

# Installation: BARD Offshore 1

## The Project

Fred. Olsen Windcarrier's custom wind turbine installation vessel Brave Tern along with a full complement of Global Wind Service installation crew were contracted to install the final 14 complete BARD 5.0 MW wind turbines and an additional 2 rotor stars on the 80 turbine wind farm in the German Bight. The BARD project was a first for the organisation for a number of reasons. It was the first project for Windcarrier that featured a 5MW turbine. It was the first time that Windcarrier had handled and installed direct drive machines which also meant the first rotor star deck lay-outs and installations. Also included in the full scope of work was the supply of a Bayard class CTV - this too was a first for the group.

The Fred. Olsen related companies were introduced to the project in early 2013 and the first installations took place on the 16th April. It was anticipated that the work would take 150 days and the final rotor star was mounted on the 31st July 2013.

The full scope of work supplied by Fred. Olsen Windcarrier and related companies included:

- Engineering and manufacturing of grillage
- Transport and installation of WTGs
- Marine engineering
- Lift plans
- Lift tools for all turbine components
- Offshore construction management
- Lift supervisors
- WTG technicians
- Offshore HSE representative
- Crew transfer vessels

## The Wind Farm

BARD Offshore 1 is located 90 km off the coast of Borkum Island in the German North Sea. Eemshaven acted as the base port for this project. The wind farm features 80x 5 MW BARD turbines with a combined output of 400MW - enough energy to power approximately 500,000 homes.

## Comments

Fred. Olsen Windcarrier's Project Manager Per Dyberg said: "The final scope was the installation and completion of 14 turbines and installation of 2 rotors. This project has been a challenge to us all due to several factors: a late start, a new vessel, various risk factors associated with the complexity of the project, the overall responsibility for the installation and commissioning and last but not least a very focused and thorough client.

In spite of a late start (the project commenced 6 weeks later than scheduled) we were able to complete the above scope within the requested time. This achievement would not have been possible had it not been for the outstanding efforts by all those involved - efforts that often went beyond what would normally be expected.

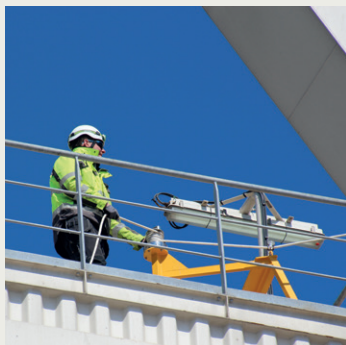
BARD has informed me that they are very pleased with our performance, again due to the contribution from each and every one involved in the project."



First rotor star lift at Eemshaven



Rotor star touch down on board Brave Tern



GWS technician during installation



First rotor star installation