

# Welcome and Introduction to ScottishPower Renewables

Welcome to our Phase Two public information days about our proposed East Anglia TWO and East Anglia ONE North projects. Members of our project team are on hand today to answer any queries you may have.

ScottishPower Renewables is part of the Iberdrola Group, a world leader in clean energy with an installed capacity of over 28,000 megawatts, and the leading wind energy producer worldwide.

It is currently progressing the construction of the 714 megawatt East Anglia ONE This £2.5 billion project is planned to deliver energy to meet the annual demand of almost 600,000<sup>1</sup> homes and should be fully operational during 2020.

This project will be followed by the 1,200 megawatt East Anglia THREE windfarm which received development consent in Summer 2017.

### offshore windfarm approximately 43km off the coast of Suffolk.

<sup>1</sup>Calculated taking the number of megawatts (714) multiplied by the number of hours in one year (8,766), multiplied by the average load factor for offshore wind (36.7 %, published by the Digest of United Kingdom Energy Statistics), divided by the average annual household energy consumption (3,900 kWh), giving an equivalent of powering 588,980 homes.







# 2) Our Projects

Building on our first two East Anglia projects, ScottishPower Renewables is now seeking to

#### progress development of the proposed East Anglia TWO and East Anglia ONE North projects.

	East Anglia TWO	East Anglia ONE North
Distance to shore (in a straight line from the edge of the windfarm)	31km from Lowestoft 32km from Southwold 40km from Orford Castle 35km from Sizewell Beach	36km from Lowestoft 42km from Southwold 60km from Orford Castle 50km from Sizewell Beach
Project area	255km <sup>2</sup>	208km <sup>2</sup>
Anticipated capacity	900 megawatts	800 megawatts
Proposed wind turbine height	Up to 300m to tip height	Up to 300m to tip height
Potential number of homes powered	Up to 740,000*	Up to 650,000*
Number of turbines	Up to 75 – exact number, layout and dimensions will	Up to 67 - exact number, layout and dimensions will





\*Calculated taking the number of megawatts (900/800) multiplied by the number of hours in one year (8,766), multiplied by the average load factor (efficiency of electrical energy usage) for offshore wind (36.7% published by the Digest of United Kingdom Energy Statistics), divided by the average annual household energy consumption (3,900kWh), giving an equivalent of powering 742,413/659,922 homes.



# Number and Size of Wind Turbines

The proposed East Anglia TWO and East Anglia ONE North projects are likely to consist of up to 75 and up to 67 wind turbines respectively.

The range of wind turbines currently being considered is 12–19 megawatts.

Note that the actual megawatt capacity of the wind turbine does not drive the environmental assessment process; it is the physical parameters, for example the tip height or hub height which are important for the assessments. It is estimated the maximum wind turbine tip height used would be 300m with a rotor diameter of up to 250m.

The images below show the East Anglia TWO and East Anglia ONE North wind turbines in comparison to earlier East Anglia projects:



The technology used to develop offshore wind turbines is constantly evolving and the industry is moving towards larger, more powerful wind turbines.

The benefits of installing larger turbines are:

- 1. Fewer foundations
- 2. Reduced installation programme
- 3. Lower costs

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For these projects up to 19 megawatt wind turbines are being considered.



# 4) Grid Connection

National Grid owns and operates the transmission network in England and Wales. In order to connect to the electricity transmission network ScottishPower Renewables requires a grid connection agreement with National Grid.

Following a National Grid review in 2017, it was agreed that the connection point for the proposed East Anglia TWO and East Anglia ONE North projects should be in the vicinity of Sizewell and Leiston, with National Grid's required infrastructure located as close as possible to existing pylons.

The proposed East Anglia TWO and East Anglia ONE North projects will each require their own onshore substation. In addition ScottishPower Renewables will consent the infrastructure required by National Grid to connect the proposed East Anglia TWO And East Anglia ONE North projects to the electricity transmission network. This is expected to include:

- Onshore substation
- Sealing end compounds/gantries
- Potential for the replacement and/or minor relocation of existing overhead pylons

ScottishPower Renewables will consult on and consent this infrastructure for National Grid to own and operate.

