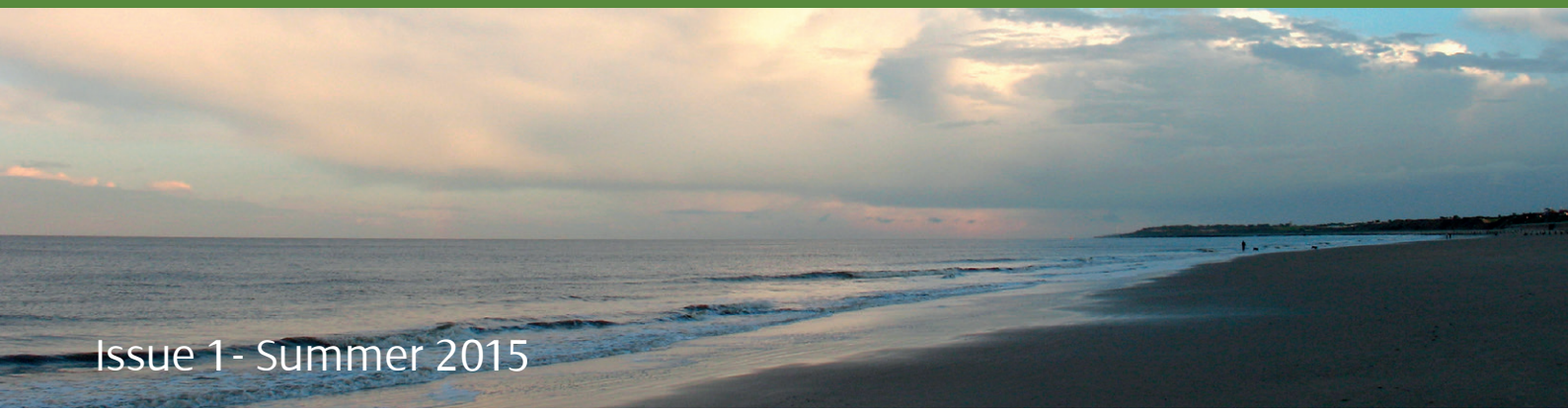
East Anglia Newsletter

SCOTTISHPOWER RENEWABLES



Issue 1 - Summer 2015

Welcome to the first edition of ScottishPower Renewables' East Anglia Newsletter. The aim of this publication, which we plan to produce at least twice a year, is to make sure you are fully informed about our projects and to bring you our latest news. This issue will focus on East Anglia ONE, the first project being developed in the East Anglia Zone. In it you will find information on the background to the project, the surveys we are undertaking, how we are attracting local companies via a Share Fair event, and the announcement about our wind turbine supplier. So please read on and find out more.

About ScottishPower Renewables

ScottishPower Renewables (SPR) is part of Iberdrola , the world's largest wind energy developer, with an operating portfolio of over 14,000 megawatts (MW).

SPR is responsible for progressing Iberdrola's onshore wind and marine energy projects in the UK and offshore windfarms throughout the world and now has 30 operational windfarm sites producing over 1,600 MW.

Project Director Charlie Jordan has overall responsibility for the East Anglia ONE Offshore Windfarm. Charlie has 17 years construction experience including the successful delivery of our West of Duddon Sands Offshore Windfarm which was officially opened in October 2014. West of Duddon Sands is located in the East Irish Sea and comprises 108 wind turbines with a total installed capacity of 389 megawatts.

Stakeholder Manager Joanna Young has worked for SPR for four years and is based at our offices at OrbisEnergy, Lowestoft. She has a wide experience of stakeholder management and community engagement and prior to joining SPR worked at 1st East, a company dedicated to the economic regeneration of Great Yarmouth and Lowestoft and the surrounding area.

The East Anglia Zone

The East Anglia Zone is a 6000km^2 area of seabed off the coast of Norfolk and Suffolk. To put it into context, that's about one and a half times the size of Suffolk! It was awarded to the 50-50 joint venture ScottishPower Renewables and Vattenfall Wind Power Limited by The Crown Estate in 2009.

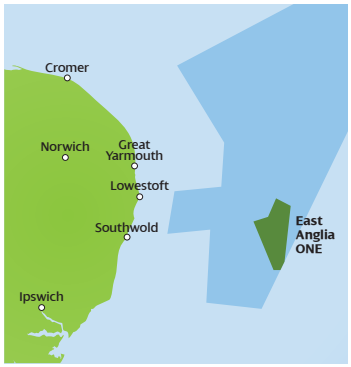
The Crown Estate owns the seabed up to 12 nautical miles around the coast of Britain and has the right to develop it a further 200 nautical miles out to sea. As part of this development, nine new offshore zones were identified, one of which was the East Anglia Zone.

