market-leading Power Grids business will be divested to Hitachi in 2020. ABB operates in more than 100 countries with about 147,000 employees.

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