

OFFSHORE WIND SECTOR DEAL CONSULTATION

How can industry and Government create a transformational environment to drive further cost reduction, increased economic benefit, and a significant increase in deployment?



Agenda

10.30	Welcome by Brian Johnson <i>Business Director and SME Ambassador, Solent LEP</i>
10.40	Sector Deal scene setting presentation <i>Pete Clusky, MHI Vestas Offshore Wind</i>
11.10	Facilitated group feedback
12.10	Presentation of findings from groups & wrap up
12.30	Networking lunch
13.00	Depart





Solent LEP SME Ambassador Brian Johnson

22nd September 2017



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National Context

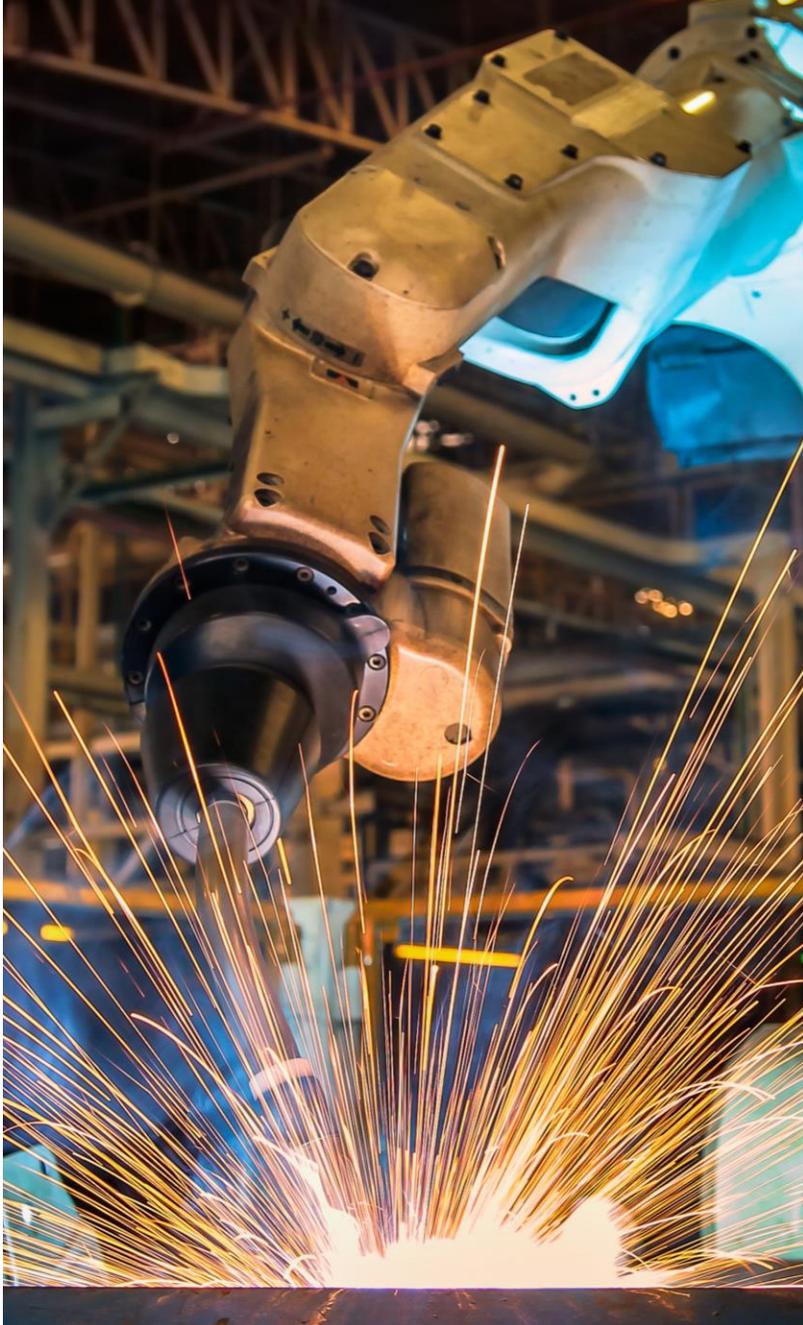


	Investing in science, research & innovation		Developing skills
	Upgrading infrastructure		Supporting businesses to start and grow
	Improving procurement		Encouraging trade & inward investment
	Delivering affordable energy & clean growth		Cultivating world-leading sectors
	Driving growth across the whole country		Creating the right institutions to bring together sectors & places



Four areas where LEPs have capacity and expertise are;

- Business Growth and Start up
- Skills
- Investment in Research, Technology and Innovation
- To support the development of sector deals to ensure that the contribution and needs of key industry clusters are addressed, building on the specialisms that reside in our universities and associated supply chains, including SME's



Solent LEP: Supporting SMEs



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Two key roles:

- 1. Support:** Delivering Business support products in the Solent Area
- 2. Strategy:** Enabling strong private sector voice in local, regional and national policy development



SME Support



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- Dedicated SME Funding Programmes:
 - £9m grant funding awarded
 - 250 SMEs supported (including more than 70 new start-ups)
 - £33m additional investment into SMEs unlocked
 - 1,500 jobs created / safeguarded
 - Range of bespoke funding programmes established
- Solent Growth Hub Established: one-stop-shop for business support
- Details on current funds available at www.solentlep.org.uk



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Other LEP Investments

- BAE Marine Workshops and Maritime Support Centre - £1.8m
- Cancer Immunology Centre - £4.5m
- Centenary Quay Phase 4 - £7.676m
- Dunsbury Park Link Road - £4.54m
- Eastleigh College Upgrades - £9m
- Fareham and Gosport Multi-Year Programme:
 - St Margarets Roundabout and Peel Common Roundabout - £4.5m
 - Gudge Heath Lane and Station Roundabout - £4.958m
 - A27 Dualling - £7.325m
- Fareham Innovation Centre Phase 2 - £2m
- The Hard Interchange - £4.832m
- Isle of Wight College Centre of Excellence for Composites, Advanced Manufacturing and Marine - £10.9m
- Station Quarter Southampton - £4.185m
- Solent Recreation Mitigation Project - £1.35m
- Solent Test Facility - £0.456m
- University of Portsmouth Future Technology Centre - £1.05m
- Z21 - £0.5m



