

## Written evidence submitted by The Crown Estate (IND0023)

### Summary

- The Crown Estate's strategy is focused on the holistic, long-term management of its diverse portfolio - this includes the seabed around England, Wales and Northern Ireland, and much of the foreshore; as well as rural land, and urban real estate assets. We believe in using our convening power to bring people together to help solve some of the most challenging problems our nation faces via a systems-based approach to nature, communities, networks, and planning.
- As a national organisation working across multiple growth and value creating sectors, we welcome the opportunity to share our perspectives on the UK's Industrial strategy ambitions. The Crown Estate is a key player in many of the sectors driving growth identified by the Industrial Strategy and believe that through collaboration we can deliver on its growth and economic prosperity ambitions.
- The Crown Estate's seabed management includes leasing activity to unlock renewable energy, through sectors such as offshore wind and new technologies including carbon capture and storage (CCS), tidal energy, and hydrogen - all of which have potential to help drive energy security and support important supply chains across the country. To boost early-stage investment, The Crown Estate also recently launched an innovative £50 million [Supply Chain Accelerator](#) to help address infrastructure and supply chain requirements identified via the [Celtic Sea Blueprint](#) (a report commissioned by The Crown Estate) to support some of the growth-driving sectors outlined in the Government's Industrial Strategy.
- The Crown Estate plans to publish a [Marine Delivery Routemap](#) during 2025 to help coordinate a range of inputs and provide pathways for the future use of our seas and coastline to enable delivery of net zero targets and support wider objectives (including NESO's Strategic Spatial Energy Plan, the UK Government's industrial growth plans and nature ambitions) - as such, we recommend the endorsement of The Crown Estate's Marine Delivery Routemap as a part of government's approach to marine spatial planning – to help reduce spatial conflicts and improve the planning and consenting process.
- There is a time-limited opportunity for the UK to seize many of the opportunities set out in Government's Industrial Strategy plans - for example, to develop emerging technologies such as floating offshore wind in the Celtic Sea, strong, clear and visible signals of support are needed from Government, alongside policy and financial assistance. Continued visible demonstration of this government support in the context of ongoing global volatility and rising supply chain costs will ensure that we retain the UK's first-mover advantage and the economic benefits that brings.

### Overview of The Crown Estate

The Crown Estate is an independent commercial business, positioned between public and private sectors with a clear mandate to enhance the value of its portfolio for the benefit of the nation, both now and in the future. Set up by an Act of Parliament, with an independent Board of Commissioners, we seek to grow the environmental, social, and financial value of our portfolio, creating long-term impact for future generations.

We return 100% of our net revenue to HM Treasury and over the last decade we have contributed over £4 billion towards public spending. Driven by our purpose, our strategy focuses on addressing long term challenges where we are best placed to make a difference. We aim to:

- Be a leader in supporting the UK towards a net zero carbon and energy-secure future
- Help to create inclusive communities, supporting equality, economic growth and productivity
- Take a leading role in stewarding the UK's natural environment and biodiversity
- Responsibly generate value and financial returns for the country

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

Over the last two decades The Crown Estate has played a pivotal role in enabling the UK's offshore wind market by managing seabed leasing, facilitating project development and supporting innovation. By investing in marine data, conducting environmental assessments, and collaborating with stakeholders across England, Wales, and Northern Ireland, The Crown Estate has streamlined processes and accelerated development, helping the UK to be a global leader in offshore wind - second only to China.

### **Floating offshore wind**

The Crown Estate is focused on building on experiences from developing the fixed offshore wind market, to ensure UK plc can capture the full economic potential from emerging technologies. Floating offshore wind is a new technology with enormous potential for the UK. The Crown Estate is using its experience to build that opportunity through supporting test and demonstration projects and scaling up to commercial-sized projects – our live [Offshore Wind Leasing Round 5](#) is an exciting opportunity to create up to 4.5GW of new renewable energy capacity, while acting as a springboard for social, economic and environmental opportunities.

The Crown Estate's [Celtic Sea Blueprint](#) report estimates Offshore Leasing Round 5 could generate up to 5,400 jobs, approximately £300 million in annual economic activity during the construction phase, and an estimated £1.4 billion economic boost for the UK. The report highlights the need for deep water ports to assemble floating wind turbines, more than 1,000 anchors to secure turbines to the seabed, at least 300km of mooring lines, and nearly 900km of cables for electricity export.

