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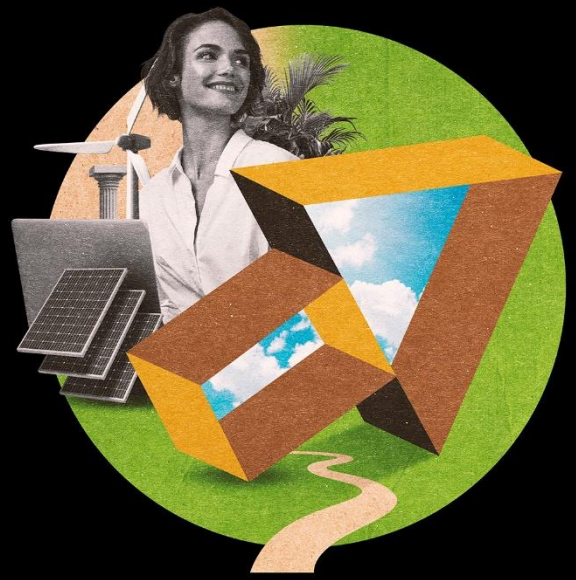
Turbocharging the UK's Economy in Pursuit of Net Zero

An exclusive, interactive day of learning and debate, where the UK's leaders in business, the public sector, academia and politics will collaborate to drive UK economic growth through sustainability and climate action.

Breakout group conversations are focused on tangible growth opportunities for the UK. This document provides a briefing on the growth opportunity you will be exploring in the breakout out group you have been assigned to during the 13:30 to 15:15 slot.



Grow the value of service exports from the UK's renewables sectors

- Through a combination of forward-thinking policy, private sector investment and the redeployment of the nation's energy expertise, the UK has established itself as a global leader in the deployment offshore wind technologies.
- Interventions such as **Contracts for Difference (CfD)** have stimulated the early investment which saw the nation ranked second in offshore wind development globally, with only China increasing capacity at a quicker rate.
- There has been progress in other areas of the burgeoning integrated energy sector too, such as in the development of the hydrogen economy and in establishing critical CCUS infrastructure.
- Domestic markets for offshore wind, hydrogen and CCUS are forecast to be worth **£2.9bn, £900m and £5bn respectively by 2030.**
- Now, with other nations seeking to follow suit, the UK is well placed to export this expertise – growing the value of service exports from the UK's renewables sectors exponentially. So, how can we harness the biggest economic opportunity of the 21st century?
- Analysts estimate wind energy will supply a third of global electricity by 2050, with **the market value growing to $85bn by 2030.** There's a significant opportunity for UK-based businesses to leverage their domestic experience to play a central role in overseas projects.
- Similarly, the global hydrogen market is expected to swell to **$410bn by 2030** as demand and supply ramps up in support of net zero plans internationally. Expertise gained within clusters in **Teeside, the Humber and St Fergus** can be developed into exportable engineering services.
- Those clusters are also central to plans to develop capacity to safely store up to 78 billion tonnes of CO2 within depleted subsea oil and gas reservoirs – one of the largest such capacities in the world. Deploying CCUS technologies could boost the national economy by up to **£5bn per year by 2050.**
- **Engineering, installation and project delivery expertise** developed in the delivery of the UK's net zero ambitions will provide uniquely skilled workforce and experienced businesses which can seize this export opportunity.

In your breakout group you will...

- **Discuss the size of this opportunity** for the UK with a cross-industry group of leaders
- **Consider the barriers** that are currently getting in the way of the UK realising this opportunity
- **Explore the levers that** breakout group participants could pull to overcome these barriers
- **Identify opportunities** to work together with other breakout group participants to accelerate progress

Sources: Industrial Growth Plan, CCUS Cluster Sequencing, UK Government Hydrogen Strategy, UKEP – report envisages 10-fold increase in global wind power by 2050, Hydrogen Market Outlook Report, UK Energy system – our path to net zero

The UK's legacy energy infrastructure and world-leading engineering and project delivery capabilities can see the UK establish competitive advantage in offshore wind, hydrogen and CCUS.

Developing strong domestic markets will be vital if the UK is to achieve its net zero targets – but will also create the workforce and supply chain to drive growth in service exports for UK businesses.

Adopting a collaborative approach will ensure we seize the opportunity presented by this global boom in renewable energy activity.

Advantages for UK renewables sector

Track record of delivery

The UK has a **strong track record of success** and has developed **world-leading expertise** across every sector of the integrated energy industry.

From the genesis of the North Sea oil and gas industry in the 1960s and 1970s through to the present day with **offshore wind, hydrogen and CCUS projects again demonstrating the nation's capacity for innovation**, its expertise, and its **transferrable skills**.

As the drive to decarbonise electricity networks gathers pace the UK has already established itself as a **global leader in offshore fixed wind capacity** generation and is now also ramping up its floating wind pipeline too.

With the domestic workforce having grown rapidly in support of these developing sectors of the UK's integrated energy system there is potential for further growth to ensure capacity to export expertise and services while also delivering domestic energy security and decarbonisation.

Policy

Climate policy is increasingly a headline issue globally and, despite recent criticisms, **the UK has developed innovative policy frameworks** which stimulated growth in key areas such as offshore wind.

Through **Contracts for Difference (CfD)** the UK established itself as an early frontrunner in the development of offshore wind capacity and propelled itself toward its target of decarbonising electricity networks by 2035.

While there have been some bumps in the road latterly there is little doubt the industry would not have been able to scale to some 32,000 workers without this stimulus, and other nations are now considering replicating it in an effort to boost activity.

There have been **progressive policy interventions within hydrogen and CCUS** development too with the creation of the cluster sequencing programme and related investments in critical projects, and which are also being considered by policymakers in Europe and the US.

Challenges for UK renewables sector

Skills shortages

While the UK has emerged as an early leader in the renewable energy industry, specifically within offshore wind, **further progress will depend on the country's ability to scale its workforce at pace**.

Skills shortages have long been a problem within the UK energy sector, but the escalation in pressure to ramp up domestic renewable energy capacity necessitates the country's workforce can be scaled at pace.

Rapidly growing the workforce will enable the UK to continue driving progress toward its domestic decarbonisation goals, while also enabling the UK supply chain to leverage its expertise to expand via **service exports which exponentially expand potential market value**.

Establishing pathways for people to enter into this rapidly growing sector, whether by **redeploying transferrable skills** or through **entry-level training schemes** or initiatives will be vital but will require cross sector collaboration as well as support from government and education providers.

Supply chain

While the UK has already established its position as a leader in the deployment of offshore wind, the domestic supply chain – particularly as it related to manufacturing – is lagging.

Across every sector of our renewable energy there are **capacity constraints which need to be addressed** to ensure domestic supply chains can seize upon the opportunity presented by increasing activity both domestically and across the international market.

Within offshore wind there's **pressing need to increase availability of floating foundations**, export cables, connectors, HVDC and HVAC stations. Vessels to support the installation of turbines, foundations and cables are also in short supply – as are port services.

In room facilitators:

Sponsor: Lorraine Mackin, Partner - *UK Government and Public Sector lead*

Energy Transition SME: Merlyn Gregory, Partner - *Consulting*

Insights Facilitator: Alan Majury, *Growth*, *Consulting*

Additional Resources:

Renewable energy industry outlook, Deloitte 2024

Green hydrogen report, Deloitte 2024

UK energy system: our path to net zero, Deloitte 2024