PRESS RELEASE

CONTACT	Cornelia Junge	**DATE**	15.02.2022
PHONE	+49 5132 89-2357	**PAGE**	1 von 3
E-MAIL	presse@tennet.eu		

TenneT awards land and sea station of grid connection project BorWin6 to international consortium

- **New consortium prevails: McDermott and GEIRI/C-EPRI win bid for converter stations at sea and on land**
- **980 megawatt grid connection - output of a large power plant**
- **Record length of 190 kilometres of subsea cable**

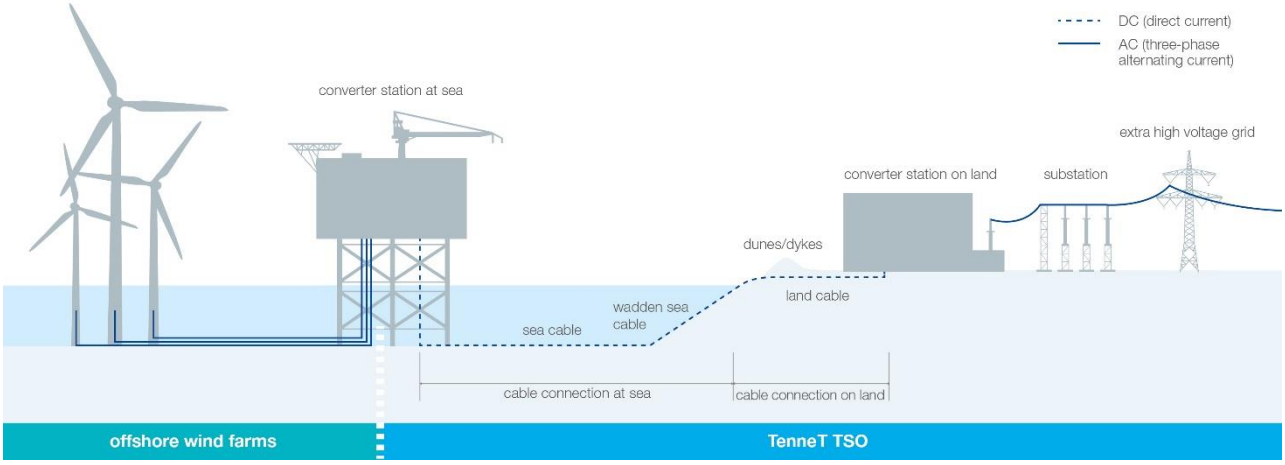
In the tendering process for the construction of the 235-kilometre-long offshore grid connection system BorWin6, TenneT has awarded the contract for the converter stations at sea and on land to the McDermott and GEIRI/C-EPRI consortium. The "stations" lot has thus been awarded, the second "cable" lot for the cable between the two stations will follow in summer 2022.

"With regard to the high expansion targets for offshore wind energy in the North Sea, we are pleased that an international consortium was able to prevail in our tendering procedure. Even though this consortium is new to us, it has a lot of experience in the offshore as well as the high-voltage direct current transmission (HVDC) business," said Tim Meyerjürgens, COO of TenneT. "As a transmission system operator, we will need many reliable partners in the coming years to enable the offshore expansion at the desired pace and with the targeted connection capacities. In terms of speeding up the process, we have taken the lead with this project: It was initially planned with a connection capacity of 930 megawatts. In the technical planning, we were able to increase the capacity by 50 megawatts. The project was recently confirmed in the latest grid development plan."

The direct connection principle is also used for BorWin6, which means that TenneT connects the wind turbines directly to TenneT's offshore platform BorWin kappa via 66-kilovolt three-phase cables. This eliminates the need of transformer stations that were previously necessary in each and every wind farm. In addition, 155-kilovolt three-phase cables are not required to connect TenneT's offshore platform with that of the wind farm. Economically speaking, this innovative technology leads to enormous cost savings.

Tim Meyerjürgens: "With the award of BorWin6, we are continuing the ongoing cost reduction in the construction of offshore grid connection systems. We are also applying the smart platform concept by installing particularly low-maintenance technology on the offshore platform. This enables us to reduce the maintenance effort and ultimately the operating costs of the asset."

On a 235-kilometre-long route, TenneT transmits the electricity via underground cable by using low-loss direct current technology (DC) from the offshore converter station BorWin kappa to the converter station in Büttel (Schleswig-Holstein) on land. Here, the direct current is converted back into three-phase alternating current (AC) and fed into the extra-high voltage grid.



With the innovative 66 kV connection, the wind farms are directly connected to TenneT's offshore platform. Transformer stations in the offshore wind farms are thus no longer necessary.

