

Newsletter

Autumn 2020

The Sofia story so far

Sofia Offshore Wind Farm, one of the world's largest offshore wind farms, will have its onshore infrastructure in Teesside, with work starting on-site in March 2021. Work on installing the offshore elements of the project will begin in 2023. This newsletter, due to be published quarterly, aims to provide anyone with an interest in the project with information about the planned works, status and progress.

Welcome to the first newsletter from Sofia Offshore Wind Farm, one of four offshore wind projects sited on Dogger Bank, more than 190 kilometres off the North East coast. If you are familiar with the Dogger

Bank development, this newsletter picks up where the previous Forewind publications left off. The last of these was published in 2015 after the four projects on Dogger Bank were awarded development consent by the then Secretary of State.

Two of the consented projects connect to the national grid at Creyke Beck in East Riding of Yorkshire while the other two – including Sofia – connect to the national grid at Lackenby, near Redcar in Teesside.

Forewind, a consortium of leading energy companies, developed the four projects but has now been

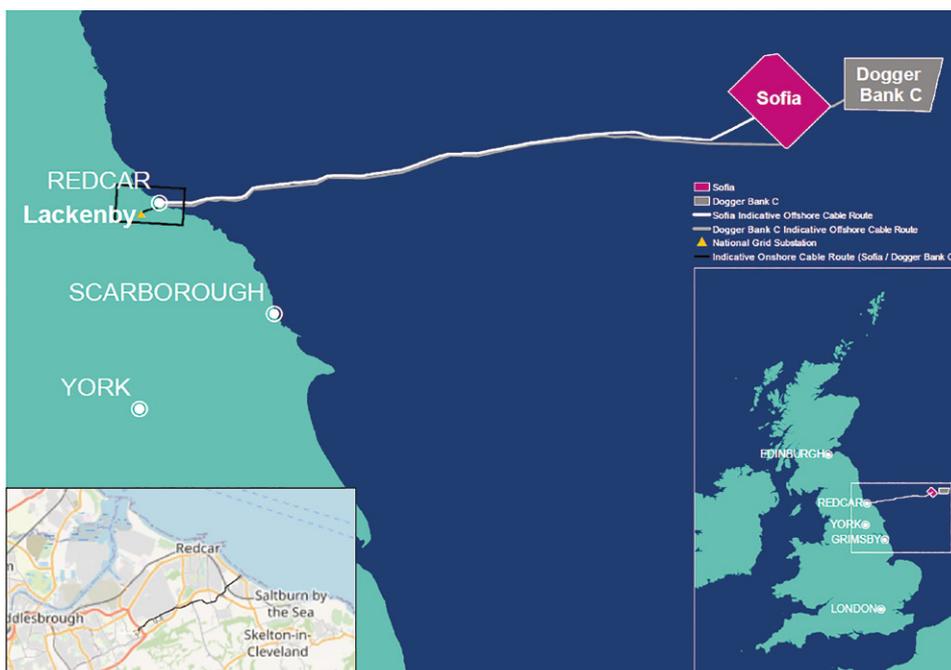
dissolved, with ownership of the wind farm projects divided between the consortium partners.

Sofia (formerly known as Teesside B), transferred 100% to innogy (now RWE) in August 2017. The other three projects are now owned by SSE Renewables and Equinor under the umbrella name 'Dogger Bank Projects'.

This newsletter will only cover Sofia, a 1.4 gigawatt project set to generate enough power to provide 1.2 million homes with their annual electricity needs. It achieved a major milestone in 2019 by winning a Contract for Difference (CfD) in the UK Government's competitive auction round, greenlighting it to proceed to the next stage.

A team of more than 90 people is now focussed on the final design of the wind farm, awarding contracts to major component suppliers and achieving the financial decisions required before construction can get underway.

The project's next major milestone, due early in 2021, will be the final investment decision by project owner RWE, giving Sofia the full go-ahead. Works at the converter station site adjacent to the Wilton Complex are due to begin around the same time. Pre-construction works are now underway (see page 4 for details).





