

High Potential Opportunity

Offshore Wind Deepwater Ports Hub

Meet the growing demand for clean energy by innovating and supplying to the world's leading offshore wind super cluster, located at the new offshore wind ports in Teesside and the Humber.

Teesside and the Humber



Department for
International Trade



Contents

| | |
|------------------------------|----|
| Executive summary | 3 |
| The opportunity | 5 |
| Skills & research | 10 |
| Cluster information | 14 |
| Soft landing & local support | 16 |
| Government & sector support | 19 |
| Case studies | 22 |
| Contact us | 27 |



1

Executive Summary

Test, develop and manufacture components and sub components for offshore wind in Teesside and the Humber.

Exploit the opportunity to meet growing national and international demand in the offshore wind supply chain ...

The UK is a leading nation in the deployment of offshore wind and currently has the largest offshore wind assets in the world. The UK offshore wind workforce is predicted to double, from 15,000 employees in 2021 to a predicted 27,000 by 2030, with turnover from wind energy generating c.£6 billion in 2019.

Offshore wind energy in the UK is poised to grow rapidly over the next 10 years, with the government eager to deploy **40 gigawatts (GW) by 2030 as part of the '10 Point Plan'** for a green industrial revolution. The UK government has set up strong mechanisms for financial stability and certainty for investors with a legal obligation to achieve net-zero by 2050.

Teesside and the Humber presents a unique investment offer in its ability to test, develop and manufacture the necessary components and subcomponents with the large quayside needed to deploy the offshore wind farms in the North Sea and further afield.

The UK government has committed an investment of **£95m for 2 new offshore wind ports** to be constructed in the Humber region and Teesside, complementing the existing Greenport site at Hull. This will enable large manufacturers of blades, monopiles, wind turbines, cables, large installation vessels and other supply chain companies to co-locate at these sites. The region offers a wide range of testing facilities, ample physical space for investment and a committed offshore wind cluster which can support your company's ambitious projects.

Innovate and supply to the world's leading super cluster in Offshore Wind

35GW

Current global offshore wind capacity

270 GW

Forecast global capacity of offshore wind by 2030

High value manufacturing in blades, turbines and nacelles

Innovation and developing solutions in critical sub systems

Operations and maintenance

Marine solutions



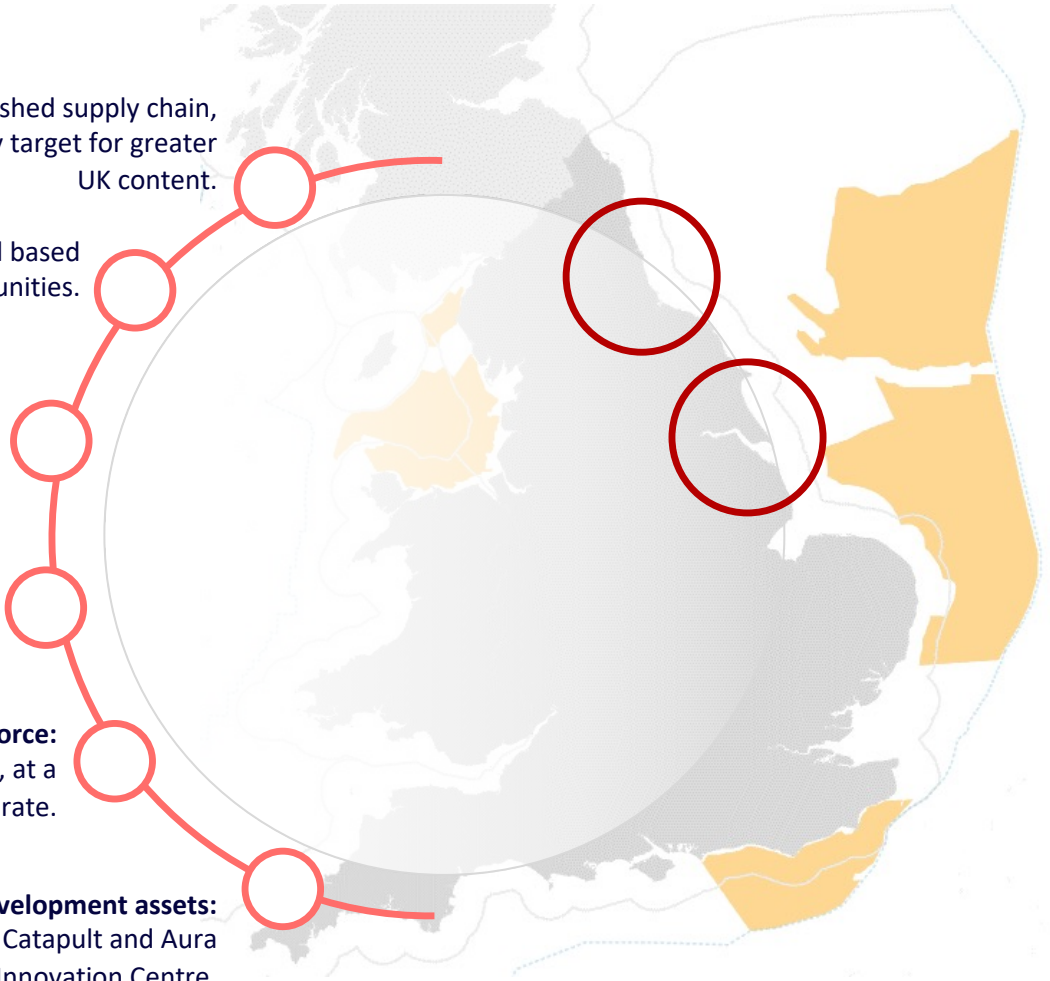
1

Executive Summary

A prime location with significant assets and capabilities to support your investment.

... Which you can access through the unique capabilities of the UK's offshore wind cluster

Teesside and the Humber present a key opportunity to benefit from these strengths and provide solutions across the supply chain in the UK and to overseas export markets.

- 
- Tap into the world's offshore wind supercluster:** Benefit from a well established supply chain, ranging from monopiles, jackets, cables and blades with an ambitious industry target for greater UK content.
 - Collaborations to help your business prosper:** Several leading industry manufacturers are all based within Teesside and the Humber, providing partnering opportunities.
 - Affordable cost base for your business:** Benefit from specific industrial space available at competitive rates with new freeport status, which will include tax reliefs, customs, business rates retention, planning, regeneration and trade and investment support.
 - Take advantage of upgraded quayside:** Teesside and the Humber have a combined 1,200 acres of manufacturing space especially devoted to offshore wind.
 - Benefit from highly competitive salaries and a skilled workforce:** Direct access to a core of highly-skilled offshore wind and engineering students and professionals, at a competitive salary rate.
 - Testing and development assets:** Trial and validate your technologies at facilities such as the Offshore Renewable Energy Catapult and Aura Innovation Centre.



2

The opportunity

A clearly defined opportunity across manufacturing, operations and maintenance and transportation.

High Value
Manufacturing

Supply Chain

Operations and
Maintenance

Marine Solutions

Design, develop and manufacture your high value offshore wind components in Teesside and the Humber

Turbines – towers and nacelles

The nacelle of a wind turbine houses the drive train and other tower-top components. Currently the UK does not produce nacelles for offshore wind turbines, leaving a clear opportunity to expand in to.

Additional opportunities exist in the tower market, driven by the need for larger towers due to increases in turbine sizes, which can be conveniently manufactured at a port side facility, located near the turbine OEMs.

Jackets and Monopiles

Current demand in the UK for jackets and monopiles, expected to be contracted between 2020 and 2030;

- › 1,500 turbine monopiles (2,000,000 tonnes of monopiles, 830,000 tonnes of TP's and 100,000 tonnes of secondary steel)
- › 350 turbine jackets (390,000 tonnes of jackets, 170,000 tonnes of piles and 38,000 tonnes of secondary steel).

Blades

Predicted to be a global market worth £31.4 billion by 2027 with a growth rate of 20.51%,

- › UK is a global leader in the development and production of the latest versions of wind turbine blades.
- › Companies can collaborate and develop with the [Offshore Renewable Energy Catapult](#) and test blades in excess of 100m long at world class facilities.

