

Offshore Wind Farm Decommissioning Model (DCM)

The DCM model enables detailed assessment of strategies, time estimates, expenditure, and salvage revenue to support decision-making at the planning stages of decommissioning an offshore wind farm.

THE TECHNOLOGY

Developed by researchers at the Centre for Marine and Renewable Energy (MaREI), the DCM model simulates a strategy input by the user to partially or fully dismantle an offshore wind farm to generate an estimate of the time and costs of decommissioning activities. To determine the strategy, inputs include the turbine components, the duration to dismantle each component, the available resources, and salvage revenue.

The DCM model allows the user to determine whether a turbine is decommissioned in its entirety or dismantled by component (including the order) and facilitates decommissioning in batches (e.g. X number of turbines or components in a single activity). In simulating a strategy the model considers the:

- the resources available (e.g. vessels, feeder vessels, technicians and on-land transport);
- the post-decommissioning strategy (considering up to three ports assuming components may be sent to different locations);
- the nearest recycling centre or landfill locations and the associated salvage revenue or post-decommissioning costs;
- re-sale value of components or re-conditioning costs in the case of re-powering rather than fully decommissioning; and
- impact of weather (e.g. the probability of an available window of a given operation).

ABOUT MaREI

MaREI is the marine and renewable energy research, development and innovation centre supported by Science Foundation Ireland. The MAREI Centre conducts fundamental scientific research relating to marine and renewable energy applications and enables the development and testing of technology through to the construction of demonstration systems. MaREI provides innovative research, development, engineering and consulting services and tailor-made solutions for companies of all industries.

OPPORTUNITIES

Consultancy

FIELDS OF APPLICATION

Offshore wind farms

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