Sofia construction timetable

Autumn 2021	Work starts on construction of the onshore converter station
Early 2022	Preparatory works at landfall, between Redcar and Markse-by-the-Sea
Mid 2022	Horizontal directional drilling for cable duct installation off the coast
Early 2023	Offshore construction begins at Dogger Bank
2025	First power generated
2026	Wind farm fully operational

Offshore site investigation completed

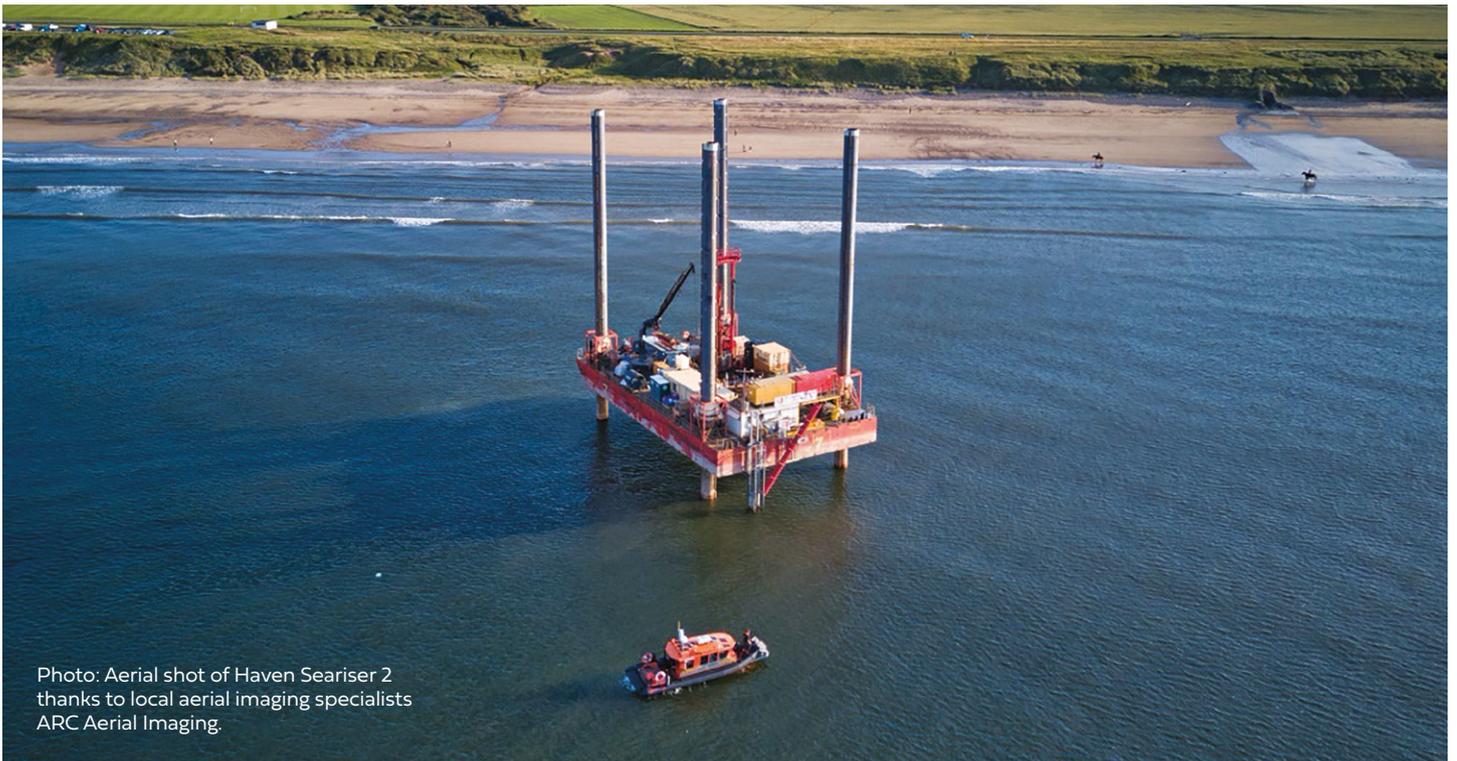


Photo: Aerial shot of Haven Seariser 2 thanks to local aerial imaging specialists ARC Aerial Imaging.

Sofia completed a six-month offshore site investigation in late summer, using multiple vessels to carry out geophysical and geotechnical surveys right along the 220 kilometre cable route and across the 600 km² array site on Dogger Bank.

The vessels included jack-up Haven Seariser 2 that provided Redcar with a temporary tourist attraction as it undertook boreholes close to shore.

