

European Offshore Wind Deployment Centre Environmental Statement

Chapter 23: Socioeconomics, Recreation and Tourism

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Technip



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23 SOCIOECONIMICS, RECREATION AND TOURISM

23.1 Introduction

- 1 The purpose of this chapter is to assess the socio-economic impacts associated with the European Offshore Wind Deployment Centre (EOWDC), including direct employment and supply chain effects, impacts on tourism and recreation, and impacts on the offshore wind energy sector as a whole, due to the opportunity for research and development. This assessment has been carried out by DTZ Consulting. The assessment has been achieved through reference to secondary literature, consultation with relevant stakeholders, and economic modelling of impacts. The scope of the assessment is the Inner Study Area (Aberdeen and Aberdeenshire), Wider Study Area (Scotland), and the UK.
- 2 The following technical reports support this chapter and can be found as:
 - Socioeconomic, Recreation and Tourism Baseline Technical Report (Appendix 23.1)
 - Socioeconomic, Recreation and Tourism Environmental Impact Assessment (EIA) Technical Report (Appendix 23.2)

23.1.1 Methodology Consultation

- 3 DTZ consulted with the following individuals in April 2011 (all by telephone) to inform the Baseline Assessment and Impact Assessment:
 - Colin Parker, Chief Executive, Aberdeen Harbour
 - Matt North, Port Manager for the Port of Dundee, Forth Ports
 - Steven Paterson, Chief Financial Officer, Peterhead Port Authority
 - Eric May, Marine Renewable Section Leader, Marine Scotland
 - Robert Forbes, Aberdeen City Council
 - Eric Wells, Aberdeenshire Council
 - Roddy Mathieson, Aberdeenshire Council
 - Alistair Reid, Aberdeenshire Council and Energetica Project
 - Paul Reynolds, Offshore Wind Development Manager, RenewableUK
 - Sara Budge, Project Director, Energetica
 - Dr Graham Russell, RYA Scotland

23.1.2 Key Guidance Documents

- 4 This assessment has been undertaken in accordance with the following guidance on economic assessment:
 - HM Treasury (2003) Green Book
 - BIS (2010) Impact Assessment Guidance
 - English Partnerships (2008) Additionality Guide: Third Edition
 - BIS (2009) Guidance for Using Additionality Benchmarks in Appraisal
 - Surfers Against Sewage (2009) Guidance on Environmental Impact Assessment of Offshore Renewable Energy Development on Surfing Resources and Recreation

23.1.3 Data Information and Sources

- 5 The following key sources of data were used to inform the baseline assessment and EIA technical reports:
- BWEA (2009) UK Offshore Wind: Charting the Right Course
 - Ernst & Young (2009) Cost of and financial support for offshore wind
 - Marine Scotland (2011) Economic Assessment of Short Term Options for Offshore Wind Energy in Scottish Territorial Waters: Costs and Benefits to Other Marine Users and Interests
 - Office of National Statistics (2003-2009) Mid Year Population Estimates
 - Office of National Statistics (2009) Annual Population Survey
 - Office of National Statistics (2009) Claimant Count
 - Office of National Statistics (2009) Annual Business Inquiry / Business Register and Employment Survey
 - Scottish Enterprise (2010) National Renewables Infrastructure Plan
 - Scottish Government (2010) Scottish Sea Fisheries Statistics 2009
 - Scottish Government (2010) Scotland's Marine Atlas - Information for the National Marine Plan
 - Scottish Renewables (2010) Scottish Offshore Wind: Creating an Industry
 - The Crown Estate / BVG Associates (2010) Guide to an Offshore Wind Farm
 - Visit Scotland (2009) Visit Scotland Tourism Statistics