SME Engagement

Enabling strong private sector voice in local, regional and national policy development: including emerging Sector Deals



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Key questions for attendees

1. Do you have enough visibility about near-term project opportunities?
2. What can the sector deal learn from other sectors or countries?
3. What are the themes that the Solent should prioritise (facilities/ innovations/clusters)?
4. What visibility does your business need of the future market to prioritise the sector?
5. What does your business need to support continued investment?
6. How should the sector deal drive innovation; 1) within the core sector, 2) in adjacent sectors that can enable stretch deployment (smart networks / storage / DSR)?
7. How can the supply chain grow the number of globally competitive UK companies?
8. Where does / can the sector have competitive advantage globally; what support is needed to really exploit this?
9. How should a sector deal help business develop a world class skilled and diverse workforce?
10. How much more local content can realistically be delivered in the short/medium/long term?



Offshore Wind is maturing – deployment

Figure 4: UK offshore wind assets – 31 December 2016

*Sites having reached Final Investment Decision (FID) and those under construction.



	Offshore turbines	Offshore substations	Export cables	Offshore Masts	Wind farms
Operating	1,463	20	56	23	29
Under construction*	830	14	25	1	14
Total	2,293	34	81	24	43

Source: Crown Estate Offshore Wind Operational Report Jan-Dec 2016

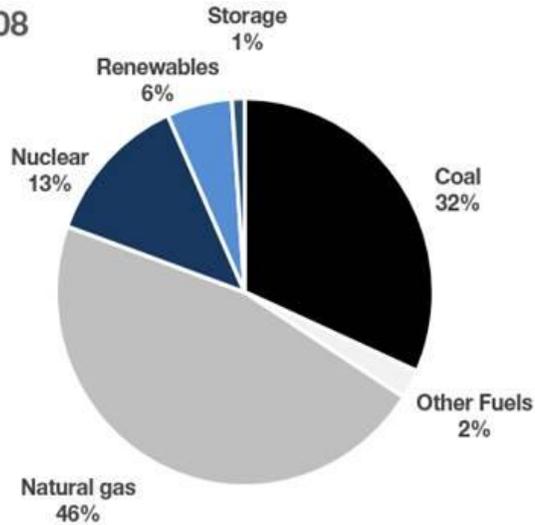
- The first offshore wind turbines were installed in Denmark 26 years ago
- The first two UK offshore turbines were installed in the UK in 2000
- In 2016 the UK's offshore wind fleet generated over 16.4 TWh, enough to supply the electricity needs of 4.1m homes, around 15% of the UK total
- In 2016 Offshore wind supplied 5.4% of the UK's total estimated electricity consumption, and with projects in construction or post FID that figure will rise to 10% in 2020



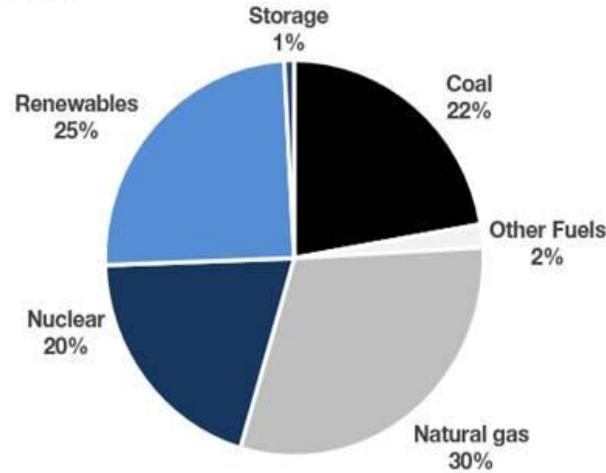
Offshore Wind is maturing – deployment

Breakdown of electricity generation

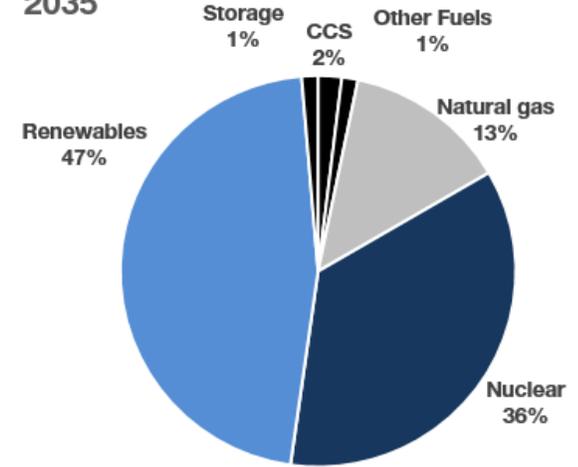
2008



2015



2035



Source: BEIS 2016 Updated Energy & Emissions Projections



It is hoped that recent accelerated cost reduction in offshore wind together with a compelling sector deal will drive an engrossed role in the post-2025 energy mix in the UK (electricity together with increasing electrification of heat and transport). Due to the dynamic nature of the sector BEIS' assumptions for these 2016 projects are out of date (costs have fallen 50%).

Offshore Wind is maturing – innovation



Source: DONG Energy Offshore Wind Works

Offshore Wind is maturing – UK media

BBC One Show – 07/09/2017

[Click here to view episode:](#) Key footage begins at 03:00



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Why the UK offshore wind success must go global