The investigation provided Sofia's consent and engineering teams with key data about the seabed and marine conditions. The data

will be analysed to build up a full picture of the seafloor and sub seafloor conditions, before construction gets underway. It will also help to determine the need for further surveys, the final cable route, the landfall location and the most appropriate cable installation methodologies.

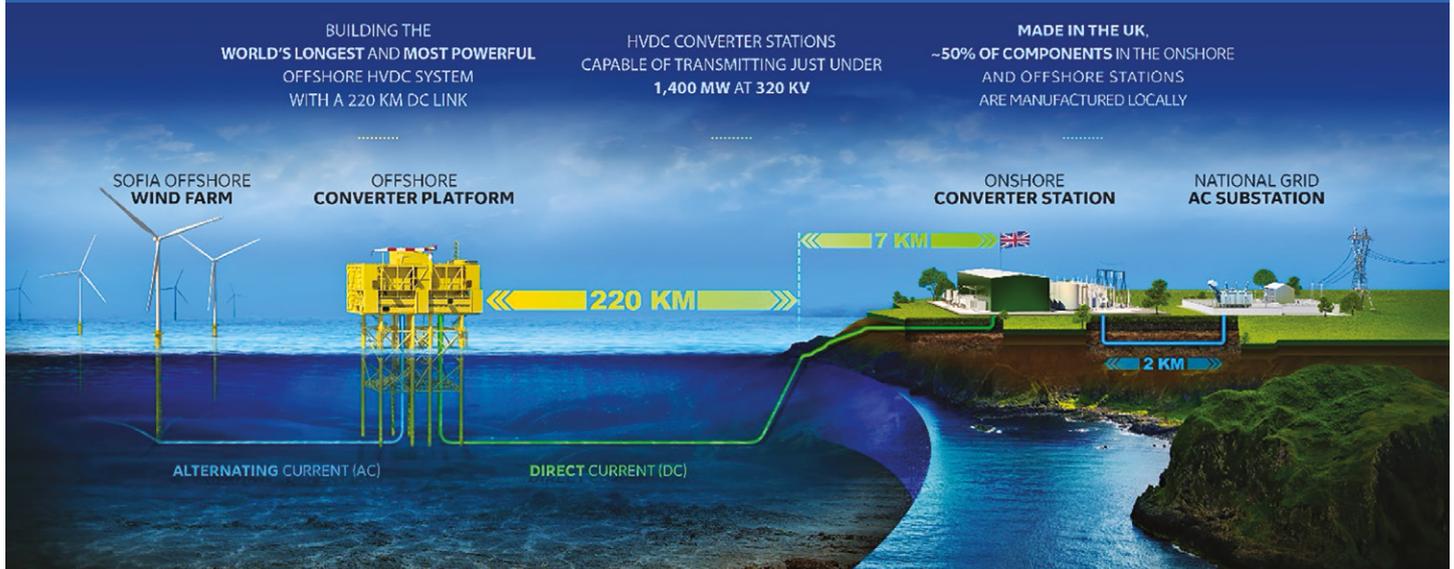
First preferred suppliers chosen



SOFIA OFFSHORE WIND FARM HVDC GRID CONNECTION



BRINGING RENEWABLE ENERGY TO ABOUT **1.2 MILLION HOMES** AND SUPPORTING THE UK GOVERNMENT'S STRATEGY TO **MEET NET ZERO GREENHOUSE EMISSIONS BY 2050**



In the summer Sofia announced that preferred suppliers had been chosen for its two biggest contracts – the wind turbines and the high voltage direct current transmission system.

Sofia is set to be the first European project to install the new Siemens Gamesa 14 MW turbine that will be market-ready by 2024, right on time for installation on Dogger Bank. Each turbine will stand 262 metres tall, that's just 50 metres shy of the height of London's The Shard, and each blade will stretch to 108 metres.

A total of 100 turbines together could generate enough green electricity to satisfy the annual electricity needs of almost 1.2 million average UK homes.

The project's high voltage direct current (HVDC) electrical transmission system is on track to be supplied by a specially formed

consortium of GE Renewable Energy's Grid Solutions and Sembcorp Marine. The system will comprise two converter stations – one onshore and one offshore on an offshore platform.