To ensure success for this emerging technology, The Crown Estate has invested in a number of important steps for Round 5 to reduce some of the risks developers may face when seeking to deploy new technology at scale. These have included:

- Investing in a multi-million-pound programme of geological and environmental marine surveys;
- Carrying out an up-front plan-level Habitats Regulations Assessment (HRA);
- Working with the Electricity Systems Operator (now NESO) to make Round 5 the first leasing round to come to market with an agreed plan for connection to the energy grid;
- Supporting Test & Demonstration projects to provide an early opportunity for the market, including ports, to learn lessons about how to deliver this new technology;
- We also recently announced the first tranche of a £50 million commitment to fund supply chains through our Supply Chain Accelerator and [awarded](#) nearly £5 million to 13 diverse applicants across the UK for this first funding round (supporting projects to enable floating wind platforms, anchoring and mooring systems, operations and maintenance facilities, test facilities, and those supporting the skills transition).

However, there is a time limited opportunity for the UK to seize the economic benefits to UK plc of first-mover advantage in floating offshore wind and achieving this will require ongoing Government support. For example:

- Strong, clear and visible messages of Government support for floating offshore wind will help maintain market confidence in the context of ongoing global volatility and rising costs. Identifying floating offshore wind as a key technology in the upcoming Industrial Strategy will demonstrate the level of Government commitment to this new technology.
- The Government could also consider providing a clear route to market for the sector through Contract for Difference Scheme support for critical test and demonstration projects which are a key stepping stone for at-scale deployment, facilitating port investment, and establishing early supply chains.

### **Carbon Capture and Storage (CCS) and Tidal Stream**

Beyond floating offshore wind, The Crown Estate is also working to enable other emerging technologies, including carbon capture and storage (CCS) and tidal stream. For CCS, we are working to help enable the sector including signing [agreements for lease for two carbon storage projects](#). Additionally, we are continuing to work with industry, Government and NSTA to unlock critical exploration and appraisal activity, vital to unlock the

future pipeline of CO2 storage projects. It is important that Government progression on CCS cluster deployment continues, to provide certainty to projects to move to deployment and capture the supply chain benefits.

For tidal stream, [we have committed](#) more than £1 million to develop emerging tidal stream technology at Morlais, off the coast of Anglesey. And we support the continuation of the contract for difference scheme and ringfencing for tidal stream to provide a route to market for the sector, building on the important support provided via Allocation Round 6 (AR6).

#### **Scale of investment**

The scale of investment required to maximise the opportunities presented by existing and nascent technologies will require a combination of public and private financing. For example, our recently announced partnership with Great British Energy, boosted by reform of our own investment and borrowing powers through The Crown Estate Bill, could support further targeted derisking investments that catalyse wider investment into emerging technologies.

#### **The need for a holistic approach to marine spatial planning**

Balancing competing requirements across existing and emerging sectors also requires robust marine spatial planning, however, the current system remains fragmented compared to terrestrial planning systems. Furthermore, balancing economic growth across sectors (e.g. offshore wind, new technologies, or fisheries) with conservation efforts can lead to stakeholder conflict, delay decision-making and hinder market confidence.

The Crown Estate is investing in the creation of a [Marine Delivery Routemap](#), a collaborative initiative with our partners and stakeholders to develop a long-term strategy for the marine space, using data and evidence to map the seabed and support a holistic approach to marine spatial planning to 2050, that will provide clarity on future deployment and where and when investments are needed in established and nascent energy sectors, nature, and associated infrastructure.

The Marine Delivery Routemap will be underpinned by our [Whole of Seabed](#) evidence base. This combines our spatial mapping expertise, digital capabilities, an overview of seabed demands across sectors and nature, and inputs from our partners to digitally map the seabed resource needed to meet future objectives – supporting vital industries, net zero and nature recovery for the long-term. We use this holistic evidence base to work with relevant programmes including the cross-government MSPri programme led by Defra, and Marine Plan updates led by the MMO, and the SSEP to be led by the ESO.

We recommend the endorsement of The Crown Estate's Marine Delivery Routemap as a part of government's approach to marine spatial planning to help reduce spatial conflicts and improve the planning and consenting process.

### **Q2. 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?**

#### **Targeted support for domestic supply chains**

The industry is already working closely with Government to support more clarity on the biggest opportunities to prioritise funding into supply chains which have the biggest potential benefit to the UK, in terms of both social and economic growth. A key example of this is through the [Offshore Wind Industrial Growth Plan](#) (published in partnership by The Crown Estate, Renewable UK, Crown Estate Scotland, and the Offshore Wind Industry Council) which sets out how to triple offshore wind manufacturing capacity over the next ten years through identifying specific parts of the supply chain the UK should seek to develop (for instance, the UK is well placed to take advantage of the global demand for the design and manufacture of floating offshore wind foundations and substructures).

