Press release

ABB commissions HVDC station improving grid stability in Michigan

Back-to-back HVDC Light system to facilitate power flow control and integration of renewables

Zurich, Switzerland, Nov 3, 2014 – ABB, the leading power and automation technology group, has successfully commissioned a power solution that will control the flow of power and enhance grid stability in the State of Michigan, US.

ABB's low-loss and eco-efficient HVDC Light (high-voltage direct current) technology controls the power flow between the Upper and Lower Peninsulas of Michigan. Furthermore it provides dynamic voltage support, thereby increasing regional grid reliability and also enabling integration of additional wind generation. The HVDC Light station has been commissioned on schedule and handed over to the customer, American Transmission Co. (ATC).

"The Mackinac station is the world's first HVDC back-to-back system for transmission using voltage source converter technology. This is a milestone demonstrating how ABB can help customers achieve efficient grid control and stabilization," said Hans-Peter Faessler, Head of the Grid Systems business within ABB's Power Systems division.

ABB designed, supplied and installed the 200 megawatt (MW) back-to-back HVDC Light station in Upper Michigan. An HVDC back-to-back system comprises two HVDC converters connected directly to each other, without any DC transmission line, making it possible to fully control the power transfer through the connection.

The voltage and reactive power control features of the system enable the integration of additional wind energy and stabilization of the network. Its 'black-start' capability allows for fast network restoration using power from the other end of the system in the case of a power outage.

ABB pioneered HVDC transmission technology 60 years ago (read more here) and has built a vast global installed base, having completed almost 100 HVDC projects around the world, with a total transmission capacity of over 95,000 MW. That accounts for about half of the global installed base. ABB remains at the forefront of HVDC innovation and is uniquely positioned in the industry with in-house manufacturing capabilities for all key components of HVDC systems, including power semiconductors, converters and high voltage cables.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility, industry, and transport and infrastructure customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in roughly 100 countries and employs about 145,000 people.

For help with any technical terms in this release, please go to: www.abb.com/glossary

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