

# STRATEGIES FOR NET ZERO: TENSIONS BETWEEN ENVIRONMENTAL AND ECONOMIC GOALS FOR SMALLER REGIONS

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## Overview:

Many regions and smaller nations worldwide have set environmental targets in the move to a more sustainable future. In addition to these environmental targets, governments see the green transition as an opportunity to grow the economy linked to the need for significant investment in new electricity generation technologies. One such technology often championed as having the potential to bring both environmental and economic benefits is offshore wind. However, the manufacture and installation of many of the components of offshore wind farms requires an expertise unlikely to be found in smaller regions, thus the level of 'local content' in these projects will be low, bringing little economic benefit to the region. The purpose of this paper is to argue, using Northern Ireland as a case study, that smaller/provisional governments should focus their green economy strategy on the regions expertise and ability to grow and sustain overtime.

Northern Ireland recently published their pathway to net zero with a commitment to produce 70% of its electricity consumption by renewables by 2030. The pathway also indicated that the move towards net zero should grow the green economy up to £2 billion annually with and, due to the large resource, offshore wind being noted as a key technology for these goals. However, Northern Ireland only has an economy 2.24% the size of the UK and with the expertise needed in the offshore wind sector the size of potential local economic benefits is debatable.

## Methods

In this paper we analyse the current structure of the economy in Northern Ireland, determining any synergies with the offshore wind supply chain, then model potential economy-wide impacts of investment in these industries.

We take three approaches in the analysis of the currently economic structure in Northern Ireland. First is a simple investigation of sectoral employment numbers which is then compared with the employment in the region of Great Britain. The second approach estimates, and compares, sectoral employment location quotients and the third approach estimates the backward linkages in the published Northern Ireland Input-Output Table. This analysis revealed four important areas of the offshore wind supply chain which may bring investment to Northern Ireland; manufacturing of foundations; electrical component manufacturing; onshore construction activities and ports.

## Results

Using published information on costs of UK based offshore wind farms and the CGE model for Northern Ireland, we estimate the potential economy-wide benefits of investment in these four areas for 1GW of installed offshore wind capacity (the expected increase in capacity to 2030). The sector with, by far, the largest potential for growth (and by extension economy-wide benefits) in the construction stage is the metal manufacturing sector linked to the fabrication of the foundations for offshore wind farms, with estimated increase in GDP of £211 million supporting ~4,300 FTEs. Ports are key for the O&M of offshore wind farms bring longer term benefits in excess of £1.65 billion GVA and 30,800 FTE years to the Northern Ireland economy over a 25-year lifetime.

## **Conclusions**

Overall, we find there is some potential economic benefit to Northern Ireland, however these are focussed on a small number of industries and are small in comparison to the overall targets. There is an argument that for smaller regions such as Northern Ireland, the government strategy should be on other components of the green transition where there is a large potential for sustainable growth - such as decarbonation of households.