

Offshore Wind: Your Passport to Europe

Withdrawn 15 August 2019

**EXPORTING
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UK Trade & Investment's Offshore Wind team has produced this guide in coordination with its network of overseas embassies, regional offices, Scottish Development International, Invest Northern Ireland, Business Wales, RenewableUK, UK Trade Finance, GROW: Offshore Wind and the Offshore Renewable Energy Catapult.

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Executive Summary

**You are uniquely well placed to access the largest offshore wind commercial opportunity in the world.
This handbook is your passport to trade success in Europe**

Building on your success

This handbook has been created with the simple aim of helping your company win business across Europe. It presents high level commercial opportunities for you to target across five key markets together with the support available through the UK Government network to help you access them.

Having played a significant role in delivering the world's largest pipeline of offshore wind projects, UK companies across the supply chain have developed a strong reputation for the safe, timely and cost effective delivery and management of projects. We want your company to build on that reputation and engage with further opportunities on the continent.

Defining the opportunity

Over the next five years across five key European countries (excluding the UK) we estimate that;

- At least 6GW of projects will require support during early stage design and development
- Around £40bn in component supply and construction contracts will be made available through open competitive tender procedures
- Over 15GW of operational offshore wind projects may need to be managed, creating significant opportunities for companies who have built up knowledge and experience with the UK's generation portfolio

Helping you win business

Differences between markets, and between the UK and continental Europe, do mean that target clients and procurement routes are often unfamiliar to British companies. This handbook provides some insight into these differences, alongside clear signposts towards the extensive Government support available to enhance your competitive position overseas.

With our wide network of local based locally throughout the UK and in-market overseas, UK Trade and Investment (UKTI) and our partners in this handbook, are here to help. So please do not hesitate to contact us.

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Foreword

The Rt. Hon Lord Maude of Horsham, Minister for UK Trade and Investment

The UK has long been a leader in renewable energy; the first wind turbine to generate electricity was built by Professor James Blyth in Scotland in 1887. Today I'm proud to say that we remain a global leader in wind power production, with more offshore wind turbines than the rest of the world combined.

UK companies have a strong international reputation for delivering safe, timely and cost effective projects. So we are well placed to build on this success by developing our export offer.

Increasing British renewable energy exports into targeted, high value markets is essential for successful, sustainable and secure UK growth. This is a priority both for this Government's economic strategy and our commitment to clean energy. We are setting ambitious targets to reduce carbon emissions, create thousands of jobs and grow the economy - creating prosperity while protecting the earth for future generations. The opportunities in this sector are as unbridled as the wind itself and we want to help more UK companies to succeed in overseas markets.

We know that companies who export achieve stronger financial performance; are more productive and innovative than non-exporters; and are more likely to survive any economic downturn. UKTI, and its partner UKEF, can help companies to begin exporting by providing access to a host of trade information and market knowledge and introducing you to new customers.

Going green and economic expansion go hand in hand and I look forward to working with UK Offshore Wind companies to build a competitive and innovative supply chain that delivers and sustains jobs, exports and economic benefits for the UK.



Francis Maude

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Foreword

David Godfrey, Chief Executive of UK Export Finance

The offshore wind sector is set to open up new export opportunities in Europe and beyond. As the UK's award-winning export credit agency, UK Export Finance stands ready to support this activity by complementing commercial providers of trade finance and credit insurance.

Six years ago OECD member states, including the UK, recognised the need to encourage investment in renewable energy through changes to the rules which govern the work of members' export credit agencies. Enhanced repayment terms were agreed of up to 18 years for loan guaranteed exports to buyers of renewable technology exports including offshore wind, compared with standard terms of up to 10 years. These are the most favourable terms available for any industrial sector.

Our support to date includes performance bond and export working capital support for JDR Cables' work on the German Sandbank project (see page 30). While exports to Europe in the offshore wind sector are often well served by commercial banks and trade credit insurers, we will continue to complement that support where needed. And with the OECD's favourable terms, we are well-placed to support the sector as new markets emerge and develop.



M. McCaffery

Maria McCaffery, CEO, RenewableUK

Since 1978 RenewableUK has been championing the UK's wind industry. As a trade association representing 500 small, medium and large companies involved in every aspect of the wind energy sector including the supply chain, we have always felt that Britain offers a unique combination of excellent natural resources and strong maritime experience, perfectly positioning our nation to maintain our pole position in the offshore wind sector. It is gratifying to see that the work of our association, urging Government and key stakeholders to ensure this opportunity is fully seized, has now resulted in the most dynamic offshore sector globally.

The offshore wind industry attracted investment worth £1 billion into this country last year, and now employs 13,000 people in full time direct or indirect jobs. Major international companies such as Siemens and MHI Vestas Offshore Wind have committed to manufacturing in the UK. The sector presents opportunities for companies to export as far afield as China, Japan and the United States, whilst the UK is already well established as an exporter, for example providing subsea cables, interconnectors and jacket foundations for projects throughout the European Union. Building on this growing capability we are pleased to see Government supporting the UK supply chain, positioning UK as a key global partner.

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Section one

Northern Europe: The Opportunity

The world's biggest offshore wind market is on your doorstep. We want to help turn this opportunity into a commercial reality for your business.

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Europe: Building on your experience

As part of the world's largest offshore wind market, British companies have developed a strong reputation in the sector that is highly sought-after across Europe

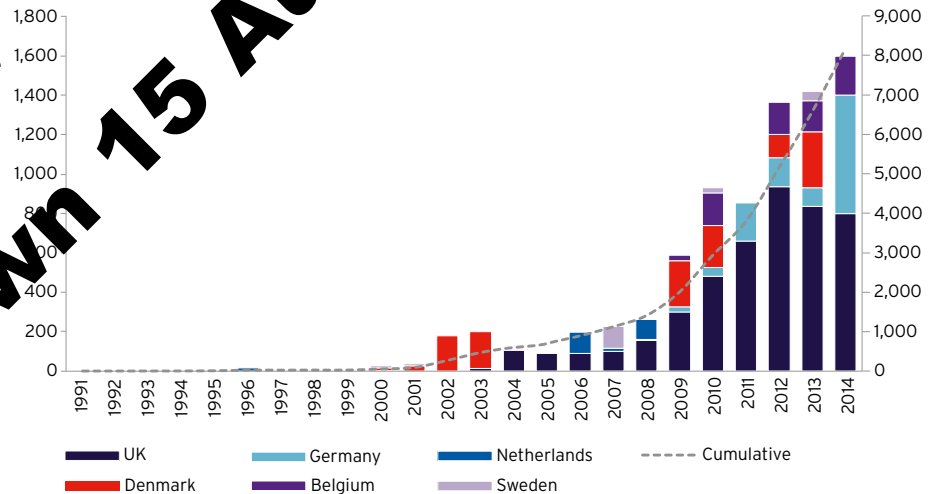
As of June 2015, fully commissioned offshore wind capacity in Europe reached over 9GW, with 2,739 turbines across 73 offshore wind farms in 10 countries.

