

ABB achieves another HVDC technology milestone

World's most powerful HVDC Light® / new record voltage level of ± 320 kV- more than 50 per cent higher than existing record

Zurich, Switzerland, April 15, 2013 – ABB, the leading power and automation technology group, has achieved another technology milestone, energizing its fourth generation of HVDC Light® transmission systems. At ± 320 kilovolts (kV) this latest innovation sets a new record for voltage-sourced converter (VSC) HVDC applications, compared with the current maximum installed rating of ± 200 kV, accredited to ABB. It will also enable power transmission capacity to be boosted by more than 50 percent while restricting transmission losses to less than 1 percent per converter station.

The HVDC Light converter station was energized at the Dörpen West substation in northern Germany, for the Dutch-German transmission system operator, TenneT. This station is the receiving end of the DolWin1 transmission link, which will integrate 800 MW of offshore wind power generated in the North Sea into the European transmission system and will operate at the new record voltage level of ± 320 kilovolts (kV).

The advance was made possible by developments in converter technology, a new valve concept, enhanced semiconductor performance and advanced control systems. It will provide further impetus to the evolution of multi-terminal systems and interconnected HVDC grids, where ABB recently removed a major technology stumbling block with the announcement of its hybrid HVDC breaker development.

“This latest achievement reinforces our leading position in HVDC transmission and our commitment to the ongoing development of this key technology,” said Hanspeter Faessler, Head of ABB’s Grid Systems business, a part of the company’s Power Systems division. “ABB is uniquely positioned in this sector with manufacturing capability for converters, cables and semiconductors - the major HVDC components.”

ABB pioneered HVDC technology nearly 60 years ago and has built a vast global installed base of more than 90 HVDC projects around the world with a total transmission capacity of over 95,000 MW. HVDC Light is a manifestation of HVDC that helps to address the needs of underground and subsea transmission and ABB leads the way in this technology, having delivered more than 20 such converter stations.

HVDC Light continues to be a preferred solution for long-distance underground and underwater power links and interconnections. This technology is increasingly being deployed across a range of applications including integration of renewable energies from land-based and offshore wind farms, mainland power supply to islands and offshore oil and gas platforms, city center in-feeds where space is a major constraint and cross-border interconnections that often connect across the seas. The ability of this technology to meet grid code compliance ensures robust network connections regardless of application.

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

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