At present it is anticipated that the National Grid substation will be an

Air Insulated Switchgear (AIS) facility measuring up to 325m x 140m with external equipment up to 13m high.





# Onshore Study Area – Grid Connection, Substations and Cable Corridor

The study area has been identified considering physical and environmental constraints, a grid connection in the vicinity of Sizewell and Leiston, and a landfall between Sizewell and Thorpeness.

Following our phase one public information days in October/ November 2017 where we introduced our onshore study area, the site selection process is still on-going and we have been continuing to consult with stakeholders, including local authorities and Statutory Nature Conservation Bodies, on the best Seven zones have been identified by avoiding environmental designations and buffering condensed areas of residential properties.

A decision on a preferred zone has not yet been made and there is further work to be done before a preferred zone can be identified.

For more detail on this site selection process, please view the interactive map of the onshore study area and the slide show, both available at this event. The interactive map allows you to discuss potential locations with the team and will help inform you where it is possible for the substations to be placed.

#### place to locate this infrastructure.





# Reduction in Proposed Substation Height

Following our phase one public information days in October/November 2017 we have listened to feedback and can now confirm that we have reduced the maximum height of the proposed onshore substation building from 21m to 15m.

Each onshore substation will be located within its own compound measuring 190m x 190m.

Within the compound there will be a mixture of warehouse style buildings and electrical equipment, the tallest of which will be 18m high.

Having listened to feedback and recognising the landscape and visual

sensitivities of the study area, we have undertaken early engagement with our supply chain, examined the requirements to protect our equipment from coastal corrosion and incorporated experience from our East Anglia ONE design, which has resulted in a commitment to reduce the substation building height.







# 7 Offshore – Landfall and Area of Search

The offshore cable corridor has

• Avoid the Southwold shipping area

been carefully selected to minimise impacts. The cable corridor has been developed to:

- Avoid environmentally protected areas where possible. Where this will not be possible (e.g. Outer Thames Estuary Special Area of Conservation (SAC), Southern North Sea candiate Special Area of Conservation (cSAC)), construction methodologies will be developed in consultation with environmental stakeholders, including Natural England, during the Environmental Impact Assessment (EIA) process to minimise impacts as far as practically possible.
- Minimise the overlap with aggregate dredging areas

- Avoid shipwrecks where possible
- Minimise interactions with other cables, pipelines and other infrastructure where possible
- Minimise impacts to commercial fisheries and maritime users as far as possible

The offshore cable corridor has been updated following publication of the Scoping Report as a result of ongoing discussion and co-operation with key stakeholders such as The Crown Estate and EdF. These changes help us to minimise our environmental impact and our interaction with other organisations' assets even further.





# 8) Cumulative Impact

We are aware of a number of projects that are either in the development process, have consent, are under construction or are in operation.

being considered include:

- Onshore construction traffic
- Construction noise

An important part of the Environmental Impact Assessment (EIA) process will be to ensure that not only are the impacts of East Anglia TWO and East Anglia ONE North assessed, but that impacts in combination with other projects are also assessed.

Key potential cumulative impacts

- Operational noise
- Landscape and visual (of onshore and offshore components)
- Ornithology and ecology

These impacts, along with others, will be reported in the Environmental Statement and there will be future consultation events where these can be explained further.

> Datum: WGS 1984

Projection: Zone 31N

23/10/17

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		0	10/10/2017	AB	First Issue.	Checked:	вк	Source: © The Crown Estate, 2017. © 4COffshore - AWAITING LICENCE. Charts from MarineFIND.co.uk Licence No EK001-0645-MF0095. Not to be used for navigation.	Anglia One North and East Anglia TWO Wind Farm Site	Date
		Rev	Date	Ву	Comment	Approved:	PP	This map has been produced to the latest known information at the time of issue, and has been produced for your information only. Please consult with the SPR Offshore GIS team to ensure the content is still current before using the information contained on this map. To the fullest extent permitted by law, we accept no responsibility or liability (whether in contract, tort (including negligence) or otherwise in respect of any errors or omissions in the information contained in the map and shall not be liable for any loss, damage or expense caused by such errors or omissions.	and Export Cable Corridor Area of Search	Figure