Within this the UK accounts for 5,048MW, over half of the total and more than all other countries in the world combined. Following the UK in Europe is Germany (1,492MW), Denmark (1,271MW), Belgium (712MW) and the Netherlands (247MW).

Deployment at scale in the UK has been achieved safely and cost effectively through a partnership of domestic and international companies, firmly establishing the country's reputation as an open, collaborative and productive environment for business in the sector.

This reputation extends directly to British companies, many of whom have fostered a unique insight into the development, financing, construction and operation of offshore wind farms that is now highly sought after in emerging markets across the globe.

European Cumulative and Annual Commissioning* Activity by Country (MW)



*MWs are phased between the date of first generation and the date of final commissioning

Source: GROW:OffshoreWind, 2015



Europe: A £40bn CAPEX market to 2020

From a UK base you are well placed to export into the largest commercial opportunity in the world

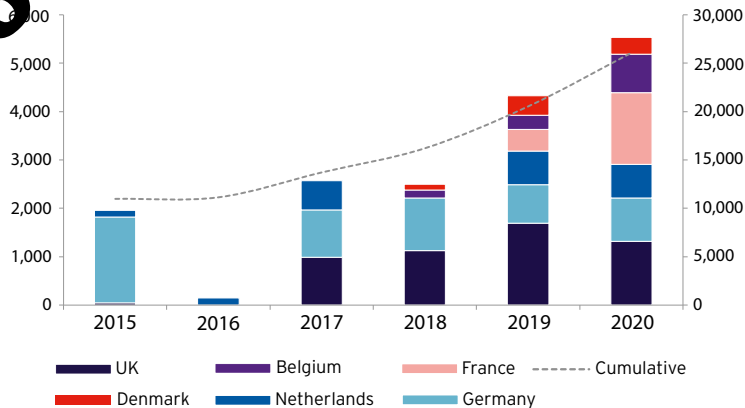
Looking forward, GROW:Offshore Wind (see page 31) forecast that by 2020 fully commissioned capacity across Europe, including the UK, will be approaching 25GW, with over 16GW of projects commissioned between June 2015 and 2020.

Within this project pipeline the UK is likely to remain Europe's largest single market with over 5GW expected to be installed over this period. This is followed by five key markets: Germany (c. 5GW), the Netherlands (c.2.3GW), France (c.2GW), Belgium (c.1.2GW) and Denmark (c.900MW). We also expect to see procurement and installation activity ongoing in these markets for projects that are not fully commissioned until after 2020.

Over the next five years these five markets (excluding the UK) therefore represent a significant commercial opportunity:

- Around 6GW of projects are likely to require development and early design services, particularly in Denmark, France and The Netherlands;
- At least £40bn in component supply and construction contracts could be awarded, including for projects awarded beyond 2020; and,
- Over 15GW of projects are likely to be fully operational by 2020, requiring companies experienced in managing and delivering offshore operations and maintenance activities.

Forecast of European Cumulative and Annual Commissioning Activity by Country, from June 2015 to end 2020 (MW)



Source: GROW:Offshore Wind, 2015

Section two

Key Markets: Policies, Projects and Procurement

This section has been designed to give you some insight into five key European markets, clarify the commercial opportunities within them and help you target the right companies at the right time.

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The Project Timelines

The project timelines presented have been collated as part of the market intelligence function of the GROW: Offshore Wind programme (see page 31). They are derived from the best available information at the time of publication (June 2015) from publicly obtainable sources. The data used to create them has not been validated by developers.

This information does not represent industry ambition, the position of UK Trade and Investment or any of its programme partners, and as such should be regarded as indicative only and subject to change over time. Every effort has however been made to portray the expected pipeline as accurately as possible from the publically available information to hand.



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Procurement

All major contracts within these markets will be made available through an open, transparent and competitive procurement process

European Utilities Directive

Much of the procurement activity for offshore wind projects in Europe will be subject to the European Utilities Directive (2004/17/EC), which includes utilities operating in the energy sector. Contracts which are subject to the Utilities Directive and are above certain thresholds must be advertised in the Official Journal of the European Union (OJEU) and follow its award procedures. This ensures that all UK companies interested in bidding will be provided with an open, transparent and competitive route by which to present their capabilities.

The relevant thresholds, net of VAT, are:

Supplies	Services	Works
£345,028	£345,028	£4,322,012
€414,000	€414,000	€5,186,000

More Information

UK projects are exempt from this directive, however, if you are looking to engage with clients elsewhere in Europe that fall under this directive and are likely to be procuring contracts above the thresholds, we would recommend that you become familiar with the OJEU approach to procurement. For more information contact your local trade adviser or go to the Enterprise Europe Network website: <http://een.ec.europa.eu/>

To review the Official Journal of the European Union today go to:

http://europa.eu/youreurope/business/public-tenders/tools-database/index_en.htm

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Belgium: The market



Belgium has over 0.7GW operational and a further 1.5GW consented

Market Overview

The Belgian Federal Government has committed to generating at least 13% of all energy from renewable energy sources by 2020. Offshore wind will play a key part in this and, by the end of 2015, six offshore projects will be operational. Consent has also been awarded for an additional 1.5GW of projects, with c.1.2GW of this expected to be commissioned by 2020.

