

Sandbank Offshore Wind Farm

Offshore Transformer Substation

Customer	Vattenfall, Germany	
Period of Execution	Design:	2013-2015
	Implementation:	2016



Description of the Supply

The Sandbank offshore wind farm is located in the German North Sea, 90km west of the island of Sylt. With 288 MW of output.

The Sandbank topside is designed as a multi-story steel structure with five decks, including a cellar deck positioned on the top of the jacket structure for cable pulling and cable hang-off. A helicopter deck is placed on the west side of the substation allowing for access by helicopter.

Located in a water depth of 29 meters, the topside is supported by a four legged lattice jacket that is able to support 8 J-tubes for array cables and 2 J-tubes for export cables.

Consultant's Role

- Concept FEED, layout arrangement followed by detail design of complete transformer Substation including auxiliary systems, structures, foundation.
- Complete detailed structural engineering design in place, sea transport, installation and lift for both Topside and four-legged jacket.
- Fire Safety
- Process, Piping & Mechanical
- Project follow-up fabrication and installation.
- Certification Packages for Topside and Substructure for DNV-GL verification.
- ZIE approval for the grouted connection
- German Standards and approval by BSH

Supplementary Information and KPI

Due to client requirements large amounts of diesel oil and large diesel generators are positioned on the platform.

Jacket weight: 1560 tons.
Topside weight: 2230 tons.