



CASE STUDY

BALTIC 2 – Temporary Power, Vessels & Project Solutions

SCOPE

CWind provided temporary power for 80 turbines at the 288MW EnBW Baltic 2 offshore wind farm, 32km off the coast of Rugen Island. As part of this integrated package of services, CWind supplied the servicing, maintenance and refuelling as well as the bunkering, generator and tank equipment, rigging and lifting operations and CTVs.

Further to this, CWind remotely monitored and controlled the temporary power using a satellite communications system. CWind proved successful in meeting the considerable technical and logistical challenges of handling the provision of temporary power on a far shore wind farm.

BENEFITS

Comprehensive service - we took on all elements even down to the bunkering which meant we were able to project manage the entire package and all risks involved.

Technically advanced - we responded to the difficulties of a far shore site (limited comms, long distances, long travel to work), by using the latest systems in monitoring generator performance and issues on site. We also kitted our vessels out with de-icing equipment to respond and anticipate site requirements in the Baltic Sea.

Ability to scale up - not only scale up, but also expand services as the project became busier according to an agreed project plan involving close interaction with the client and a flexible response to requirements. This included taking other technicians out to site to support weather windows and speed up construction capacity at short notice.

Pro-active Management - CWind vessels were rotated in and out of generator management duty, minimising the possibility of unscheduled downtime. Working closely with the client, EnBW, CWind worked in line with installation areas, so that generators on TPs installed around the same time could be refuelled and serviced together. This zoning enabled CWind to reduce time spent travelling, reduce vessel fuel requirements and streamline the maintenance of the generators.



Project	EnBW BALTIC 2
Capacity	288MW
Turbines	80
Operation	2015
Client	EnBW
Project Owner	EnBW
Project Date	2014

KEY SUCCESS FACTORS

TEMPORARY POWER SUPPLY

The diesel generators, fuel tanks and control unit are combined into one integrated system to ensure a permanent energy supply and guarantee that grid connection is supplied in time.



TELEMETRIC SATELLITE COMMUNICATIONS

It was apparent that mobile network based communications would not cover this far shore site at almost 40km off the island of Rugen. During the project the temporary power was remotely monitored and controlled using a two-way communication via satellite– the first of its kind in the offshore wind industry.

This innovative solution proved a crucial and highly resilient means of supporting further offshore construction during the prolonged bad weather of the Baltic Sea. It ensured a stable and permanent connection between the offshore unit (WTG SCADA system) and the onshore control room providing uninterrupted power supply for construction of the wind farm.

TODOMATIC COUPLINGS

A first of its kind within offshore wind, TODOMATIC couplings were used, providing a completely sealed refuelling system for the safe bunkering of liquid chemicals during transfer operations. Refuelling is usually required every 25 days and powerful pumps ensure refuelling with a capacity of 300 litres per minute. This system enabled operations 24/7.

PURPOSE-BUILT VESSELS

Fast and reliable resin-composite multi-purpose catamarans met the specific requirements for generator management and refuelling services. Their superior fuel efficiency together with their ability to operate in limits of up to 1.8m Hs, enabled effective working for extended periods offshore at Baltic 2.

Special adaptations to the vessels included integrated heated footpath deck areas to prevent iced vessels. Equipped with special steam washers using environmentally friendly Clearway F1 to clean marine growth and ice from the boat landing – all of this maximising access and reduces the risk of slippages in the harsh environment.

SAFE WORK

Safety, health, quality and care for the environment are fundamental principles of our business. The safety and health of our colleagues, customers, business partners and the communities in which we do business is our number one priority. All RAMS were compiled by CWind and reviewed by the client. Throughout the project, the RAMS were updated and reviewed following changes to processes and following suggestions of improvements. Reports were shared with the client, and detailed records were maintained. Our pro-active stance and careful quality measures were rewarded with a zero lost time incident record at Baltic 2 and subsequently by ROSPA granting us their Gold Safety Award.

