

**SEAI National
Energy Research,
Development
& Demonstration
Funding Programme**

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Keywords

Floating Offshore Wind,
Ports & Infrastructure,
Installation, Operations &
Maintenance.

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This report was prepared by Rockall Research Ltd and Partners and is based on research carried out from January 2024 to April 2025.

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Locations suitable for Ports for Floating Offshore Wind in Ireland

Abstract

Ireland's Climate Action Plan sets out the target of meeting 80% of Ireland's electricity needs through renewable sources of energy by 2030 and achieving net-zero emissions by 2050, recently confirmed by the Climate Bill. Our extensive maritime area and enviable offshore wind resource make Offshore Wind, and in particular Floating Offshore Wind (FOW) the single largest contributor to these ambitions. This is backed up by Programme for Government which suggests "at least 30GW of Offshore Floating Wind" by 2050, which is approximately 3 times our current total capacity of electrical generation.

This energy transition will be the largest infrastructural project Ireland has undertaken, worth some €60 billion in the wind farms alone. However, in order to deliver this, we will need ports, vessels and a skilled workforce to build, operate and maintain these large floating structures. The ports are a critical and long lead time item which require substantial investment. They are the first mover that will bring confidence to the industry and attract further investment.

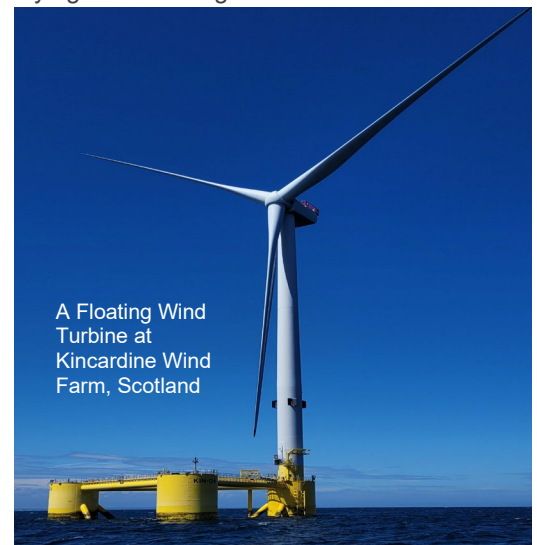
The National Ports Policy is currently under review, and this considers what policies, structures or other measures would best support ports to develop the infrastructure necessary for the facilitation of FOW. Our research within the SEAI funded SIMREI and ongoing DIFOWT projects focuses on setting out the requirements of this industry and should feed directly into the new Ports policy.

Research Outcomes

The DIFOWT project has collected Port requirements of the industry through research and stakeholder engagement. The key requirements centre around the space and water depth requirements necessary for the assembly and wet storage of Floating Offshore Wind Turbines. Using these requirements together with knowledge of the current port infrastructure and geographical constraints

two locations have been deemed suitable for handling large units: The Shannon Estuary and Bantry Bay.

Of course, many other ports around the country will play a role in this industry as there will be significant ancillary tasks which will not have the same spatial and water depth requirements, such as: inspection, operations, maintenance, towing, crew transfer, cable laying and mooring installation.



A Floating Wind Turbine at Kincardine Wind Farm, Scotland

Recommendations

In order for Ireland to realise the enormous potential that Floating Offshore Wind offers we must invest in the development of our port infrastructure. The new Ports Policy must address this directly by charting the way for investment and development in the two locations found to be suitable, the Shannon Estuary and Bantry Bay. Other ports, harbours and businesses will also need access to funding to be ready.

The DIFOWT project is currently focused on simulating the Installation, Operation and Maintenance of Ireland's proposed 30GW of Floating Offshore Wind by 2050. These simulations will provide further details on the requirements of Ireland's Floating Offshore Wind industry in terms of wet storage, vessels and workforce.