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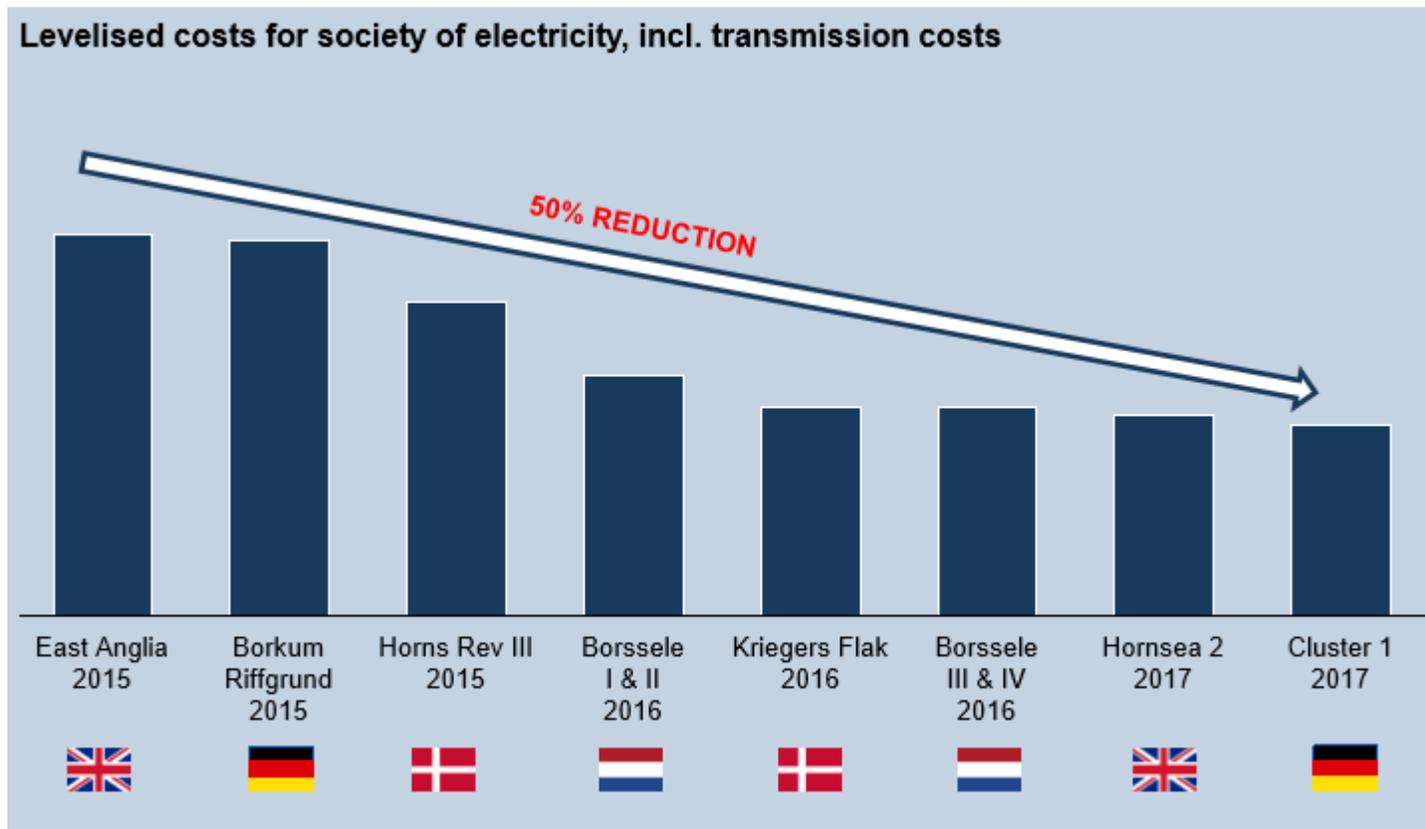
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Offshore Wind Energy Just Reached An Incredible Milestone In The UK

Better for the environment and your wallet

Offshore Wind is maturing – accelerated cost reduction



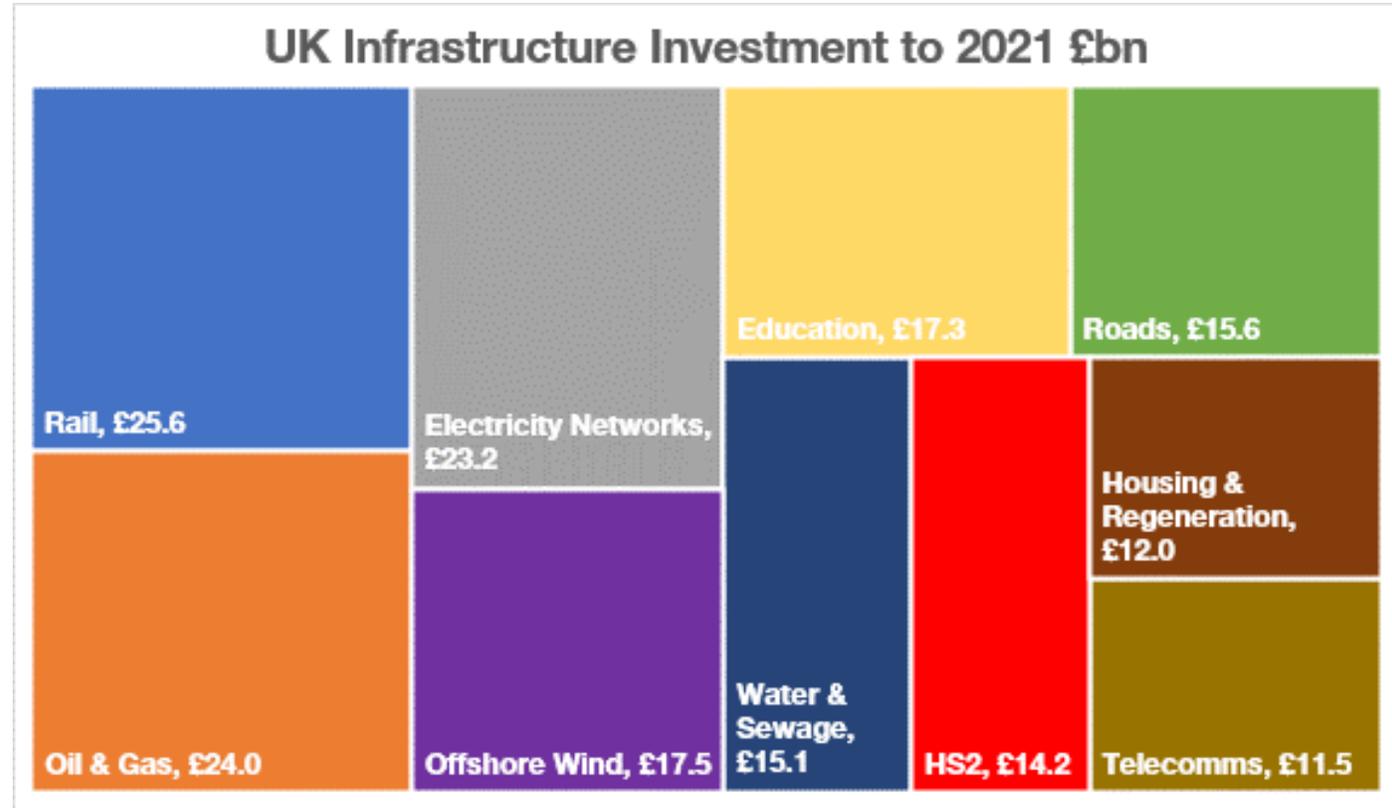
- Results in continental Europe over the last 18 months have demonstrated how competitive power from offshore wind can be.
- After a hiatus of just over 2 years since the 1st auction round, UK CFD Auction Round 2 announced on September 11th 2017 confirmed that offshore wind in the UK is also competitive with any other form of utility scale generation.
- The record-breaking cost reductions achieved by the offshore wind industry are unprecedented for large scale infrastructure.