23.2 Baseline Assessment

- 6 There is a significant renewable energy resource in Scotland, coupled with a high level of government commitment to renewable energy generation. The Scottish Government is committed to achieving a headline target of 20 % of total Scottish energy use from renewable sources by 2020. Scotland has a quarter of Europe's offshore wind potential. The Crown Estate has granted exclusive development rights for 11 offshore wind zones in Scotland. Offshore wind is in its infancy and there is a clear need for demonstration and deployment centres such as the EOWDC. The project, therefore, has an excellent fit with policy.
- 7 The project has been successful in gaining EU funding of up to €40m from the European Economic Recovery Plan. This award is in recognition of the project's potential role in supporting development of the European offshore wind industry by proving technologies and techniques.
- 8 At a local level, Aberdeen City and Aberdeenshire recognise the importance of the energy sector to the local economy. The 'Energetica' project has been developed which sets out a vision as to how the Inner Study Area can see energy, tourism, other industries and quality of life factors combine to raise the profile and economic performance of the region.
- 9 The Inner Study Area can be characterised as follows in terms of socio-economics, tourism and recreation:
- a population of 457,300 people in 2009, which has grown by 4.8 % since 2003 (a faster rate than the UK or Scotland)
 - high levels of employment in the working age population (79.4 % of the working age population are employed, compared to 71.9 % in Scotland)

- low level of unemployment (2.8 % in the Inner Study Area compared to 7.1% in Scotland)
 - a highly qualified workforce (24 % of the workforce is degree qualified, compared to 20.5 % in Scotland)
 - the Inner Study Area is less dependent on public sector employment than other parts of Scotland
 - the Inner Study Area has a significant Oil and Gas sector – comprising 25,700 workers, and accounting for over 60 % of UK employment in the oil and gas industry. This provides a firm foundation for development of new energy sources such as offshore wind, given the complementarity of skills required.
 - the three principle ports within the Inner Study Area are Aberdeen, Peterhead, and Fraserburgh. Aberdeen Port is the major supply base for the North Sea oil industry employing around 11,000 people and Peterhead is the UK's biggest fishing port, landing 149,200 tonnes of fish in 2009 valued at £118 million (27 % of the total Scottish market)
 - 1.5 million tourist trips were made to Aberdeen and Grampian in 2009, contributing £344 million of expenditure to the local economy. The region attracts a high number of Scottish and UK tourists. A relatively high proportion of tourist trips into the region relate to business tourism – almost three quarters of visitors to Aberdeen City are business-related. The most significant tourism investment in the inner study area is the Trump Corporation's investment at Menie Estate which will increase tourist income in coming years
 - the coastline of the Inner Study Area is used for a variety of recreational activities including sailing (although only to a moderate extent relative to other parts of Scotland), sea angling, surfing, canoeing, kayaking, windsurfing and kitesurfing. Fraserburgh is a particularly popular surfing location and regularly holds surf competitions and events, such as the UK Surf Tour and Fraserburgh Surf Festival
- 10 Looking forward, the Inner Study Area is expected to experience a weak recovery from the recession. Forecasts show that the economy is expected to grow by an average of 2.7 % per annum in the period 2011-2015 in the Inner Study Area, compared to 2.9 % in Scotland, and 3.4 % in the UK. Employment in the Inner Study Area is expected to decline by 12,100 jobs from 2008 to 2011; after which it is expected that there will be a gradual recovery, with job numbers increasing by 6,000 in the period 2011 to 2018. Over the period 2008-2018 as a whole, the worst affected industries in terms of job losses are expected to be Manufacturing and Oil and Gas industries.

23.3 Impact Assessment

23.3.1 Impact Assessment Methodology

- 11 The scope of this assessment is to consider the impacts of the development across the areas listed below.
- socioeconomic – employment and economic impacts associated with the construction, operation and decommissioning of the project, including supply chain and income effects
 - tourism – considering the impact on tourism in the local area
 - recreation – considering the impact on coastal recreational activities

- research and development – considering the possible impact of the deployment centre on the UK offshore wind industry as a whole, due to the opportunity for research, development and testing of equipment

12 The impact methodology is primarily based on a quantitative assessment of the economic impacts in terms of job and Gross Value Added (GVA). The level of significance is assessed as follows:

TABLE 23.1 Impact Methodology		
Magnitude of the Effect (based on spatial extent, duration, and scale)		
Spatial Extent of Effect assessed at the level of • Inner Study Area (Aberdeen & Aberdeenshire) • Wider Study Area (Scotland) • UK	Duration of Effect • Long-term/ permanent (more than 10 years) • Medium-term (existing for 5 to 10 years) • Short-term (existing for 1 to 5 years) • Temporary effect (existing for less than a year)	Scale of Effect: •As there are no specific standards or guidelines, the impacts are assessed relative to baseline conditions, or a 'No Development' scenario.
Sensitivity of the Receptor		
The sensitivity of the receptor (which in this case is assumed to be the economy, population, businesses and workforce in the study area) has been judged in terms of the level of unemployment in the area.		

13 Impacts are assigned a rating of major, moderate, minor or negligible; based on the magnitude of the effect and sensitivity of the receptor as follows:

TABLE 23.2 Matrix for Significance of Impact					
Magnitude of Effect based on spatial, duration and scale of effect	Sensitivity of Receptor				
		Very High	High	Medium	Low
Very High		Major	Major	Major	Moderate
High		Major	Major	Moderate	Minor
Medium		Major	Moderate	Moderate	Minor
Low		Moderate	Minor	Minor	Negligible
Negligible		Minor	Negligible	Negligible	Negligible

14 For the purposes of this assessment, only the offshore works associated with the EOWDC have been considered. The onshore works will be subject to a separate EIA, but have been considered briefly within this assessment as a cumulative development. The cumulative impact assessment has also considered the interaction with other planned offshore wind developments on the East coast of Scotland, totalling around 7.5 GW of capacity.

15 In conducting this assessment, consideration has been given to the possible range of impact scenarios, based around the following key aspects of the project:

- scale – it has been assumed that 84MW of capacity (comprising 11 wind turbines) would be deployed within the EOWDC, with an estimated total capital cost of £260.4 million
- timing – construction would take place from 2013-2014 and the EOWDC would be operational for a period of up to 22 years. Following which, there would be a decommissioning period of up to 5 months

- sourcing of components – based on analysis of project expenditure, it has been estimated that a total of around 38 % of capital expenditure would be retained within the Wider Study Area (Scotland), of which around 18 % would be retained within the Inner Study Area
- usage of local ports – It has been assumed that the construction and operational ports would both be within the Inner Study Area (ie Peterhead and Aberdeen)

23.4 Summary

- 16 Total capital expenditure during the two-year construction phase has been estimated at £260.4 million. It has been estimated that this would support 738 job-years worth of employment, and £40 m of Gross Value Added (GVA) in Scotland; of which 296 job-years and £16 million of GVA would be in the Inner Study Area (Aberdeen and Aberdeenshire). The impact related to the Inner Study Area would relate mainly to the construction and assembly of turbines and foundations. The additional impact in the rest of Scotland relates to the supply chain activity such as the manufacture of foundations and potentially also wind turbines.

Total Employment (job-years)	Direct & Indirect	Induced	Total
Inner Study Area	248	48	296
Wider Study Area (Scotland)	531	207	738
UK	955	n/a	n/a
Gross Value Added (£ million, discounted)	Direct & Indirect	Induced	Total
Inner Study Area	£13.8	£2.3	£16.1
Wider Study Area (Scotland)	£29.5	£10.0	£39.6
UK	£53.1	n/a	n/a

- 17 In terms of the operational phase of the project – this is anticipated to be 22 years in duration, and therefore is judged to have a ‘Long-term’ effect. Once fully deployed, it is anticipated that the EOWDC would require a local team of around 25 jobs for operational and maintenance activities within the inner and wider study area. Over the 22 year operational life of the development, this would support 768 job-years worth of employment and £23 million of GVA at the Scotland level as summarised below.