It is estimated that the zone has the capacity to generate up to 7.2 gigawatts (GWs) from offshore wind.

East Anglia ONE

In June 2014, following the approval of the Secretary of State for Energy, East Anglia ONE Limited (EAOL) gained consent for the construction and operation of an offshore windfarm with a gross output of 1,200MW.

In July 2014 the UK Government announced the first budget of its 'Contract for Difference' (CfD) regime. The new regime asks projects to bid against each other for funding from an annual budget. EAOL was successful in securing support for up to 714MW and, on 26th February 2015, was awarded a CfD by the Department of Energy and Climate Change (DECC).



The East Anglia ONE Offshore Windfarm is in the southern half of the zone and, when complete, could supply power to about 500,000 homes.

On 24th March 2015, ScottishPower Renewables took over ownership of East Anglia ONE and is now the sole developer on this project.

East Anglia ONE is approximately 300km^2 and is likely to include:

- Up to 102 wind turbines
- Two offshore substation platforms and their foundations
- Two seabed export cables, each around 73km in length
- A landfall site at Bawdsey, Suffolk, with onshore transition pits
- Up to six onshore underground cables, each of around 37km in length
- Up to eight cable ducts for two future East Anglia projects
- Onshore substation next to the existing substation at Bramford, Suffolk

Public consultation on the project began in 2010 and continued until the application for consent was submitted to the Planning Inspectorate in November 2012.

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Timescales

Although there is still a lot of work to do before construction can commence, here is a brief list of the construction timescales we are working to for the project:

- **Onshore - construction is due to start in early 2017**
- **Offshore - construction will start in 2018**
- **First Power Generation will commence in 2019, and**
- **East Anglia ONE will be fully-operational in 2020.**

Grid connection

This awarded capacity makes it necessary to connect the project to the national transmission network via high voltage alternating current (HVAC) rather than high voltage direct current (HVDC). This requires a number of limited changes to the transmission infrastructure. All these changes are minor and can be accommodated within the previously consented cable route.

An application to the Planning Inspectorate to allow these changes to be made was submitted on 19th May. Following which, the Planning Inspectorate commenced a consultation and hosted the application documents on its website from 5th June. This consultation is due to last until 20th July. Once complete, DECC and the Marine Management Organisation will consider the responses and come to a decision.

What's happening next?

Onshore surveys

SPR has a reputation for being a responsible developer with a proven track record in environmental management, having won two Queen's Awards for Sustainable Development.

To ensure this reputation is maintained and in order to comply with planning requirements, we will be undertaking a number of surveys prior to construction. These will check for endangered species and archaeology as well as the condition of the ground where the cables will be buried.

These investigations are in addition to the surveys done at the start of the project. We know that certain species are known to move locations, so it is necessary to find out whether they are present or not. If they are, then we know to take steps to protect them during construction. The same applies to archaeology. As for the tests on the ground conditions, these help to inform how the project is engineered.

These "pre-construction" surveys started at the beginning of this year and will continue throughout the remainder of 2015 and into spring 2016.

To date, we have successfully undertaken a geophysical survey that detects magnetic distortions in the ground that are analysed for evidence of archaeology, as well as a Great Crested Newt survey.

For more details about the surveys see below:

Badgers

We have already carried out surveys to assess the presence of badgers in the area. This was done when we conducted our original environmental assessments on the project. However, badgers are highly mobile and can occupy their setts at different times over a number of years. This means we have to re-survey setts to find out whether they are still in use. Pairs of ecologists will walk the route to identify any newly excavated setts. This can be done at any time of the year.

Otters and water voles

Previous surveys have identified that otters and water voles may be present along watercourses along the onshore cable route. However, we need to understand the latest distribution and abundance of these species. This is done by walking along the watercourses looking for signs of recent activity.

Water vole surveys are also likely to be carried out at the same time - again these are conducted along watercourses which are suitable water vole habitat.

Reptiles

When looking for reptiles, we have to assess the habitat to see if it is suitable and sometimes install "refugia". These refugia are made out of squares of roofing felt, carpet tiles or corrugated metal, that reptiles like to hide under or bask upon. They would be checked for reptiles on seven occasions and would be removed once the seven visits are completed.