The offshore converter station will be the most powerful ever fabricated and, being installed 220 kilometres from shore, it will also be the most remote. The offshore platform will sit at the heart of the wind farm, and will comprise a 10,000 tonne topside attached to a jacket foundation piled into the seabed.

The onshore converter station will convert the electricity generated by the wind farm to 400 kilovolts (kV) before it enters the national grid.

The selection of the consortium is positive news for the UK as a significant element of all the primary HVDC equipment will be manufactured and fabricated

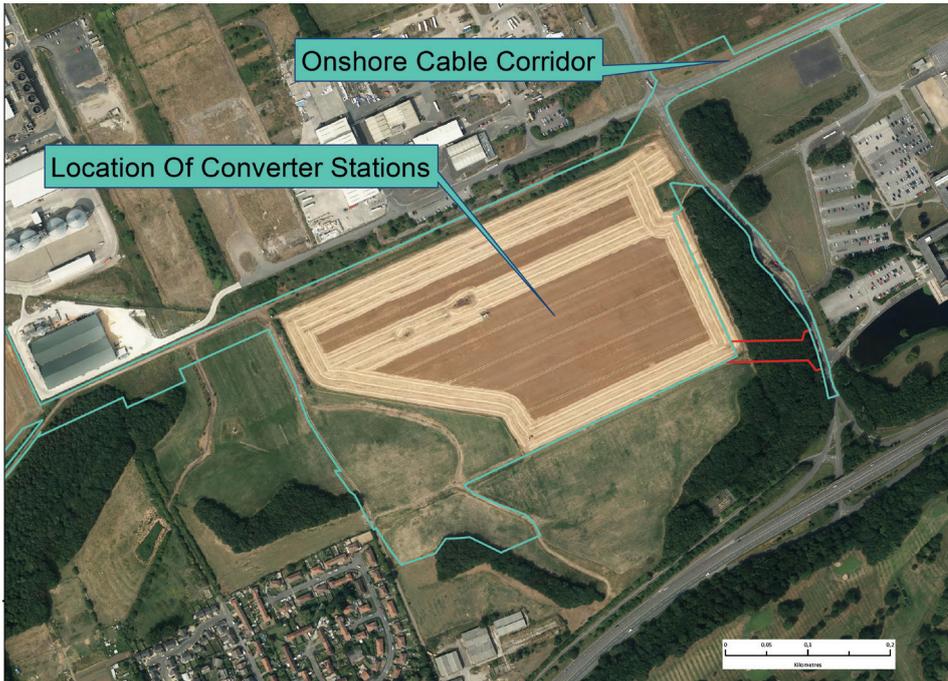
at GE's Grid Solutions' Stafford facilities, where more than 1,000 workers are employed.

Preferred suppliers to come

By the end of this year, Sofia will have 'preferred supplier' agreements with contractors to fabricate and install each of its key components. These include: turbine foundations; array cables (that carry power from the turbines to the offshore converter station), and export cables (that bring power to shore and on to the national grid).

The full contracts are due to be signed when the project reaches its final investment decision, scheduled for March 2021. This decision is the 'go' button for the project, marking the start of its official construction.

Converter station preparatory works



— Consented limit of the cable corridor, converter station and construction works areas

— Proposed southern access

The full enabling works, to prepare the site for construction, are due to kick-off in spring 2021, once the pipeline diversion work is complete.

These enabling works will include levelling land, construction of an access road, establishing the welfare area and compounds plus the creation of a platform for both converter stations along with operational services. They will also comprise extensions to two 10 metre-high mounds, plus landscaping and tree planting, to provide additional visual screening of the converter stations from Lazenby village.

Plans are underway for a community information session to give Lazenby village residents an opportunity to find out more about the enabling works, including the programme.

Details of the session will be sent direct to residents, however, if you would like to register your interest please email comms_sofia@rwe.com.

From October 2020, the site of both Sofia and Dogger Bank C's new onshore converter stations next to Wilton International, will see almost continuous activity as the area is readied for construction.

Contractors for the wind farms will carry out low-key archaeological surveys and site investigation work, including the digging of trial pits and boreholes, by the end of December.

Contractors working on behalf of Sembcorp will be active from November as they re-route two existing underground water pipelines that carry water from

nearby reservoirs to Wilton International.

The pipelines need to be diverted around the edge of the converter stations site so there will be excavation and pipe laying activity. The work will take place from 7am to 7pm, Monday to Friday and is expected to take around six months, with every effort being taken to minimise any disturbance to residents.