The sectors suggested for priority in the Industrial Growth Plan include advanced turbine manufacturing, industrialised foundations and substructures, future electrical systems and cables, smart environmental services, and next generation installation operations and maintenance. Investment in wider UK supply chains is also crucial, including to manufacture blades and towers for the next generation of offshore wind turbines to increase the UK's competitive standing. We ask Government continues to work with industry on the

recommendations of the Offshore Wind Growth Plan to develop and capture supply chain capacity in key identified areas.

### **Contracts for Difference (CfD) and new technologies**

The CfD process has an important role to play in providing financial support to emerging technologies and longer term market confidence for investors. For example, test and demonstration projects to support floating offshore wind will provide important learnings that can be used to derisk investments in at-scale projects and identify supply chains opportunities.

For Floating Wind, we ask for clear indication that CfDs for floating wind recognise that this is still a developing technology with initial higher costs, and that Government is prepared to support projects as industry drives down costs over the long term. In the immediate term, it is also important that Government indicates that CfD funding will be ringfenced for floating wind test and demonstration (T&D) projects, which are critical for demonstrating the viability of the new technology and to support UK and regional supply chains to develop capabilities. There is also a key need for Government support to develop the enabling infrastructure for floating offshore wind, in particular ports..

We also welcome continued CfD support for other emerging technologies including the tidal stream sector which The Crown Estate has supported at Morlais in North Wales over 10 years. Recently Morlais partnered with The Crown Estate to provide access to environmental survey data gathered off the coast of Ynys Môn (Anglesey). Collected during the first phase of the Morlais-led Marine Characterisation Research Project (MCRP), the data will be hosted on the Marine Data Exchange (MDE), a world-leading collection of marine industry survey data (developed in 2013 by The Crown Estate) making it publicly available for researchers, policymakers and developers with a view to advancing renewable and tidal energy.

### **Collaboration**

Such is the scale of investment required to deliver the increasing demand for renewables and to realise the economic potential to the UK, that collaboration between public and private sector will be necessary. For example, the recently announced partnership between Great British Energy and The Crown Estate will bring together The Crown Estate's leasing experience, data and strategic planning capabilities with Great British Energy's ability to coordinate investments that accelerate the sustainable delivery of clean energy, new technologies (such as carbon capture and storage, wave, tidal, floating offshore wind and hydrogen) as well as support the development and growth of the UK's energy supply chain with targeted investment.

The opportunities of joint investment will require even greater collaboration between public and private sectors and is something The Crown Estate has been working towards and helping to foster for decades, including by developing attractive de-risked propositions for the market by bringing them to private developers and investors to take forwards and build out (most notably in the marine seabed environment via offshore wind development). Given the need and opportunities for co-ordinated investment, we ask Government prioritises the development and delivery of co-investment models alongside sectoral plans and consider the scope for Government to adopt new models (such as risk sharing models, backed guarantees, or supporting capacity purchasing models).

**Q3. Does the UK have the supply chain capacity to deliver the required energy infrastructure by 2035, including an expanded electricity network?**

### **Ports and wider supply chains**

In terms of overall supply chain capacity, development of port infrastructure will be critical to enable multiple sectors identified in the Government's Industrial Strategy, from defence to clean energy. Last year, we carried out a [study](#) to look at the port and storage infrastructure suitability for Carbon Capture and storage, signposting the future infrastructure opportunity and a technical summary of the benefits which could be achieved with

investment in strategic locations. Beyond this, we have also been working along with the offshore wind sector to look at the delta in current provision of required port infrastructure to unpin industrialised scale floating offshore wind deployment. According to a 2023 RenewableUK [report](#), developing UK port facilities is also critical to accelerate the deployment of floating offshore wind and to maximise the socio-economic opportunities from this innovative industry.

The Crown Estate is playing its part to support investment in ports infrastructure for offshore wind. Via Offshore Wind Leasing Round 5, developers will be required to nominate their preferred integration ports and make early commitments to those ports to support their timely development. This will be monitored through the Agreement for Lease.

The Marine Delivery Routemap will provide greater certainty and long-term visibility of how the seabed will be developed which will help address ‘bottlenecks’ by unlocking anticipatory investments needed by ports and other infrastructure, e.g., grid. This should provide confidence to private capital of the benefits from investing directly in renewable projects and the adjacent supply chain, as well as identifying the potential locations at a high level that could be the source of this future growth. Alongside this, we ask that there is a cross-Government approach and strategy to delivering critical anticipatory investment in ports and that departments and devolved nations work together to provide a holistic strategy for the sector.

### **Building the Transmission supply chain**

It is important that the supply chain continues to be an enabler for UK projects and UK projects (current and future) remain attractive in a globally competitive market. As the UK looks to undertake a generational grid upgrade, onshore and offshore, we ask that Government considers opportunities to ensure the transmission supply chain is prepared to deliver and, to this end, reviews the points identified in our [Industrial Growth Plan](#) including increasing HVDC manufacturing capacity and developing UK capability to produce 132kV inter-array cabling.

