

SECURE SUPPLY



10 years of offshore expertise

This is an anniversary year for TenneT: it is ten years since we first started our offshore operations. We started in 2007 with only six employees, growing to 400 employees within a decade, realising 5.3 GW transmission capacity.

As offshore wind energy plays a key role in the Energiewende, the German government is planning to realise its ambitious targets with a significant expansion of capacity in offshore wind production. TenneT is playing its part in connecting wind farms to the grid by 2020. To that end, technically complex AC and DC projects in the North Sea, as well as other major projects – both onshore and offshore – are being accelerated.

Wilfried Breuer, Member of the Executive Board TenneT: *“We are the leading grid operator in the North Sea for interconnectors as well as offshore wind integration. Our unique and longstanding experience and skills make us the frontrunner in a complex and demanding environment.”*

Meanwhile, we can draw on years of experience and expertise. Our very first offshore project was Alpha Ventus, an AC connection of 62 MW. TenneT’s early days in offshore work in Germany were a rollercoaster ride. Everything was new: the technology, the contractors, the risks, the enormous financial investments as well as the political pressure. Our organisation grew rapidly to keep up, almost bursting at the seams. There was a lot at stake and it was not always easy.

Following Alpha Ventus, we realised BorWin1 in 2010, with a transport capacity of 400 MW and then a further nine offshore connections, with a total transport capacity of 5.3 GW. In 2017, these connections transported 16 TWh of

wind energy from the North Sea to shore, with a high grid availability and a significant contribution to CO₂ savings, in total 8.4 million tonnes. The energy flow from the North Sea has now reached a significant share of the overall wind energy generation in Germany.

We are currently planning and constructing four additional offshore connections that by 2019, will bring our total transmission capacity to 6.5 GW for electricity from renewables.

Torben Glar Nielsen, Executive Vice President Energinet dk: *“As a fellow TSO we really appreciate the excellent job TenneT has done in connecting enormous amounts of offshore wind in a short period of time.”*

Our experience with connecting offshore wind in Germany has helped us to increase the efficiency in our offshore connections from DolWin3 to BorWin3 and now DolWin6, which has resulted in an average contract price reduction of around 15 per cent in 2017. With our offshore expertise in Germany we have taken the lead in mapping the future development of this critical infrastructure. For example, we conducted a study that determined 66 kV voltage levels for Dutch wind farms. This can now pave the way for further innovations, and become an industry standard.

