East Anglia ONE Offshore Wind Farm

Developer: Scottish Power Renewables (UK) Limited & Vattenfall Wind Power Ltd

Site Size
Covering an area of approximately 300km². It will be part of a develop of approximately 7200MW of wind capacity off the coast of East Anglia, known as Zone 5 under the Crown Estate Round 3 Offshore Wind Farm Licensing Arrangements.

Site Location
Zone 5, known as the East Anglia Zone is 14km from shore at its closest point. The East Anglia ONE site is located in the south of this zone and is approximately 43.4km from the UK shoreline at its closest point and 45.4km from the nearest coastal town (Lowestoft). The western site boundary is delineated by the Bacton to Zeebrugge high pressure gas pipeline and the eastern boundary is delineated by an IMO Deep Water Shipping Route. Swell in this area is predominantly North/ North North Easterly. Surf beaches from Cromer (91km) to Southwold (51km) could be affected, especially if swell is from the South East. More southerly beaches down to Broadstair (141Kkm) could be affected but the distance from the Wind Farm means the effects are likely to be negligible.

Image: ©East Anglia Offshore Wind Ltd.

Technology
The project consists of up to 325 wind turbine generators and associated infrastructure, with an installed capacity of 1200MW, enough to meet the average energy needs of up to 770,000 homes. The wind turbine generators will be 3MW or 8MW and the proposed design envelope for each is:

<table>
<thead>
<tr>
<th>Wind Turbine Parameters</th>
<th>3.0MW Wind Turbine</th>
<th>8.0MW Wind Turbine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of wind turbines</td>
<td>325</td>
<td>150</td>
</tr>
<tr>
<td>Tip Height range</td>
<td>Minimum 135m (LAT)</td>
<td>Maximum 200m (LAT)</td>
</tr>
<tr>
<td>Rotor Diameter range</td>
<td>Minimum 110m</td>
<td>Maximum 170m</td>
</tr>
<tr>
<td>Hub Height</td>
<td>Minimum 80m (LAT)</td>
<td>Maximum 120m (LAT)</td>
</tr>
<tr>
<td>Air Draft (distance between sea level and lowest point of blade)</td>
<td>Minimum 22m (MHWS)</td>
<td>Minimum 22m (MHWS)</td>
</tr>
</tbody>
</table>

Foundations for the turbines are yet to be confirmed and will be of the following:

- **Gravity Base** — comprised of a base, a conical section and an upper cylindrical shaft, although there are many variants. The base of the structure is typically hexagonal, octagonal or circular in shape with a diameter of up to 50m. It is possible that some ground preparation is necessary, comprising excavation and the possible provision of a graded gravel or rock layer. The worst case assesses in the EIA for gravity base foundations is based on 240 foundations and a maximum seabed footprint of 50m diameter (excluding scour protection).

- **Suction Caisson** — comprised of a cylindrical tower, a transition structure and a large diameter cylindrical skirt measuring up to 25m diameter, which penetrates into the seabed. Suction caissons are primarily made of steel. The environmental effects of a suction caisson are assumed to be similar to that of a gravity base. As gravity base foundations could be much larger than the suction caisson, the maximum case gravity base dimensions have been taken forward for assessment instead of the maximum case suction caisson foundation. The worst case assessed in the EIA for suction caisson foundations is based on 240 foundations and a maximum seabed footprint of 25m diameter (excluding scour protection).

- **Jacket Foundation** — comprised of three or four-sided steel tubular framed structures with main tubular legs and horizontal and diagonal bracing. The structures widen from the top to the base, with fixity to the seabed using pin piles. Suction buckets at the base of the jacket legs are also under consideration as an alternative form of fixity to pin piles. The worst case assessed in the EIA for jacket foundations is based on 325 four legged jacket foundations with battered legs, and a maximum seabed footprint of 35m by 35m.

The foundations for operational buildings such as meteorological masts and collector stations are likely to be from the same range as presented for the wind turbines.

There will be up to four seabed export cables, each around 73km in length, to connect the offshore substations to onshore cable at the landfall point, near Bawdesy, East Anglia. The export cables would be buried at a depth between 0.5m and 5m for the majority of the route. In instances where cables cannot be buried, protection measures would be adopted e.g. concrete mattresses or rock...
placement. Where cables meet the landfall site, horizontal drilling or a similar method will be used
to drill a pilot hole and lay the cables along the designed route beneath the cliff and shingle beach to
beyond the low tide line-up to 1,100m from the base of the cliff.

**Development Stage**
East Anglia ONE Wind Farm is currently in the Examination stage. The deadline for close of
examination is 25/12/2013.

**Timeline**
Scoping report submitted: 06/2011
Scoping Opinion published from IPC: 08/2011
Community Consultation Period: 20/07/2011 – 31/10/2011

10/02/2012 - 03/09/2012
Application Submitted: 21/11/2012
Application Accepted: 14/12/2012
Registration for interested parties begins: 15/12/2012
Registration for interested parties closes: 11/01/2013
Preliminary meeting: 25/06/2013
Examination begins: 25/06/2013
Examination ends: 25/12/2013
Construction begins: Anticipated to commence in 2016

Although the deadline to become an interested party has closed, if you have a legal interest in land
affected by a nationally significant infrastructure project and have not already registered to become
an interested party, then you can make a request to the Examining Authority to become an
interested party under s102A of the Planning Act 2008 (as amended). The last chance to influence
the project is the 26/11/2013.

**Contact Details**
- FREEPOST RSTC-EJY-RKRX,
  EAOW,
  1 Atlantic Quay,
  45 Robertson Street,
  4th Floor,
  Glasgow,
  G2 8JB
  eastangliaone@eastangliawind.com
• Project Manager: Helen Thompson
  Tel: 01416140444
  eastangliaone@eastangliawind.com

• Programme Director: Jason Martin
  eastangliaone@eastangliawind.com

Regulator Details

• Planning Inspectorate case team:
  Tel: 0303 444 5000

Consultees

• The Marine Management Agency (MMO)
  Lancaster House
  Hampshire Court
  Newcastle upon Tyne
  NE4 7YH
  Tel: 0300 123 1032
  info@marinemanagement.org.uk

• Trinity House
  London
  Tower Hill
  London
  EC3N 4DH
  enquiries@thls.org

• Cefas/Defra
  C/O Cefas
  Pakefield Road
  Lowestoft
  Suffolk
  NR33 0HT
  Tel: 01502 524228

• Suffolk Coastal District Council
  Suffolk Coastal District Council,
  Melton Hill,
  Woodbridge,
  Suffolk
  IP12 1AU
  Tel: 01394 383789.
  customerservices@suffolkcoastal.gov.uk

• Norfolk County Council
  Norfolk County Council
  County Hall
  Martineau Lane
  Norwich
  Norfolk
  NR1 2DH
  Tel: 0344 800 8020
  information@norfolk.gov.uk

• Essex County Council
  Essex County Council
  County Hall
  Market Road
  Chelmsford
  CM1 1QH
  Tel: 08457 430 430
  contact@essex.gov.uk

• JNCC
  Joint Nature Conservation Committee
  Monkstone House
Surfers Against Sewage have concerns and believe further consultation is need. There are several surf beaches within a close proximity to the proposed array. There are a number of developments proposed for this area that could have a combined effect on refraction, wave direction and size. These problems would be further compounded if gravity base foundations were used.