

Written evidence submitted by RWE (IND0011)

We were pleased to make an updated submission to the Committee's 'top-up' inquiry on Securing the Domestic Supply Chain in the energy sector. Our submission to the previous Committee can be [viewed](#) here.

About RWE

RWE is the leading power generator in the UK, employing over 3,100 people, with a diverse operational portfolio of onshore wind, offshore wind, hydro, biomass and gas. We produce enough energy to power the equivalent of around 12 million UK homes. We have an ambition to invest around €8 billion net developing clean energy projects in the UK from 2024 to 2030 to support the energy transition, creating high quality jobs and developing green skills across the length and breadth of the country. Our plans include a development pipeline of nine offshore wind projects, onshore wind and solar, as well as battery storage, carbon capture at our gas power stations and green hydrogen production. We are committed to working in partnership with the government to deliver its 2030 clean power mission, and to deliver clean, secure and affordable energy for the UK.

1. How can UK plc capture its fair share of the economic potential of emerging or less developed energy technologies?

A combination of supportive policy frameworks and associated incentives are required to ensure the UK makes the most of the economic benefits of low carbon technologies. The overarching requirement for this is to ensure a stable investment environment in the UK for low carbon technologies and the companies that develop these projects.

Stable and transparent policy frameworks that enable investment, such as the Contract for Difference (CfD) Scheme, are critical mechanisms as they provide certainty for project developers to bring forward projects and create visibility on the pipeline for the supply chain. For all major renewables technologies, the CfD is the crucial policy tool for unlocking investment in projects out to 2035. The CfD has worked well to date and is viewed as being the 'gold standard' worldwide, but we believe there are clear areas for improvement (as detailed in our answer to question two).

As well as supporting the continued deployment of established renewable technology, such as onshore wind, fixed-offshore wind and solar, the Government should also focus on **ensuring appropriate policy, regulatory and financial support frameworks to maximise the opportunity presented by more nascent clean energy technologies**. Many of these technologies offer the potential for the UK to develop a competitive advantage over other countries. Example technologies include hydrogen, carbon capture and storage (CCS) and floating offshore wind. For each of these technologies there are major supply chain opportunities and prizes to be won, but success requires early, anticipatory action to prepare the ground, for example in port infrastructure upgrades and investment for the next generation of floating wind turbines.

For CCS and hydrogen, the Dispatchable Power Agreement (DPA) and Hydrogen Production Business Model (HPBM) are both welcome developments, but there has been a lack of clarity of the schedule through which projects will be selected to receive support. Action is needed to get the Cluster Sequencing programme back on track. This should include a **funding settlement in the forthcoming**

Spending Review for Track-2 CCS projects and a regulatory framework for non-pipeline transport projects that don't have access to transport & storage infrastructure, to ensure that all industrial clusters can benefit from this technology, protecting jobs and driving investment. There is a **need for clarity on the Hydrogen Allocation Rounds (HAR)** too, with delays to the shortlisting of HAR2 projects.

The inclusion of 'clean energy' in the Government's Industrial Strategy green paper is welcome. By aligning industrial policy with the nation's net zero target, the energy transition can support economic transformation across the UK, driving high-quality jobs and sustainable domestic supply chains in our industrial heartlands and coastal communities. To be a success it needs to:

- Make strategic interventions that truly crowd-in private investment
- Focus on clean energy supply chains where the UK can have the greatest competitive advantage
- Drive policy clarity, certainty and pace to drive investment
- Develop the workforce of tomorrow

2. What more can the Government do to encourage greater domestic supply chain investment in the energy industry by 2035, including through the Contracts for Difference scheme?

As noted in the previous answer, the CfD is seen as the 'gold standard' for support in bringing forward renewables technologies and driving cost reduction, but it is in need of reform to both maximise deployment in line with Clean Power 2030 ambitions and to provide the certainty needed for the supply chain to invest.

The clearest way that the Government could enhance the CfD to achieve this would be to **set capacity targets for future auction rounds**, aligned with Clean Power 2030. This would give much greater visibility and certainty of the forward project pipeline needed to help unlock major supply chain investments in the UK.

However, whilst we welcome many of the proposed changes to the CfD proposed by the new Government, **we are concerned that the Department for Energy Security and Net Zero are considering consulting on relaxing the CfD auction eligibility criteria to allow offshore wind projects without planning consent to participate.** Pre-consented projects are inherently more uncertain, as they have not made substantial resource and capital commitments, unlike consented projects. They should not be equated with projects where significant commitments have already been made, and delivery is more assured. This proposal puts the pipeline of consented projects that already hold supply chain agreements at risk. It will not speed up project delivery, puts the 2030 target at risk and brings less certainty to the supply chain.

The new Government have also announced the Clean Industry Bonus (CIB) framework to support supply chain commitments within the development of offshore wind projects. This provides opportunities for individual developers to seek support for specific supply chain commitments based on a defined criteria and budget pot provided by the Government.