Bats

Teams of experienced and, where necessary, Natural England bat-licensed ecologists, inspect trees from the ground, to determine if potential roosts, such as cracks and holes, are present. In some cases inspections are undertaken using climbing equipment to reach potential roosts.

If potential roosts are found, follow-up night surveys would be undertaken to see if bats are present, their numbers and species. As well as observation, manual and remote bat detectors are sometimes used to record bat calls and aid species identification.

Ecology surveys

Although we have surveyed Great Crested Newts, we still need to monitor the activity of badgers, water voles, otters and reptiles in the area. The calendar on the right shows the times when this activity can take place.

Species Survey Calendar - Key

- Recommended survey time
- Possible survey time
- Surveys not recommended

Table 1												
Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Newts												
Badgers												
Water Voles												
Otters												
Reptiles												

Site investigation surveys

We will also need to undertake surveys, where small samples of material are analysed to better understand the site conditions of the area.

As well as the works outlined below there will be ground investigations in areas of contaminated land and places where further information is required for engineering purposes.

The surveys will be carried out this summer and autumn so that we have enough time to analyse the data and feed it into our project design.

Contaminated land

A desktop assessment of the former Tuddenham St Martin landfill and other likely areas is to be undertaken, to see whether any potential contamination may exist.

Depending on the results, we may need to do some intrusive site investigations, accompanied by laboratory testing for water, groundwater and gas.

The site investigations will involve extracting samples of material, water and gas. We may need to dig trial pits using an excavator. Depending on the results of the site investigations, subsequent clean-up works may be required prior to the cable route being constructed. We will work closely with the Environment Agency during this process.

A vessel similar to this jack-up barge, with drilling equipment on board, will be used in the Deben Estuary.

Overwater geophysical and geotechnical surveys

We will be carrying out geophysical surveys off the coast of Bawdsey at the landfall location and also in the Deben Estuary and Martlesham Creek.

These works will be carried out by a small vessel approximately 12 metre(m) by 5m that will tow equipment through the water to take measurements of the sea and river bed.

This will provide us with a map of the surface and sub-surface conditions of the riverbed and seabed in these areas. The survey will take place in the summer and will last up to two weeks at each of the following locations: the landfall at Bawdsey, Deben Estuary and Martlesham Creek.

Following completion of the geophysical survey there will be a geotechnical survey of the same areas.

This geotechnical survey will either use intrusive equipment to penetrate and extract samples of the ground known as boreholes, or take readings from the soil properties without extracting samples, known as Cone Penetration Tests (CPTs).

The survey will use either a specialist vessel approximately 24m by 13m or a jack-up vessel approximately 12m by 17m.

The jack-up or specialist vessel will be towed or moved to each location (Martlesham Creek, Deben Estuary and the landfall) and will remain in that place, including overnight, until the works have been completed. The vessel will be visible from the surrounding area and may be accompanied by a guard vessel.

Once the vessel is in place, equipment on board will be used to penetrate the sea or river bed and extract cores of material at depths of up to 30m.

The core material will be analysed and the results used to determine the physical characteristics of these areas such as the type of bedrock and soil composition.

Below: A platform with drilling equipment like this will be used at Martlesham Creek.

Photos by kind permission of Structural Soils Ltd, a member of the RSK Group.

Onshore geophyiscal and geotechnical surveys

We also plan on carrying out land-based geophysical and geotechnical investigations. These will be focused on the area around key Horizontal Directional Drilling locations, including the banks of the River Deben and Martlesham Creek.

The contractor will place seismic lines (geophones) in a cross-cross pattern across an area of land and use acoustic testing to measure the sound waves passing through the lines, this will make a noise similar to that of a bird scarer. A vehicle, such as a Land Rover, will be used to tow a trolley with the equipment for the survey. The measurement from the sound waves will provide us with accurate mapping of the areas where horizontal directional drilling entry and exit points will be located.

After the geophysical survey, geotechnical works will take place in the same areas. These will use the same techniques as the geotechnical works off the coast and in the River Deben and Martlesham Creek and will take up to four weeks to complete. Whilst carrying out these works the contractor will install standpipes to monitor the water table at these locations. These will remain in place throughout the construction period but will cause minimum disruption. Their location will be agreed with individual landowners beforehand.

As with the geophysical works, the equipment for this survey will be transported on a trolley towed by a Land Rover or similar-sized truck.