Opportunities Across the Project Lifecycle

Development

- Limited development activity as almost all projects are already consented
- Possible engineering opportunities in design, energy analysis and project optimisation leading up to FID and construction

Under Construction

- Projects in close proximity to the UK
- Likely to be EPCed due to developer capability
- Direct supply or partnership opportunities with Belgian fabricators to offset capacity constraints
- Projects require environmental monitoring support during construction activities

Operation

- Projects similar in size to UK portfolio
- Potential opportunities in vessel supply, logistics management, condition monitoring
- Projects coming out of warranty in next five years likely to be looking to increase availability through optimised O&M delivery

Key Industry Bodies:

- Belgian Offshore Platform - representing the interests of investors in the Belgian offshore wind energy projects: www.belgianoffshoreplatform.be
- Belgian companies involved in the supply chain, construction, operation and maintenance of offshore wind farms are represented by either the Flanders Maritime Cluster (www.flanders-maritime-cluster.be) or Agoria Renewable Energy Club (www.agoria.be/en/renewable-energy-club)

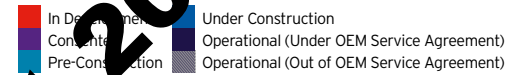
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Belgium: The projects



By 2020 almost 2GW of projects are expected to be operational

Wind Farm	Owner(s)	Capacity (MWs)	Turbine	2014	2015	2016	2017	2018	2019	2020
Thornton Bank 1	C-Power	30	Senvion 5MW	Operational (Out of OEM Service Agreement)						
Belwind 1	Parkwind; Sumitomo; Meewind; Rabobank	165	Vestas 3MW	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)					
Thornton Bank 2	C-Power	185	Senvion 6MW	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)					
Thornton Bank 3	C-Power	111	Senvion 6MW	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)					
Northwind	Aspiravi; Parkwind; Sumitomo	216	Vestas 3MW	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)					
Belwind Demo	Alstom; Lydian	6	Alstom 1.5MW	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)					
Nobelwind (Belwind2)	Parkwind; Sumitomo; Meewind	165	Vestas 3.3MW	Operational (Out of OEM Service Agreement)	FID	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)			
Rental	Otary	288	Tbc	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)	FID	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)		
Norther	Eneco; Elicio	150	Tbc	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)	FID	Operational (Out of OEM Service Agreement)		
Mermaid	Otary; Electrabel	170	Tbc	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)	FID	Operational (Out of OEM Service Agreement)		
Seastar	Otary	246	Tbc	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)	Operational (Out of OEM Service Agreement)	FID	Operational (Out of OEM Service Agreement)	

Total
Fully Operational June '15
Under Construction '15
By 2020

2,211
712
0
1,965

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Denmark: The market



Denmark has 1.3GW in operation and 1.5GW consented or in development

Market Overview

The Danish development pipeline includes 1,000MW of large scale tenders where the Danish Energy Agency conduct all development work and the Danish Transmission System Operator, Energinet.dk, manage delivery of the electrical infrastructure. These sites are auctioned to developers for construction and operation, with the lowest bid being awarded both the project and a subsidy at the bid level for 12.5 years. There are also 350MW of near-shore tenders, where Government performs the development work but does not deliver the grid connection, and open door projects where the developer is responsible for all activities. Open door projects receive a lower subsidy level than the large projects; there is, however, also a 50MW pot for experimental projects which are delivered similarly to open door projects but with a lower subsidy level.

Opportunities Across the Project Lifecycle

Development

- Most large scale development activity is undertaken by the Danish Government - following Horns Rev 3 award in February 2015 there is only one large project in the current pipeline, Kriegers Flak.
- Developers bidding for near-shore projects, experimental projects and the Kriegers Flak project in coming years will require environmental and engineering support during and after bidding process

Under Construction

- Horns Rev 3 will present procurement opportunities via Vattenfall, but likely to be in later stages of process
- Energinet.dk have procured electrical infrastructure for Horns Rev 3, but there may be installation opportunities and further component requirements for Kriegers Flak
- Potential opportunities on future bids
- Potential repowering opportunities

Operation

- Large fleet of projects out of warranty that may be seeking O&M optimisation and/or life extensions
- Strong connections with Danish developers in the UK may create partnership opportunities in Denmark
- Transmission System Operator may seek support from experienced UK companies to maximise asset availability

Key Industry Bodies and Annual Events

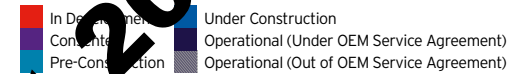
- Danish Wind Power Association (Vindmølleindustrien): <http://www.vindpower.org>
- Offshoreenergy.dk: <http://www.offshoreenergy.dk/renewables/renewables.aspx>
- Energinet.dk, Danish Transmission System Operator: www.energinet.dk
- Danish Wind Industry Association Annual Meeting
- Offshore Wind International Business: www.owib.dk

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Denmark: The projects



By 2020 over 2GW of projects are expected to be operational

Wind Farm	Owner(s)	Capacity (MWs)	Turbine	2014	2015	2016	2017	2018	2019	2020
Vindeby	Dong	5	Siemens 0.45MW							
Tuno Knob	Dong	5	Vestas 0.5MW							
Middelgrundten	Dong; Middelgrundten Vindmøllelaug	40	Siemens 2MW							
Horns Rev	Vattenfall; Dong	160	Vestas 2MW							
Ronland 1.1	Thyboron-Harboore Vindmøllelaug; Harboore Møllelaug; Vindenergi	9	Siemens 2.3MW							
Ronland 1.2	Thyboron-Harboore Vindmøllelaug; Harboore Møllelaug; Vindenergi	8	Vestas 2MW							
Samsø	Samsø Municipality; Difko	23	Siemens 2.3MW							
Frederikshavn 1.1	Dong	2	Siemens 2.3MW							
Frederikshavn 1.2	Dong	3	Vestas 2.3MW							
Frederikshavn 1.3	Dong	2	Nord 2.3MW							
Rodsand 1 (Nysted)	PensionDanmark; Dong; SWL	166	Siemens 2.3MW							
Horns Rev 2	Dong	209	Siemens 2.3MW							
Sprogø	Storebælt	21	Vestas 3MW							
Avedøre Holme 1	Dong		Siemens 3.6MW							
Rodsand 2	SEAS-NVE; E.ON		Siemens 2.3MW							
Avedøre Holme 2	Dong		Siemens 3.6MW							
Anholt	Dong; PensionDanmark; PKA A	400	Siemens 3.6MW							
Mejflak	Havvind Århus Bugt	120	Siemens 4MW							
Horns Rev 3	Vattenfall	400	Tbc							
Nearshore Tender	Tbc	350	Tbc							
Kriegers Flak	Tbc	600	Tbc							

