

ABB to supply special transformers for the world's most powerful wind turbines

Zurich, Switzerland, May 4, 2016 – Wind farm with 40 turbines will contribute to supply clean energy to thousands of households in England

ABB will deploy 40 special transformers to equip wind turbines for an offshore wind farm in the Irish Sea. The MHI Vestas Offshore Wind turbines are 195 m (640 ft) tall - around two-thirds the height of the Eiffel Tower - and weigh 1000 metric tons, approximately double a fully-loaded Airbus A380 plane. Its 80 m (262 ft) rotor blades sweep through an area equivalent of three soccer fields and can produce up to eight megawatts of power, making it the most powerful wind turbine in the world.

ABB received the order from MHI Vestas Offshore Wind for the Walney Extension Offshore Wind Farm, located around 19 kilometers west of Walney Island off the coast of Cumbria, England. The offshore wind farm is owned by the Danish utility DONG Energy A/S. The order is a follow-up of one at the end of 2014 for 32 specialty transformers to equip similar turbines for the Burbo Bank Extension Offshore Wind Farm, also located in the Irish Sea.

The Walney Extension will provide additional generation potential of 660 MW in addition to the existing offshore wind farm's 367 MW. The western part of this extension, for which ABB will supply the transformers, will account for half of the new capacity ie, 330 MW. As announced previously, ABB has also been contracted to supply a high-voltage cable system that will bring power from the Walney Extension wind park to the mainland.

When completed, the Walney offshore wind farms together will be capable of providing clean electricity to over 800,000 households, making a significant contribution to the UK's target of achieving 15 percent of its total energy production from renewable sources by 2020 and reducing carbon dioxide emissions.

The ABB transformer (9.7-megavolt ampere, 34-kilovolt) will be installed inside the turbine tower with accompanying low-voltage products. ABB's specialty transformers meet the most stringent electrical and mechanical requirements that are a prerequisites in an offshore environment where quality and reliability are critical. The transformer has customized design attributes and uses state-of-the-art raw materials and components. It is vibration and short-circuit resistant and has a compact footprint in order to accommodate the turbine door frame. It also weighs around 30 percent less than a similar standard transformer.

"These transformers are specially designed to meet the specific application needs of the most powerful wind turbines and a testimony to ABB's technology and innovation strength being a key differentiator when it comes to creating value for our customers," said Claudio Facchin, President of ABB's Power Grids division. "We are pleased to continue with our contribution to the integration of more renewable energy into the grid, a key focus area of our Next Level strategy."

ABB offers a complete range of power and distribution transformers designed for reliability, durability and efficiency. ABB is a major transformer manufacturer throughout the world and offers both liquid-filled and dry-type transformers as well as services for complete lifecycle support, including replacement parts and components.



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