

Hornsea Project One & Two Offshore Wind Farms

Community Newsletter

March 2018



 Orsted

Welcome

Welcome to the updated community newsletter for Hornsea Project One, which now also includes new information on Hornsea Project Two.

Before we get into the detail of our offshore wind projects, we would like to introduce ourselves and our new identity.

The Ørsted way



Climate change is one of the biggest challenges for life on Earth. Today, the world mainly runs on fossil fuels. We need to transform the way we power the world; from black to green energy.



At Ørsted, our vision is to create a world that runs entirely on green energy.



By doing so, we create value for the societies that we're a part of and for all our stakeholders. We want to revolutionise the way we power people by developing green, independent and economically viable energy systems.



We have changed our name to Ørsted, after Danish scientist Hans Christian Ørsted, who discovered electromagnetism. His ground-breaking discovery was driven by his curiosity, dedication and interest in nature. These qualities are essential for all of us to continue our journey from black to green energy.

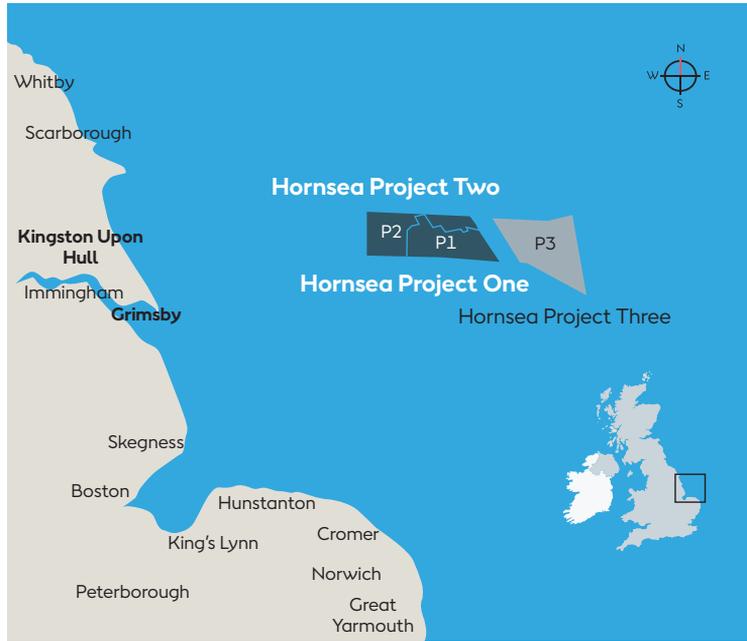


Because the place we all call home needs love. But love means nothing without action.

Where are Hornsea Project One and Hornsea Project Two?

Project One is located 120 km from the Yorkshire coast and Project Two will be 89 km from the coast, adjacent to Project One. Project One is currently under construction and Project Two is currently making preparations to commence construction later this year.

If you have any specific questions about Project One or Two, please get in touch using the contact details provided at the end of this newsletter.



**Let's create a world
that runs entirely
on green energy.**



Hornsea Project One

HORNSEA PROJECT ONE



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Project One Facts



Project One has a capacity of 1.2 GW.



It will provide enough power for well over 1 million homes.



The offshore wind farm spans an area of 407 km². That's 58,000 times the size of Blundell Park, home of Grimsby Town F.C.



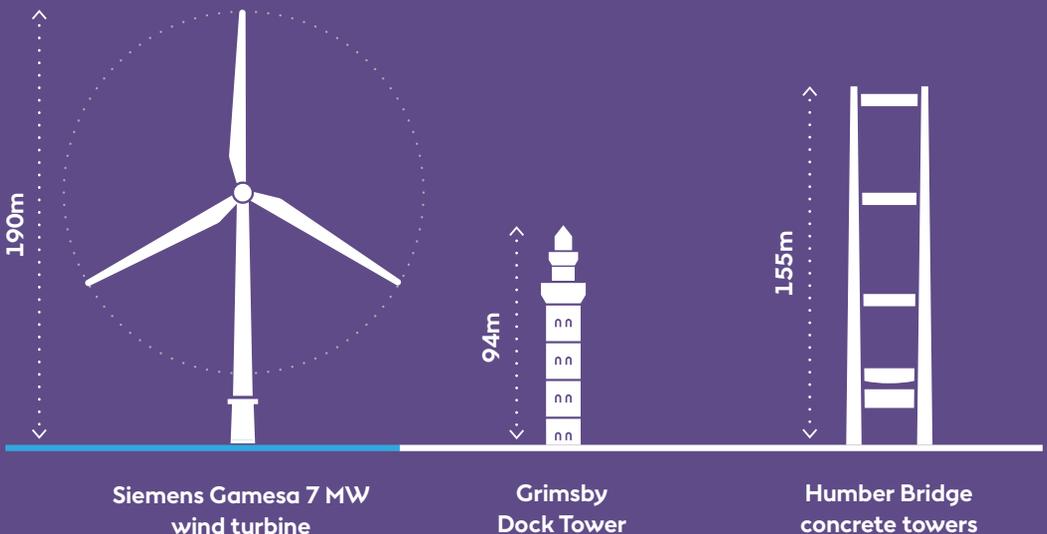
The distance from shore to the offshore wind farm site is 120 km, longer than the distance from Sheffield to Hull.



