



Strategic Environmental Assessment
of
Offshore Renewable Energy Development Plan

May 2011

Introduction

Coastal Concern Alliance (CCA) is an independent, voluntary body established in 2006 to campaign for reform of the outdated Foreshore Act 1933, and the introduction of coastal and marine spatial planning to balance competing interests in our seas.

We welcome the opportunity to comment on the SEA and draft Plan for Offshore Renewable Energy Development and hope this initiative will form the first step in the introduction of a modern system of marine and coastal planning for Irish waters.

We are deeply concerned at the manner in which coastal zone policy in Ireland has been evolving, shaped largely by industry interests with emphasis on development rather than conservation. Ireland's inadequate consenting regime has not been updated, no marine or coastal spatial planning has been introduced, the contribution of sea to coastal landscapes is not officially recognised and large areas of ecologically rich habitat have not been surveyed and designated for protection.

Extensive amounts of offshore wind energy, proposed by developers over the last decade, have already been permitted by the Minister for the Marine, under the undemocratic Foreshore Act 1933 with no public right of appeal and no statutory involvement of local authorities. There was no national plan for offshore renewables and no strategic environmental assessment. Industry interests appear to dominate and there is very little public input into shaping the future of one of Ireland's prime public assets – our coastal zone.

While CCA recognise the value of developing alternative energy sources, we strongly believe that, in relation to industrial development in a threatened and vulnerable marine environment, the precautionary principle must apply.

Our comments on the SEA and OREDP relate largely to offshore wind energy, where major development is proposed, 0 -15km from shore, off designated landscapes in ecologically rich habitat.

Strategic Environmental Assessment (1.2)

The focus of the SEA “is to carry out a formal and systematic assessment of the likely significant effects of the proposals contained in the OREDP for the future development of offshore energy in Irish waters”.

Overall Conclusion of the SEA of OREDP

The SEA Environmental Report concludes that there is potential to develop up to 4,500MW of offshore wind and 1,500MW of wave and tidal energy in Irish waters without any likely significant adverse effects on the environment.

Coastal Concern Alliance

- question the validity of drawing this conclusion, given the scale and magnitude of the acknowledged “*uncertainties and unknowns associated with this conclusion where there is still potential for significant adverse effects to occur*” (ORED 10.5).
- . have concerns with respect to the evidence base and with some of the interpretations

The SEA acknowledges (15.2.1) the limitations of the available data, notably significant data gaps, limited evidence / knowledge on the effects of certain types of devices on the environment and the poor quality of much of the information underlying the assessment of seascape/ landscape effects. These data gaps and areas where reliable conclusions cannot be drawn are described in the SEA.

CCA suggests that adequate resources must be devoted to carrying out the research necessary to fill these data gaps before proceeding with development, which may result in significant adverse, potentially irreparable effects.

Informing the preparation of the OREDP (1.5)

The main focus of the SEA is to test development scenarios to year 2030, as set out in the OREDP. This includes the following scenarios for offshore wind: Low-800 MW; Medium-2300 MW; High-4500 MW (Table 1.3).

In the interest of transparency, it is important to highlight that in Ireland significant amounts of offshore wind have already been permitted (1620 MW) and proposed (1794 MW) under outdated legislation and regulations, prior to the introduction of any national plan or SEA for offshore renewable energy. These total 3414 MW. This is 77% of the High, 150% of the Medium and 431% of the Low Development Scenarios in the OREDP. In fact, 37% of the High Development Scenario is already fully consented 10-12 km off the Wicklow coast.

Links between the SEA, OREDP and Current Foreshore Licence Applications (1.6)

The Environmental Report (ER) states that “a *Parliamentary Statement provided by Eamon Ryan, Minister for Communications, Energy & Natural Resources confirmed that the SEA should not influence or affect the processing of existing foreshore lease applications*”.

The objectives of the SEA are “*to provide a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development.*” (Directive 2001/42/EC. Article 1).

The Minister’s statement is confusing and appears to be in conflict with the stated objective of the SEA.

CCA contend that it is essential that the SEA should influence and affect existing foreshore lease applications, which amount to 40% of the OREDP High Development Scenario for offshore wind. Clarification of this issue is necessary.

Renewable energy in Ireland (2.3)

Under Directive 2009/28/EC, Ireland's target is that 16% of all energy (heat, transport and electricity) consumed is from renewable sources by 2020. In addition, the Irish Government set its national targets for the production of energy from renewable sources at 33% by 2020 (The Energy White Paper, 2007). This target was then increased to 40% in the 2009 Carbon Budget.

