

Erebus - Floating Offshore Windfarm

Client: Blue Gem Wind

Location: Celtic Sea, UK

Date: 2020-23—ongoing

Erebus is a pioneering 100MW floating offshore wind demonstration project in the Celtic Sea and, once commissioned, it will be the first of its kind in Wales. Erebus will pave the way for future commercial floating wind in the UK and globally. It represents a significant step towards realising the electricity generating capacity in the Celtic Sea, recently estimated by ITPenergised to potentially be as much as 50GW.

Working for the Principal Designer OWC and liaising closely with the Blue Gem team, we are providing a wide range of consenting and engineering services.

In March 2023 Welsh Ministers have granted a **Section 36 consent** with deemed planning permission to Blue Gem Wind to build and operate the Erebus project. The news follows the recent decision by Natural Resources Wales to provide a **marine licence**.

As **Consenting Lead**, we ensured the consenting strategy was sound and all application documentation robust. The role involved bringing together the offshore and onshore aspects of the Environmental Impact Assessment (EIA), led by Marine Space (offshore) and ourselves (onshore), respectively.

We have delivered and managed all **onshore EIA** surveys and assessments as well as managed the Seascape assessment, supporting stakeholder engagement, including aiding in delivery of virtual public exhibitions.

We provided the initial draft of onshore planning conditions and we supported Blue Gem Wind for all the onshore requirement during the determination phase.

For engineering services, we are leading the **grid, electrical and onshore engineering FEED package management** with client focussed solutions, maintaining interfaces, project risk assessment and programming, maintaining CDM, QEMS and HSE standards and budget control.

Grid connection - we are supporting the project through the connection process, carrying out grid offer review and negotiation, underwriting support and Use of System charging estimates.

We are leading on **cable system design, power system modelling, substation design and site boundary definition**. Our technical design work has involved steady state and dynamic thermal rating of the export cable system, third-party crossing support, substation electrical design, cable array layout, power system modelling (load flow, short circuit, fault ride through and loss analysis), development of employer requirements, vendor engagement, and export system cost benefit analysis.



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