Well over 400 km of export cable has been used to connect the wind farm to the onshore substation.



The project will be made up of 174 Siemens Gamesa 7 MW turbines.



Project One Timeline



December
2014

Development consent granted by Secretary of State



February
2015

Full ownership taken over from Smart Wind



January
2016

Onshore substation site construction begins



September
2016

Onshore cable construction works begin



April
2017

Landfall cable construction works begin



January
2018

Offshore construction begins

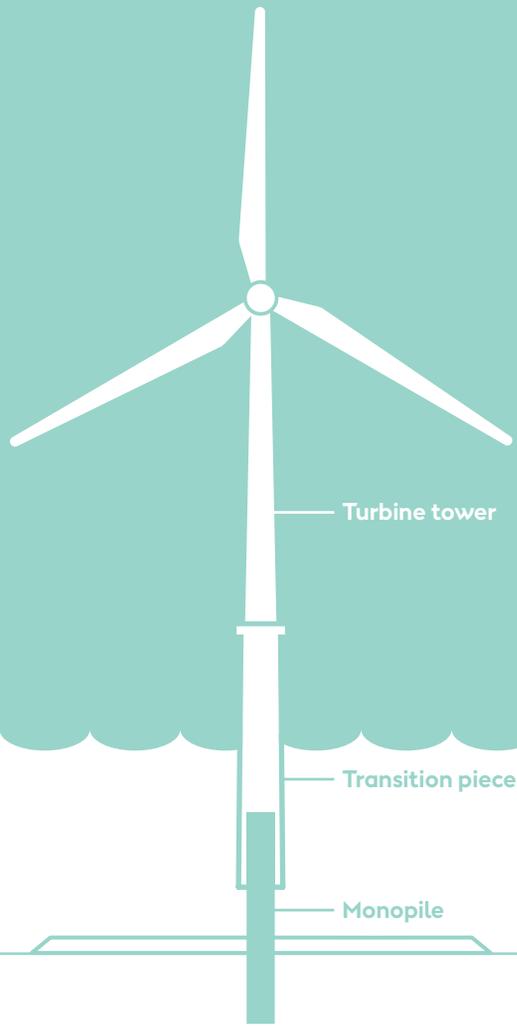


2020

Project One becomes fully operational

Latest News

The start of 2018 saw the installation of the first of 174 monopiles, which is a key milestone to signify the start of offshore construction. These large steel cylindrical structures, 65 metres in length, 800 tonnes in weight and 8.1 metres in diameter, are piled into the seabed, onto which the yellow transition piece and the turbine tower is installed. The first of the monopiles were delivered by sea and installed by GeoSea's Vessel Innovation which will carry four monopiles at a time.



More than **50%** of the onshore cable route has been laid



Horizontal Directional Drilling (HDD) under Network Rail assets commenced in **February 2018**



Preparations to connect the export cable at landfall at Horse Shoe Point were completed in **February 2018**



