Application for a Foreshore Lease to Construct an Offshore Electricity Generating Station.

Application for

a

Foreshore Lease

for the

Construction

and

Operation of an

Offshore Electricity Generating Station

Complete and return, with fourteen (14) copies of EIS and Admiralty Charts and one copy of the Articles of Association, to Foreshore Section, Department of the Marine and Natural Resources, Leeson Lane, Dublin 2
APPLICATION FOR FORESHORE LEASE TO CONSTRUCT AN OFFSHORE ELECTRICITY GENERATING STATION
(Please read the guidance notes before completing this application form)

1. Applicant’s Name and address:

Oriel Windfarm Limited
2 Marine Court
Blackrock
Co. Louth

Tel: 042 9322952
Fax: 042 9322995
E-mail: info@orielwind.com

1. (a) Name and address of applicant’s legal advisor

O’Donnell Sweeney
1 Earlsfort Centre
Earlsfort Terrace
Dublin 2

Tel: 01 6644200
Fax: 01 6644300

2. Nature of proposed generating station (i.e. wind powered, wave powered, etc.)

Wind Powered

3. Details of Authorisation to construct and Licence to generate and supply issued by the Commission for Electricity Regulation (include. photocopies)

(i) CER Authorisation to Construct, refer to appendix 1.1 for application.
(ii) CER Licence to generate, refer to appendix 1.2 for application.

4. Longitude and Latitude of proposed generating station site boundaries

The proposed wind farm is a hexagonal shape with the following corners.

<table>
<thead>
<tr>
<th>Corner</th>
<th>Longitude</th>
<th>Latitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW</td>
<td>53°56’52.39”N</td>
<td>06°05’32.27”W</td>
</tr>
<tr>
<td>NE</td>
<td>53°56’47.91”N</td>
<td>06°02’28.34”W</td>
</tr>
<tr>
<td>E</td>
<td>53°55’13.29”N</td>
<td>06°01’38.52”W</td>
</tr>
<tr>
<td>SE</td>
<td>53°53’13.02”N</td>
<td>06°02’54.22”W</td>
</tr>
<tr>
<td>SW</td>
<td>53°53’16.71”N</td>
<td>06°05’25.07”W</td>
</tr>
<tr>
<td>W</td>
<td>53°55’20.15”N</td>
<td>06°06’30.24”W</td>
</tr>
</tbody>
</table>
4.(a) Where the area can be identified on the Ordnance Survey map, the Ordnance survey co-ordinates should also be shown

<table>
<thead>
<tr>
<th>Irish National Grid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corner</td>
</tr>
<tr>
<td>NW</td>
</tr>
<tr>
<td>NE</td>
</tr>
<tr>
<td>E</td>
</tr>
<tr>
<td>SE</td>
</tr>
<tr>
<td>SW</td>
</tr>
<tr>
<td>W</td>
</tr>
</tbody>
</table>

5. Longitude and Latitude of the central Point of the proposed wind farm

<table>
<thead>
<tr>
<th></th>
<th>Longitude</th>
<th>Latitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre</td>
<td>53°55’02.60&quot;N</td>
<td>06°04’05.00&quot;W</td>
</tr>
</tbody>
</table>

5(a) Where the area can be identified on the Ordnance Survey map, the Ordnance survey co-ordinates should also be shown

<table>
<thead>
<tr>
<th></th>
<th>Easting</th>
<th>Northing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre</td>
<td>326988</td>
<td>298164</td>
</tr>
</tbody>
</table>

6. Area to be covered by the proposed generating station

2781 Hectares (27.8 Sq km)

7. Dimension of the generating station area at its longest and widest points

6.7 km long
5.3 km wide

8. Number & location of turbines within the area (indicate on charts)

55 turbines
See chart No.1 Appendix 2.1 and Drawing 1.1 Appendix 3.1

9. Maximum height of turbines above chart datum (including, in the case of wind farms, blades when vertical)

Tower height 100m and Blades 60m (+10% for larger capacity turbines). The total height with the blades in the vertical, to allow for increased turbine capacity the uplift would be to 166m with no alteration to tower height.