Cables

There is an abundance of supply chain opportunities in the global array and export cable markets:

- › 75% of contracting opportunities are still available to companies involved in the offshore wind cables sector.
- › A total of 9,606km of array cables are forecast to be installed between 2020 and 2024,
- › with 7,428km of this yet to be awarded to cables manufacturers and,
- › 7,218km of array cable installations have yet to be contracted during this period

Source: Market Research Future, Wind Turbine Blade Market Overview, 2021 – 2027, July 2021.
Renewable UK, Offshore Wind Cable Manufacturing And Installation Forecast 2019–2029, 2019.
Paul Breeze, Wind Power Generation, 2016.
Offshore Renewable Energy Catapult, UK Strategic Capability Assessment Offshore Wind Foundations, Jan 2020. Windpower Engineering and Development, Making of the modern offshore substation, Oct 2016.

Teesside and the Humber have the skills and property you need to produce the required parts needed for the offshore wind energy sector.

A recent £95 million investment in manufacturing space has been made to facilitate this.





Join a thriving and expanding supply chain: with opportunities to meet 80 GW of power across the North Sea Basin

The UK offshore wind industry supply chain has the potential to grow significantly through increased sales into the growing UK market, and through exports.

The economic analysis which underpins the Offshore Wind Sector Deal prospectus shows a global market of £33bn a year by 2030 with UK exports worth 2.6bn per year and 27,000 jobs by 2030 – a doubling on today's level.

The UK's expertise in offshore wind systems, equipment, design, manufacturing and engineering has led to global leading companies being based in Teesside and the Humber.

Companies such as Siemens Gamesa, Ørsted, JDR, Iberdrola, EDF, Equinor and RWE Renewables are located in

the supercluster, giving investors an opportunity to supply these leaders alongside tier 2 and tier 3 supply chain companies.

Collaborate with the Offshore Wind Growth Partnership (OWGP) to develop your business

The OWGP is a long-term business transformation programme that will promote closer collaboration across the supply chain, implement structured productivity improvement programmes and facilitate shared growth opportunities between developers and the supply chain. owgp.org.uk/

Teesside and the Humber have a wealth of experience and expertise in high value manufacturing, with complementary strengths in oil and gas, maritime and chemicals.

World renowned offshore wind energy organisations set industry standards for design, research, manufacturing and testing and are well placed to develop the regional and wider UK economy, through enhanced trade, productivity and brand value.

High Value
Manufacturing

Supply Chain

Operations and
Maintenance

Marine Solutions

Source: Offshore Wind Growth Partnership, About OGWP, 2021.





The UK enjoys a leading position in the operations and maintenance market through a combination of product excellence and effective services to energy providers

Teesside and the Humber are the ideal location to base your maintenance operations, being physically close to the wind farms and having the necessary land based infrastructure. Teesside and the Humber also have decades of related experience in the offshore oil and gas industry and are further to benefit from the new quayside being developed at both sites dedicated to offshore wind.

10.42 GW of
operational
offshore
wind
capacity

A further
3.69 GW
under
construction

The operations and maintenance (O&M) phase of an offshore wind project represents around 25% of the total project value. Combined with existing skills and experience, complimented by those from other industries, there are significant opportunities for new businesses and expansion in offshore wind in the short-to medium-term in the UK. The techniques used and level of experience continue to evolve as the industry grows in scale and maturity.

At present there are significant opportunities to improve O&M practices by becoming more proactive and data-driven in conducting maintenance: doing more work in a planned way, rather than at short notice in a reactive manner. Improvements in the health and safety of offshore personnel through technology and by decreasing their exposure or number of trips required are also achievable in the medium-term.

High Value
Manufacturing

Supply Chain

Operations and
Maintenance

Marine Solutions

>10 GW
projects with
consent

>30 GW
Pipeline of
seabed leases

The industry continues to strive for improved reliability as a means of improving efficiency and profitability and coupled with the UK's world-leading installed capacity, there is also a strong pipeline for future development – including projects in construction, those with consent but yet to achieve financial investment decision (FID), and more again in development.

A strong pipeline of offshore wind projects is being maintained with additional rounds of competitive seabed leases standing currently at over 30GW.

More leasing rounds will be run to maintain the healthy pipeline towards achieving Net Zero by 2050.



Enable the UK's growing Offshore Renewable Energy sector with complete marine solutions

The UK Government is committed to having over 40GW of offshore wind farms installed by 2030 as part of the UK's net zero emission strategy, with a potential of up to 80GW by 2050, providing unrivalled opportunities for logistics to the sector in new autonomous and green vessels.

For offshore wind farms to operate effectively marine logistics will play a vital role with demand in:

- › **Guard vessels** – to secure the site during development
- › **Seabed characterisation** – early stage assessments using world leading hydrography, marine geospatial data processing and video, build a real picture of the seabed and water column
- › **Geophysical and Geotechnical Surveys** – surveying to assist planning construction e.g. cable routes, jack up positioning and help with maintenance / monitoring of the windfarm asset and seabed once constructed.
- › **Windfarm installation and logistics vessels** – helping transport and install foundations/turbines including jack up vessels and cable laying vessels, as well as tugs and other vessels for mooring operations. Also used during major maintenance programmes.
- › **Support vessels** – such as Crew Transfer Vessels (CTVs) and Service Operation Vessels (SOVs) work both during construction and operational phases, transferring personnel to wind turbines and onshore/offshore substations.
- › **Inspection, Maintenance and Repair (IMR)** – support during the operational phase to ensure that offshore assets are operating efficiently using a variety of vessels including Remote Operated Vehicle (ROVs) and Autonomous Underwater Vehicle (AUVs)
- › **Security operations** – asset protection, liaising and assisting during emergencies
- › **Autonomous / Uncrewed Surface Vessel (ASVs / USVs)** – now beginning to be used for surveys and asset inspection and will become an increasing feature of offshore work as robotics and AI increases. ROVs and AUVs will be part of this trend.

High Value
Manufacturing

Supply Chain

Operations and
Maintenance

Marine Solutions

The offshore wind industry has the potential to act as a 'springboard', providing early adoption of technologies that can assist a broader maritime decarbonisation. The majority of vessels using Marine Gas Oil (MGO) are currently responsible for an estimated 284 kt CO₂e/ year. Opportunities exist to decarbonise this sector. Potential solutions include;

- › Green hydrogen propelled vessels
- › Ammonia propelled vessels
- › Battery electric propelled vessels
- › Offshore electric charging vessels

Source: BVG Associates, Wind Europe; Our Energy Our Future, 2019; WASP Consortium, The Windfarm Autonomous Ship Project, June 2020; Offshore Renewable Energy Catapult, Offshore wind opportunities and technology challenges, 2021; Offshore Renewable Energy Catapult, Decarbonising Maritime Operations In North Sea Offshore Wind O&M, 2021.

Teesside and the Humber have the research, testing, ship repair, maintenance and manufacturing facilities on both river banks that are needed to enable the autonomous and green marine transport of the future



Explore Teesside and the Humber

A compelling case for your business

[Skills & Research](#)[Cluster Information](#)[Soft Landing](#)[Sector Support & Case Studies](#)

Top photo; AMEP aerial illustration of site.
Bottom photo; Teeswork site.



3

Skills & research

Access world-class research, help to translate that to a business setting, and access relevant skills.

A skilled and professional workforce

Teesside and the Humber are working together to provide the skills and capabilities to succeed in the offshore wind sector.

Teesworks Skills Academy

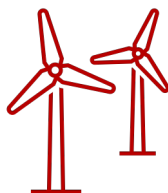
Teesworks Skills Academy helps the local people of the Tees Valley develop the best skills possible to take advantage of the new jobs and opportunities that are being created for workers at the Teesworks site.

The skills academy forms a major part of the future of Teesworks, the UK's largest industrial zone which aims to create thousands of high-quality jobs centred around advanced manufacturing, innovation and clean growth.



