

North East England: Offshore wind market opportunities



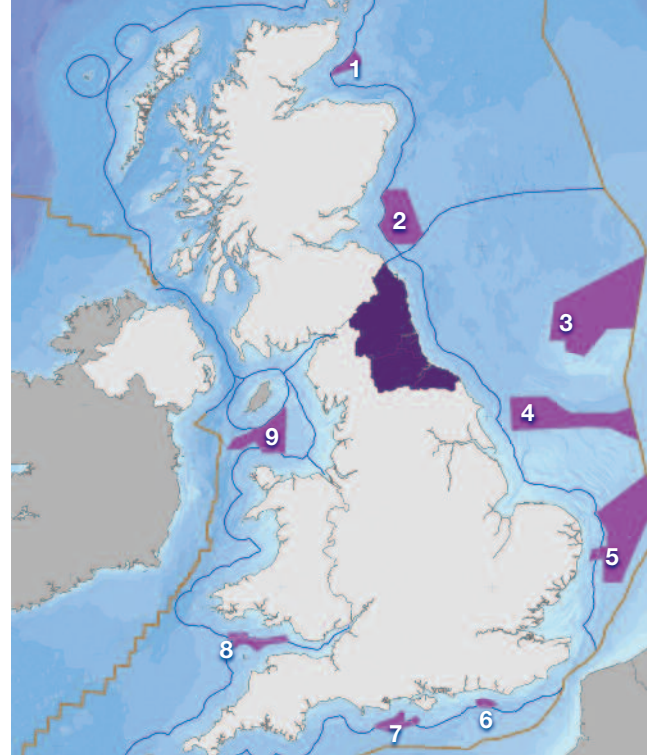
north east
england

UK overview

The UK offshore wind programme is the largest in the world, and is expected to form around half of the European market in the next 10–20 years.

It presents one of the greatest business growth opportunities in decades. Both existing and new entrant companies will no doubt benefit, whether they are the main developers contracted to build sites or those in the supply chain.

The Crown Estate's Round 3 programme alone will generate an extra 25GW of capacity in the UK. This will contribute over a quarter of the country's electricity demand by 2020: the most significant level of offshore wind investment in the world to date.



Offshore Wind Round 3 Zones

Zone	Name	Zone	Name
1	Moray Firth	6	Hastings
2	Firth of Forth	7	West Isle of Wight
3	Dogger Bank	8	Bristol Channel
4	Hornsea	9	Irish Sea
5	Norfolk		

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The scale of opportunities in North East England

North East England has become a region that is increasingly recognised as one of the leading locations for investment in innovation, energy and high value manufacturing. In the drive towards developing a fast-growing, low carbon economy, offshore wind has been identified by One North East as a key investment area in positioning the region as a major global player.

Our region offers enormous opportunities for ambitious companies aiming to grow in the offshore wind sector for many reasons, and with 75 per cent of the economic value from Round 3 projects located off the east coast, the region is ideally placed to service this market. Dogger Bank, which lies due east of the region and spans 8,660 sq km, is the largest of the nine zones announced in this round of development.

The North East has a strong capability in offshore

and power engineering, and is renowned for its dynamic ability to adapt to new opportunities. Our vast experience in power generation, marine and offshore traditions, with strong connections to the global energy industry, will no doubt help maximise investment returns for companies located in the region. We also boast some of the leading engineering and manufacturing firms in the oil and gas industry. As a result, the people and companies in the region are highly skilled and experienced in delivering large-scale, deepwater infrastructure projects.

Over £150m of work relating to offshore wind has already been secured in the last year by existing regional companies, and signs are showing that the trend is continuing to rise. Clipper Windpower, the company currently developing the world's largest offshore wind turbine, has already chosen to locate in the region.



Be part of the supply chain

One North East, the Regional Development Agency for North East England, has developed considerable business intelligence in the sector and a database of around 300 companies with skills and capabilities matched to offshore work. There are also established formal links to other English regions, particularly the North West and Yorkshire through the Northern Way, to help develop wider supply chain capability and access.

Many of the firms in the region can provide the whole range of skills that will be required, including mechanical, electrical, composites, towers and foundation specialists – all of the vital players in the supply chain. The oil and gas capabilities are already strong in the region with a cluster of world-class companies

operating in the marine and sub-sea sectors.

Many of these companies have the key skills required for the development of offshore wind farms such as:

- Cable and umbilical manufacture and expertise
- Ploughing, laying and subsea cable connection
- Sea bed operations and undersea connection techniques
- Project management and design engineering
- Specialist logistics and professional services

If you would like more information about supply chain opportunities, please email windsupply@onenortheast.co.uk



Eight good reasons to grow your business in the offshore wind market in North East England

1 Prime central location

The geographical locations of the Round 3 offshore wind farms put North East England in a unique central position from which companies can service over half of the farms.

Dogger Bank, the nearest and overall largest development zone, is expected to produce over a third (9GW) of the total offshore wind energy generated through this phase. Our location therefore gives close access to the largest market.

2 Great riverside sites

The region benefits from two major river systems – the Tyne and the Tees. There are also a number of deepwater ports including those in Blyth, Sunderland and Hartlepool which could be used to support or supply offshore projects.

These regions have been home to major

shipbuilding and heavy engineering centres providing fabrication used in the North Sea development of oil and gas reserves.

Equally important, there are available vacant and under-used quayside locations with the necessary infrastructure already in place to help companies locate in the region quickly.

The supportive planning approach for manufacturing sites and widely available support will allow companies to be market ready within a much shorter time than in other locations.