### **Skills**

As a nation we need to build capability, expertise and capacity in skills required to deliver clean energy infrastructure. Importantly, we also need to build awareness of the types of roles that we will need for the future and ensure that education providers, Job Centres, academic institutions and those supporting re-training have the resource and support to enable a pipeline of skills in growth sectors across the full extent of the UK.

For example, The Offshore Wind Industry Council recently [highlighted](#) that almost 70,000 additional jobs are required in the sector by 2030. Challenges arising from Brexit, increasing complexity of offshore wind projects, and increasing competition for skill (e.g. power network upgrades and deployment of battery storage) will put strain on skilled workforces in the sector, particularly electrical engineering skills. In addition, the number of skilled workers required, the availability of the desired quality and experience of this workforce is also a key issue in the UK.

The Crown Estate has identified a variety of opportunities to support meeting this skills shortage, including a partnership with Hopscotch Consulting to develop a pilot programme to upskill work coaches from the Department of Work and Pensions (DWP) to educate them on the types of job opportunities and skills required in the offshore wind sector. We have also funded an engineering qualification at Falmouth Marine School to train the next-generation of offshore renewable technicians.

Beyond the work that we can deliver in partnership and through investment, we note the opportunities to be realised by transferring skills from adjacent sectors, and in areas such as Plymouth, we see the benefits of collaboration between the defence industry and the embryonic floating offshore wind sector where engineering, planning and construction skills will be vital as new technologies are developed for deployment in the Celtic Sea within the next decade.

We ask that Government consider the cross cutting opportunity for investment in the future skills needed across multiple sectors and ask that they work with industry and education providers to raise awareness of the future potential careers in key regions.

#### Q4. To what extent would growing the domestic supply chain bolster UK energy security?

To realise the Government's Industrial Strategy ambitions, it will be critical to capture a greater share of clean energy supply chain benefits within the UK to drive key outcomes in jobs, skills, and development which together support energy security.

To do so, it is important supply chains continue to be an enabler for UK projects (current and future) and that it remains attractive in a globally competitive market to meet various national objectives, including energy security. This is especially important as the UK looks to undertake and coordinate various major strategic projects, including a generational grid upgrade (onshore and offshore).

In terms of skills, for example, the Offshore Wind Industry Council highlighted that almost 70,000 additional jobs will be required in the sector by 2030 and we would ask that Government consider the cross-cutting opportunity for investment in the future skills needed across multiple sectors, working with industry and education providers to raise awareness of potential careers and activities in key regions - as part of this work, The Crown Estate can play a key role in supporting Government with its skills and development plans in key areas of the UK including in the Humber, the South West, and South Wales.

#### Q5. What are the key concerns with respect to the availability of raw materials in the supply chain and how might those be addressed?

In terms of raw materials, there is a need for greater coordination, to ensure supply of raw materials and to prevent bottlenecks in sourcing supply. With an estimated £54bn investment needed in the UK's network infrastructure, for example, further action is needed to align connection requirements with wider grid upgrades. In addition, enhanced cooperation with other countries (e.g. through Strategic Partnerships) should be considered to diversify the UK's supply of critical raw materials. The Crown Estate's investment into digitally mapping seabed resource and coordinating the cross-sector actions required to deliver multiple policy outcomes to 2050, could support greater market confidence and future clarity for UK supply chains.

The Offshore Wind Industrial Growth Plan has also outlined the need for key raw materials for the offshore wind sector. It is recommended that significant scale-up in raw material production is now required to meet the demands of the offshore wind pipeline (this includes metal productions such as steel and copper, carbon fibre, glass fibre, cement and resin).

Overall, The Crown Estate owns almost all of the sand and gravel resources lying off the coast of England, Wales and Northern Ireland and already awards and manages commercial agreements for companies to extract these, providing an important source of quality aggregate for construction and civil engineering projects, transport, and infrastructure. We also work in partnership with industry, regulators and stakeholders to improve the sustainability of the sector (in particular reducing the area of seabed licensed that is dredged year on year). In addition, The Crown Estate continues to support the emerging Lithium extraction sector, through access to mineral resources under the seabed in Cornwall.

More widely, we are aware of ongoing concerns regarding forced labour in global supply chains and continue to work with Government and other stakeholders to understand how we can further uphold ethical and inclusive practices - as part of this work, The Crown Estate's Supplier Charter already sets out clear expectations on how our purpose, core values and priorities should apply across our whole supply chain (including requirements for suppliers to demonstrate their commitment to our priorities and meeting their obligations under law to any practices concerning modern slavery).