5+

world class
research
organisations



15,205

Direct Jobs

10,888

Indirect Jobs



4+

Universities with
highly trained
graduates

TTE

TTE is the UK's leading provider of technical training and consultancy services to sectors including manufacturing, engineering, and oil and gas, and is the international technical skills training arm of Middlesbrough College Group. TTE's offering includes practical skills training, formal technical qualifications and apprenticeship initiatives delivered in partnership with companies worldwide. TTE is also launching an Offshore Wind Manufacturing Academy which will offer a full-time study programme for 16-18 students, including the internationally-recognised Global Wind Organisation Basic Technical Training (BTT) course.

HETA (Humberside Engineering Training Association)

HETA is the leading engineering training provider in the Yorkshire and Humber region. HETA offer a fully managed Advanced Apprenticeship Scheme for a large client base ranging across a number of industry sectors including chemicals, ports, power generation and distribution, oil and gas and manufacturing.

Modal Training

MODAL Training is a subsidiary of the Grimsby Institute and provides specialist training to the maritime, ports, offshore and logistic sectors. Alongside sector-led training activity Modal offers cross-cutting training in safety and leadership. Their state of the art simulators improve learner development through safe, cost effective and realistic training.

HOTA

Based in Hull, East Yorkshire, HOTA is a Limited Company with Charity Status, providing Internationally Approved and Certified Training and an extensive portfolio of bespoke courses for the Renewables, Offshore, Maritime and Onshore Sectors to meet individual and company specific training needs.

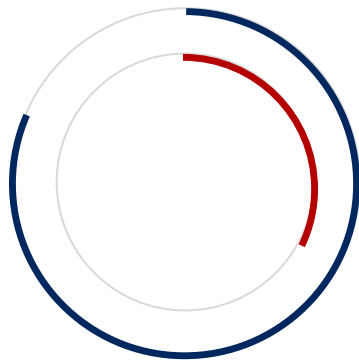
C-Wind

C-Wind provide a range of wind turbine training and offshore specialisations courses. C-Wind have 10 years experience in delivering high-quality offshore wind training to professionals across the world, helping them to identify and navigate safety hazards, and effectively preparing them for day-to-day activities on site.

Leading institutions are developing a pipeline of talent for your future

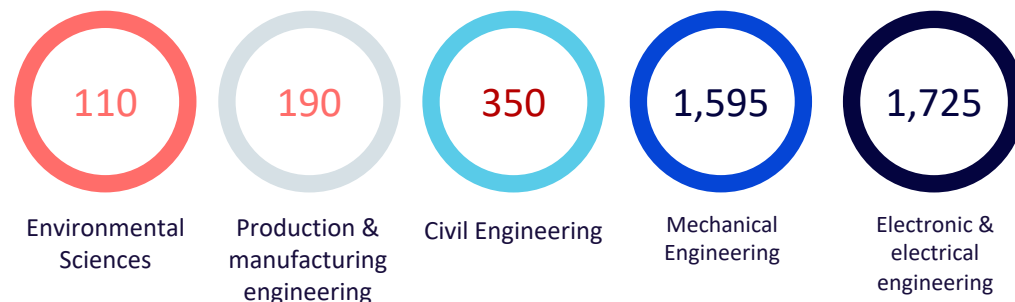
Teesside and the Humber Education Institutes are supporting a steady pipeline of students and graduates educated for the offshore wind supply chain sector.

Students in key related subjects: 3,885
Graduates in key related subjects: 1,230



Globally ranked universities such as the University of Hull are offering degrees in relevant courses.

Students currently studying at all Teesside and The Humber Higher Education institutes



Source: HESA 2018/19

The graduate pool is strengthened by Marine specific courses and world-class research centres

Durham University
19,025 students
across all subjects

Durham is a World Top 100 University (QS World Rankings 2019) and consistently ranked 5th in the UK, and is the third oldest university in England founded in 1832. Durham hosts the Durham Energy Institute including the Wind Energy Research group. www.durham.ac.uk

University of Hull
16,095 students
across all subjects

Founded in 1927, Hull was named the UK's most affordable student city in the Natwest 2018 Student Living Index, with a single-site campus. Hull hosts the Aura Centre for Excellence for Offshore Wind and offers an MSc in Offshore Wind Energy and the Environment. www.hull.ac.uk

Teesside University
18,670 students
across all subjects

The university was founded in 1992. It has its main campus in Middlesbrough. The university houses the Centre for Sustainable Engineering and has a MOU with RWE. www.tees.ac.uk

University of Lincoln
15,875 students
across all subjects

Founded in 1992, the university is ranked in the world's top 150 universities in the Times Higher Education's (THE) Young University Rankings 2020. The university is home to the Engineering Hub and has been listed as a principal partner of Siemens Industrial Turbomachinery Ltd. www.lincoln.ac.uk



Innovate. Incubate. Accelerate.

Links to institutions dedicated to enabling the transfer of technology from research to industrial applications.

Offshore Renewable Energy Catapult

The Offshore Renewable Energy Catapult is the UK's leading technology innovation and research centre for offshore renewable energy. They will play a key role in delivering the UK's net zero targets by accelerating the creation and growth of UK companies in the offshore renewable energy sector. Using their unique facilities and research and engineering capabilities, they will bring together industry and academia and drive innovation in renewable energy.

Catch UK

CATCH is an industry led partnership supporting the process, energy, engineering and renewable industries in Yorkshire and the Humber, with members and partners from key industrial sectors, associated supply chains, regional, national government agencies and local authorities. CATCH has world class industrial training facilities and works with leading training providers. CATCH are co-investing in the Humber Industrial Cluster Plan, developing viable routes to net zero for industrial emissions by 2040 through deployment of carbon, capture and storage and both blue and green hydrogen production.

The Welding Institute (TWI)

TWI is a global leader in technology engineering, providing research and consultancy to its members. Respected for its expertise, professionalism, impartiality and confidentiality, TWI works with the most influential companies worldwide across all industry sectors.

TWI's expertise in materials joining, fabrication, structural integrity, non-destructive testing and asset management is available to help the wind industry ensure safe, cost effective and efficient operations.

Aura Innovation Centre

Aura is at the forefront of innovation through leading collaboration, pioneering ideas and outstanding innovation. Led by the University of Hull, Aura finds solutions to the challenges we face, from technical and operational to economic and societal, working as a facilitator to accelerate ground-breaking solutions with their partners, to help them collaborate for innovation – for the region, the UK and globally. Rooted in the UK's Energy Estuary, Aura is at the heart of the Humber Advanced Cluster and identified as a key delivery partner in the UK Government's Offshore Wind Sector Deal.



Innovate. Incubate. Accelerate.

Links to institutions dedicated to enabling the transfer of technology from research to industrial applications.

University of Hull – Energy and Environment Institute

The interdisciplinary Energy and Environment Institute at the University of Hull brings together the skills and capabilities of leading researchers to tackle global challenges related to climate change and population growth and their consequences for society and livelihoods. The Institute works within four themes:

- Co-evolution of earth and life
- 'Energy estuary' 2050
- Global change, risk and resilience
- Energy, resource recovery and waste

Teesside University – Centre for Sustainable Engineering

The Centre for Sustainable Engineering focuses on the design, development, and enhancement of engineering systems, processes, and products that are efficient and sustainable without compromising the natural environment. Work spans three key areas:

- Smart energy and smart grid
- Construction innovation and research
- Hydrogen engineering and decarbonisation technologies

University of Lincoln – School of Engineering

The School of Engineering combines state-of-the-art R&D and teaching facilities with research informed teaching and industrial links. The School was part of a £37 million project, with £7 million allocated to build the dedicated Engineering Hub. The School has been listed as a principal partner of Siemens Industrial Turbomachinery Limited who shared the vision of producing graduates who are industry ready and academically excellent. Siemens have transferred their R&D equipment to the Engineering Hub, alongside relocating their training team.

Durham Energy Institute – Wind Energy Group

The UK leading Wind Energy Group's research spans all aspects of wind energy, from the design of turbine blades and foundations, cable installation, power electronics, the reliability and condition monitoring of wind turbines, how turbines interact within wind fields and with the environment, as well as the wider supply chain and regulatory contexts of wind farms. The Group has strong research links with the Wind Energy Industry including a long-standing strategic partnership with the leading Offshore Wind Developer Ørsted.