- **The 40% target** has been widely queried by independent national bodies. The ESRI, IBEC and the Irish Academy of Engineering have raised questions about the high cost of offshore wind, which is not necessary to meet Ireland's binding renewable energy targets and the impact of its development on competitiveness.
- In April 2011, the ESRI pointed out that while the objectives of policy remain enhancement of competitiveness, ensuring a secure energy supply and tackling climate change, "*the changing external context*" requires some new solutions.

In view of the above, CCA advocate that there should be a re-evaluation of the 40% target, and of the OREDP Development Scenarios for offshore wind energy arising from this.

Alternatives (3)

Serious consideration of alternatives is vital given Ireland's changed economic circumstances, the evolving EU policy context and recent developments in technology. We do not believe that there has been adequate consideration in the SEA.

Evolution of the Environment Without the plan (3.2)

The SEA states that it is necessary to evaluate the "actual need" for the OREDP. The data presented shows that the OREDP entails potential significant adverse effects on the environment, in particular with regard to offshore wind.

CCA recommend that there is a fundamental change in the approach used to the identification of alternatives, including more robust consideration of the "do nothing" scenario, particularly at this time.

Potential Environmental Effects of Not Implementing the OREDP (3.2.3)

In consideration of alternatives, the SEA states that if the OREDP is not implemented there is a risk of not achieving the proposed 40% national target for renewables by 2020. The report cites potential knock-on environmental effects associated with failure to meet this target. These include:

- **Climate Change Mitigation:** In "*Controlling the Cost of Controlling the Climate-The Irish Government's Climate Change Strategy*" economist Colm McCarthy (2008) states that Ireland accounts for approximately 0.02% of global CO₂ emissions.

We recommend that the environmental benefits, in terms of global climate change mitigation, be weighed up against the environmental costs.

- **Reliance on onshore wind:** The report states that not implementing the OREDP would increase reliance on onshore wind, with potential for increased pressure on sensitive habitats and increased adverse effect on landscape character. It is clear from the findings of the SEA that, in the marine environment, significant adverse effects on these receptors will result from the implementation of the OREDP. The EU has recognised that the conservation status of marine environments is less favourable than that of terrestrial.

We recommend that a comparative analysis of the potential adverse environmental effects which would result from onshore and offshore wind should be carried out to inform the OREDP.

As a first step towards developing realistic alternatives to the Development Scenarios, a comprehensive economic and environmental cost benefit analysis of the various technologies (wind, wave, tidal) should be undertaken.

Landscape/Seascape Assessment

The European Landscape Convention, which Ireland has ratified, brings a clear requirement for an integrated approach to landscape planning, protection and management across all areas of government policy formulation and implementation. It applies to “*land, inland water and marine areas*” and requires that signatories “*recognise landscapes in law*”.

It is important that policy makers clearly acknowledge this requirement when assessing the draft OREDP and its low, medium and high development scenarios for offshore wind, all acknowledged in the ER to have potential significant adverse effects on landscape/seascape.

Seascape Assessment (6.5)

Sufficient information needs to be collected to identify the environmental issues and trends that characterise the areas affected by the OREDP and to provide the evidence base against which its potential effects can be measured and assessed.

In Ireland there is a serious lack of baseline landscape data: There are:

- No Seascape Character Assessments
- Few Landscape Character Assessments

In short, there is not sufficient information to provide the evidence base against which potential effects can be assessed and measured. The ER acknowledges this, describing confidence in baseline landscape data as “Low”.

This is a serious gap given:

- The extensive amount of offshore wind power already permitted (1620MW) and proposed by developers (1794MW) concentrated in Areas 1 & 2 off the East coast
- The proximity to shore of these extensive developments (>15km)
- The quality of adjoining coastal landscapes as indicated by high level county designations (AONBs, protected views and prospects, etc)

Given the high quality of the Irish coastline (and its importance to amenity and local economies), the scale of developments permitted and proposed, largely off the East coast, and their proximity to shore, it is clear that to properly consider the draft OREDP, comprehensive landscape and seascape character assessments must be carried out and the carrying capacity of coastlines assessed.

Implications of gaps in Landscape Baseline Data for project level EIS

The absence of appropriate Baseline Data (e.g. seascape character assessment and landscape character assessment) acknowledged in the ER, raises questions about the robustness of the project level assessment of the two extensive offshore wind farms already permitted off Wicklow (i.e. 520MW Arklow Bank and 1100MW Codling Bank projects). The Environmental Impact Statement is required to consider landscape/seascape and the visual resource. The absence of baseline information to inform the EIS baseline study raises questions about the robustness of the Seascape Visual Impact Assessment and Landscape Visual Impact Assessment carried out in connection with these two projects, involving up to 400 turbines, 160m high, 0>15km off the Wicklow coastline, designated as AONB in Wicklow County Development Plan .