All works completed **safely**

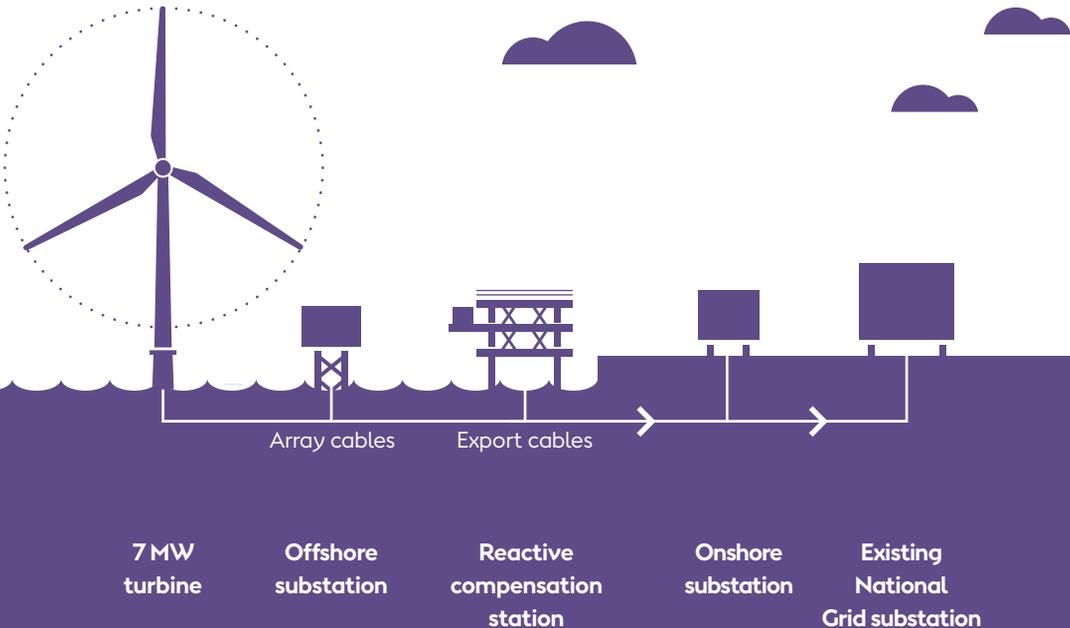
Reactive Compensation Station

Project One is a large and very complex infrastructure project. Over 400 km of cable is used to transport electricity from the offshore substation to the National Grid substation at North Killinghome.

Due to the length of the cable, a special system is needed to ensure it will function over long distances. The world's first reactive compensation station (RCS) is being built to address this issue, with a topside that weighs more than 2,000 tonnes.



Components of a Typical Offshore Wind Farm





Archaeology

Over the past two years, we have completed thorough archaeological investigations ahead of the installation and burial of our onshore cable. Wessex Archaeology have carried out excavation works and have uncovered thousands of artefacts and archaeological remains.

A few to note are two Iron Age settlement sites in North Killingholme, prehistoric farming activity and a Romano-British settlement in Stallingborough, Romano-British settlement sites in Tetney and Holton-le-Clay, and medieval moated sites in Harborough and South Killingholme.

Working with Local Businesses

On 25 January 2018, our first helicopter flight left Humberside Airport, initiating the start of a 6 year deal operating out of Humberside with Aberdeen-based CHC Group.

With Project One covering an approximate area of 407 km², current boat based transportation methods are not sufficient to transport our working teams to and from the wind farm site every day. These helicopters will be utilised during offshore construction and during the first five years of the operational and maintenance phases of the project.

Hornsea Project Two

HORNSEA PROJECT TWO



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Project Two Facts



Project Two has a potential capacity of around 1.4 GW.



It will provide enough power for over 1.3 million homes.



Project Two is due to be completed in 2022.



Project Two is located 89 km off the Yorkshire coast.



Project Two is the sister project to Hornsea Project One.



Onshore substation enabling works and archaeological investigations are due to start in April 2018.



Project Two has a similar cable route to Project One, running in parallel between the landfall at Horseshoe Point and the onshore substation in North Killingholme.

Hornsea Project Two

After receiving planning consent in August 2016 for Hornsea Project Two, Ørsted will deliver the most affordable electricity from offshore wind yet.

Project Two will be located in an area of 462 km² in the North Sea, approximately 89 km from the coast of the East Riding of Yorkshire, adjacent to Project One which is currently under construction. The project was awarded a Contract For Difference by the Government in September 2017. Ørsted are now preparing to construct the project, with onshore construction due to commence in Q3 2018.

Building on the successes of Project One, we are committed to a no carbon future, taking a lead in driving down the cost of wind power and developing innovative solutions for our energy customers.



Project Two Timeline



August
2016

Development Consent Order granted by the Secretary of State



September
2017

Contract for Difference awarded to the Project and Final Investment Decision made



Q2
2018

Enabling works and site investigations to commence at the onshore substation



Q3
2018

Construction of onshore substation to commence



Q2
2019

Onshore cable construction work begins



2020

Offshore construction begins



2022

Project Two becomes fully operational

Latest News

The project team are currently preparing for the start of onshore construction at the substation site in North Killingholme. The onshore substation site for Project Two is adjacent to the onshore substation for Project One. Enabling works for Project Two are due to commence in April 2018. Construction of the Project Two onshore substation will commence in late summer 2018.