4

Cluster information

Teesside & The Humber boasts superb connectivity to the rest of the UK and the world

Get connected to the world

A connected transport network providing access to the rest of the UK, Europe and beyond.



Air

4 airports with local and international connections.

Teesside International Airport

Serves 16 national and international destinations.

Humberside Airport

Serves 14 national and international destinations and nearly half a million passengers per year.

Newcastle Airport

Serving 5 million passengers to over 80 destinations.

Leeds Bradford Airport

Serves nearly 4 million passengers with 65 destinations.

Rail

Teesside and the Humber are well connected to Britain's large and extensive rail network. Connections are available to major population centre in the North of England, alongside fast trains to London.



Road

Tees Valley is connected to the motorway network with the A1(M) enabling a lorry to complete a return trip to Scotland, the North West or the Midlands within a driver's shift.

The Humber is located by the end of the M62 and M180 with close proximity to freight distribution centres.

Shipping

Both ports are uncongested, easing the movements of ships to and from offshore wind sites.

Teesside

The Tees is one of the largest container ports on the North East coast and England's largest exporting port. Tees and Hartlepool ports handle approximately 7% of all cargo tonnes through UK ports and have a throughput of 500,000 teu. There are over 80 berths on the Tees and at Hartlepool.

The Humber

The Humber is the UK's busiest ports complex. The Humber Ports handle over 40,000 shipping movements per year and 79mt of cargo in the year to Q3 2018. Immingham, the largest single port, handles a wide variety of general cargo, RoRo, containers and dry bulks products. Grimsby is home to a large car import terminal and is an established O&M location for partners such as Orsted Energy and RWE. The Port of Hull hosts Green Port Hull and the Siemens Gamesa wind turbine plant. Able UK has consented plans to develop a new, large bespoke offshore wind outload facility with a planned 1.2km of river frontage.



Work in an ecosystem developed specifically for the marine and offshore sector

Energi Coast (Teesside and the North East)

Energi Coast is the North East of England's Offshore Wind Cluster. Made up of more than 30 key regional businesses and stakeholder organisations involved in offshore wind, the industry group works to showcase the vast supply chain capabilities in this sector within North East England, promote the region as a key hub for servicing both the UK and International offshore wind markets and address the themes arising from the sector deal announced in early 2019.

The industry group is made up of Developers, Ports, Supply Chain, Skills & Academia, Innovation & Research Organisations and the two Local Enterprise Partnerships. The wider Energi Coast cluster is made up of circa 400 North East England suppliers who are either active in the market or have the transferrable skills along with the ambition to move into offshore wind.

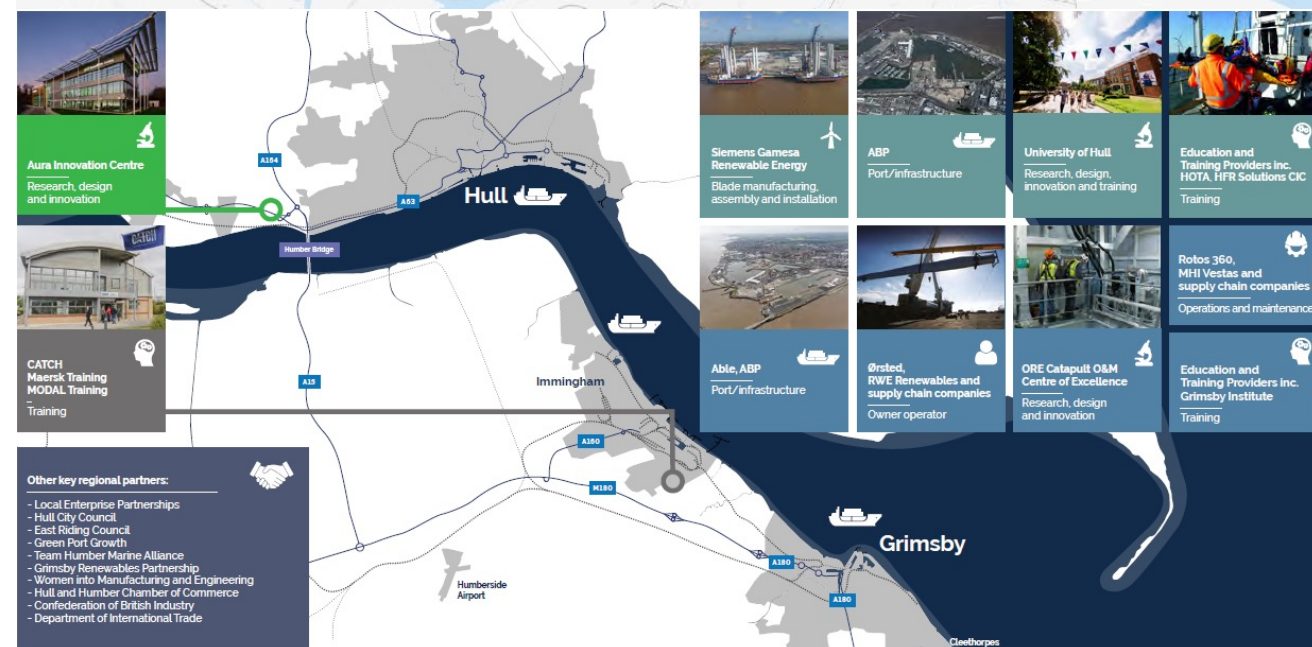
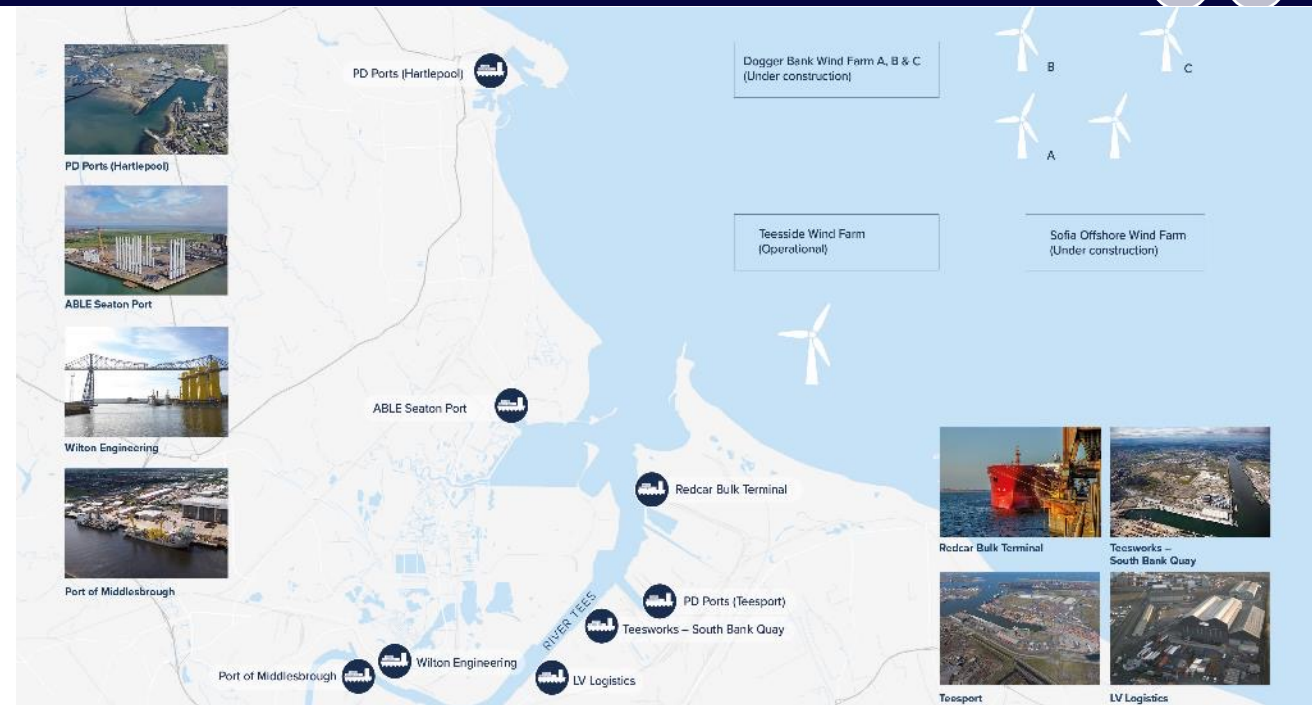
The Humber Offshore Wind Cluster

Team Humber Marine Alliance

Team Humber Marine Alliance is a powerhouse of businesses working in the marine and offshore sectors. Its 200 member companies have full supply chain capabilities including in commercial shipping, marine engineering, support vessels, specialist health & safety and ports & logistics.