The acknowledged insufficiency/absence of baseline data in landscape (and other topic areas), coupled with the acknowledged shortcomings in the consenting process, indicate that project level EIS must be treated with caution.

Robust project level EIS is central to the proper assessment of individual and cumulative effects of ORE developments. In the interest of transparency and public confidence, it is important that shortcomings in project level EIS for consented offshore wind projects in Irish waters, arising from lack of baseline data and an inadequate consenting process, are given due mention in the OREDP and the accompanying SEA.

Seascape Types

Classification of the seascape according to Seascape Type is important as it is used to assess Sensitivity to Change. While accepting that the SEA is a high level assessment, this assessment will be used to inform project level decision-making processes for all stakeholders (including regulators and developers).

CCA is of the opinion that Seascape Type needs to be more accurately classified to ensure that key deductions drawn about the ability of the seascape to accommodate change are reliable. This is of particular importance in the assessment of cumulative impacts.

Discrepancies in Sensitivity Assessment: Northern Ireland / RoI.

CCA note discrepancies in the assessment of sensitivity of Seascape Type between the Northern Ireland and Irish Republic SEAs. The RoI SEA sets out Sensitivity to Change of eight seascape types in Table A.8. The Northern Ireland SEA presents a comparable Table (ER Appendix E: Seascape Assessment. Table 2). Discrepancies are shown below.

Sensitivity to Change of Offshore Wind Device Characteristics: Republic of Ireland & Northern Ireland

Seascape Type	Off Shore Wind Turbines	
	RoI	N. Ireland
Low Lying Coastal Plain		Medium
Low Lying Coastal Plain and Estuarine Landscape, Low Lying Islands and Peninsulas	Low/Medium	
Large Bay	Low/ Medium	High

The Sensitivity to Change of Low Lying Coastal Plain and Large Bays is particularly pertinent given that these landscape types are described by the RoI SEA as predominating in Areas 1 & 2, where 3444 MW of offshore wind is permitted / proposed.

The SEA for Northern Ireland concludes that, off its coastline (650 km long), the total potential offshore wind capacity, excluding environmental factors, is 600 MW (Zone 1) and 900 MW (Zone 2). In contrast, in the Republic of Ireland in Assessment Area 2, the potential offshore wind capacity is concluded to be 3000-3300 MW, all off the 60 km Wicklow coastline. (Of this 1650 MW is already consented and an additional 1794 MW proposed.)

Clarification is required of (a) the vastly different density of offshore wind development considered in Northern Ireland and in Assessment Area 2 in the Republic and (b) the lesser sensitivity allocated to certain seascape types in the Republic of Ireland.

Policy Context (5)

Comparative Analysis

In considering the various scenarios set out in the OREDP, the Department of Energy should institute a comparative analysis of the development permitted in other EU countries with particular attention paid to size of development, proximity to shore, sensitivity of habitat and landscape. Such an analysis is necessary to ensure that Ireland conforms to good international practice in offshore wind farm siting.

Planning in the Marine Environment (5.2.1)

Currently Ireland has no integrated regulatory framework for marine / coastal management and protection (ER 5.1.).

The Foreshore Act, 1933, the key national legislation governing marine planning in Ireland, was drawn up before offshore renewable energy development was envisaged. It is widely acknowledged and noted in the SEA, that this legislation is not fit for purpose and is in need of significant reform. 1620 MW of offshore wind has been permitted under this legislation.

CCA calls for urgent action to progress this reform.

European Legislation

1. The Foreshore Act confers sole authority on the Minister to grant foreshore leases for construction in Irish waters. There is no public right of appeal against the Minister's decision.

The absence of an appeal procedure breaches the Environmental Impact Assessment Directive (85/337/EEC) by failing to have in place “*access to a review procedure before a court of law or another independent and impartial body...*” It is required that any such procedure “*shall be fair, equitable and not prohibitively expensive.*”

Acknowledgement of the need to comply with this Directive with regard to offshore planning should be included in the SEA.

2. Ireland is obliged, under the Public Participation Directive (2003/35/EC) to “*identify the public entitled to participate for the purposes of paragraph 2, including relevant nongovernmental organisations meeting any requirements imposed under national law, such as those promoting environmental protection. “The public concerned” must also be informed in relation to decisions likely to have significant impact on the*

environment. “*The public concerned*” means: the public affected or likely to be affected by, or having an interest in, the environmental decision-making procedures.