Total
Operational June'15
By 2020

2,741
1,271
2,141

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France: The market



France currently has no operational capacity but has around 30GW in development

Market Overview

The French Government is actively seeking to utilise offshore wind to deliver industrial capacity. This presents a number of partnership opportunities for experienced UK companies across the supply chain. Development rights for four sites totaling 2GW were awarded by the French Government in 2012 and a fifth for 2 x 500MW was added in 2013. Projects will be supported by a feed-in-tariff system, with R&D grants available for the supply chain. The French Transmission System Operator, RTE, is responsible for constructing and operating the grid connection.

Opportunities Across the Project Lifecycle

Development

- Managed by the developers but little domestic experience in market
- Environmental opportunities in later stage surveys and stakeholder management
- Engineering opportunities in design, energy analysis and project optimisation
- RTE likely to seek experienced support for cable routing and offshore electrical infrastructure design

Under Construction

- Significant industrial agenda but little experience may lead to partnership arrangements across supply chain
- Requirement for experienced contractors and consultants to minimise installation risks
- May also seek support on HSE
- RTE likely to seek experienced contractors in cable installation to minimise risk to developer of delayed connection

Operation

- Projects will be under warranty from construction so target should be turbine providers Adwen and Alstom
- May seek experienced consultancy input during O&M modelling and strategy planning
- RTE likely to seek companies experienced in managing transmission assets offshore to maximise availability

Key Industry Bodies and Annual Events

- France Energie Eolienne: www.fee-energies.com
- Syndicat Energies Renouvelables: www.enr.fr
- RTE, Transmission System Operator: www.rte-france.com/en/
- Annual UKTI Offshore Wind Summit in Paris
- THETIS: <http://thetis.com>

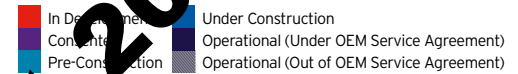
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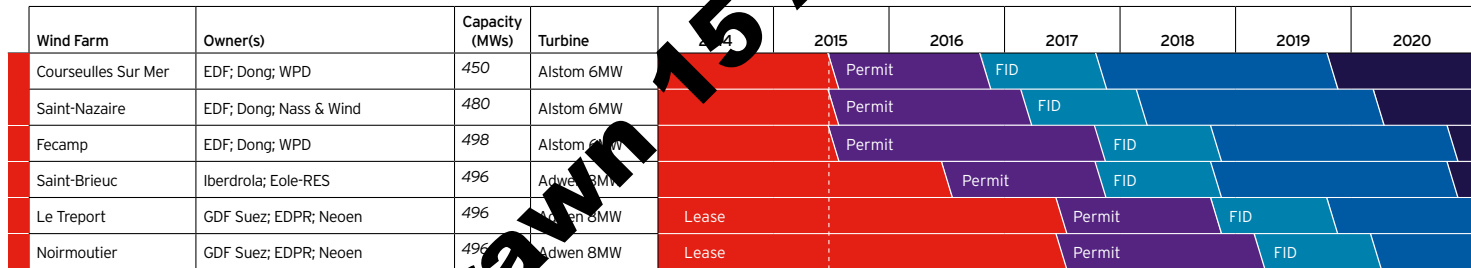
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France: The projects



By 2020 almost 2GW of projects are expected to be operational



Total 1,916
 Fully Operational June '15 0
 Under Construction '15 0
 By 2020 1,924

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Germany: The market



Germany has over 1GW in operation and a delivery target of 6.5GW by 2025

Market Overview

German projects are built out in offshore transmission hubs in accordance with the country's onshore grid development plan. The national construction programme is therefore essentially dictated by a project's position in one of two grid queues: TenneT (North Sea Transmission Operator) and 50Hertz (Baltic Sea Transmission Operator). All projects with connection agreements out to 2020 have consent in place from BSH (Germany's federal maritime and hydrographic agency).

Opportunities Across the Project Lifecycle

Development

- Limited to post-consent monitoring and design variations as all projects with grid connections have consent
- Potential engineering design contracts available, but likely to be aligned more with construction

Under Construction

- North Sea projects well located for delivery of components from the UK
- Opportunities for UK fabricators either directly with developers or through partnerships with local suppliers
- The next 3-5 years of construction activity over the next two years will require significant support to ensure safe and successful delivery. Experienced UK companies should be well placed to provide this
- Construction activities will require environmental monitoring support to meet BSH noise regulations

Operation

- With such a new fleet, all German projects will be under warranty for a number of years
- Key targets should be Siemens, Adwen and Senvion
- Transmission System Operators TenneT and 50Hertz may seek companies experienced in managing offshore transmission assets in order to maximise availability for projects

Key Industry Bodies and Annual Events

- Offshore-Wind-Industrie-Alliance: www.owia.de
- BSH (Federal Maritime and Hydrographic Agency): www.bsh.de
- British German Offshore Wind Forum, British Embassy Berlin
- WINDFORCE, Bremerhaven
- Husum Wind
- WindEnergy Hamburg

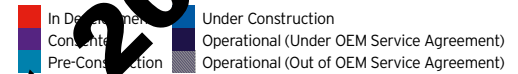
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Germany: The projects