Within the consortium, the focus of McDermott will be on the converter stations; they draw on a wide range of offshore experience and their own worldwide fabrication yards. Global Energy Interconnection Research Institute Co. Ltd. (GEIRI) & C-EPRI Electric Power Engineering Co. Ltd. (C-EPRI), in turn, will focus on electrical engineering. Many high-voltage DC projects have already been realised, primarily in Asia, and GEIRI/C-EPRI is regarded as an experienced HVDC developer and supplier worldwide.

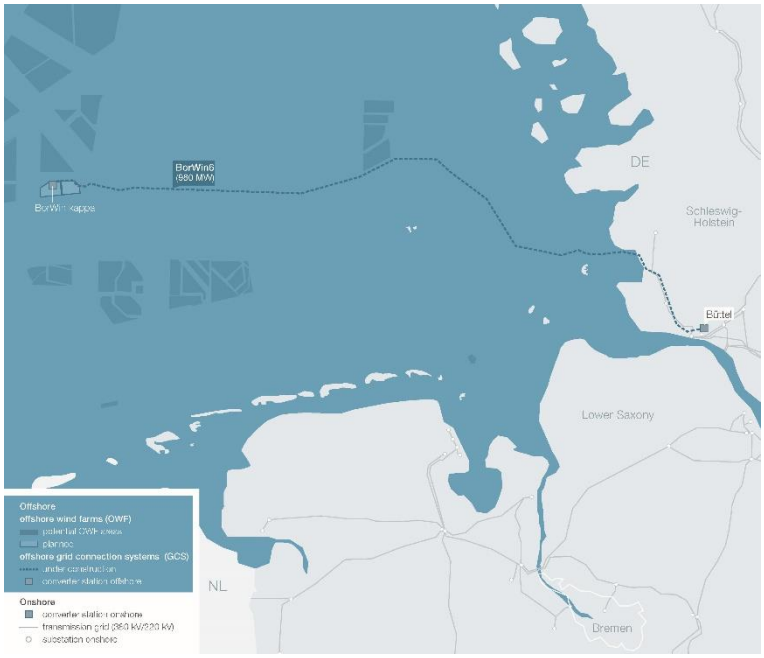
BorWin6 is the last offshore grid connection system to be implemented by TenneT in the German North Sea with 320-kilovolt technology. The technological leap to 525-kilovolt and a transmission capacity of two gigawatts will be implemented in future projects. BorWin6 is scheduled to go into operation in 2027.

The milestones at a glance

The contract for the second lot, for the production and laying of the cables, will be awarded before the end of this year. In addition, the first preparatory measures for the construction of the land station in Büttel are planned. The actual construction of the land station will begin in 2024.

Construction of the topside, i.e. the actual converter station at sea, which will be built in Qingdao (China), is expected to start in mid-2023. Construction of the jacket in Batam (Indonesia) will also start at the end of 2023. The jacket will form the substructure on which the platform will be placed in the approximately 38-metre-deep water, probably in mid-2026.

In 2023, horizontal drillings are also planned to underpass the land protection dike (near Büsum) and the Kiel Canal; the land cable will be laid in 2024 and 2025, and the subsea cable in 2025 and 2026.



Facts and figures on BorWin6

Next to the projects BorWin1+2+3 and 5, BorWin6 is the fifth offshore grid connection to be realised by TenneT off the coast of Borkum using extra-high voltage direct current transmission technology. BorWin6 has a transmission capacity of 980 megawatts, and commissioning is planned for 2027.

- 235-kilometre HVDC connection with a maximum transmission capacity of 980 megawatts
- 45 kilometres of land cable, 190 kilometres of subsea cable
- Grid connection point: Büttel (west of Itzehoe in Schleswig-Holstein)

TenneT

TenneT is a leading European grid operator. We are committed to providing a secure and reliable supply of electricity 24 hours a day, 365 days a year, while helping to drive the energy transition in our pursuit of a brighter energy future – more sustainable, reliable and affordable than ever before. In our role as the first cross-border Transmission System Operator (TSO) we design, build, maintain and operate 23,900 km of high-voltage electricity grid in the Netherlands and large parts of Germany, and facilitate the European energy market through our 16 interconnectors to neighbouring countries. We are one of the largest investors in national and international onshore and offshore electricity grids, with a turnover of EUR 4.5 billion and a total asset value of EUR 27 billion. Every day our 5,700 employees take ownership, show courage and make and maintain connections to ensure that the supply and demand of electricity is balanced for over 42 million people.
Lighting the way ahead together