

ABB hands over Germany's DoWin1 offshore wind energy link

Zurich, Switzerland, July 28, 2015 – DoWin1 integrates 800 megawatts (MW) of clean energy into the German transmission grid

ABB, the leading power and automation technology group, has successfully commissioned and handed over the DoWin1 offshore wind grid connection to the Dutch-German transmission system operator TenneT.

The 800 megawatts (MW) High Voltage Direct Current (HVDC) link connects offshore wind farms around 75 kilometers off the German coast in the DoWin cluster, with the country's transmission grid. The DoWin1 grid connection can integrate 800 MW of offshore wind power, enough to supply around one million households with clean energy.

The DoWin1 grid connection is part of Germany's ambitious energy transition roadmap, called "Energiewende", which foresees the generation of more than 6.5 gigawatts (GW) from offshore wind by 2020 and 15 GW by 2030.

ABB deployed its Voltage Source Converter (VSC) technology, called HVDC Light®, for the project and was responsible for the design, engineering supply and installation of the offshore and onshore converter stations, as well as the submarine and underground cable systems.

"We are proud to hand over the DoWin1 offshore wind grid connection to TenneT and to make a significant contribution to Germany's target of increasing its share of renewables in the energy mix," said Claudio Facchin, President, ABB Power Systems division. "We pioneered HVDC technology and have remained at the forefront of its innovation. We are pleased to see it being leveraged to bring clean energy to millions of people reliably and efficiently."

The wind farm Borkum West II and the wind farm Borkum Riffgrund I are connected via submarine cables to DoWin alpha, the offshore converter station. Here the alternating current from the wind farms is converted into direct current before being transmitted at a voltage of +/- 320 kilovolts (kV) via 165 kilometers of extruded DC submarine and underground cables to the grid connection point at the Dörpen West substation in Heede, northern Germany.

HVDC is the technology of choice for transmitting large amounts of power, over long distances, efficiently and reliably through overhead, underground and sub-sea links with minimum losses. It is ideally suited for the integration of remotely located renewable energy sources like offshore wind, desert solar or mountain-based hydropower. It is also being increasingly deployed to create cross border interconnections – to strengthen grids and improve the reliability of power supplies. This is a key focus area in ABB's Next Level strategy.

ABB has been awarded about 100 HVDC projects since it pioneered the technology more than 60 years ago. This represents a total installed capacity of more than 120,000 MW and accounts for around half the global installed base. ABB further developed HVDC in the 1990s by introducing voltage sourced converter (VSC) HVDC technology. ABB leads the way in this technology and, with the DoWin1 project ABB has delivered 16 out of 22 VSC HVDC projects that are in commercial operation around the world.

About ABB

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 140,000 people.

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