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## 9) Where We Are Now

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PRE-APPLICATION COMMUNITY ENGAGEMENT

SCOPING

#### **BASELINE SURVEYS**

WE ARE CURRENTLY HERE

ASSESSMENT OF IMPACT

PRELIMINARY ENVIRONMENTAL INFORMATION (PEI) Pre-application engagement with consultees and stakeholders ahead of the formal Development Consent Order (DCO) process

This stage is to agree with the regulators the issues and methodologies that will be considered within the Environmental Impact Assessment

Baseline surveys are required to inform the assessment of impacts

Once the baseline information has been collected, an assessment of potentially significant environmental impacts, as a result of the development, can be undertaken

The preliminary findings of the impact assessment are reported at this stage and we will submit a draft Environmental Statement. PEI is submitted for formal consultation with relevant stakeholders

ENVIRONMENTAL STATEMENT

> CONSENT APPLICATION

EXAMINATION

DECISION

Following feedback from PEI consultation the assessment of impacts is completed and reported in the final Environmental Statement. This forms a key part of the application for development consent

The application is submitted to the Planning Inspectorate which has 28 days to confirm acceptance

Following acceptance of the application the Examining Authority will undertake a six-month examination of the proposed development

Following the examination the Examining Authority will make a recommendation to the Secretary of State within three months. The Secretary of State then has a further three months to make a final decision on the application

Consultation is on-going throughout the consent application.



# 10) Timeline

#### East Anglia TWO

• Publication of Statement

#### East Anglia ONE North



#### MARCH 2018

- of Community Consultation (SoCC)
- Phase 2 Public Information Days
  - To consult on the contents of our
    Statement of Community Consultation
  - To review the onshore development area
  - To present visualisations of the offshore wind turbines from shore

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Phase 3 Public
 Information Days

 To present the refined onshore development area and the preferred substation location JUNE 2018

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0 LATE 2018

UNE

2018

- Phase 4 Public
  Information Days
- Section 42 consultation commences on

LATE 2018  Phase 4 Public Information Days
 – Update on progress



![](_page_10_Picture_1.jpeg)

# 11) Statement of Community Consultation – How We Will Engage

Details of how we plan to consult with you throughout this process have been set out in a Statement of Community Consultation (SoCC) for each project.

These documents are available in the following locations and are presented today for your review and comment.

The aim of the SoCC is to explain how ScottishPower Renewables intends to consult with local communities on the proposed East Anglia TWO and East Anglia ONE North offshore windfarm projects as required under the Planning Act 2008. It details the opportunities available to come and meet us, to ask questions and to comment on the plans for the project.

Southwold Town Council	Aldeburgh Library
Aldeburgh Town Council	The Village Store Kessingland
Orford Town Council	Kessingland Library
Aldringham-cum-Thorpe Parish Council	Saxmundham Library
Leiston-cum-Sizewell Town Council	Martins Saxmundam
Lowestoft Library	Southwold Post Office
Southwold Library	SCDC Customer Services @ Woodbridge Library
Great Yarmouth Borough Council	Felixstowe Library
Great Yarmouth Central Library	Felixstowe Town Council

#### We welcome your comments.

Feedback forms are available for you to complete today.

![](_page_10_Picture_10.jpeg)

Please keep an eye on our website for the latest information: www.scottishpowerrenewables.com/pages/east\_anglia\_projects

If you have any questions or would like to send in some feedback, please contact us:

![](_page_10_Picture_13.jpeg)

#### **Email:**

East Anglia TWO - eastangliatwo@scottishpower.com East Anglia ONE North - eastangliaonenorth@scottishpower.com

#### Freepost address:

ScottishPower Renewables East Anglia TWO or ScottishPower Renewables East Anglia ONE North RTLY-RLGH-GKSE FREEPOST, 25 Priestgate Peterborough

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