By 2020 6.5 GW of projects are expected to be operational

Wind Farm	Owner(s)	Capacity (MWs)	Turbine	2014	2015	2016	2017	2018	2019	2020
Hooksiel	BARD	5	BARD 5MW							
Alpha Ventus 1	EW/E; E.On; Vattenfall	30	Servion 5MW							
Alpha Ventus 2	EW/E; E.On; Vattenfall	30	Adwen 5MW		5 year service agreement					
Baltic 1	EnBW; Consortium of Municipalities	48	Siemens 2.3MW							
BARD Offshore 1	BARD; Ocean Breeze	400	Bard 5MW							
Riffgat	EW/E; Enova	108	Siemens 3.6MW	5 year service agreement						
Meerwind	Blackstone; WindMW	288	Siemens 3.6MW		5 year service agreement					
DanTysk	Vattenfall; SWM	288	Siemens 3.6MW			5 year service agreement				
Nordsee Ost	RWE	295	Servion 6MW		5 year service agreement					
Borkum West 2.1	Trianel	200	Adwen 5MW			5 year service agreement				
Global Tech 1	SWM; HSE; Axpo; Esportes Offshore; FC Wind; Windreich; GTU; Norderland	400	Adwen 5MW			5 year service agreement				
Baltic 2	EnBW Macquarie	288	Siemens 3.6MW			5 year service agreement				
Borkum Riffgrund 1	Dong; Kirkbi; Oticon	312	Siemens 4MW			5 year service agreement				
Amrumbank West	E.On	288	Siemens 3.6MW			5 year service agreement				
Butendiek	Marguerite; Siemens; PKA A/S; Industriens Pension; WPD	288	Siemens 3.6MW				10 year service agreement			
Gode Wind 1&2	Dong	582	Siemens 6MW				5 year service agreement			
Sandbank	Vattenfall; SWM	288	Siemens 4MW	FID			5 year service agreement			
Nordergrunde	WPD	111	Servion 6MW		FID		5 year service agreement			
Wikinger	Iberdrola	350	Adwen 5MW		FID			5 year service agreement		
Nordsee 1	Northland; RWE	332	Siemens 6MW		FID			5 year service agreement		
Veja Mate	Laidlaw Capital	402	Siemens 6MW			FID		15 year service agreement		
Arkona-Becken Sudost	E.On	385	Siemens 6MW	Grid Agreed		FID				
Borkum West 2.2	Trianel	200	Adwen 5MW	Grid Agreed		FID				5 year service agreement
Borkum Riffgrund 2	Dong	240	Siemens 4MW Vestas 6MW	Grid Agreed		FID				
Hoh See	EnBW	350	Tbc	Grid Agreed		FID				5 year service agreement
Deutsche Bucht	Laidlaw Capital	402	Adwen 5MW				FID			
MEG 1	DEME; Windreich	400	Adwen 5MW			Data is unavailable at this time		14 year service agreement		

Total 7,428
 Fully Operational June '15 1,493
 Under Construction '15 2,358
 By 2020 *7,428

*This figure represents all projects with grid connections to 2020. This is more than is required to deliver the Federal Government's cap of 6.5GW by 2020. For this reason the German Federal Network Agency may look to manage capacity in order to work within this cap.

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Netherlands: The market



The Netherlands currently has 0.2GW operational, 0.9GW under construction and a further 3.5GW in development

Market Overview

There are currently only two operational projects in the Netherlands. The Dutch Government has, however, designated three wind farm zones and a high level programme for their development. The Ministry of Infrastructure and Environment is responsible for the preliminary development activity and consents. Sites are then made available through a competitive bidding process, with the contractor presenting the lowest bid awarded both the permit and grant to develop the wind farm. Grants for the wind farm sites offer producers financial compensation for the electricity they generate for 15 years. The Transmission System Operator, TenneT, is responsible for designing, delivering and managing the offshore electrical infrastructure.

Opportunities Across the Project Lifecycle

Development

- Early development work contracted and conducted by Ministry of Infrastructure and Environment
- Significant development and early-stage design activity currently underway
- More opportunities to provide support will appear as more zones are developed
- Developers will also require support during and after the site bidding process, and following successful award

Under Construction

- Tender for the initial 700MW zone will be open from December 2015
- Developers will be seeking input for bids during this period, particularly on project lifecycle costs
- Supply levels will put pressure on project costs, therefore experience in efficient project delivery will be key
- Opportunity for strategic alliances with Dutch suppliers, potentially to offset capacity constraints for larger orders

Operation

- Limited domestic experience in this area, may create opportunities for experienced UK companies
- Will seek opportunities for lifetime cost reductions through O&M optimisation
- Siemens and Vestas currently providing service contracts on existing projects
- TenneT likely to seek companies experienced in managing transmission assets offshore to maximise availability

Key Industry Bodies and Annual Events

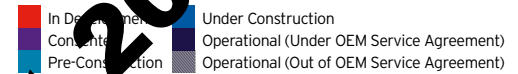
- Netherlands Wind Energy Association (NWEA): www.nwea.nl
- Netherlands Enterprise Agency (RVO): <http://english.rvo.nl/topics/sustainability/offshore-wind-energy>
- UKTI Offshore Wind Trade Mission, The Hague
- Offshore Energy, including Offshore WIND Conference

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Netherlands: The projects



By 2020 2.5GW of projects are expected to be operational

Wind Farm	Owner(s)	Capacity (MWs)	Turbine	2014	2015	2016	2017	2018	2019	2020
Lely	Vattenfall	2	Nedwind 0.5MW	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction
Irene Vorrink	Vattenfall	17	NEG 0.6MW	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction
Egmond aan Zee	Vattenfall; Shell	108	Vestas 3MW	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction
Princess Amalia	Eneco	120	Vestas 2MW	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction
Luchterduinen	Eneco; MHI	129	Vestas 3MW	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction
Westerneerwind	Westerneerwind	144	Siemens 3MW	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction
Gemini	Northland; Siemens; Van Oord; HVC	600	Siemens 4MW	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction
Borssele 1&2	Tbc	700	Tbc	Lease	Permit	FID	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction
Borssele 3&4	Tbc	700	Tbc	Lease	Permit	FID	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction
Zuid-Holland 1&2	Tbc	700	Tbc	Lease	Permit	FID	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction
Zuid-Holland 1&2	Tbc	700	Tbc	Lease	Permit	FID	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction
Nord-Holland 1&2	Tbc	700	Tbc	Lease	Permit	FID	Pre-Construction	Pre-Construction	Pre-Construction	Pre-Construction

Total
Fully Operational June '15
Under Construction '15
By 2020

4,620
247
273
2,520

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Section three

Accessing Support

Throughout the UK and across the globe you can access support that gives you the tools for successful exporting.