Offshore Wind is maturing – major infrastructure category

Like any infrastructure projects, offshore wind has long lead times.

The sector will already make a significant contribution to UK infrastructure as the 4th largest category of investment up to 2021.

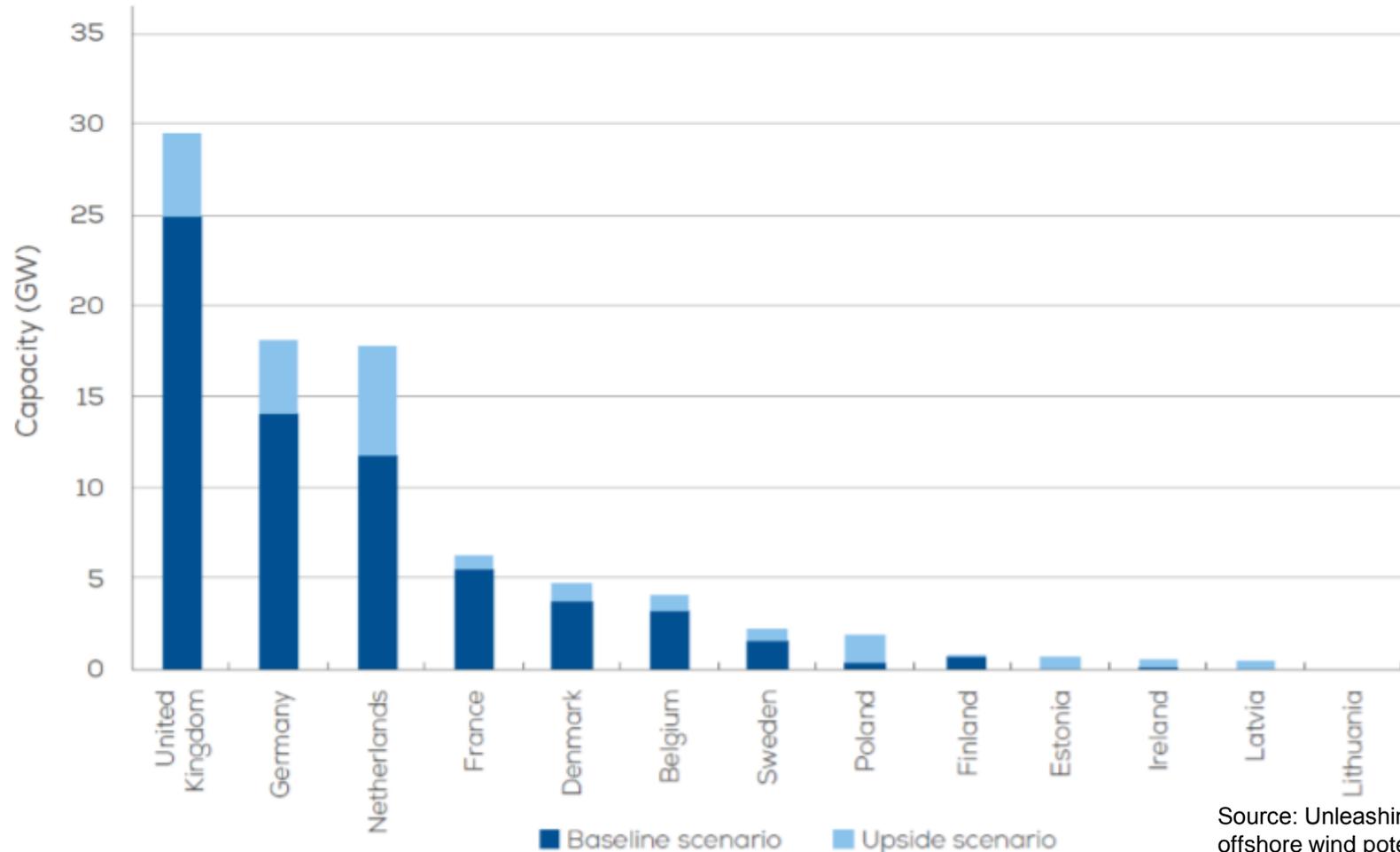


Source: UK National Infrastructure Plan & Renewable UK

Offshore Wind is maturing – significant additional potential

The UK has a fantastic natural resource and still represents a high growth market.

The auction results of 11th September together with a compelling sector deal can set the framework for the next chapter in UK offshore wind, with the sector playing an engrossed role in the post-2021 energy mix



Source: Unleashing Europe's offshore wind potential, Wind Europe & BVG Associates, 2017



What is the Economic Value of Offshore Wind to the UK?

