PRESS RELEASE

50Hertz awards contract for Ostwind 2 grid connection to NKT-Boskalis Consortium

Transmission system operator successfully concludes a global call for tender for the manufacture and installation of 220 kV A/C subsea cable systems, to connect the recently awarded offshore wind farms in the Baltic Sea to the grid

- **Three cable systems will connect the Arcadis Ost 1 and Baltic Eagle wind farms in the Baltic Sea to the German extra high-voltage grid**
- **Alternating current technology is the tried and tested transmission concept for the Baltic Sea wind farm connections**

(Berlin, 29/11/2018) 50Hertz has awarded the contract for the manufacture and installation of three 220 kV alternating current cables (220 kV HVAC cables) for the Ostwind 2 project to a consortium of Danish cable manufacturer NKT and Dutch installation company Boskalis. The order is worth approximately 550 million euros. The 220 kV HVAC cables will connect two wind farms in the Baltic Sea, *Arcadis Ost 1* and *Baltic Eagle*, to the German extra high-voltage grid. “We are highly pleased with the outcome of the award procedure, in which NKT and Boskalis prevailed as the supplier consortium for the grid connection of Ostwind 2,” said Dr Henrich Quick, Head of Offshore Projects at 50Hertz. “NKT and Boskalis provided us with their fully developed and convincing offer, also with regard to price and quality. We are confident that with this consortium, we will be able to connect both wind farms to the German extra high-voltage on schedule,” Dr Quick continued. He concluded: “Our alternating current approach for the grid connections in the Baltic Sea guarantees the demand-oriented grid expansion.”

High security of supply thanks to tried-and-tested technology

The cable systems, identified as OST-2-1, OST-2-2 and OST-2-3, were confirmed by the Federal Network Agency (BNetzA) in accordance with the 2030 Offshore Grid Development Plan (in its version of 2017). The cables have a total length of about 270 kilometres. Offshore, these are divided into three cable bundles with different lengths between 97 and 85 kilometres. Onshore, all cables have the same standard

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length of three kilometres. The three 220 kV HVAC cables can transfer a capacity of 750 MW in total. The cables used are synthetic insulated three-core cables made of copper with a conductor cross-section of 1,200 mm². The cable insulation consists of cross-linked polyethylene (XLPE). The watertight submarine cables are reinforced with steel to protect them from mechanical damage. 50Hertz used similar technology for the connection of the Baltic Sea wind farms in the scope of the Ostwind 1 project.

Alternating current: the most efficient type of connection in the Baltic Sea

50Hertz uses a connection concept based on alternating current technology for the grid connection of the offshore wind farms in the Baltic Sea. This technology involves transmission of the electricity generated by the wind turbines of one or more wind farms at a substation platform operated jointly with the wind park. The generated electricity is directly transported to land by means of an alternating current submarine cable system and further on land to the grid connection point. As a result, no converter platform is needed for the grid connection, contrary to the connection concept in the North Sea (high voltage direct current transmission). The use of the 220 kV alternating current technologies to connect the Arkonasee and Westlich Arkonasee clusters is the most efficient transmission method from a technical and economic point of view.

About the Ostwind 2 project

Ostwind 2 is a 50Hertz project to connect the Arcadis Ost 1 and Baltic Eagle wind farms in the Baltic Sea to the German extra high-voltage grid.
Arcadis Ost 1, the wind farm of Parkwind, a Belgian company, is located in the Westlich Arkonasee cluster. Baltic Eagle, the project of Spanish utility Iberdrola, is located in the Arkonasee cluster. Together, both wind farms will generate a capacity of approximately 725 megawatts (MW).

50Hertz plans the construction of three submarine cable systems to transport this capacity. For the Ostwind 2 project, permits have already been granted for the land route, for the coastal waters (12 nautical mile zone) of Mecklenburg-Western Pomerania, and for a section of approx. five km in the Exclusive Economic Zone (EEZ). For other parts of the cable route in the EEZ, 50Hertz is currently obtaining the necessary permits. The permitting authority for the construction and operation of the grid connections along the onshore and offshore route (coastal waters) is the Ministry of Energy, Infrastructure and Digitalisation of Mecklenburg-Western Pomerania. The Federal Maritime and Hydrographic Agency (BSH) is responsible for the approval of the offshore route in the EEZ.

The connection to the German extra high-voltage transmission grid is made at the grid connection point in the substation in Lubmin (Mecklenburg-Western Pomerania). Here, the electricity is transformed to 380 kV and fed into the 50Hertz transmission grid.

More information about the project, including graphics, is available here:
https://www.50hertz.com/de/Netz/Netzentwicklung/ProjekteaufSee/Ostwind2

50Hertz takes care of the operation and expansion of the transmission network with more than 1000 employees. In addition, the company is responsible for managing the overall electrical system in the federal states of Berlin, Brandenburg, Hamburg, Mecklenburg-Western Pomerania, Saxony, Saxony-Anhalt and Thuringia. As a transmission system operator at the heart of Europe, 50Hertz stands for the secure integration of renewable energies, the development of the European electricity market and the maintenance of a high standard of supply security. The shareholders are the Belgian transmission system operator Elia (80 percent) and the Kreditanstalt für Wiederaufbau (KfW, 20 percent). As a European transmission system operator, 50Hertz is part of the Elia Group and a member of the European association ENTSO-E.

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