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A large offshore wind turbine is shown in the process of being installed. The nacelle and parts of the tower are visible on a platform supported by two large black piles. A red and white crane is mounted on the platform. The background shows a clear blue sky and the sea. The text 'SIEMENS' is visible on the platform.

UK Trade and Investment

UK Trade and Investment works with UK-based businesses of all sizes, providing advice, expertise and support throughout their journey

UK Trade and Investment offers services and support to businesses throughout the UK, and works in close partnership with its national delivery partners in Northern Ireland, Scotland and Wales. Whether you are based in the English Regions, Northern Ireland, Scotland or Wales you can access trade support and services through your local office.

Through UK Trade and Investment and its delivery partners, a range of bespoke support packages are available to guide you through your trade journey.



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Access Support

Your local trade team can offer you experienced advice on entering new markets and introduce you to new customers and opportunities



To access local support tailored to your specific business needs, your first port of call should be to contact your local trade team:

- In England, UK Trade and Investment has 9 regional offices, with a network of over 300 International Trade Advisors (ITAs)
- In Northern Ireland, UK Trade and Investment's national delivery partner is Invest NI
- In Scotland, UK Trade and Investment's national delivery partner is Scottish Development International (SDI). Their trade functions are delivered through Scottish Enterprise (SE) and Highlands and Islands Enterprise (HIE)
- In Wales, UK Trade and Investment's national delivery partner is Business Wales

Experienced trade advisors will offer practical advice and support to guide you through every step. With access to an extensive network of market experts and delivery partners they can assist in:

- Reviewing your readiness and capability to export
- Locating the best market to suit your business and advising you on your entry strategy
- Advising you on any issues that affect exporting to your chosen market
- Attending offshore wind trade shows and events where you can meet potential customers
- Meeting potential customers through the network of in-market experts
- Building and delivering a strategy for future growth and success

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Access Support

To access trade support, the first port of call should be your local trade office

English Regions

UK Trade & Investment East Midlands

Tel: 01332 826 320
Email: info@uktiem.co.uk
Innovation House, Derby,
East Midlands DE21 7BF

UK Trade & Investment East of England

Tel: 01707 398 398
Email: info@uktieast.org.uk
BioPark, Broadwater Road,
Welwyn Garden City,
Hertfordshire AL7 3AX

UK Trade & Investment London

Tel: 020 7234 3000
Email: export@uktilondon.org.uk
10-12 Queen Elizabeth Street,
London SE1 2JN

UK Trade & Investment North East

Tel: 0345 136 0169
Email: northeast@mobile.ukti.gov.uk
Aykley Heads Business Centre,
Durham DH1 5TS

UK Trade & Investment North West

Tel: 0333 320 0392
E-mail: info@uktinorthwest.co.uk
Churchgate House,
56 Oxford Street,
Manchester M60 7HJ

UK Trade & Investment South East

Tel: 0330 300 0012
Email: info@uktisoutheast.com
Unit 10, Fulcrum 2 Solent Way,
Whiteley,
Fareham PO15 7FN

UK Trade & Investment South West

Tel: 01275 370 944
Email: enquiries@uktisouthwest.org
Leigh Court,
Abbots Leigh,
Bristol BS8 3RA

UK Trade & Investment West Midlands

Tel: 0345 222 0159
Email: enquiries@uktiwm.co.uk
75 Harborne Road,
Birmingham B15 2TT

UK Trade & Investment Yorkshire & the Humber

Tel: 01904 65 1000
Email: info@uktiyorkshire.co.uk
Leeds Road,
Barnsley S70 2JW

Northern Ireland

Invest NI

Tel: +44(0) 28 9023 9090
Email: export@investni.com
Website: www.investni.com

Scotland

Scottish Enterprise

Tel: 0800 917 9534
Email: enquiries@scotnet.co.uk
Website: www.scottish-enterprise.com/international

Highlands and Islands Enterprise

Tel: 01463 234171
Email: info@hient.co.uk
Website: www.hie.co.uk

Wales

Business Wales

Tel: 0300 060 3000
E-mail: business@wales.gsi.gov.uk
Website: www.wales.com/business

General

UKTI Enquiry Unit
Tel: +44 (0)20 7215 5000
Email: enquiries@ukti.gov.uk

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Discovering opportunities

You can sign up online to receive up-to-date event notifications and business opportunities



Offshore Wind Export Portal

UK Trade and Investment has created a dedicated offshore wind export portal to find information on the sector, events and opportunities. This will be updated regularly based on input from our delivery partners throughout the UK, in-market experts and from companies seeking to raise the profile of procurement opportunities:

gov.uk/government/collections/offshore-wind-sector-export-help

Resources at this site include:

Trade links - links to a host of trade advice, support and contacts

Events - access details about attending dedicated offshore wind events in the UK and in Europe. You can also register for updates to keep you informed about forthcoming events

Business Opportunities - if you are looking for offshore wind export leads, you can register for UK Trade and Investment's free sales leads service, brought to you from UK Trade and Investment offices in Europe

Offshore wind publications - you will be linked to UK Trade and Investment's offshore wind publications

eBulletin - you can sign up for the offshore wind eBulletin, keeping you up-to-date with sector news, events, opportunities and more

OJEU

We also recommend you become familiar with the OJEU procurement process for large contract opportunities in Europe (see page 9) and regularly check the online Journal for updates: http://europa.eu/youreurope/business/public-tenders/tools-database/index_en.htm

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English Regions

UK Trade and Investment has 9 regional trade offices throughout England who provide expert trade support to help you grow your business



Local support throughout the English regions

UK Trade and Investment offers services and support to companies throughout UK. For local trade support in England they run 9 regional trade offices where you can connect to an International Trade Advisor (ITA) offering a range of bespoke support packages including:

- **First time exporters support** - aimed at SMEs, who are relatively inexperienced to exporting
- **Export growth service** - aimed at increasing the international trade of SME's more experienced in exporting
- **Medium Sized Business (MSB) programme** - receive first-hand support from an MSB International Trade Advisor

UK Trade and Investment also offers a wide range of additional services including digital and online support, as well as being able to connect you to a network of delivery partners, support organisations and other sources of funding support.

Furthermore, companies can access support through GROW: Offshore Wind. For more see page 31.