Archaeological trial trenching

Data gathered from the archaeological geophysical survey already conducted this year has been collated and will be reviewed by Historic England and Suffolk County Council.

This review will highlight areas where further archaeological investigation is required. These investigations will require some digging, known as "trial trenching", and a plan will be produced showing the location of where this will take place.

The trenches will range from around 20m to 70m long, by 2m wide. Most trenches will be around 50m long and they will be approximately 1m deep. They will be dug and backfilled using 360 excavators.

The contractor carrying out these works will also have a tractor and trailer on site to assist with access and movement of the excavators.

Soil removed from the trench will be divided into top soil and sub soil and stored at either side of the trench. A team of archaeological supervisors will be present on site to co-ordinate the works.

Where nothing significant is found, the trenches will be backfilled within a few days. If something is uncovered, however, representatives from Historic England and Suffolk County Council will be invited to the site to view the finds before the trench is backfilled.

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An excavator digging a trial trench.

Photo by kind permission of Oxford Archaeology.

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The trial trenching is expected to last approximately 80 days, although this could be spread out over a longer period with breaks in between. Works are expected to commence in August.

During the survey the contractor will make use of compound sites to store equipment and welfare facilities. This will minimise the movement of traffic and allow the overall works to be carried out quickly and efficiently.

We will be contacting all landowners and known tenants in the coming weeks to confirm that these works are happening and explain the arrangements.

However, if you own or use land along the cable route for agricultural or leisure purposes and have further questions about these works please contact **jyoung@scottishpower.com**.

East Anglia Zone

East Anglia THREE Phase III consultation exercise

Whereas East Anglia ONE is now wholly owned by SPR, East Anglia THREE remains owned by East Anglia Offshore Wind, a joint venture between SPR and Vattenfall.

The East Anglia THREE Project team last consulted with you during the summer and autumn of 2014 when we published our Preliminary Environmental Information Report and held a series of public information days in Bramford, Woodbridge and Burstall.

Prior to that we held a consultation in autumn 2013 when we published a Statement of Community Consultation for the project.

As a result of the iterative nature of the Environmental Impact Assessment process, the project design and the consultation outlined above, there have been a number of updates to the project description since we last consulted with you.

We therefore intend to carry out a further round of consultation (which we are calling Phase III) to give an update to stakeholders on the project design and receive feedback on our most recent proposals. The Phase III Consultation comprises the following elements:

- A Phase III Report
- Two drop-in sessions at Bramford Church Rooms (22nd June 2015) and Woodbridge Library (23rd June 2015) to discuss the project changes with you, sessions will be open from 12noon to 7pm
- Consultation material to be available in hard copy format and electronically on the East Anglia THREE website: (http://eastangliathreeeastangliawind.com/)
- Documents to include the PEIR, SoCC (2013), SoCC update, and the Phase III Report. Hard copies to be placed at local libraries along the cable route including Ipswich, Lowestoft, Woodbridge, Hadleigh and Felixstowe and
- Site notices to be placed on site and advertisements to be placed in the local and national press (including The Times, Lloyds List, London Gazette, Fishing News, East Anglian Daily Times/Ipswich Star and Eastern Daily Press).

Please take the time to review our consultation material or come along to one of the drop-in sessions to talk to the project team directly. After we have completed Phase III consultation we expect to submit East Anglia THREE for consent in November this year. East Anglia THREE is not expected to commence construction until around 2020.

Supply chain plan

When East Anglia ONE bid for a share of the Contract for Difference (CfD) allocation, we were also required to submit a Supply Chain Plan, which was approved by the Department of Energy and Climate Change (DECC) in September 2014.

This sets out a number of past and future actions that East Anglia ONE intends to deliver upon to help promote competition, foster innovation and develop skills in the offshore wind industry. The key actions to achieve these goals include:

Promoting competition

- Investing around £2bn to construct the Project, targeting the delivery of 50% UK Content over its lifetime
- Holding open and transparent procurement processes
- Promoting supply chain opportunities to prospective local & national suppliers and new market entrants

Fostering innovation

- Utilising next generation wind turbines, jacket foundations, innovative grid and cable solutions and state-of-the-art installation vessels to deliver the Project
- Investing an average of £3.5m per year in new technologies and innovation specifically for offshore wind and encouraging chosen suppliers to also invest in this area
- Using three to five positions in the wind park to demonstrate new turbine and foundation technologies

Developing skills

- Targeting employment opportunities for between 1,500 - 3,000 people at the peak of construction
- Working collaboratively with chosen suppliers, academic and enterprise bodies to promote and develop skilled workers for the EA1 Project and future offshore windfarms in East Anglia and the wider UK.