 **renewableUK** Offshore Wind Industry Investment In The UK 2017



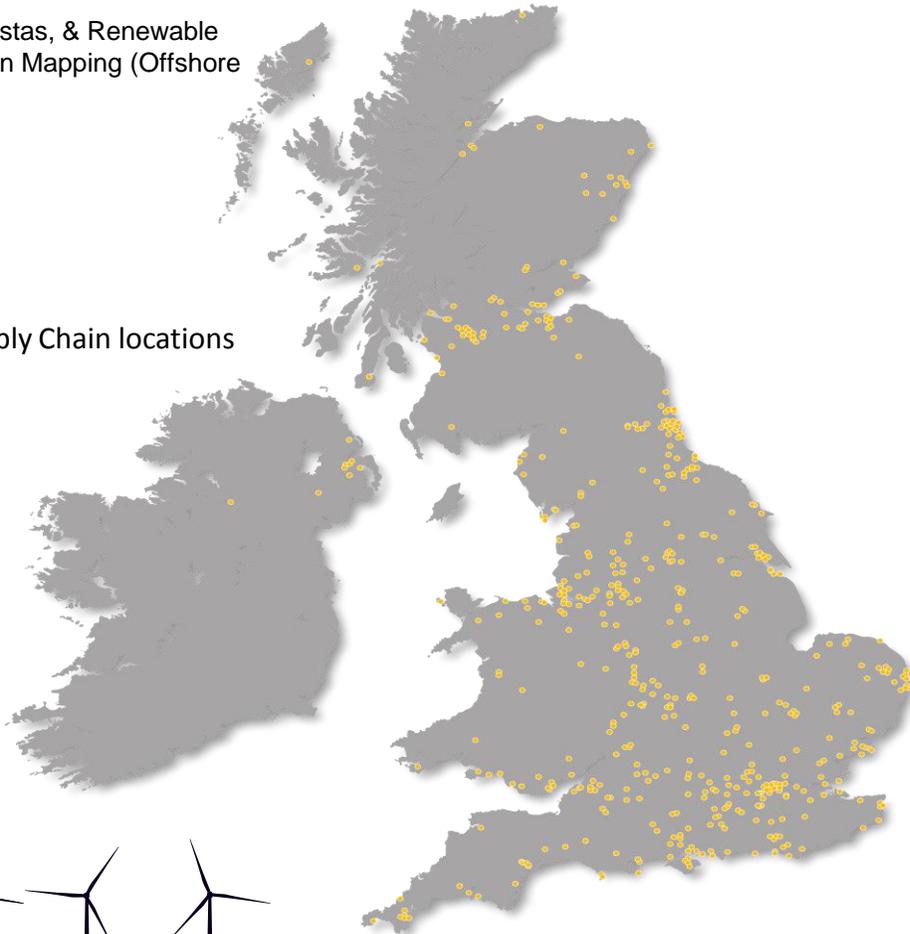
Category	Lower	Upper	Weighted average 2017	Change from 2015
DEVEX	27%	92%	73%	+16%
CAPEX	22%	38%	29%	+11%
OPEX	52%	89%	75%	+2%
TOTEX	44%	53%	48%	+5%



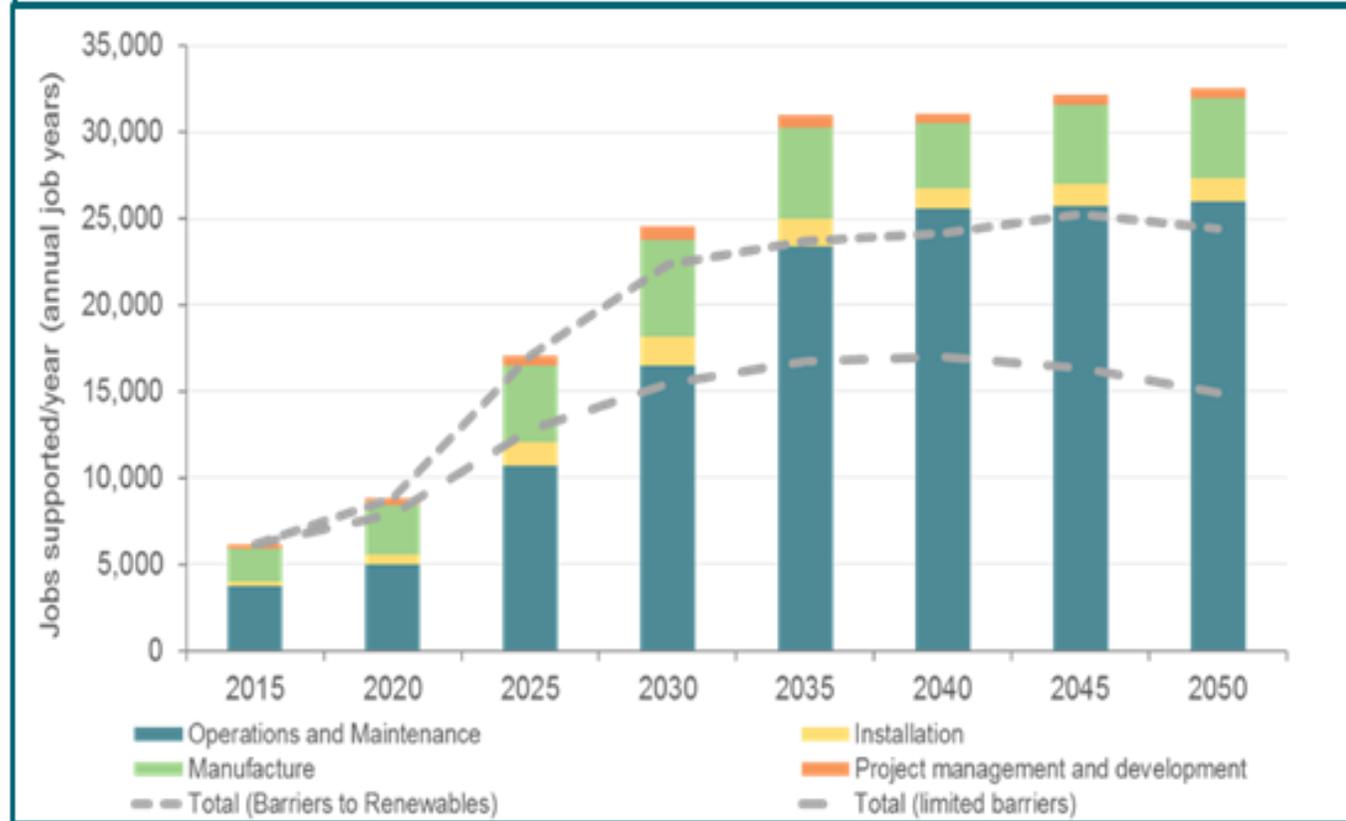
What is the Economic Value of Offshore Wind to the UK?

