

## **Written evidence submitted by the Department for Energy Security and Net Zero (IND0044)**

### **Update on supply chain questions for ESNZ Committee**

*Following the written evidence supplied by DESNZ in January 2024, this is an update on new and changed policies and programmes since the change of government.*

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

Growth is the government's number one mission, and our clean energy mission is a crucial and central part of delivering growth. The importance of energy security and price stability must not be overlooked. Scaling up renewable electricity generation is a fundamental and necessary part of our strategy to protect ourselves from fossil fuel price shocks and secure economic growth in the longer term, as the costs of not making the transition far outweigh the investment required to deliver clean power 2030 and net zero. There are also clear growth benefits from this deployment in terms of well-paid jobs created, innovation and efficiencies driven and crowding in productive investment to the economy.

However, this is not enough – we must use our Industrial Strategy and Trade Strategy to set out a compelling and internationally competitive offer in the Industrial Strategy to capture further upside growth opportunities through the Clean Energy Superpower Mission. Growing established and developing clean energy technologies will support both the clean energy and growth missions, ensuring that domestic manufacturing capacity can both service the increased domestic demand for renewable energy technologies and then utilise that expertise to export these technologies around the world. To maximise the growth opportunities, we must break down barriers to growth in these sectors such as planning, improve access to finance from the public and private sector, including our public finance institutions, improve commercialisation of R&D, address skills challenges and identify key supply chain challenges.

The UK has an extensive base of innovative small and medium enterprises working in the energy sector. DESNZ in conjunction with Ofgem and UKRI have been working with the sector to identify the barriers preventing them exploiting their technologies for decarbonisation. In a workshop we ran with the sector, SME innovators identified the need for large network companies to have a way to engage with smaller companies, with a named point of entry for companies wishing to pursue opportunities; a simplified procurement route and a way to develop innovations over multiple RIIO cycles. Ofgem are now working with DESNZ in order to take these ideas forward with the energy industry.

#### **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?**

The government has launched the Clean Industry Bonus. It offers extra revenue support from the Contracts for Difference scheme to offshore wind developers who invest in their supply chains. We reward them for investments in the UK's poorest communities, and in cleaner factories. The government is keen to boost investment while honouring its international trade obligations.

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

In the efforts to decarbonise global economies, growth of electricity networks and renewable generation is placing significant strain on supply chains. This has resulted in longer lead times for key equipment for electricity transmission and offshore wind generation development such as high voltage cables and power transformers.

UK manufacturers have highlighted challenges to increasing existing supply chain capacity to overcome constraints. Existing regulatory policy and timing of investment in electricity networks and renewables limits order visibility and certainty, making it difficult for investors to commit to building additional manufacturing capacity. But in comparison, international capacity is also experiencing similar issues with varying reports of backlogs and shortfalls in key components until 2030.

The UK electricity networks supply chain is limited to capabilities in certain equipment categories, with equipment such as cables and power transformers only minimally served. For example, until the Sumitomo Electric Industries Ltd factory comes online in c.2026, the UK is one of two G7 countries without onshore manufacturing capabilities for key High Voltage Direct Current (HVDC) submarine cables. The result is UK reliance on European and international suppliers in the face of global competition.

However, Transmission and Distribution Network Owners continue to form relationships with supply chains to ensure they have access to the equipment needed to deliver on Clean Power 2030 and 2050 Net Zero ambitions. Further, Ofgem are due to launch their 'Advanced Procurement Mechanism' in the upcoming months. The mechanism will free up funding to enable UK transmission operators to procure equipment earlier in the project development cycle and on a portfolio basis – reducing the impact of constrained supply chains on network expansion.

To enhance the capabilities of the UK's supply chain, officials from DESNZ and DBT are exploring alternative mechanisms to address constraints within the UK network supply chains, with a specific focus resolving issues related to order certainty.