RWE therefore supports the intent of CIBs to increase supply chain capacity and resilience for the UK, however there are a number of areas of concern:

- **The timing of the CIB process** means it comes before projects have received the certainty of obtaining CfD, and even some of the rules and frameworks of the auction, making bids uncertain at the point of submission, and adding extra risk to developers project considerations.
- Aspects of the CIB criteria are also **misaligned with broader initiatives** to support UK supply chain development, for example the inability to include offshore transmission operator (OFTO) related components, despite this being highlighted as a key opportunity in the offshore wind sector's Industrial Growth Plan (IGP).
- **The complexity of the application process** also brings added regulatory burdens (and the risk of delays) to project developers.
- Finally, by making the CIB a competitive process **cross-industry collaboration is undermined**. Support under this framework does not go beyond individual developer-supply chain agreements and therefore does not provide the broader holistic, strategic investment required to develop UK supply chain and associated infrastructure. Such investment depends on collaboration between government, developers and the wider supply chain. Individual CfD projects do not have the "buying power" to incentivise a factory to be built or a port to be upgraded, with multiple sustained orders needed to fund supply chain investments. **CIB backed orders must therefore be complimented by a broader government strategy and investment plan.**
- As a new policy framework, the Government should seek to learn the lessons from its experience of CIBs for CfD Allocation Round 7 (AR7) and **simplify and streamline the process for AR8** to ensure this auction can deliver projects which can come online in time for Clean Power 2030.

The CfD on its own is not the only policy tool to support supply chain growth. Early strategic investment in key supply chain capabilities, such as ports and lay-down space, is key to unlocking supply chain growth and cannot be incentivised at the CfD stage as this is too late in the process for the supply chain to make the necessary investment in new capacity/facilities/infrastructure. **Steps to ensure early stage government funding support (tax incentives, grants)** which ensure factories are ready to deliver when they receive orders from CfD approved projects is also an important tool.

For the broader clean energy supply chain, the key issue is certainty and foresight of the project pipeline. This can be delivered by **ensuring that the three key barriers to new clean energy projects getting developed – planning, grid and route-to-market – are addressed**. The UK already has strengths within the offshore supply chain but, with increased global interest in the energy transition, projects are facing greater competition to secure requisite parts, and the supply chain has become increasingly strained. Enhancing UK offshore wind supply chain capabilities can therefore help in support of the UK Government Clean Energy Superpower mission.

3. Does the UK have the supply chain capacity to deliver the required energy infrastructure by 2035, including an expanded electricity network?

The global supply chain, particularly for offshore wind, is not currently at the scale to meet UK, EU and wider offshore wind demand in the next 10 years. Over the period 2021-2023 we observe increased scarcity in supply chains (most notably offshore wind), creating bottlenecks, delays and large increases in contract prices.

Unless significant investment is undertaken, these bottlenecks could persist into the future as renewables deployment increases globally. As an example, Wind Europe data from 2022 shows that up to 10-fold increases in supply chain capacity are needed to meet combined European and UK 2030 offshore wind targets of around 165GW (as of end of 2022). It should be noted that with its stretching 50GW ambitions, the UK represented over 25% of the total capacity growth predicted in this analysis. This was more than the targets of Belgium, Denmark, France, Italy, Norway, Poland and Portugal combined. Targets could see a need for a two-fold increase in installation vessels, four-fold increase in foundations and doubling of annual turbine production.

Without tackling these issues immediately, there will soon be a lack of relevant offshore wind equipment. Previously, the solution to this has been the sourcing of components from outside the UK (and EU). The risk of this ultimately being the loss of critical parts of the supply chain industry, reducing security of supply and negatively impacting the wider economic benefits to the UK of having a domestic supply chain.

4. To what extent would growing the domestic supply chain bolster UK energy security?

Policymakers should note precedents set in the expansion of previous renewable technology supply chains, such as solar PV, where the supply chain was not sufficiently developed and supported in the UK and wider European region. The result is now a concentration of supply chain capabilities in China.

However, within this issue lies opportunity for the UK supply chain if investment certainty can be increased and regulatory barriers removed. The UK supply chain could then help serve UK demand and look to the growing export opportunities in the EU, US and Asia.

We would broadly agree that alongside the benefits of economic development and jobs that come with a domestic supply chain, energy security (or rather security of supply chain) would be a further benefit.

Low carbon hydrogen is an example of an area where there is a real opportunity to create a domestic market which could ultimately enable the UK's energy security, resilience and export opportunities, reducing dependence on imported fuels which is crucial in a volatile global energy market and driving investment in our regional economies.

There are several industrial heartlands across the UK facing the need to decarbonise whilst maintaining industry, jobs and socioeconomic value. This will require the development of hydrogen production technology, end-use and transport and storage (T&S) network infrastructure, for which the UK can utilise its existing industrial skills and assets to drive this transition at pace.

5. What are the key concerns with respect to the availability of raw materials in the supply chain and how might those be addressed?

Demand for many raw materials – including metals and rare earth elements – will inevitably increase as countries transition to low carbon technologies.

As an example of potential issues, wind turbines currently rely on balsa wood - 95% of which grows in Ecuador and is very susceptible to climate change. Globally, raw material shortages over the recent years

have highlighted some chemicals and resin are also susceptible to climate change (The Texas snowstorms of 2021 are a key example). Innovation within the supply chain is key to ensure the entire supply chain is not dependant on one material from limited places.

Steel is another key component for turbine foundations, towers and substation platforms. However, there are no UK based heavy plate steel producers, meaning reliance on established European and Far East fabrication options, and demand pressure from other markets, as well as logistical and political risks (e.g. current issues with transiting through the Red Sea).

RWE has also explored options around the feasibility/economics of concrete based foundations for floating wind turbines which may help diversify the source material requirement whilst also possibly being an opportunity for UK manufacturing. However, these options are still at the early stages.

Currently, developers are exploring many alternative supply chain/raw material options on their own accord, rather than at a coordinated industry level and this may need to change to ensure a strategic approach.

The UK could look at strategic options for ensuring raw materials availability, with the EU's Critical Raw Materials Act providing an example of how a strategy could be created. The CRMA represents an important step by the European Union to address the challenges of secure and sustainable access to critical raw materials, aiming to significantly reduce the EU's dependence on single third-country suppliers and promoting circularity and sustainable sourcing practices.

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