Case Study - Agile Group Ltd

Agile Group, based in the North East of England, provide IT and Communications services to companies across the UK and beyond. They are an end-to-end solutions provider for a number of Maritime Satellite Services. They service the offshore wind market by providing global high speed Internet, television and voice services via satellite to mobile users at sea.

Agile Group have been successful at winning foreign contracts through continued support from UKTI. Over a number of years this has included:

- Market entry support
- Export strategy development through Passport to Export
- Market evaluation through both Overseas Market Introduction Service (OMIS) and the Export Marketing Research Scheme (EMRS)
- As well as day-to-day assistance from their local ITA

Contact your local international trade team
Or VIA contactus.ukti.gov.uk OR VISIT gov.uk/ukti

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Northern Ireland

Invest NI is here to provide expert trade support and to help you grow your business



Invest Northern Ireland (Invest NI)

As the regional business development agency, Invest NI's role is to grow the local economy by helping new and existing businesses to compete internationally, and by attracting new investment to Northern Ireland.

Business Information Centre in Belfast has extensive market information and in partnership with the Enterprise Europe Network can research European markets and identify potential business partners for you.

They assist companies active in the renewables:

- Tailored packages of assistance which include advice, mentoring and financial support in areas such as job creation, skills development, research and development and productivity improvement.

Supported by collaborative networks:

- Companies with complementary skills sets which provide a range of services under an identified brand e.g. S1 Source and Global Wind Alliance.
- Research based centres which have expertise in offshore energy, including the Centre for Advanced Sustainable Energy, Northern Ireland Advanced Composites & Engineering Centre and the Institute of Electronics, Communications and Information Technology.

Case Study - Harland and Wolff Group

Harland and Wolff has been involved in offshore renewable energy since 2005, successfully completing a wide range of projects in the UK and across Europe.

This has included:

- Design and fabrication of wave and tidal energy devices
- Offshore substations and jacket foundations

Invest NI has assisted the company with participation in key sectoral exhibitions and trade missions in Germany, Stockholm and Amsterdam.

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Scotland

SE and HIE are here to provide expert trade support and to help you grow your business



Scottish Enterprise (SE) and Highlands and Islands Enterprise (HIE)

SE and HIE recognise the importance of doing business outside Scotland for company growth. To support your company achieve its international ambitions both agencies have a range of support offerings such as:

- **Export Advisers** provide tailored advice on market opportunities and support on strategy planning, market entry, logistics and payment advice.
- **Trade Missions and Exhibitions** with subsidised staff space on Scottish Pavilions, speaker slots and tailored meeting arrangements.
- **International Manager for Hire** programme to support the delivery of your company's international trade strategy.
- **Globalscot**, a global support network offering free help and advice.

There is additional support available which is tailored to the specific requirements of the offshore wind sector including:

- **Offshore Wind Expert Support Programme** - Up to two full days of free, one-to-one advice about diversifying your business for offshore wind
- **International Technology and Renewable Energy Zone (ITREZ)** - Bringing business and academia together
- **Offshore Wind Supply Chain Development** - Identification, brokerage and match making service between suppliers and developers

Case Study - FoundOcean

FoundOcean is the world's largest dedicated offshore construction grouting company, with over 50 years experience of subsea grouting for oil & gas and offshore wind installers.

They recently completed grouting operations on Trianel's 200 MW capacity Borkum West II offshore wind farm in Germany and after being the first in the world to develop the process of offshore grouting their practice is now used worldwide.

FoundOcean achieved their global success with the support of a Scottish Enterprise account manager and by using the following Scottish Enterprise services:

• Trade Missions & Events

FoundOcean attended numerous events and trade missions with Scottish Enterprise including the EWEA Offshore Conference.

• International Manager For Hire

Scottish Enterprise part funded the employment of an International Export Manager.

• Export Advisers

The expertise of Scottish Enterprise's Export Advisers also helped FoundOcean in their journey to trading internationally.

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Wales

Welsh Government is here to provide expert trade support and help you grow your business



Wales - Energy Wales Unit and Trade & Invest support

Energy Wales have a team of business managers working with offshore developers and their supply chain partners in Wales to increase investment and support company growth.

There are specific support initiatives provided through a dedicated Trade and Invest team:

International Trade Development (ITD) - programme of specialist support that is available to both new and existing exporters across Wales. Its aim is to provide practical exporting advice and support to businesses.

International Trade Opportunities (ITO) - Using our global network we can help you connect with your ideal partner or customers in over 50 countries.

Overseas Business Development Visit (OBDV) - financial support to reach new markets and win international business. OBDV can support 50% of the costs of visiting new markets for a maximum of £10,000.

Procurement opportunities

A dedicated supply chain and procurement database - Sell 2 Wales - can provide overseas buying companies and / or their UK supply chain partners access to thousands of manufacturing and service companies in Wales. Commercial opportunities can be highlighted, products & services requested, and tenders placed on the system for suppliers to respond.

Case Study -Workplace Worksafe

Workplace Worksafe, based in North Wales, have reported healthy activity in the Offshore Wind Market with the continued increase in sales of their Component Protector Bags to several major customers Globally. They have won contracts to supply clients with their needs for Health and Safety Equipment on various Wind Farm Projects. Also for the supply of critical component protectors for O&M service providers worldwide.

Welsh Government have continued to support Workplace Worksafe through:

- Assistance in the product development phase
- Supporting attendance at international trade events.

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UK Export Finance (UKEF)

The UK's export credit agency provides trade finance and insurance solutions to support UK exporters. They help make exports happen



Who they are:

- UKEF are the UK's export credit agency. If you are planning to export goods or services from the UK then it is likely you'll need some form of guarantee or insurance to protect you against payment risks. If you can't get what you need from the private market, UKEF may be able to help.
- UKEF work closely with exporters, banks and overseas buyers to support financing of UK exports and investments across the world.