10. Rotor diameter of turbines (in the case of windfarms)

120m (+ 10% for larger capacity turbines and manufacturers variances)
11. Physical dimensions of each complete structure including anchorage or foundation *

<table>
<thead>
<tr>
<th></th>
<th>Water depth</th>
<th>Width of base</th>
<th>Diameter of tower</th>
<th>Height of base</th>
<th>Depth to base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravity</td>
<td>15-30m</td>
<td>45m</td>
<td>5-9.5m</td>
<td>6</td>
<td>0m</td>
</tr>
<tr>
<td>Monopile</td>
<td>15-20m</td>
<td>7m</td>
<td>6m</td>
<td>-</td>
<td>-45m</td>
</tr>
<tr>
<td>Tripod</td>
<td>15-20m</td>
<td>25m</td>
<td>6m</td>
<td>-</td>
<td>-30m</td>
</tr>
</tbody>
</table>

The above information is based on designs for turbines with an average size of 6 MW mounted on a 100m high tower. Currently the largest commercially available turbines range in size from 3 MW to 5 MW. Prototype developments currently are for 6 MW turbines with GE declaring an intent to develop a 7.5 MW offshore turbine.

12. Nature of construction below sea-level

Gravity. **Self-weight concrete structure providing sufficient dead load to stabilise the structure from the resultant overturning moments created by wind and wave. The structure is supported by using the bearing capacity of the soil underneath. Minimal site preparation is required as the sea bed topography is generally flat, measured slope of 1:600. It is unlikely that scour protection will be required due to the low current regimes in the area.**

Monopile. **A large diameter steel pile driven or vibrated into the seabed providing stability against overturning forces via horizontal earth pressure on the pile. The pile can be extended to take account of any potential scour, which is unlikely.**

Tripod. **Central support column that is supported by a system of inclining and horizontal steel members in the form of a tripod. 1.8m diameter steel piles driven or vibrated up to 30m into the seabed support the tripod. Stability against overturning forces is provided by compression and tension in the piles. The turbine tower is installed on a flange on top of the centre column.**

13. Nature of construction above sea-level*

Wind turbine nacelle mounted on 100m high towers installed on the foundation systems described above, connection flange at 10m above mean sea level. Refer to attached drawing 1.2 Appendix 3.2.

14. Manner in which structures will be anchored to the sea bed (i.e. cable, set in concrete foundations, etc.)*

<table>
<thead>
<tr>
<th></th>
<th>Refer to drawing No. 1.3 Appendix 3.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravity</td>
<td>Refer to drawing No. 1.4 Appendix 3.2</td>
</tr>
<tr>
<td>Monopile</td>
<td>Refer to drawing No. 1.5 Appendix 3.2</td>
</tr>
</tbody>
</table>
15. Nearest distance from other generating stations or other constructions on the sea-bed (including constructions anchored permanently or semi-permanently to the sea-bed) **

There are no other generators in the vicinity of the lease area. A met mast will be installed within the Windfarm area. The nearest constructions anchored to the sea bed are the Dundalk Bay Pile light at 14 km, Irish lights navigation buoys Imogen at 2.5 km and Dunany Buoy at 4.5 km.

16. Distance from shore at nearest point

5.16 km.

17. Distance from nearest habitation

In excess of 6 km.

18. Distance from nearest Aquaculture operation if less than 3 km

NA.

19. Distance from nearest Special Protection Area (SPA) or Special Area of Conservation (SAC) if less than 5 Km.

14 km to nearest SAC.
10 km to nearest SPA. Refer to Appendix 2.2 for marine chart.

20. Distance from shipping lanes at nearest point.

Distance 1.8 km.
The Windfarm area is adjacent to Shipping routes to Carlingford Lough and Dundalk Bay. Adequate space for safe passage has been allowed by agreement with the Commissioners of Irish Lights. Refer to EIS section 4.3 for Navigation Risk Assessment.

