Waterford Energy Services Inc.
wesi.ca

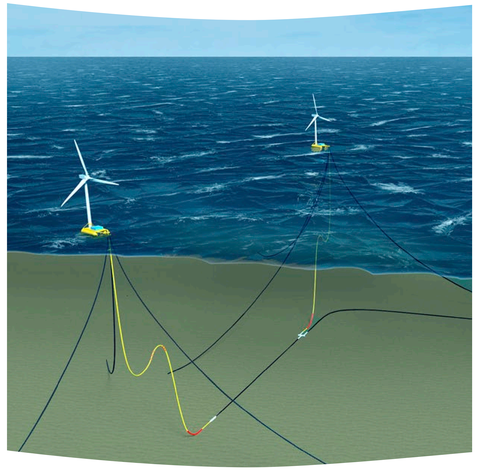
Floating Wind Power for Offshore Installations

Summary

Target Emission Source: **Power Generation**
Emission Reduction Strategy: **Renewable Energy Supply**
Project Type: **Research & Development**
Entry TRL: **2**
Target TRL: **4**
Field Trial Required: **Yes**
Projected Ready By: **2025-26**

The Project

Globally, floating wind technology has advanced and prototypes tested, however, research regarding its applicability to the unique conditions offshore Newfoundland and Labrador (NL), is in the early stages. WESI performed a conceptual study applying floating wind as an alternate energy source for oil and gas installations offshore NL, and examined mooring analysis, power cables, wind resource assessment, battery systems, ice effects, power modelling, and electrical cable disconnection. The study concluded that Floating Offshore Wind Turbines (FOWT) are feasible in this region and WESI plans a field trial in the coming years.



Benefits

- Developed local knowledge and expertise in FOWT and renewable power conversion of offshore installations
- Creation of a FOWT knowledge hub in Atlantic Canada
- De-risked FOWT as a viable solution for operations in harsher, ice-prone environments
- Demonstrated how FOWT can significantly decrease GHG emissions plus provide benefits associated with carbon tax and fuel savings

Opportunities & Next Steps

Perform FEED studies for specific application of FOWT

Initiate Canada's first FOWT demonstration project

Integrate hydrogen production into the FOWT concept

Strengthen technical and commercial partnerships, further analysis of local benefits in areas such as job creation

Project was supported from Natural Resources Canada's Emissions Reduction Fund, Offshore RD&D program, which is managed and administered by Energy Research & Innovation Newfoundland & Labrador

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