Enquiries about these works can be made to Sembcorp via email gbr-sol.communications@sembcorp.com or telephone **01642 212 385**.

What's happening on-site

October 2020	Onshore archaeology and site investigation underway (completed by end 2020) Sembcorp start six month pipe diversion works
Early 2021	Community information session (Lazenby)
Spring 2021	Pipe diversion works complete Converter station enabling works start on-site including new mounds, access road, site clearance and services connection
Autumn 2021	Construction of onshore converter station begins

Sofia looking for teacher champions

Sofia has launched an outreach education programme designed to encourage young people to consider choosing a career in offshore wind. Called 'Sofia Champions for Wind', it aims to attract creative and enthusiastic teachers from secondary schools local to the onshore infrastructure.

They will work as 'champions' to develop, implement and share curriculum materials, to educate students in Key Stages 3 to 5 about the diverse and fascinating range of careers in the growing offshore wind sector. We will introduce them in the next newsletter.

Working in offshore

Sofia collaborated with Tees Valley Careers on their production of a video about working in the offshore wind sector as part of a 'Be inspired' series.

It is now live on teesvalleycareers.com.

Working together

Online supplier directory launched

As Sofia heads towards construction, the team has launched an online open search directory to boost UK supply chain opportunities, particularly in the North East.

The directory is part of a wider portal that will also highlight upcoming contract opportunities

with Sofia and its key contractors, and will publish case studies on how UK companies have contributed to the development of the wind farm.

With more than 600 suppliers now registered, it is hoped the directory will become a useful tool for

contractors from across the supply chain to find the goods, services and suppliers they need. These may range from large engineering firms to local caterers.

To find out more visit sofiawindfarm.com/supplier-portal/

Sofia and Dogger Bank cooperation



Sofia and neighbouring project Dogger Bank C share the same landfall between Redcar and Marske-by-the-Sea, the same onshore cable route and the same

site for their onshore converter stations (OCSs). While the two projects are separate entities, owned by different companies and with different construction programmes, the project teams will continue to assess synergies and opportunities to cooperate.

To date this cooperation has included working jointly on proposed changes to the original Development Consent Order to enable more practical working, and also on submitting joint planning applications to Redcar and Cleveland Borough Council proposing minor changes to the onshore work plans.

Two separate letters were sent to more than 11,000 local residents to explain the proposals and the relationship between the two projects. To view all the joint planning documents visit the Sofia website:

sofiawindfarm.com

The OCS enabling works to prepare the site for the construction of the two onshore converter stations (one for each project) are also being undertaken jointly.

The works are being managed by Sofia on behalf of both projects.

Skills agreement signed with Teesside University

Signing the MOU – from left – Sofia's Senior Consents Manager Kim Gauld-Clark and Teesside University's Siobhan Fenton, Associate Dean (Enterprise and Business Engagement)

Middlesbrough's Teesside University and Sofia have pledged to work together to boost local entrants into offshore wind careers with a signed Memorandum of Understanding setting out what they will do to equip students for careers in the rapidly growing offshore wind sector.

Through a structured partnership, Teesside University will help Sofia ensure that necessary skills will be available throughout the wind farm's lifetime and that, where

feasible, that those skills will be developed locally.

An early project has included industry placements focussed on a technical challenge around analysing carbon payback with Sofia monitoring students throughout the process. Further activities will include internships, delivering offshore wind STEM-related master classes, and taking part in university careers fairs and events, both virtual and in person when able.



It is expected that highly-skilled jobs in the UK's offshore wind sector will almost triple from today's figure of around 9,000 to almost 27,000 by 2030, so it is vital that educational institutions work closely with the industry to ensure the skills are available.

Sofia newsletter delivered to you

This edition of the newsletter has been delivered to addresses closest to the onshore converter station site. Postcard notifications were also delivered to those living and working within 500m of the full cable corridor.

To minimise the impact on the environment, we will convert to eNewsletters in 2021, with hard copies available at central locations. If you would like to (continue to) receive a hard copy of the newsletter directly please let

us know via email comms_sofia@rwe.com.

To request hard copies, send your name and postal address, for electronic versions send us your email address. Please be sure to state your preference.

To follow the project online, including to view the latest news and updates, visit sofiawindfarm.com

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