Acknowledgement of the need to comply with this Directive with regard to offshore planning should be included in the SEA.

3. Ireland is obliged, under the Marine Strategy Framework Directive (MSFD), to prepare a strategy for the management of Irish waters to achieve or maintain good environmental status (GES) of the marine environment by 2020 and to develop environmental targets by 2012. Offshore renewable energy development has potential to affect a number of the GES descriptors (13.2.3). New marine planning legislation is obliged to include strategies to comply with obligations under this Directive.

We welcome the SEA’s acknowledgement of the need to comply with the Marine Strategy Framework Directive.

CCA recommend that, in recognition of the serious democratic deficits inherent in the current permitting process, with respect to both EU and national law, there should be a moratorium on the granting of foreshore leases until a fit for purpose permitting process is introduced in line with good international practice.

Current and Proposed Offshore Renewable Energy Developments in Irish Waters (5.4.11)

SEA for OREPD is generally used to inform offshore leasing decisions. It is difficult to see how it can do the same in Ireland. Two of the biggest offshore wind farms in the world totaling 1620 MW have already been approved on protected sandbank habitat, 0-15 km off the Wicklow coastline, designated as an AONB. In addition, proposals for 1794 MW of offshore wind are well advanced under an inadequate permitting process and in the absence of any OREDP or any SEA.

In the interest of transparency, the possible adverse environmental effects of the large scale offshore wind development already permitted and advanced in Ireland’s near-shore zone, must be clearly acknowledged in the SEA and OREDP.

Biodiversity, Flora and Fauna (9.3)

Like climate change and renewable energy, biodiversity conservation is a high political priority in the EU. The Marine Strategy Framework Directive states that “*Programmes of measures and subsequent actions by member states should be based on an ecosystem based approach to the management of human activities and on the principles referred to in Article 174 of the treaty, in particular the precautionary principle*” (Article 44 Directive 2008/56/EC establishing a framework for community action in the field of environmental policy).

We welcome the SEA’s acknowledgement of the need to comply with the Marine Strategy Framework Directive. The application of the precautionary principle is crucial, given the unknown impact of renewable energy technologies on marine life and the poverty of knowledge about Irish marine ecosystems.

Sandbanks which are slightly covered by seawater at all times (9.3.2.2)

Most of the offshore wind farm developments currently proposed (Areas 1 & 2), are sited on the Kish, Bray, Codling, and Arklow sandbanks (ER p 135). These shallow “*Sandbanks slightly covered by sea water at all times*” are listed for protection in the Habitats Directive (Annex 1), as “*Natural Habitat Types of Community interest whose Conservation requires the designation of Special Areas of Conservation*”.

Hanna *et al* (2002) conclude that “*Soft glacial coastal sediments have little resistance to wave and hydrodynamic action and on the eastern seaboard of Ireland are slowly eroding on a geological time scale. This erosion of coastal sediments is partially arrested by a supply of sediments from offshore banks in deep water and underlies the importance of the banks in sediment transport to shores along the east coast of Ireland*”.

National Parks & Wildlife (2007), *Conservation Assessment of Sandbanks Slightly Covered by Seawater at All Times (Habitat Code 1110)*, judged that the current conservation status of the banks was “favourable”, in the absence of any significant habitat reduction events (e.g. “*aggregate extraction or wind farm development*”). However, the report concluded that “*from the large number of sand banks that have been investigated for their suitability for wind farms and their potential as sites for aggregate extraction, the future prospects are considered to be unfavourable-inadequate. ... Nationally the overall conservation status of the habitat “sandbanks covered by water at all times” is Unfavourable - Inadequate.*”

In “*EU Guidance on wind energy development in accordance with the EU nature legislation*” (2009), it is shown that “*The overall assessment (of sandbanks) for the marine Atlantic region is ‘unfavourable-bad...’.*”

Ireland has not completed the survey and designation process for this habitat and, as yet, only Long Bank, off Wexford, has been designated. However, the *Benthic surveys of sandbanks in the Irish Sea*, (Roche *et al* 2007) examined the status of the Kish Bank and the Blackwater Bank. The results of this survey state that the “*calculated diversity, richness and*

evenness of the two banks are broadly similar to those designated as habitats of community importance within the UK jurisdiction”.

Coastal Concern Alliance suggests that inadequate attention has been focused in the SEA on the potential adverse impact of extensive offshore wind farm construction on listed sandbank habitats.