Grimsby Renewables Partnership

The Grimsby Renewables Partnership was established by a group of local businesses which anticipated the arrival of the offshore wind market. By gathering together, the area has had a stronger voice for attracting new investment and providing new opportunities in the supply chain for local business. Today the Partnership has around 100 local businesses registered, growing month on month, regularly attending events for just this purpose.





5

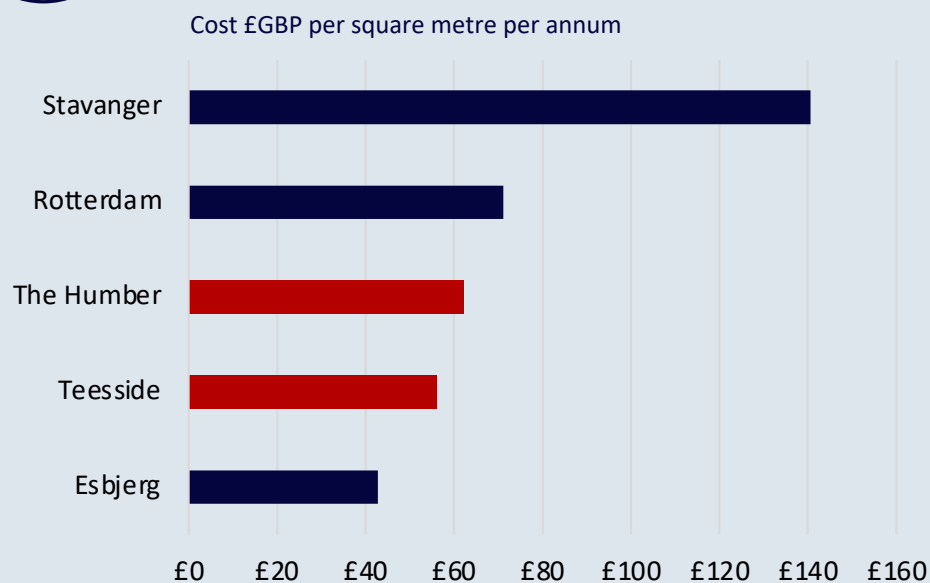
Soft landing & local support

A cost competitive location against leading global marine and offshore wind markets.



Industrial Space Costs

Teesside and Humber has some of the lowest industrial space costs compared to its major competitors.



Cost Effective Salaries

Salary costs in the UK are competitively lower than other key global locations.

| | Electrical Engineer | Industrial Engineer | Wind Turbine Technician |
|------------|---------------------|---------------------|-------------------------|
| Teesside | £35,700 | £34,654 | £27,511 |
| The Humber | £36,141 | £35,082 | £27,851 |
| Rotterdam | £56,577 | £54,825 | £46,028 |
| Stavanger | £60,977 | £59,736 | £51,088 |
| Esbjerg | £63,831 | £61,777 | £53,772 |

Averages in £000s (European cities converted from €). Total costs indicated.



Access a well-connected network of support

Local Enterprise Partnerships (LEPs) offer support and help to drive your business forward

Hull and East Yorkshire LEP

Hull and East Yorkshire Local Enterprise Partnership (HEY LEP) covers the two Council geographies of Hull and the East Riding of Yorkshire. The LEP operates business support schemes, grants and funding. The LEP also funds a Business Growth Hub as part of a government scheme, which looks to simplify the support landscape for businesses. The growth hub provides; Business advisors, Inward Investment, Events, Training, News, Growth Hub TV, IT & Digital and The Knowledge Centre.

Greater Lincolnshire LEP

The Greater Lincolnshire LEP is a business led partnership made up of private and public sector leaders, offering range of funding and finance options for your investment. The LEP's Inward Investment team can guide you through every step of relocating or growing your business. From funding and recruitment, to raising the profile of your company, the LEP can offer practical help and advice on a diverse range of subjects.

Tees Valley Combined Authority

The Tees Valley Combined Authority is a partnership of five authorities; Darlington, Hartlepool, Middlesbrough, Redcar & Cleveland and Stockton-on-Tees, working closely with the wider business community and other partners to support growth of the economy.

Tees Valley Business

Tees Valley Business is a new £35million business support service which provides companies in the region with a one-stop shop for a range of support to help businesses start up, grow and create jobs, including comprehensive advice on funding and finance options and assistance in establishing links with potential funding sources.

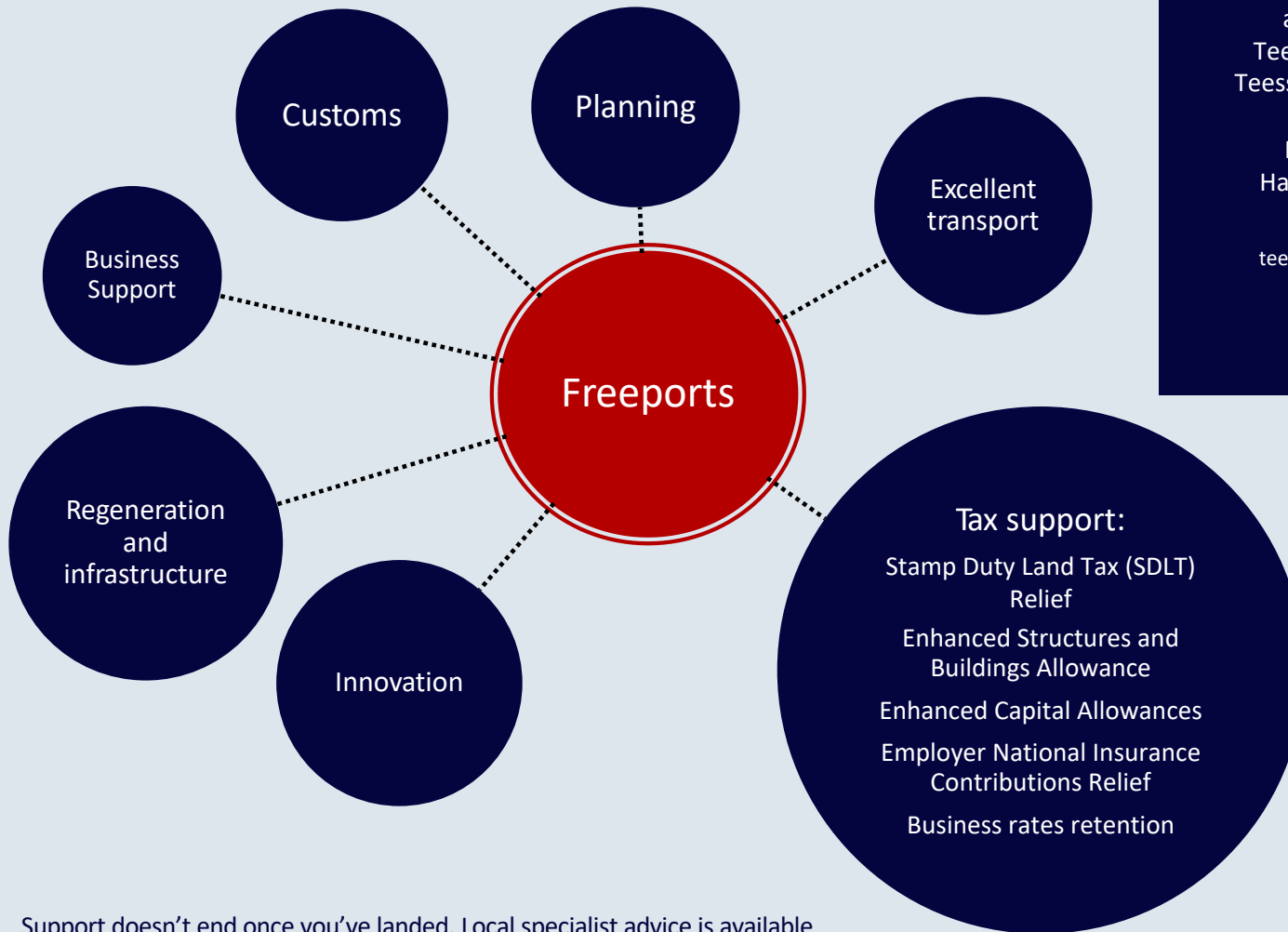
The programme includes a £20million Tees Valley Business Fund, awarding grants and loans to firms looking to invest, expand and create jobs.





