

ECONOMIC IMPACTS OF THE SOUTHCOAST NATIONAL DESIGNATED MARITIME AREA PLAN (SC-DMAP) FOR OFFSHORE RENEWABLE ENERGY IN IRELAND

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Extended Abstract

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Abstract Summary

Ireland has set ambitious offshore wind targets under the revised Renewable Energy Directive (RED III), aiming to deliver at least 5 GW of capacity by 2030 and substantially expand deployment in subsequent decades. The South Coast Designated Maritime Area Plan (SC-DMAP) represents a key step in this strategy, identifying four sites for future fixed offshore wind development. Against this backdrop, this study assesses the potential economic impacts of these projects on the Irish economy.

An integrated modelling framework is developed, combining engineering-based cost models and an Input-Output (IO) approach. Capital and operational expenditures are estimated using the ORBIT and WOMBAT models, incorporating site-specific characteristics and updated industry benchmarks. A detailed assessment of the Irish offshore wind supply chain is undertaken, with local content estimated using the Location Quotient methodology under multiple development scenarios. These sectoral expenditure profiles are then applied to an IO model to estimate direct, indirect, and induced impacts.

The results indicate that total project costs range from €6.6 to €8.97 billion across sites, with CAPEX and OPEX accounting for the majority of expenditures. The SC-DMAP projects are estimated to support approximately 15,000 FTEs, generate €6 billion in output, and contribute €2.5 billion in gross value added. However, the scale of economic benefits is highly sensitive to local content. While development and operations phases exhibit relatively high domestic retention, much of the construction-related expenditure is expected to leak abroad.

The findings highlight both the economic potential of offshore wind and the importance of strengthening Ireland's domestic supply chain. Targeted investments in infrastructure, skills, and industrial capacity will be critical to maximising long-term economic benefits from offshore wind deployment.

Presenting Author Biography

Tuyen Tran is an Experienced Postdoctoral Researcher at the Marine Institute, Ireland, focusing on the socio-economic impacts of offshore renewable energy projects. He holds a PhD in Economics from the University of Galway, with research spanning macroeconomics, development, energy economics, and finance. He received a Master's degree in Public Economics from Hitotsubashi University, Japan.