Where surveys have been completed, the designation process for SACs and SPAs should proceed immediately, in order to inform the OREDP with regard to Habitats and Coastal Processes.

The SEA should include a map showing the location of Irish sandbanks, with reference to permitted and proposed developments.

Marine Birds

The SEA assesses the potential effects on Marine Birds as a result of Physical Disturbance only during the Installation and Decommissioning phases of wind. Clearly Physical Disturbance continues during the Operation phase, due to the moving parts of turbines (and as a result of activities associated with maintenance). These effects are likely to be especially significant when assessed for multiple developments cumulatively.

Assessment of the Potential Adverse Effects on Marine Birds during the Operation Phase of offshore wind should be completed.

Mitigation Measures (15)

Careful site selection and avoiding sensitive sites are key mitigation measures for avoiding adverse potential effects of development. Siting devices further from shore is also frequently mentioned.

Other EU countries (Germany, Belgium, The Netherlands, etc.) are mitigating the impact of large scale offshore wind by introducing 12 nm buffer zones (22.2 km) around their coastlines to protect inshore habitats, wildlife, landscape, tourism etc.. *The UK Offshore Energy SEA 2009* recommended the application of a 12 nm buffer zone from the coastline around large (>100 MW) offshore wind farms and stated that wider buffer zones may be justified for some areas/developments. This recommendation was reviewed by the Department of Energy and Climate Change and the finalised Energy Plan proposes that the application of a 12nm buffer should be examined on a case by case basis depending on the proposed scale of the development and the sensitivity of the surrounding seascape. (*SEA of Offshore Wind and Marine Renewables Energy in Northern Ireland, page 34*). By international standards, development of the size, scale and technological uncertainty of the wind farms proposed in Areas 1 & 2 would not be permitted in Ireland's near shore zone.

It must be acknowledged that since some 77% of the OREDP's High Development Scenario for offshore wind has already been permitted or proposed on sensitive habitats, in the near shore zone, the potential to mitigate effects of offshore wind in Irish waters by careful site selection is almost eliminated.

Given the scale of development proposed in Areas 1 & 2 and the sensitivity of multiple receptors in these coastal waters, a 12nm buffer zone (22.2km) should be recommended to conform to good international siting practice.

The siting recommendations made above for landscape/seascape is also considered to significantly reduce the potential for adverse effects on tourism and recreation.

Deploy and Monitor (15.4)

Deploy and monitor is not an acceptable mitigation measure where developments are proposed on environmentally sensitive sites listed for protection in Annex 1 of the Habitats Directive (ER 1.4) and where it is obvious that, were developments to be permitted, sites would be degraded. In these instances the precautionary principle must apply (Appropriate Assessment & Natura 2000. Birdwatch Ireland, 2010). There is absolutely no ambiguity about this.

Additional comments in brief

Public Consultation

Wide public consultation should be actively sought in relation to plans for offshore renewable energy development in the coastal zone.

Wind Turbine Array (typical) (6.5.2.1)

A typical wind turbine array is defined in the ER as 60 turbines, 5 MW, 300 MW total, 30 km² area. The SEA does not consider developments at a project specific level. However, all of the permitted developments and all those for which foreshore leases have been applied on Ireland's east coast are larger than the "typical" array on which the assessment of environmental impact is based. **This must be acknowledged as larger arrays would obviously have greater effect on receptors.**

Information on the location of devices

The ER (6.5.3.3) states that there is a "lack of information on the location of the devices". Locations of offshore wind farm developments in Areas 1, 2 & 5, are known and listed in the Environmental Report (ER 6.4.1.4)

Visibility Thresholds (6.5.3.3)

This section contains reference to data (Kish & Bray Banks OWF EIS 2005) which is not available to the public.

Lighting (9.5.4.2)

Offshore wind farms are also subject to 'conspicuity' requirements which include lighting, marking and radar enhancements (IAA 2002). **No consideration has been given to the visual impact of the lighting on night skies.**

Errata

Table 5.1: Foreshore Acts 1993 – 2005 should read 1933 – 2005.

Section 5.4.12: Distance of Codling Wind Park stated as 16.8 km & Kish Bank wind farm from shore stated as 3 km. Both incorrect.

Section 5.4.12: Oriel Wind Farm .. "will generate 300MW". This is incorrect. The name plate capacity differs from the actual output so the output is likely to be 20-35% of 300MW.

Biogenic Reef. The heading included at 9.3.2.2 p137 ER does not list the Biogenic reef.

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Coastal Concern Alliance is an independent voluntary body established in 2006 to campaign for the introduction of a democratic system of marine and coastal planning to protect Ireland's coastal zone.