Freeports

A new innovative policy by the UK Government providing businesses with significant advantages to enable them grow and gain a competitive edge.



Teesside Freeport is the largest in the UK, covering 4,500 acres. The Teesside Freeport covers sites across the region, including Teesworks, Wilton International, Teesside International Airport, ABLE Seaton Port, the Port of Middlesbrough, the Port of Hartlepool, Liberty Steel and LV Shipping.

teesvalley-ca.gov.uk/teesside-freeport

Humber Freeport takes in the economic catchment area of the Humber Estuary. The Humber Freeport includes three tax sites at Able Marine Energy Park and Immingham, Hull East centred on the Saltend Chemical Park and Goole adjacent to the Siemens Mobility rail plant. Support for the offshore wind industry is a core activity at the Humber ports.

humberfreeport.org/

What is a Freeport?

Freeports are secure customs zones located at ports where business can be carried out inside a country's land border, but where different customs rules apply. They can reduce administrative burdens and tariff controls, provide relief from duties and import taxes, and ease tax and planning regulations. While located geographically within a country, they essentially exist outside its borders for tax purposes.

Humber and Teesside have been designated as freeport sites by the UK Government.

Support doesn't end once you've landed. Local specialist advice is available throughout the entire journey your business takes.



6

Government & sector support

A dynamic and flexible offshore wind sector, underpinned by a supportive regulatory environment

The UK Government wants the UK to be at the heart of the global offshore wind industry

By 2030 the Government plans to quadruple the UK's offshore wind capacity so as to generate more power than all homes in the nation use today, backing new innovations to make the most of this proven technology and investing to bring new jobs and growth to ports and coastal regions.

Policy Impacts

- our commitment to a 40GW offshore wind target could help bring forth around £20 billion of private investment in renewable energy
- co-ordinated offshore wind connection could deliver up to £6 billion in consumer savings by 2050, significantly reducing environmental and social impacts on coastal communities
- an estimated 60% of spending on UK offshore wind will be invested back into the economy by 2030.
- 2020: Competitive process launched to support modern, integrated portside infrastructure
- 2021: Consult on the introduction of more stringent supply chain plan requirements, and support up to twice the capacity of renewable generation in the next CfD round, with onshore wind and solar projects eligible to bid for CfD contracts
- 2021: Publish an update from the Offshore Transmission Network Review at the end of the year, with a view to providing clarity for an enduring approach in 2022.

Progress to date

Offshore Wind Sector Deal

The Offshore Wind Sector Deal builds on the UK's global leadership in offshore wind, maximising the advantages for UK industry from the global shift to clean growth.

This Sector Deal builds on the UK's global leadership position in offshore wind and seeks to maximise the advantages for UK industry from the global shift to clean growth, consistent with the Clean Growth Grand Challenge.

It will do this by:

- > Providing forward visibility of future Contracts for Difference rounds with support of up to £557 million
- > The sector committing to increase UK content to 60% by 2030, including increases in the capital expenditure phase.
- > Increasing the representation of women in the offshore wind workforce to at least a third by 2030.
- > Setting an ambition of increasing exports fivefold to £2.6bn by 2030.
- > The sector will invest up to £250 million in building a stronger UK supply chain, establishing the Offshore Wind Growth Partnership (OWGP) to support productivity and increase competitiveness.



UK industry bodies enable quick and easy access to suppliers and customers

Connect with businesses and research institutions via the Teesside and the Humber offshore wind cluster.

Renewable UK

RenewableUK is the UK's leading not for profit renewable energy trade association.

Renewable Energy Association

The REA is the UK's largest renewable energy and clean technology body, representing around 550 member companies.

Wind Europe

WindEurope is the voice of the wind industry, actively promoting wind power in Europe and worldwide. They have over 400 members active in 35 countries.

Carbon Trust

An expert partner for businesses and governments – supporting them in ambitious plans for a low carbon future.

Innovate UK

The United Kingdom's innovation agency

Global Wind Energy Council

Founded in 2005 to provide a credible and representative forum for the entire wind energy sector at an international level.

The Crown Estate

Manages the seabed around the UK (less Scotland) working with customers/stakeholders to support the development of the seabed.

IMarEST Institute of Marine Engineering, Science and Technology

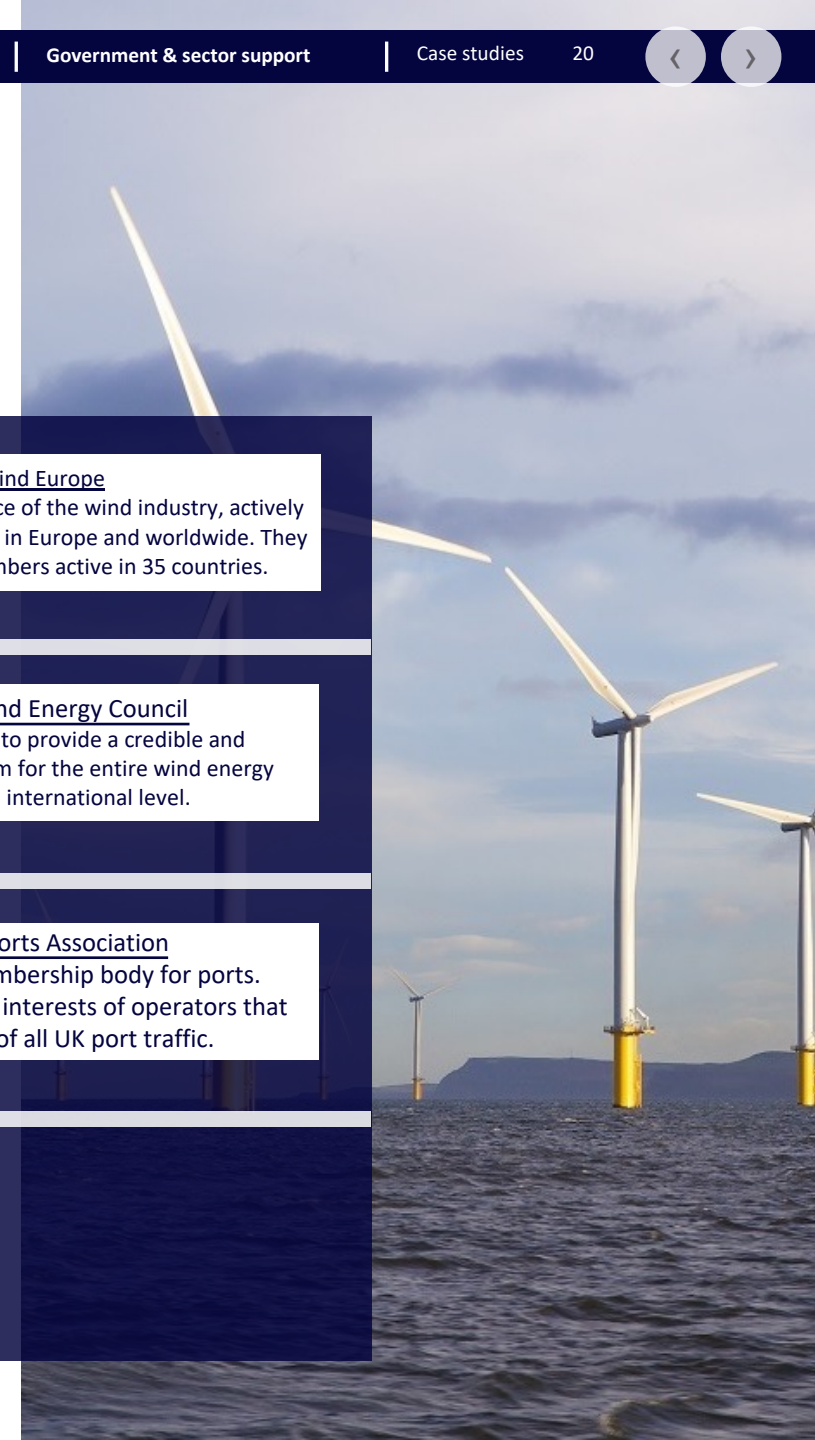
The international professional body and learned society for marine professionals.

