DECC explanatory note: ABPmer study to quantify the potential impact of a Marine Conservation Zone (MCZ) Network on the deployment of offshore renewables

Background

The Marine and Coastal Access Act 2009 requires the Government to create a network of Marine Protected Areas (MPAs) and enables Ministers to designate and protect Marine Conservation Zones (MCZs). The Government's aim is to use MCZs, together with Natura 2000 sites, Ramsar sites and Sites of Special Scientific Interest (SSSIs), to create an ecologically-coherent network of MPAs. In designating MCZs, Government will take account of socio-economic impacts, including impact on offshore renewables deployment.

In late 2009, the Statutory Nature Conservation Bodies (SNCBs) established four stakeholder-led Regional Projects to identify possible MCZs in English waters and Welsh offshore waters, and assess their impact. These Regional Projects will submit their recommendations to the SNCBs and the independent Science Advisory Panel in late summer 2011. SNCB advice and an Impact Assessment will be submitted to Defra early next year. Government will consider the recommendations, SCNB advice, and the Impact Assessment, before consulting on sites to take forward for designation in 2012, with designation by the end of 2012. Similar processes are operating in Wales and Scotland.

In November 2010, when the process of site identification was in its early stages, DECC commissioned ABPmer to quantify the potential impact of an MCZ network on the deployment of offshore renewables. Through this study, we sought to identify whether particular factors in an MCZ network might drive up deployment costs for offshore renewables, and to what extent.

The scope of the study

This report sets out four illustrative MCZ network options with different degrees of spatial overlap with offshore renewables resource. For each network option, high and low cost scenarios are explored - based on assumptions about the nature of management measures and the treatment of Areas of Additional Ecological Importance (AAEIs)[1] that might be included in the network. This approach was chosen to inform the designation process in its early stages by examining the drivers of higher cost, which could lead to a higher risk to offshore renewables deployment.

[1] Features not listed in the SNCBs Ecological Network Guidance.

Key findings

The report conclusions indicate that it is possible to designate a network of MCZs in a way which minimises likely costs to offshore renewables projects, while still meeting the Government's environmental aims. This would ensure that offshore renewables can still make a significant contribution to the UK's work to mitigate climate change and its environmental impacts, including via our 2020 Renewable Energy target and 2050 decarbonisation target. However, some of the scenarios considered are associated with much higher costs to renewables, indicating the importance of fully considering the impact on the industry in identifying MCZ locations and setting appropriate management measures.

Four scenarios are considered in which there is a greater or lesser degree of spatial overlap between MCZs and offshore renewables resource, reflecting the high level of uncertainty at the time the project started, as to the extent of spatial overlap a coherent network might entail. In each scenario, a low and high cost option is examined, reflecting the potential for implementation of more or less onerous (for renewables projects) management measures.

The resulting total cost to offshore renewables vary widely from the lower cost option in the scenario with least spatial overlap with renewables (£9m), to the higher cost option in the scenario with the greatest spatial overlap (£4.4bn). Virtually all of these costs are for offshore wind, reflecting the more advanced plans for deployment of this technology. **This finding demonstrates that although there is the potential for a network to have high associated costs, once socio-economic impacts are taken into account – it is possible to designate a network of MCZs in such a way as to have minimal impact on the deployment of offshore renewables, while still meeting the Government's conservation aims.**

A particularly important finding was that the capital cost of diverting export cables around MCZs account for a large proportion of the potential costs: between 85 and 98% of costs in the low cost options. The significant capital cost of diverting cabling indicates the importance of considering cable routes when designating MCZs, as well as the locations of actual wind farms or wave and tidal arrays.

For the high cost options, requirements to protect or enhance conservation features other than habitat account for >95% of management measure costs for offshore wind and tidal stream. 20 to 25% of the total management measure costs for future offshore renewables developments could be driven by the inclusion of a requirement to protect additional features of conservation importance. These costs relate to additional monitoring requirements and measures to mitigate underwater noise and, for tidal steam devices, collision risk. Management measures to protect habitat alone are associated with relatively low costs. This highlights the importance of considering the socio-economic impact of different management measures.

Since the report was completed the Regional Projects have published further iterations of their network proposals and the SNCBs have published further guidance and advice on the likely impact of MCZs on licensed activities (including renewable energy) and the treatment of AAEIs.

An Impact Assessment being developed by the SNCBs and Regional Projects will evaluate the impact of the actual recommended network, and will contain more detailed assessment at both national and local levels.

The Government continues to work to ensure that the right balance is achieved between meeting conservation objectives and minimising the socio-economic impacts of the MCZ network.

The Project Steering Group

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