What they do:

- Provide guarantees, insurance and advice to support UK-based exporters large and small
- Work across all sectors from engineering and infrastructure projects, consulting and service industries. The energy sector is a key sector for UKEF, and companies they have supported include JDR Cables for work on an offshore wind project in German waters (see page 30)
- Work hard to understand the needs of each sector and tailor their support to provide the most appropriate solution to our customers
- Can support exports to more than 200 countries
- Work closely with UK Trade & Investment and the trade support organisations in Scotland, Northern Ireland and Wales, to ensure exporters receive the full range of government support available

Get in touch:

To find out more about their products and services, see their website for online guides and video case studies. You can also book a free appointment with a member of our network of Export Finance Advisers (EFAs), based throughout the UK.

As regional representatives of UK Export Finance, their EFAs can also act as points of contact to introduce exporters - or potential exporters - to other finance providers, credit insurers, insurance brokers, trade support bodies and other sources of government support.

To find out more and book an appointment online, visit:

gov.uk/uk-export-finance

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UK Export Finance case study

UKEF support JDR cables to win contracts in Europe



Case study - JDR Cables

JDR Cables is a mid-sized business supplying sub-sea power cables and control umbilicals to the energy sector, including offshore wind farms. Most of the Cambridgeshire-headquartered firm's output - more than 80% - is exported to markets worldwide including Asia Pacific, the US, West Africa and Europe.

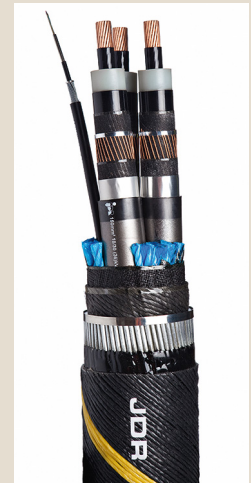
UK Export Finance has been backing JDR since 2012, when it issued guarantees for a £10m bonding facility - to meet potential buyer requirements for performance bonds - and £5m of export working capital, both to be supplied by the firm's bank HSBC.

This support has since underpinned a series of contract wins including a 2014 contract for more than 100 kilometres of inter-array cabling for Vattenfall's Sandbank project, in German waters.

"It is off the back of the fantastic support from UKEF that we are now working on our new inter-array cable contract in the German North Sea," says Martin Boden, Chief Financial Officer at JDR.

"We are a relatively small company compared to many of our multinational competitors, so our customers require bonding for security.

"Our bank has been very supportive, but there is no doubt that UKEF bonding assistance has enabled our European expansion, and I'm sure the same would apply to other companies of our size. For us, UKEF support is critical - without it, we would not be able to compete."



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GROW: Offshore Wind

GROW: Offshore Wind can help companies based in England access funding support for growth within the offshore wind sector



What they do:

GROW: Offshore Wind has supported over 1,000 companies across a wide range of projects, including business development, progressing innovation and assisting with capital investments. They have matched funding available to support a wide range of business projects that can help your company develop in the offshore wind sector.

Projects include*:

- Business Development
- Patents and intellectual property
- Product design and development
- Prototyping, testing & trials
- Supply chain assessment, design and development
- Specialised training
- Bid writing, support with pre-qualification

For more information and to arrange a free business capability review, register your interest at www.growoffshorewind.com, email growoffshorewind@myras.org or telephone 0207 728 2738

*Projects and size of grants are subject to eligibility and scope criteria that we will discuss and review with you to make sure you meet the necessary conditions

Case study - GROW: Offshore Wind funding supports H&Askham's growth

H&Askham is a Kent-based electrical installation specialist, offering a full range of electrical installation services for customers involved in civil engineering, rail and renewable energy.

In 2014 they saw a number of major electrical engineering projects - worth several £millions - successfully completed in renewable energy, including the Global Tech 1 offshore wind farm, Dan Tysk offshore wind farm (both located in Germany), Whitland solar farm (UK) and the London Array offshore wind farm in Kent.

David Pierce, General Manager, stated:

"The generous funding and support from GROW:OffshoreWind is allowing the business to pursue a number of opportunities that will not only help us develop as a business, but will also create jobs as we further expand our team."

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Offshore Renewable Energy Catapult

Supporting the growth of the offshore renewables industry in the UK through innovation



Who they are:

- ORE Catapult is an independent, not-for-profit business that exists to accelerate the development of offshore wind, wave and tidal technologies
- The team of over 120 people has extensive technical and research capabilities, industry knowledge and track record.
- Through world-class testing and research programmes, they work for industry, academia and government to improve technology reliability and enhance knowledge, commercialising and reducing the cost of generating offshore renewable energy.
- They play an important role in supporting delivery of the government's policy objectives and in attracting and anchoring internationally mobile investment to the UK and generating UK economic benefit.

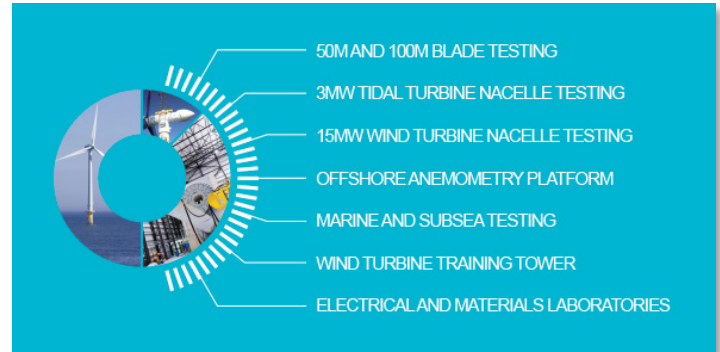
What they do:

Support the growth of the offshore renewables industry in the UK through:

- Reducing risk and downtime
- Improving reliability
- Accelerating technology development
- Performance verification
- Reducing cost of energy
- Improving investor confidence
- Reducing product costs
- Reducing development times

Test and demonstration

ORE Catapult manages the most comprehensive open access and independent test and demonstration facilities in the world for advancing offshore renewable energy technologies.



ore.catapult.org.uk

Contacts



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UK Export Finance

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London, SW1A 2HQ

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tel: +44 (0)20 7271 8000

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address: Greencoat House,
Francis Street, London, SW1P 1DH

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tel: +44 (0)20 7901 3000

email: info@renewableuk.com

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UKTI

UK Trade & Investment is the Government Department that helps UK-based companies succeed in the global economy. We also help overseas companies bring their high-quality investment to the UK's dynamic economy, acknowledged as Europe's best place from which to succeed in global business.

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