Written evidence submitted by Scottish Renewables (IND0028)

Scottish Renewables (SR) is the leading voice of Scotland's renewable energy industry. Our vision is for Scotland to lead the world in renewable energy. We work to grow Scotland's renewable energy sector and sustain its position at the forefront of the global clean energy industry. We represent over 350 organisations that deliver investment, jobs, social benefit, and reduce the carbon emissions which cause climate change.

Our members work across all renewable technologies in Scotland, the UK, Europe and around the world. They range from energy suppliers, operators and manufacturers to small developers, installers and community groups, as well as companies throughout the supply chain. We aim to lead and inform the debate on how the growth of renewable energy can provide solutions to help sustainably heat and power Scotland's homes and businesses.

SR was recently appointed as the Cluster Management Organisation (CMO) by the Scottish Offshore Wind Energy Council (SOWEC) to take forward the establishment of a national Clean Energy Cluster for Scotland. There are currently eight clusters around the UK with Deepwind and Forth & Tay having been in Scotland. The unified national cluster will enable SR to consolidate and streamline support for all Scottish suppliers to build a world-class network.

We welcome the Committee's timely inquiry into an industrial strategy for clean power. Scotland's renewable energy industry and supply chain has grown significantly in recent years with the latest estimates by the Fraser of Allander Institute revealing we supported more than 42,000 jobs and an economic output of over £10.1 billion in 2021. However, with electricity demand set to rise significantly over the next decade as we decarbonise our entire economy, we must accelerate the deployment of Scotland's renewable energy pipeline. This in return will create a cleaner, more secure and affordable energy system that generates high-value jobs and economic growth.

We hope that this submission, in addition to SR and RenewableUK's responses to the UK Government's Industrial Strategy Whitepaper, is helpful and would be pleased to provide any further evidence to the Committee.

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

Scottish Renewables strongly supports the recognition of clean energy industries as one of the eight growth-driving sectors in the proposed Industrial Strategy. Scottish Renewables also welcomes the criteria set out in the consultation for subsectors being reviewed in terms of their contribution to net-zero, regional growth, economic security and resilience. The recognition of key barriers to investment in the consultation is also welcome, including skills, access to finance, regulation, grid connections, infrastructure and planning.

Renewable energy presents the biggest opportunity for sustainable economic growth in Scotland and across the UK. Scotland's renewable energy industry and supply chain supports more than 42,000 full time equivalent (FTE) jobs and an economic output of £10.1 billion, according to the latest data for 2021 by the Fraser of Allander Institute. Offshore wind powered the most activity from clean energy across the Scottish economy in 2021, generating more than £4 billion, followed by onshore wind with £3.4 billion and hydropower with £1.2 billion. In addition, Scotland's supply chain is well experienced and established in offshore work, and has possibility to benefit from the wealth of work possible from renewables development.

Most recently, the Offshore Wind Industrial Growth Plan (IGP) sets out how the UK can triple offshore wind manufacturing capacity over the next ten years to firmly establish the UK as a leader in a surging global market. The IGP effectively identifies five key technology areas in which the UK should prioritise investment to secure value for the UK economy:

1. Advanced Turbine Technology *(Towers, Blades, Drive train components, Composite-based components, Automation of manufacturing process and Leading-edge protection).*

2. Industrialised Foundations and Substructures *(Floating foundation design, Deeper water and floating foundations, Moorings and anchors, Automated welding, Composites for light weight foundations and Synthetic mooring line materials).*

3. Future Electrical Systems and Cables *(Array cables, Export cables, Dynamic inter-array cables at 132kV, HVDC system interoperability and Standardised systems).*

4. Smart Environmental Services *(Environmental surveys, Autonomous vehicles for environmental survey and Machine learning for environmental impact analysis).*

5. Next Generation Installation, Operations and Maintenance *(Wind turbine installation, Operations and maintenance and Cables installation vessels operation).*

The measures set out in the IGP would create an additional 10,000 jobs a year and boost the UK's economy by a further £25 billion between now and 2035, if we accelerate offshore wind deployment in line with our net-zero targets to 5-6GW a year. The plan envisages mobilising nearly £3 billion of funding nationwide, with private finance doing the heavy lifting, which would offer a return to our economy of just under £9 for every £1 invested.