Source: MHI Vestas, & Renewable UK Supply Chain Mapping (Offshore Wind only)

● UK Supply Chain locations



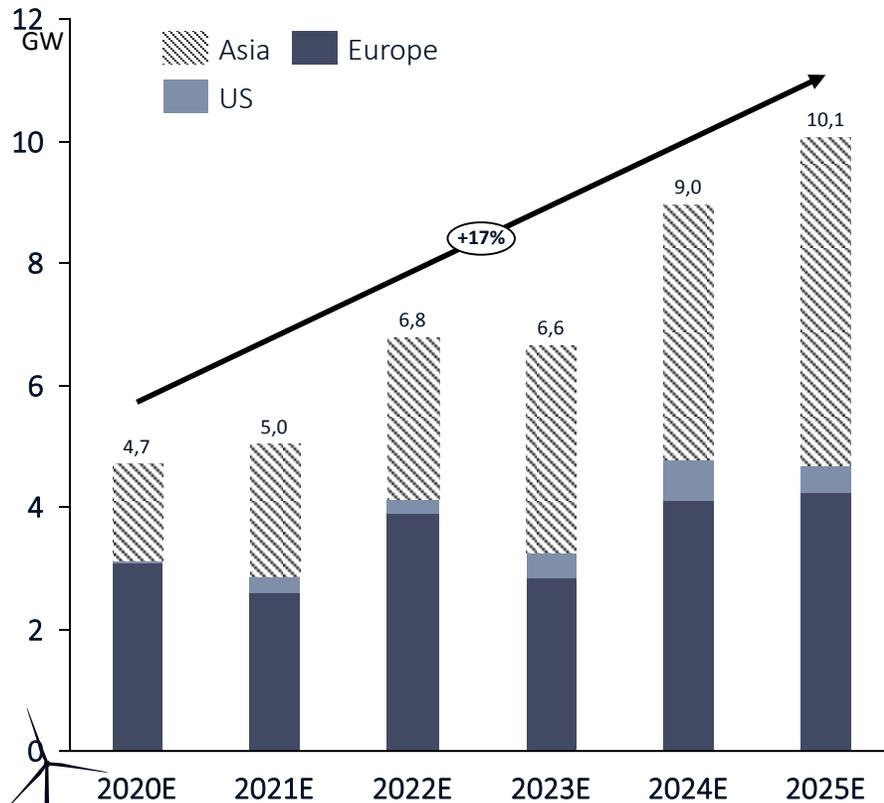
Jobs supported under the “barriers to nuclear” scenario



Source: Vivid Economics

What is the Economic Value of Offshore Wind to the UK?

Forecasted installed capacity, 2020-2025 (GW) - Regions



Source: Make Consulting – Q2 2017 Global Wind Power Market Outlook

Forecasts of around 200GW of offshore wind in Europe by 2050



Source: European Climate Foundation Roadmap 2050

Industrial Strategy Refresher

Background

- BEIS published the Industrial Strategy green paper earlier this year.
- UK Sector Representatives are being invited to propose a sector deal.
- Offshore wind in second tranche of sectors

Successful sectors are likely to:

- Represent new entrants as well as established participants
- Collaborate with stakeholders such as universities and local leaders
- They should address challenges such as:
 - Delivering upgrades in productivity including in supply chains
 - Promoting competition and innovation
 - Facilitating long term investment and coordination between suppliers and primes
 - Accelerating growth across the value chain, including by identifying where the greatest value can be gained from technology development and investment
 - Developing and growing the strengths of particular clusters

....and Government might be able to help by:

- Addressing a regulatory issue or deregulating
- Ensuring existing sources of funding are used most effectively