Discussions with the Commissioners for Irish Lights regarding the wind farm and its lighting have occurred, with agreement to use the International Association of Marine Aids to Navigation and Lighthouse Authorities recommendation for the marking of offshore wind farms. IALA recommendation 0-117 May 2000. Refer to attached correspondence Appendix 5.3.

21. Indicate any other economic or leisure activities known to take place within or adjacent to the area proposed for the generating station

Refer to EIS sections 4.8, 4.9 and 4.10.
CONDITIONS WHEN OPERATING

22. Maximum noise levels expected at the site ______________________ dB

Refer to EIS section 4.3.7.2.1.

23. Normal noise levels expected at the site ______________________ dB

Refer to EIS section 4.3.7.2.1.

24. Normal noise levels expected at site of nearest habitation __________ dB

No noise level to impact on shore from wind farm. Refer to EIS section 4.3.7.2.2.

25. Maximum Noise levels expected at site of nearest habitation __________ dB

No noise level to impact on shore from wind farm. Refer to EIS section 4.3.7.2.2.

26. Maximum noise levels expected at nearest SPA or SAC (if closer than 5 Km.)

The wind farm will be 14km from the nearest SAC and 10km from the nearest SPA. No noise level from the wind farm will impact SAC’s or SPA’s in the vicinity. Refer to EIS section 4.3.8.2 for details.

27. Indicate conditions which might be expected (a) to increase noise levels above normal and (b) to maximum levels

During the construction phase at the lease area and during cable laying operations to shore. Refer to EIS section 4.3.7.1 for details.

28. Describe visual impact of the proposal at site of nearest habitation or human activity on-shore (indicate type of site (i.e. houses, beach, boat club, etc.)

VRP 12 Cooley Point. Refer to Appendix 4 and EIS.

29. Designed maximum annual output of the proposed generating station

1.1924 TWhr/a.

30. Anticipated maximum annual output of the proposed generating station

1.084 TWhr/annum.
Availability expected at 90% (possible access restrictions due to weather).

31(a). Is an exclusion zone for passage of shipping (including fishing and leisure boats) sought (YES/NO) (If “yes” please supply details and give reasons)

No exclusion zone is sought for passage of fishing or leisure craft. Commercial Shipping to traverse around the Windfarm, safe transit corridors have been allowed for, following consultation with the Commissioners for Irish Lights.
(b) Is an exclusion zone (or ban) sought on the use of any type of fishing gear or leisure activity within the area occupied by the turbines and/or associated cables?

A complete exclusion would be required for heavy beam trawling within the wind park for safety reasons; traditional fishing methods may be practiced within the Windfarm area. Angling potting and other light activity would not be discouraged. Restrictions on leisure activities are not sought in relation to the wind farm. It is understood that leisure craft will take due care on their own account to avoid any damage to their property.

(exclusion zone should be indicated on the appropriate marine charts which should accompany the application)

32. Capital Cost of Proposed Venture

€623,000,000

33. Source of capital

Debt and Equity based on a 75 -25 ratio (refer to attached Business plan Appendix 7).

34. Has consultation taken place with Dúchas - the National Heritage Service?

Yes, refer to attached correspondence appendix 5.1.

(If yes please supply copies of relevant correspondence)

35. Have nearby harbour authorities been consulted (Yes/No)

Yes, refer to attached correspondence appendix 5.2.

(If yes please supply copies of relevant correspondence)

36. Has planning permission been received for shore based works?
(If yes copy should be attached)

Cables associated with the wind farm will be installed underground. Eirgrid or another competent undertaker will apply for planning permissions required for above ground substation works at the grid connection location, following final agreement. Refer to attached correspondence Appendix 5.4.

If planning permission has not been received a copy of the planning application(s) should accompany the application

NA

37. Have necessary on-shore eaves been obtained?

Refer to attached correspondence, appendix 6.
Signed for and on behalf of the applicant

Chris Hannevig
Secretary Oriel Windfarm Limited.

Date 19th Feb 2007

Name address, telephone etc. details of contact (if different from that of the applicant)

As Above