British Ports Association

The national membership body for ports. They represent the interests of operators that handle 86% of all UK port traffic.

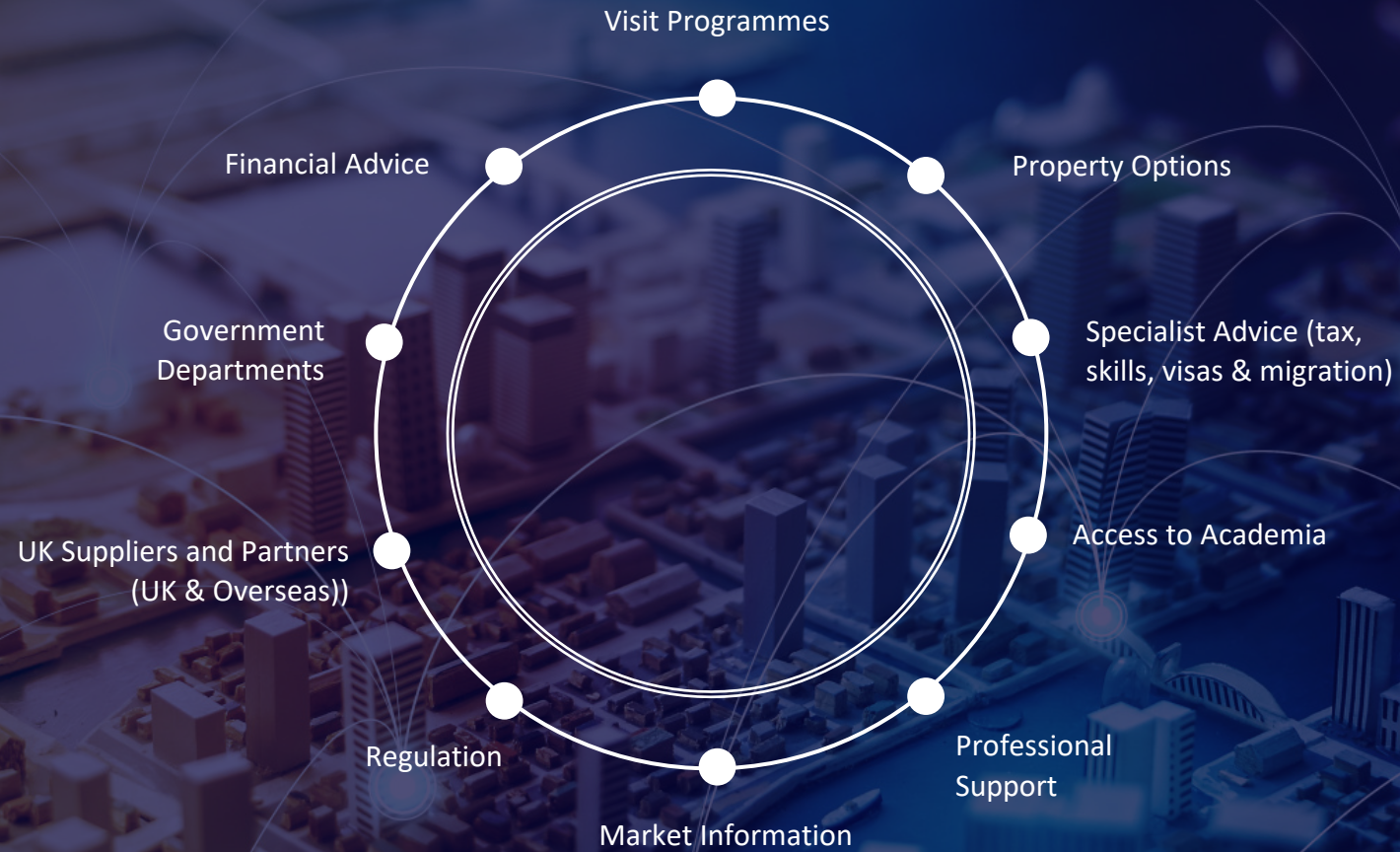
NOF

A not for profit organisation helping to make valuable connections between businesses in the global energy sector.





Benefit from the right support from local partners and Government to ensure a seamless investor process



Real companies. Real experience. Real value.

Case Studies

How the Humber and Teesside can
work for your business

JDR

Ørsted

RWE

Siemens Gamesa





JDR is a pioneer in the development of Submarine Power Cables for offshore wind, wave and tidal energy projects. Our commitment to technology developments and client-focussed delivery on some of the world's largest offshore wind farms has earned us an industry leading reputation and trust to provide the vital connection. JDR's state-of-the-art Hartlepool facility, which opened in 2009 has led the development of submarine power cable design, manufacture and services creating comprehensive product systems for some of the world's largest offshore renewable energy projects"

JDR Cable Systems Ltd (Hartlepool, Teesside)

JDR Cables Systems Ltd, part of the TFKable Group, has emerged as a leader in the supply of medium voltage array cabling for offshore wind, since opening their cable assembly facility at Hartlepool in 2009. The business quickly established itself in the region and secured contracts to supply cabling for some of the largest offshore wind farms in the UK, notably for Greater Gabbard and London Array. The company made strong supply-chain connections locally in the North-East UK, enabling many other businesses with complementary products and services to also flourish.

Following great success in the UK, JDR started to export cable technology and products to other offshore wind farm developers across Europe, Taiwan and the US. JDR became the European market leader for the supply of Array Cables in 2016, introducing innovative 66 kV array cabling.

Investment and Expansion at Hartlepool and Blyth

Over the past decade JDR have expanded and added new assembly machines at the Hartlepool site including the Vertical Laying Up Machine (VLM) in 2011, a Horizontal Laying-Up Machine (HLM) in 2016 and increased cable storage facilities. In March 2022 JDR completed a £3M investment in upgrading their Hartlepool VLM to produce larger and longer length cables needed by the industry, for the latest turbine sizes above 14 MW.

In 2022, JDR will construct a £130M high voltage advanced cable manufacturing facility at Cambois, near Blyth, part funded by a BEIS OWMIS grant. Once operational in 2024, the combined JDR plants will allow JDR to treble its annual cable capacity, assisting the UK Offshore Wind Sector to meet its target of 40 GW by 2030.

New Technology - Next Generation Cables

The company announced their Advanced High-voltage Export and Array Dynamic (AHEAD) cable development project in collaboration with ORE Catapult, Blyth. The AHEAD project aims to develop and validate dynamic cable technology at 132 and 150 kV required for turbines larger than 15 MW. The project is supported by a BEIS grant through the Floating Offshore Wind Demonstration Programme.

Read more case studies

JDR

Ørsted

RWE

Siemens Gamesa





“The Humber has provided Ørsted with the infrastructure, skills, and support to enable us to construct, operate and maintain our world leading offshore wind projects that are supporting the UK to achieve its net zero ambitions.

We’re looking forward to our continued presence in the Humber as we build out our pipeline of offshore wind projects and explore future opportunities, to collaborate with industry to decarbonise through green hydrogen production from offshore wind energy.”

Duncan Clark, Head of UK Region

Ørsted

Ørsted is the global leader in offshore wind with a vision to create a world that runs entirely on green energy. Ørsted develops, constructs, and operates offshore and onshore wind farms, solar farms, energy storage facilities, renewable hydrogen and green fuels facilities, and bioenergy plants. Ørsted has over 30 years’ experience and it is constructing the world’s biggest offshore wind farms off the East Coast of the UK. Headquartered in Denmark, Ørsted employs 6,836 people, with over 1,000 people in the UK.