We encourage the UK Industrial Strategy to be closely aligned to the IGP and wider industry initiatives, such as the Scottish Government's Green Industrial Strategy and Strategic Investment Model. We also appeal for urgent clarity on the financial assistance which may become available through GB Energy and the National Wealth Fund to ensure funding is readily available and aligned.

In addition, Robert Gordon University's Powering Up the Workforce report found that the UK's offshore renewable energy workforce has potential to increase from around 34,000 in 2023 up to 138,000 in 2030 if a successful transition is achieved. With a 90% transferability rate between oil and gas and offshore wind, there is clear opportunity to create a just transition in the energy industry workforce. Examples include offshore inspection, port services and steel fabrication, civil engineering, electrical products, and accommodation services.

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?

Moving to a clean energy system will not only help to strengthen the UK's energy security, but provide an enormous opportunity to secure supply chains across the country to underpin that clean energy system. Delivering the UK's clean energy ambitions will not only depend on a commitment from developers to drive projects but on a whole raft of skilled, experienced, innovative suppliers too. From offshore inspection, port services and steel fabrication to civil engineering, electrical products and even accommodation services, there is a wide variety of work to be tendered for, won and delivered. But these businesses will need to have confidence in the timelines of these projects if they are to make the significant level of investment required.

Using the CfD scheme to create a clear and certain pipeline of projects
Investor confidence is essential to the scaling up of the clean energy supply chain, as well as scaling up a skilled workforce. This can be achieved through a consistent, visible pipeline of projects. Currently, projects have no view of Contract for Difference (CfD) procurement beyond the current auction. An offshore wind project must develop leasing, planning consents and grid connections over a number of years only to understand its ability to secure a CfD contract just months before bidding.

To provide more certainty, and accelerate deployment with an ambitious programme of CfD auctions, we recommend that the UK Government sets out clear GW targets for established technologies (Pot 1), emerging technologies (Pot 2), and offshore wind (Pot 3) out to at least 2030, starting with Allocation Round 7 (AR7). Initially these targets should be set in advance for the next five future auctions and adjusted on a rolling annual basis, in line with CP2030 targets. The RenewableUK report on CfD reform provides further details relating to this recommendation.

Industry broadly welcomes the proposals for CfD reform in the Clean Power 2030 Action Plan and continues to engage closely with the Department for Energy Security and Net Zero (DESNZ) on their

design. To secure the high level of capacity required across all technologies to achieve clean power by 2030, the budget for AR7 must be maximised. This is particularly important for Scottish projects which will underpin a clean power system.

Industry also supports the development of the Clean Industry Bonus to help bring vital investment to our domestic supply chain. However, the amount of new funding the Clean Industry Bonus will provide for ports and clean energy manufacturing facilities is dependent on how much offshore wind capacity is delivered through the next round of the Contracts for Difference scheme. Maximising delivery through AR7 will therefore be crucial for securing benefits for our economy as well as achieving the UK Government's clean energy targets.

Supporting SMEs
Businesses, particularly small to medium enterprises (SMEs), looking to expand their facilities, grow their capabilities and upskill staff need to be able to justify the investment. According to the Federation for Small Businesses, SMEs represent 99.4% of all private sector businesses. However, many SMEs are struggling to invest in the capabilities and capacity needed to expand and innovate in renewable energy and we would encourage more tailored support for SMEs to grasp near-term renewable energy opportunities. Launching targeted financial grant support for SMEs and supply chain firms seeking to scale-up their capabilities, facilities and skills in renewable energy, helping to create high-value jobs and regional economic growth.

According to IPPR, the UK has a current competitive edge in making a third of the 143 products needed in technologies to deliver net-zero. These include products for monitoring, measuring and analysing, all crucial for the electricity grid, renewable energy generation and decarbonising industry. The UK is also strong at making electric trains and their parts, heat pump components, and turbines for geothermal or hydro electricity generation.