The planned actions set out in the Supply Chain Plan will be monitored and reviewed regularly. When the Project has been constructed East Anglia ONE will prepare a Post Build Report which will explain how the commitments in the Supply Chain Plan have been implemented.

To find out more, you can read the plan which was recently published on the DECC section of the GOV.UK website: (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/429411/EA1_SC_plan_600MW_DECC_Shortened_19.3.15.pdf).

Events & news

Share Fair event

ScottishPower Renewables (SPR) is teaming up with the East of England Energy Group (EEEGR) in July, to hold a Share Fair at Norwich City Football Club in Norwich.

The event takes place on 16th July and will provide an opportunity for supply chain companies to meet members of the East Anglia ONE team.

The event will be followed by an awards dinner where SPR will sponsor an Offshore Wind Award, one of eight to be given out on the night.

More details about the event will be posted on the East Anglia ONE section of the SPR website (see link below), together with details on how potential suppliers can register to attend.

Companies interested in participating in East Anglia ONE and future projects should register their interest through our supply chain portal. If you are a supplier and have not already done so, please visit our website: **www.scottishpowerrenewables.com** and follow these simple steps:

1. Under "Our Projects" click on "Offshore Wind"
2. On the "Offshore Wind" page, click on "East Anglia ONE" on the left hand side
3. On the "East Anglia ONE" page, scroll down to "Supplier Registration"
4. Click on this link and then provide your details.

ScottishPower Renewables sponsors Global Offshore Wind 2015

ScottishPower Renewables (SPR) is the core sponsor of this year's Global Offshore Wind Conference and Exhibition.

The RenewableUK event takes place at London's ExCeL from 24-25th June and will feature over 100 speakers and more than 200 exhibitors.

There will be an introductory speech from Fergus Ewing MSP, Scottish Government Minister for Business, Energy and Tourism, a business leaders' debate, share fair and much more!

You can find out more by visiting the conference and exhibition section of the renewables UK website: **www.renewableuk.com**

Turbine agreement announced

ScottishPower Renewables (SPR) has selected Siemens as its preferred turbine supplier for the East Anglia ONE offshore windfarm.

The agreement, which will be the largest individual contract placed as part of the £2 billion East Anglia ONE project, will see up to 102 of Siemens' 7 megawatt (MW) turbines supplied.

More than half of the project components and services will be made and sourced in the UK. As part of the turbine agreement, Siemens will use their new facility in Hull for manufacturing the wind turbine blades for this project.

SPR will now be able to accelerate discussions with port facilities in the East Anglia region that will be critical to the construction of the project. The company will also work closely with Siemens to maximise the training and employment opportunities across East Anglia to support the turbine contract.

Energy and Climate Change Secretary Amber Rudd, said: "This massive financial investment is great news for East Anglia and for Hull, which will now become a real clean energy manufacturing hub."

Keith Anderson, CEO of ScottishPower Renewables, said: "East Anglia ONE will be the most cost effective offshore windfarm ever delivered. Selecting the turbine supplier will be the single largest agreement for East Anglia ONE, and the most significant in terms of achieving important cost reduction goals. We are confident that we have selected the most efficient offshore wind turbines in the world, and we look forward to working with Siemens to deliver a successful project."

Michael Hannibal, CEO Offshore of Siemens Wind Power and Renewables Division, explained: "We are pleased that ScottishPower Renewables has selected Siemens for this project. Our advanced model of our proven Direct Drive wind turbine with an output of 7 MW will leverage the energy output of East Anglia ONE Offshore Wind Farm and contribute to lowering the cost of electricity. We will manufacture the wind turbine blades for East Anglia ONE at our new factory in Hull and work with ScottishPower to further promote the growth of the UK offshore industry."

More information

For more information please contact Joanna Young, Stakeholder Manager, ScottishPower Renewables - East Anglia.

Telephone: 01502 509 236
Email: JYoung@ScottishPower.com

You can also write to the project at:
FREEPOST RSTC-EJEY-RKRX, EAOW, 1 Atlantic Quay, 4th Floor, Glasgow, G2 8JB

Or visit our websites:
www.scottishpowerrenewables.com/pages/east_anglia_one.asp
and: eastangliathree.eastangliawind.com