The Ørsted East Coast Hub is the largest Operations & Maintenance hub for offshore wind in the world. Ørsted arrived in the Humber region in 2013 to build its first UK offshore wind farm, Westernmost Rough, consisting of 35 turbines. By 2022, Ørsted have invested over £14 million in their East Coast Hub facility and over £4.5 million in marine infrastructure at the Port of Grimsby. The state-of-the-art facility now operates six offshore wind farms, including the largest projects in the world, Hornsea One and Two. The Port of Grimsby was chosen by Ørsted due to its geographical proximity to the offshore wind farms as the site offered good flexibility in terms of port facilities needed to support construction and operations activities.

Ørsted’s growth in the town of Grimsby and the wider Humber region can be attributed to the growth of the cluster from supply chain companies, government authorities, innovation, education, and training providers, all providing a platform to support growth and investment. Examples include the Grimsby Institute who support with the training of wind turbine technician apprentices, suppliers such as Siemens Gamesa and their 1,000 strong Hull-based workforce manufacturing blades for wind turbines, and Local Authorities and LEPs who continue to support the sector through Regional Growth Funding, planning support and regional skills development.

The UK has provided a stable energy policy environment to enable the deployment of renewable energy projects through the Contract for Difference scheme. This has provided developers and the supply chain with the confidence to invest in the UK and for regions like the Humber to benefit from the construction and operation of offshore wind farms.

Read more case studies

JDR

Ørsted

RWE

Siemens Gamesa





“RWE’s Sofia team has a clear focus on local engagement to ensure regional benefits are maximised, for the Tees Valley supply chain and also the wider community. The region has a rich maritime, construction and engineering heritage which is why we have been able to utilise the expertise of more than 20 local suppliers on the project so far.”

– Graham Wright, Sofia’s Supply Chain Manager

RWE’s Sofia Offshore Wind Farm

RWE has been involved in offshore wind energy in the UK since the start – commissioning the UK’s first commercial wind farm in 2003, the 60MW North Hoyle. Its relationship with North East suppliers started at that time too, with local suppliers playing key roles in each of the companies’ projects since.

RWE currently has 11 operational wind farms in the UK, with a total installed capacity of almost 4 gigawatts (GW) as well as the 1.4GW Sofia, which started construction onshore in Teesside in June 2021. Consistency and a healthy pipeline have been fundamental to the growth of the UK’s offshore wind sector and RWE is contributing to this with six projects in development likely to add at least another 5.6GW to the UK’s offshore wind capacity.

While RWE has scale, experience and long-term vision, its partners and suppliers also facilitate the innovation, cost reduction and step changes that have made the UK a world leader in the sector.

Now under construction

Sofia is one of the largest single offshore wind farms in the world, and at 195km from the North East coast, one of the farthest from shore. A more than £3 billion investment in the UK’s electricity infrastructure, the project offers significant economic opportunity with supply chain benefits, direct and indirect jobs and contracts.

With landfall and its onshore infrastructure in Teesside, the region’s suppliers are playing a fundamental role in bringing it to fruition. The converter station is being built adjacent to Wilton International, and Stokesley-based Tier 1 supplier Van Oord joins more than 20 other local suppliers, from engineering, vessel and landscaping firms to fabrication and support services, in contributing to the project’s construction.



RWE

Read more case studies

JDR

Ørsted

RWE

Siemens Gamesa



“Since our offshore blade factory opened in Hull in 2016, Siemens Gamesa has proudly served as the catalyst for the powerful growth the area has seen. The rapid development of the offshore wind industry – and continued, strong, long-term support provided by the UK government for offshore wind – has enabled us to power ahead with confidence when making these plans. We’re committed to unlocking the potential of wind energy around the globe, with solutions from Hull playing a vital role,” says Marc Becker, CEO of the Siemens Gamesa Offshore Business Unit.



Siemens Gamesa Renewable Energy

Siemens Gamesa Renewable Energy’s (SGRE) presence in Hull dates to 2009, when the company saw the potential to grow its wind energy business in the region. The availability of a large area of brownfield dock, a pool of complementary skills in the labour market and a collaborative spirit from the local authorities and politicians all played a role in attracting Siemens to the Hull.

The Green Port Hull development site on Alexandra Dock was part of an Enterprise Zone and benefited from Hull City Council’s Local Development Order (LDO), a flexible outline permission for a range of renewable energy uses. In 2014 SGRE announced it was opening a new 40,000 sq. m factory in Hull, with the support of Associated British Ports. The plant was completed ahead of time and within budget in December 2016 and the first blades left the Alexandra Dock bound for Race Bank in January 2017. Since then, over 1,500 blades have been manufactured at SGRE’s factory. Over 1,000 jobs have been created and 98% of the employees come from a 30-mile radius of the factory, with the new Hull workforce demonstrating rapidly their capability in world-class manufacturing and engineering.

The UK Government has provided certainty on its long-term support for the growth of offshore wind capacity, which requires significant installation capacity. To allow for the increased capacity and to accommodate the production of the next generation of offshore wind turbine blades, Siemens Gamesa is investing £186m to expand its successful blade factory in Hull by a further 41,600 square metres, more than doubling the size of the manufacturing facility. The expansion is scheduled for completion in 2023 and will directly employ a further 200 people. SGRE built blades have been installed on both UK and export projects, and in the UK have been installed at Hornsea One, East Anglia 1, Beatrice in Scotland and Walney on the west coast. In 2019 the facility was upgraded to produce longer blades at over 81m that will be deployed on upcoming projects such as Hornsea Two, which will again become the world’s largest offshore wind farm.

Clark MacFarlane, Managing Director of Siemens Gamesa UK said: “The UK Government has provided strong and consistent support for offshore wind, having committed to a further 30 GW installed this decade, three times the current installed capacity. This underlines the commitment the UK Government has made since the Offshore Sector Deal was unveiled in early 2019.”

Read more case studies

[JDR](#)[Ørsted](#)[RWE](#)[Siemens Gamesa](#)



Dedicated to finding the ideal fit for your business

The Department for International Trade (DIT) and local partners are here to support you in navigating the opportunities across the UK – to find the right fit for your business.

Based on our experience of investors like you, this attractive opportunity demonstrates the strength and depth of capability available locally and in central Government to support you, and maximise your investment in the UK.

For investors interested in considering high value options further – we provide a bespoke service tailored to your needs from investment inception, right through to aftercare support.

We pride ourselves in developing long-term relationships with our clients, predicated on a full understanding of their needs.

Contact us

Investment Services Team

T: +44(0) 207 000 9012

[How to set up a business in the UK](#)

[Web](#)

[Email](#)



Department for
International Trade

great.gov.uk

Department for International Trade

The UK's Department for International Trade (DIT) has overall responsibility for promoting UK trade across the world and attracting foreign investment to our economy. We are a specialised government body with responsibility for negotiating international trade policy, supporting business, as well as delivering an outward-looking trade diplomacy strategy.

Disclaimer

This information has been prepared by the Department for International Trade (DIT), and suppliers of DIT, for general informational purposes only. This information is not intended to amount to advice on which you should rely. Although DIT and its suppliers makes reasonable efforts to ensure the accuracy of any information provided, neither DIT nor any of its suppliers makes any representations, warranties or guarantees, whether express or implied, that any information supplied is accurate, complete or up-to-date. Accordingly, you must obtain professional or specialist advice before taking, or refraining from, any action on the basis of this information.

Neither DIT nor any of its suppliers accepts any responsibility for updating this information in light of subsequent events or for any other reason. This information does not constitute a recommendation or endorsement by DIT or any of its suppliers.

To the fullest extent permitted by law, neither DIT nor any of its suppliers accepts or assumes any responsibility or liability to any reader of this information for any loss or damage, whether in contract, tort (including negligence), breach of statutory duty, or otherwise, even if foreseeable, arising under or in connection with the use of or reliance on this information including, but not limited to, loss of profits, sales, business, or revenue, business interruption, loss of business opportunity, goodwill or reputation, or any indirect or consequential loss or damage. Should any such reader choose to rely on this information, then they do so at their own risk.

DIT is the owner, or the licensee, of all intellectual property rights in this information and DIT reserves all rights in this information.