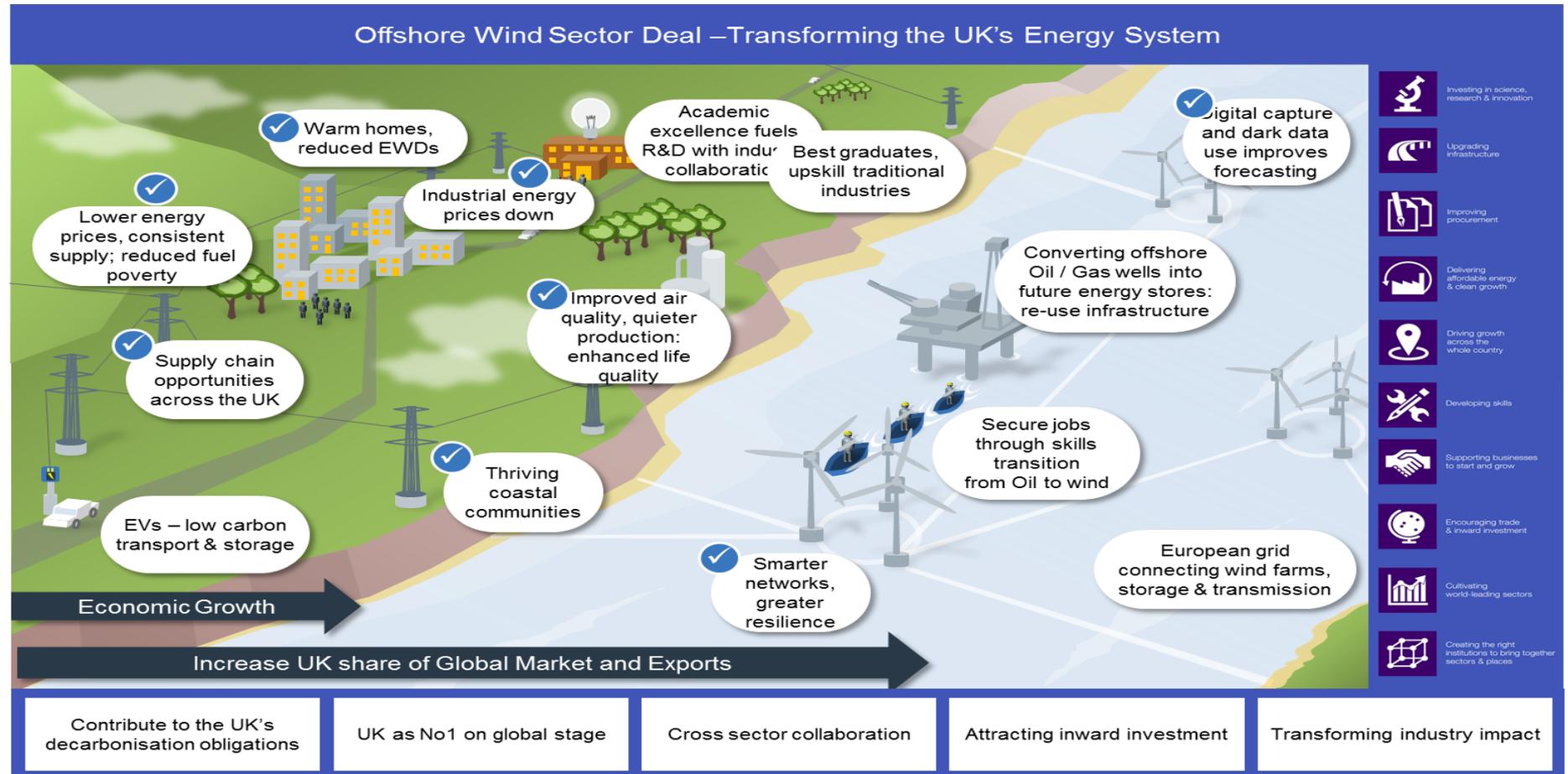
Industrial Strategy Refresher

Offshore wind has a great strategic fit across the whole of the industrial strategy but we need to focus on the areas where we can deliver **transformational outcomes**

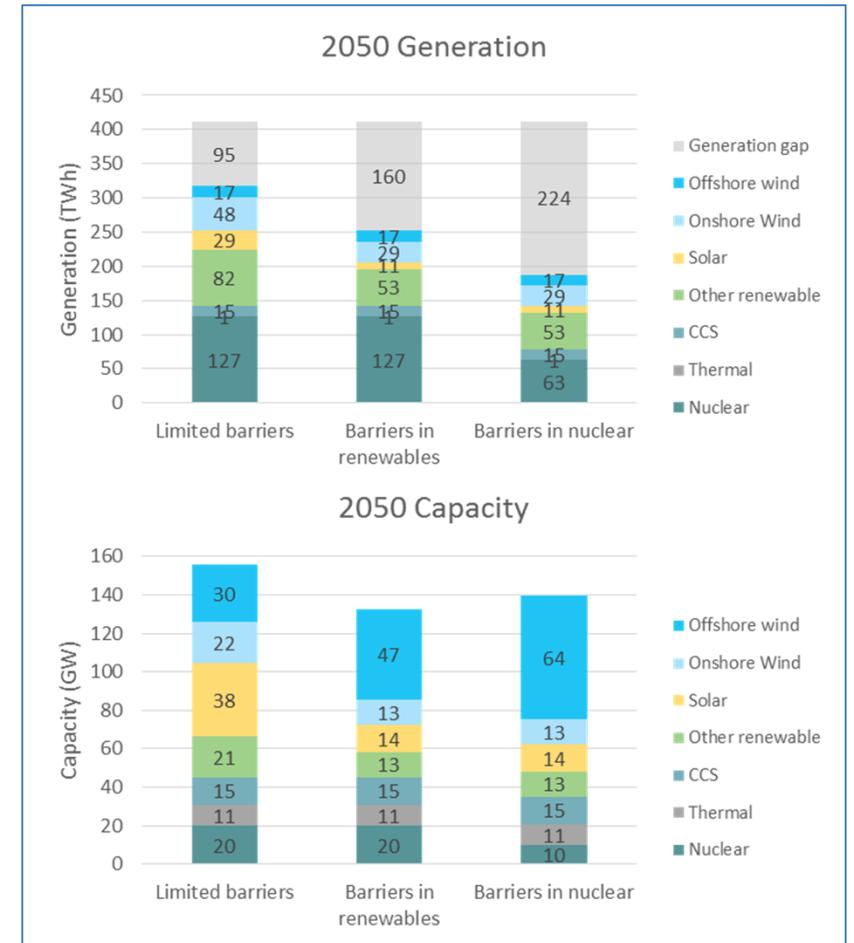
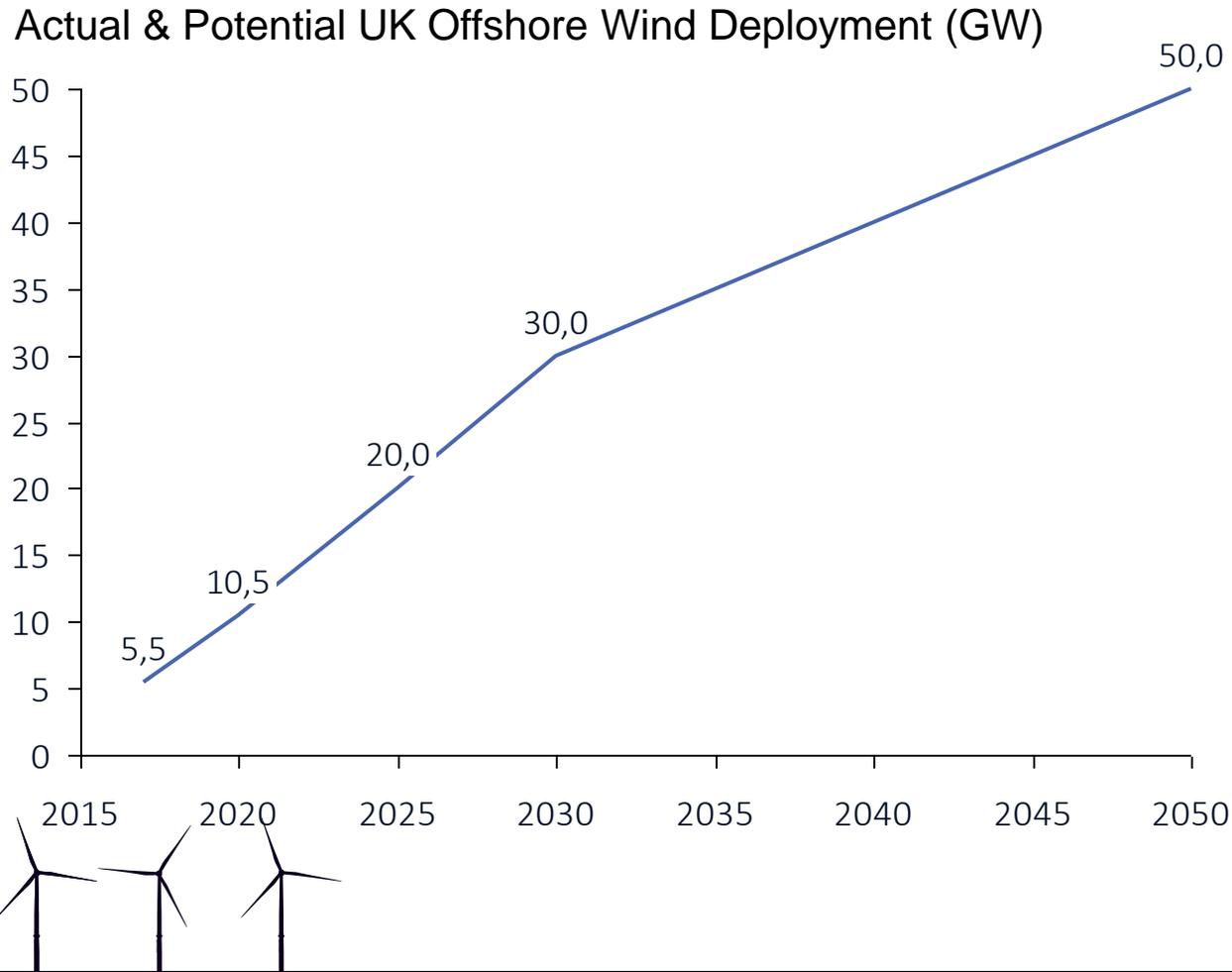