TABLE 23.4			
Summary Operational Impacts over lifetime of project (22 years)			
Total Employment (job-years)	Direct & Indirect	Induced	Total
Inner Study Area	553	108	661
Wider Study Area (Scotland)	553	216	768
UK	693	n/a	n/a
Gross Value Added (£ million, discounted)	Direct & Indirect	Induced	Total
Inner Study Area	£17.4	£3.0	£20.4
Wider Study Area (Scotland)	£17.4	£5.9	£23.4
UK	£21.9	n/a	n/a

- 18 The decommissioning phase is expected to be temporary, lasting for up to five months. It has been estimated that the total expenditure on decommissioning would be £33.3 million, and this would support 248 job-years of employment and £7.7m of GVA at the Scotland level.

TABLE 23.5			
Summary of Impacts from Decommissioning Phase (up to 5 months)			
Total Employment (job-years)	Direct & Indirect	Induced	Total
Inner Study Area	178	35	213
Wider Study Area (Scotland)	178	69	248
UK	178	n/a	n/a
NPV of GVA	Direct & Indirect	Induced	Total
Inner Study Area	£5.8	£1.0	£6.8
Wider Study Area (Scotland)	£5.8	£2.0	£7.7
UK	£5.8	n/a	n/a

- 19 The impact of the proposed development on tourism is considered to be of negligible significance.
- 20 The impact of the proposed development on recreational activities is considered to be of negligible significance.
- 21 The impact of the proposed development on research and development and the offshore wind industry has also been considered at both a local and national level. The view of consultations was that the proposed deployment centre would have a positive impact on the offshore wind sector. The following quotations highlight the significance of that impact:

'The development of offshore wind still faces many challenges to commercial deployment. The operation of the EOWDC will make a strong contribution to knowledge sharing for new components, designs and access methodologies for construction, operations and maintenance to be executed in the marine environment.' **Chris Bronsdon, Chief Executive, Scottish European Green Energy Centre (SEGEC)**

'The European Offshore Wind Deployment Centre will provide invaluable opportunities for R&D, helping the industry to grow with real confidence. Innovative projects such as this will help the UK to maintain its position as the

world leader in offshore wind. This will in turn encourage more investors to come forward, creating thousands of jobs in the rapidly-expanding offshore wind sector.' **Maria McCaffery, Chief Executive of RenewableUK**

'This is potentially a great opportunity for Scotland's research community to actively engage in the development of an important means to generate low carbon electricity. Particularly important will be the deployment of the Ocean Laboratory, a wide range of turbines and support structures as possible and access to these for independent evaluation in order to aid future developments.' **Professor Paul Mitchell of the University of Aberdeen's School of Engineering**

'The EOWDC is a major component of ACSEF's flagship project, Energetica. As a pioneering offshore wind project, it will be at the cutting edge of the development of new technologies and presents significant opportunities for Aberdeen City and Shire to build a viable, robust supply chain around offshore wind, particularly in the areas of development, operation and maintenance' **Sara Budge, project manager for Energetica, Aberdeen City and Shire Economic Future (ACSEF)**

'This is a real opportunity for Aberdeen and the North-east [of Scotland] to place itself at the forefront of this aspect of the renewables industry. There is fierce competition not just in Scotland but across the rest of Europe to gain recognition as a leader in the field and this project will provide an extremely valuable testing site for manufacturers to demonstrate their products and to gather vital data on performance.' **Bob Collier, Chief Executive of Aberdeen & Grampian Chamber of Commerce**

- 22 Overall, the assessment demonstrates that the project would have a significant positive impact on the economy of the Inner Study Area, Scotland and the UK. Over the lifetime of the project, it is estimated that it would support over 1,750 job-years worth of employment in Scotland, supporting over £70 million of Gross Value Added. It would also provide benefits to the wider offshore wind energy sector by providing opportunities for testing, research and development, and training. This would accelerate the deployment of offshore wind projects progressing through The Crown Estate's 'Round 3' and Scottish Territorial Waters licensing processes by providing the opportunity to demonstrate new equipment in the marine environment. The impacts on tourism and recreational activities are considered to be of negligible significance.