

BorWin3

160-kilometre-long and 900-megawatt-strong direct current connection



Cable length

130 km submarine cable
and 30 km land cable



Grid connection point

Converter station
Emden/East



Status of project

In operation
since August 2019



Photo: BorWin gamma



Facts and figures

transmission technology:
direct current (DC)

Project/converter platform:
BorWin3/BorWin gamma

Location of platform at sea:
54°23'16.8"N 6°22'48.6"E

Water depth on site:
40 metres

Overall platform height:
47 metres

About the project

Alongside the grid connection projects BorWin1 and BorWin2, BorWin3 is the third project that TenneT has implemented off the coast of Borkum using direct current technology. At the Emden/East site, TenneT built a converter station with a transformer station to convert the energy generated at sea from direct current to three-phase alternating current and feed it into the grid from there. A total distance of 160 kilometres has to be bridged, with the wind power first

being transported via a 130-kilometre-long sea cable to the west of Borkum to Hamswehrum and from there transmitted via a 30-kilometre-long underground cable to Emden/East.

Since 2018, the onshore converter station has been completed, and in September 2018 the offshore converter station, which was manufactured in Dubai, was transported to the North Sea and installed there in October. BorWin3 has been in operation since August 2019.

TenneT is a leading European grid operator committed to a secure and reliable electricity supply - 24 hours a day, 365 days a year. We are shaping the energy transition for a sustainable energy future. As the first cross-border transmission system operator, we plan, build and operate an almost 24,500 kilometres long high and extra-high voltage grid in the Netherlands and Germany and are one of the largest investors in national and international electricity grids, on land and at sea. Every day, our 6,600 employees give their best and ensure with responsibility, courage and networking that more than 42 million end consumers can rely on a stable electricity supply.

Lighting the way ahead together

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