The UK is attracting inward investment in key manufacturing that will support deployment of electricity grids and renewables. This includes investment supportive of electricity network expansion, such as from Sumitomo Electric Industries and JDR Cables in new HVDC and HVAC cable manufacturing facilities in Scotland and the North East. Expansion of a power transformer factory in Stafford by GE Vernova. In addition, XLCC, a UK-based high voltage cable company, has recently attracted investment from The National Wealth Fund and the Scottish National Investment Bank.

### **To what extent would growing the domestic supply chain bolster UK energy security?**

The government has made growing UK supply chains and jobs throughout the country a priority for its growth and clean energy superpower missions. The government recognises that the development of a competitive and sustainable supply chain, resilient to global economic shocks, is crucial.

At the same time, supply chains are global by nature, so the UK will work with international partners to ensure clean energy supply chains are secure and diverse.

The UK is a dynamic, ambitious, highly skilled and globally connected economy that has long been at the forefront of global exploration, invention, and innovation. We have existing strengths in key sectors, with established domestic manufacturing capabilities and expertise in offshore wind components and electrical equipment. The Clean Power transition presents the opportunity to harness these strengths further.

Action in key clean energy supply chain sectors is already underway. For example, the Offshore Wind Industrial Growth Plan developed by RenewableUK, the Offshore Wind Growth Partnership, The Crown Estate, Crown Estate Scotland and wider industry was published in April 2024. It sets out the long-term priorities, objectives, actions and investments needed to grow the offshore wind supply chain to accelerate and de-risk delivery, as well as grow market share and technology leadership in the UK. Industry is now working to establish the independent delivery body to deliver the IGP priorities.

Clean energy industries will continue to be a priority growth sector for the UK. Government will set out its full approach to supporting UK supply chains for the sector in the Industrial Strategy in the Spring.

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

Critical minerals are essential to the delivery of the global clean energy transition, given their importance in many clean energy technologies. They are vital components in many products, making them pivotal for many key sectors including defence, agriculture and telecommunications. The International Energy Agency 2024 Critical Minerals Outlook forecasts that global demand for CMs will quadruple by 2040 (and for lithium increase ninefold) to meet global net zero targets. To meet this demand, market analysts[1] note that investment must triple by 2030 with the world needing 65 new nickel mines, 121 new copper mines and 217 new lithium mines.

The UK's direct demand for CMs is low due to our services-based economy and limited domestic manufacturing. Future UK demand is uncertain and will be impacted by progress made under the UK's Industrial Strategy and Clean Energy Mission. The UK is an end user of many critical mineral products essential for meeting our energy security and net zero ambitions and therefore has an interest in ensuring supply chains are diverse, resilient and sustainable. The UK has pockets of mineral wealth however no country has domestic access to all the raw materials it needs to support its supply chains. The issues we are facing are global and cannot be resolved through taking unilateral action alone.

In December 2024, Minister Jones announced that HMG will publish a new Critical Minerals Strategy and will work closely with industry on this. This new, targeted Critical Minerals Strategy will help secure our supply chains for the long term and drive forward the green industries of the future. The Strategy will refine our approach to domestic production, the circular economy, the UK's future demand, international partnerships and responsible and transparent supply chains. In the coming months, the Government will engage stakeholders to gather expertise and insights to shape our approach.

In October 2024, UK Export Finance (UKEF) announced a new Critical Minerals Supply Finance offer to an overseas project if the project has a long-term contract in place to supply a UK exporter with either raw minerals or goods that contain critical minerals. Qualifying minerals will be defined in line with broader HMG definitions, particularly the UK Critical Minerals List developed by the Critical Minerals Intelligence Centre, which identifies minerals considered to have significant supply risks. Projects can include mining, processing, manufacturing, or recycling. This support is targeted at helping UK exporters to secure their supply chains and provides additional flexibility for the UK to work alongside partners and allies to co-finance projects in third countries that increase global supplies.

[1] Benchmark Minerals

*February 2025*