				
Science, Research and Innovation	Skills	Infrastructure	Supporting Businesses to Start and Grow	Procurement
				
Trade and Inward Investment	Affordable Energy and Clean Growth	Sectors	Driving Growth Across the Country	Institutions: Linking Sectors and Places

Offshore Wind sector deal vision

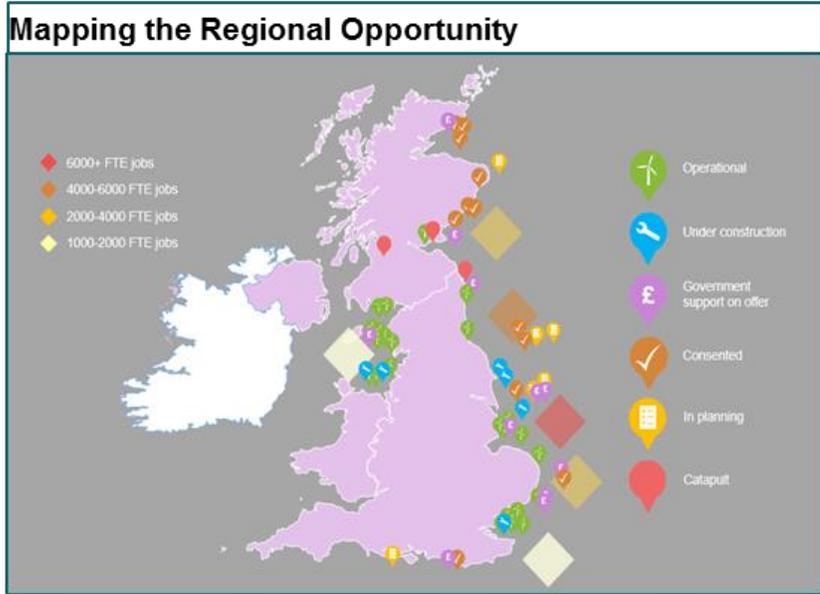


Stretch deployment will deliver significant additional UK investment



Source: Vivid Economics

Emerging themes of the sector deal



Accelerated & low cost system integration after 2025

Offshore Wind Sector Deal

**30in30
50in50**

Supercharged globally competitive supply chain

World class skilled & diverse workforce

Emerging themes of the sector deal

Supercharged globally competitive supply chain

- Build on existing supply chain & deployment clusters (virtual & physical)
- Consolidation of end to end innovation; research through delivery where it makes sense
- Investment in high quality business support; generic and offshore wind specific
- Create an environment conducive to longer term strategies & investment to drive competitiveness at home & export

Accelerated & low cost system integration after 2025

- Continue to innovate within the offshore wind sector/ core scope
- Innovation as a key driver of business growth & competitiveness at home & export
- Work with adjacent sectors/ technology to ensure the cost effective integration of large volumes of offshore wind
- Use competitions to focus in on areas which need to be transformational

World class skilled & diverse workforce

- Create an environment where a strategic and employer led skills provision can deliver skilled jobs into areas of the UK where gaps exist, & to enable exports
- Strategic approach to both qualification design & delivery in existing & new clusters (virtual & physical)
- Encourage more & diverse entrants into the workforce (& STEM) at all stages of their careers



Offshore Wind sector deal summary

The Opportunity....

...is to create

a world-leading low cost, low carbon power system

with offshore wind at it's heart, and with it

a world-leading, export-led industrial sector

Working with key partners to deliver global leadership in Offshore Wind, driving the breakthroughs needed to unlock the scale-up:

- **System:** storage, heat and transport technologies
- **Grid:** technology, policy and regulatory framework
- **Sector Innovation:** UK building global leadership in Offshore Wind R&D
- **High Growth Businesses:** accelerate the buildout of the UK supply chain across the regions



Questions to answer in groups

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Offshore Wind sector deal timetable