The onshore cable route will broadly follow the route taken for the cables on Project One. Though there will be minor deviations along the route, Project Two will connect once again to the National Grid substation at North Killingholme. The cable will also make landfall at Horseshoe Point, near the village of North Coates, within the district of East Lindsey, Lincolnshire. This part of the construction phase is due to commence in spring 2019. Ørsted will hold a series of events ahead of the scheduled start to ensure local residents are aware of the plans.

Project Two Onshore Cable Route



Supplier Update

We have selected Siemens Gamesa Renewable Energy (SGRE) as the exclusive turbine supplier for Hornsea Project Two.

Project Two will deploy the SGRE 8 MW turbine with a 167 metre rotor, with the majority of blade production being carried out at the SGRE facility in Hull. This is the same facility that has already contributed to Hornsea Project One and the Race Bank and Walney Extension Offshore Wind Farms.

As part of the agreement, SGRE also plans to partly source the wind turbine towers from the UK.

// We're pleased to have selected SGRE for the delivery of turbines for the world's biggest offshore wind farm.

Hornsea Project Two is a game-changing renewable energy project in terms of both size and cost, and this selection is an important step in the procurement and construction process. We look forward to working with SGRE and other suppliers to bring to life this transformational project.

This selection paves the way for more, and even larger, UK made blades at a UK offshore wind farm, underlining this country's world-leading position in the sector.

Duncan Clark, Programme Director for Hornsea Project Two at Ørsted



Operations and Maintenance Hub Construction

We have appointed UK construction firm Hobson & Porter as the principal contractor to deliver a multi-million-pound extension to our hub at the Royal Dock in Grimsby.

The Ørsted East Coast Hub, as it will be known, will be the UK's largest offshore wind Operations and Maintenance facility and will serve some of Ørsted's east coast projects, including Project One and Two.

Transforming the way wind farms are supported, the hub will be served by high-tech vessels capable of accommodating up to 60 staff members while remaining at sea for long periods. The hub will also include a comprehensive marine and helicopter coordination centre capable of providing 24/7 service to our offshore operations across the UK and beyond.



A rendering of the offshore wind operations centre at the Royal Dock in Grimsby

Supply Chain Engagement

Building relationships with capable, competitive and innovative suppliers is essential to delivering new projects successfully.

Wherever Ørsted operates, we seek to positively engage with the local community. This promotes development of the local economy and supply chain.

We know that suppliers are a vital part of our success as market leader in the offshore wind industry. Therefore, we value relationships with our suppliers and welcome new suppliers to be part of our supply chain.

Any potential suppliers are encouraged to visit our website to register an interest:

<https://orsted.com/About-us/Procurement/Supplier-registration>

In the latter half of 2018, we will be hosting a supplier event for interested parties. The event will provide an insight into the Ørsted procurement process. It will also enable local suppliers to gain an understanding of our processes from one-to-one engagement with the Ørsted procurement team. We will release more details, including how to register for the event, at a later date.



Community Engagement

We will have a range of community engagement initiatives that will allow you to follow the progress of the Projects. These include:

Local Community Events

There will be a project exhibition that will take place this summer. Further details on this will be provided in due course.

Local Engagement

The project team will be meeting with various parish councils over the coming months to introduce the plans for Hornsea Project Two.

Freephone Information Line

The Freephone information line is open for calls between 9am and 5pm, Monday to Friday, with an answer phone facility to take calls outside these hours. The information line allows members of the local community to ask questions about Hornsea Project Two or specific work taking place.

Community Liaison Officer, Dereth Morgan

We have a dedicated Community Liaison Officer that covers both projects in an onshore capacity. Dereth acts as the first point of contact for onshore related queries from the local community and provides a link between the Hornsea Project teams and members of the local community.

Should you have any questions about the construction process or the continued presence of Ørsted in the local area, then please don't hesitate to contact her.

Dereth can be contacted on **07472 617 839**
or at **community@hornsea-one.co.uk**



Contact us

To find out more or to ask any questions about Hornsea Project One or Hornsea Project Two Offshore Wind Farms:



Call our Freephone Project Information line:

0800 111 4478

(9am to 5pm, Mon-Fri, with an answer phone facility to take calls outside of these hours)



Email us:

HornseaProjectOne@orsted.co.uk

HornseaProjectTwo@orsted.co.uk



Visit our website: **orsted.co.uk**



@OrstedUK

Ørsted
5 Howick Place
London
SW1P 1WG
Tel: +44 (0) 20 7811 5200



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