3 Strong supply chain links

As outlined earlier, the Government's commitment to the offshore wind market has opened up major opportunities for local and new companies to the region. This builds on the experience and expertise that already exist in North East England, and also the strong public and private sector relationships in place throughout the UK.

4 Access to funding support

Companies in the region can access a comprehensive range of finance and funding options including grants, loans and equity products.

We have a strong track record of delivering capital grants for companies investing in the region, and local businesses seeking to grow and develop new markets. The Grant for Business Investment scheme, for instance, provides direct support to projects that have capital expenditure and strong job creation potential.

There are also strong strategic and funding relationships with the national government and agencies, the European Investment Bank and private finance centres. For example, the Department for Energy and Climate Change (DECC) is working closely with the region to support innovative projects led by a number of companies here. Their Environmental Transformation Fund is now helping one company develop a new manufacturing approach for blades and another company to build a facility for towers and monopile production on the Tees.

One North East is working with the Northern Way on the Northern Wind Innovation Programme which has committed to £3m of industry-led projects to stimulate innovation and technology development in the offshore wind industry in the North of England.

5 Skills support

Engineering is at the heart of the region. Many companies deliver on major projects time and time again – a true endorsement of the ‘can do’ culture here in the region.

Around 62,000 people are employed in the region’s engineering sector. North East engineers are well-known for working on oil, gas and marine-related projects worldwide. The Tyne still has a significant engineering workforce in shipbuilding projects even today.

A significant cluster of research, design engineering, logistic and professional services companies have also built their expertise in these markets.

Investments have already been made in training a future generation of workforce in new and renewable industries. For example, a new 27 metre offshore wind training tower is now available for training Level 3 and Level 4 wind skills technicians. This is an open access facility that will allow both regional training providers and industrial companies the opportunity to increase their skills base.

In addition, we have a workforce that is familiar and experienced with the disciplines of modern production such as lean manufacturing. Our strong automotive sector, with Nissan being a key investor in the region, has played a major role in developing a culture that brings out the best in advanced manufacturing.

This experience of production engineering will be a vital component as companies develop capacity to deliver the significant volumes required for offshore projects.

The Manufacturing Advisory Service based here in the North East will be able to help companies develop and access these skills if required.

6 Top research and innovation

Forward-thinking businesses can benefit from world-leading research and development capabilities in specialist industrial research and academic centres on their doorstep here in North East England.

Narec, the National Renewable Energy Centre, is the focus for national innovation assets for the offshore wind and marine renewables industries. Its open access testing assets and expertise provide the full suite of component and systems testing for the offshore wind industry.

In 2009, DECC announced £11.5m national investment to enhance Narec blade testing capability to allow testing of up to 100m long blades and £10m for enhancements to their wave and tidal testing capability. Further plans are being developed to build the largest test facility for turbine nacelles, establish offshore demonstration sites for wind turbines, and to develop innovative power network solutions.

The Welding Institute (TWI) operates an open access facility in Middlesbrough to provide their leading materials, fabrication and joining technology expertise to help grow the offshore wind industry. Durham University leads the UK Wind Research network as part of the Research Council SUPERGEN Programme and, together with Newcastle University, provides state-of-the-art laboratories and facilities such as those for testing power electronics, aerodynamics, wave and tidal and gearboxes.

7 Dedicated and integrated business support

Business support in the region is well integrated. Agencies, universities, sector representatives and specialist centres often work together to provide a solution for businesses looking to locate here.

One North East, as the local Regional Development Agency, is able to help make the initial introductions and facilitate financial support where appropriate. There are wind sector specialists who will be able to provide first-hand advice on enquiries ranging from supply chain opportunities to availability of sites. One North East also has considerable experience in helping companies all over the world locate within the region.

8 A well-connected infrastructure

Companies located in this region are supported by several deepwater ports and a well-connected air, rail and road infrastructure. Newcastle International and Durham Tees Valley Airports offer a total of 30 scheduled routes daily to UK and European airports. They have connections to all destinations via major hubs including London, Schiphol and Dubai.

The East Coast mainline offers frequent rail connections to London and the rest of the country. Newcastle upon Tyne is less than three hours by train from London, and trains depart every half an hour.



“The new JDR Hartlepool facility has been built in response to a significant growth in demand from customers for our products and a move to expand our offering to the renewable energy sector. We believe this is the best location to serve the needs of our clients in the UK and continental Europe.”

**Patrick Phelan, Managing Director
JDR Cable Systems**



Case study

JDR Cable Systems, is a leading provider of subsea power cables, umbilical systems and marine cables for the energy sector. It chose to locate its new deepwater quayside facility at Hartlepool dock, knowing its location would provide the company with the ideal base to expand into the offshore wind sector.

The new purpose-built, state-of-the-art 100,000 sq ft facility is the only site in the UK designed specifically to manufacture subsea power cables for the oil and gas sector and the burgeoning offshore renewable energy market. The location at Hartlepool dock allows the cables to be spooled directly onto cable-laying vessels.

JDR’s expansion was supported by a £850,000 Grant for Business Investment (GBI) from Regional Development Agency One North East.

For more information, please contact:

Ray Thompson

Email: ray.thompson@onenortheast.co.uk

or

Clare McDermott

Email: clare.mcdermott@onenortheast.co.uk

One North East

Stella House

Goldcrest Way

Newburn Riverside

Newcastle upon Tyne

NE15 8NY

Tel: 0191 229 6200

Fax: 0191 229 6201

www.onenortheast.co.uk

The information in this document can be made available in a variety of languages and formats.

Please contact the Marketing Team:

Tel: 0191 229 6836

E-mail: marketing@onenortheast.co.uk

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