Encouraging Investment
To keep investors engaged in the UK renewables market barriers to deployment must be urgently addressed. Key enablers that will unlock the opportunity clean energy projects include:

- Clear, long-term policy commitment
- Improve international manufacturing competitiveness
- Increase ports and harbours capacity
- A clear and certain pipeline of projects
- De-risk investment in the UK through markets
- Increase grid capacity (transmission and distribution)
- A diverse and inclusive skilled workforce
- An efficient planning and consenting system
- Access to capital grant funding
- Prosperous trade partnerships

Stability in policy and regulatory frameworks, with strong visibility of political and financial support to a stable pipeline, is essential for sustained growth in any industry, but for the renewable energy industry it is particularly important given the massive investment and deployment required to meet decarbonisation targets.

One of the most significant policy uncertainties within industry at this time is the UK Government's Review of Electricity Market Arrangements (REMA). Whilst electricity market reform is important as we move towards a renewables-based energy system, any market reform must be compatible with delivering the billions of pounds worth of investment needed to deliver the UK's pipeline of renewable energy projects. Scottish Renewables, RenewableUK, British Glass, Ceramics UK, Community Trade Association, Global Infrastructure Investor Association, Independent Renewable Energy Generators Group, Make UK, Solar UK and UK Steel have made clear that a Reformed National Market represents the best programme of market reform to benefit billpayers and protect investor confidence. For Scotland in particular, which is absolutely central to achieving our clean energy ambitions, zonal pricing would severely disincentivise the construction of renewable energy generation and its supply chain. By ruling out zonal pricing, the UK Government would be able to concentrate efforts over the next five years to ensuring an Industrial Strategy enables the growth of the renewable energy industry

and its supply chain to deliver real economic benefits to businesses and communities across the country.

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

In the Clean Power 2030 Action Plan, advice from the National Energy System Operator (NESO) rightly identified that the global race to decarbonise is straining international supply chains and compounding skills shortages. NESO have also appealed for swift funding decisions to benefit supply chains which our members routinely highlight as a key priority. Scottish Renewables supply chain members have advised of labour shortages and difficulties in accessing skilled resources, including welders and those skilled in construction practices. The UK Government's approach to industrial strategy, employment and welfare reform, educational and apprenticeship levy reform must all work in tandem to successfully meet the skills needs of wider industry.

Grid infrastructure is at the core of our net-zero and energy security ambitions with significant industrial opportunities through some of the largest construction projects in the UK. With electricity demand set to more than double over the next ten years, demand for high voltage direct current (HVDC) cables will increase 8-fold over the next 10 years and 35-fold by 2050. The UK is expected to be one of the largest markets for power cables, with the high voltage direct current transmission systems market in UK was valued at $827.6 million in 2023 and is estimated to grow to $1,221.0 million in 2028. This will create an incremental growth opportunity worth $393.4 million between 2023 and 2028, which translates to around 48% of the market size in 2023.

The global market for HV switchgear, which includes HVDC systems, was valued at approximately $25.02 billion in 2022 and is projected to grow to $30.34 billion by 2027. In 2023, at least 46 new HVDC projects were set to be installed over the next decade, equating to a 94.3GW addition of HVDC transmission capacity and at least 18,000 km of HVDC cables. Scotland has taken steps to secure these industrial opportunities with £24.5 million worth of public sector support secure Sumitomo Electric's £350 million purpose-built subsea cable manufacturing plant at the Port of Nigg which is expected to create around 330 jobs over the next ten years for the Highlands. The UK Infrastructure Bank also recently announced £20 million investment into XLCC's planned subsea HVDC cable manufacturing facility at Hunterston.

SSEN Transmission's RIIO-T3 Business Plan sets out a clear and evidence-based need for an expected known total expenditure of around £22.3 billion over the RIIO-T3 period. The plan has also identified potential for an additional £9.4 billion of future Uncertainty Mechanism expenditure, which could bring the total expenditure over the RIIO-T3 period to around £31.7 billion. If delivered in full, this could support up to 37,000 jobs across the UK and add £15 billion in value to the UK economy. SP Energy Network's RIIO-T3 Business Plan sets out a clear and evidence-based need for an expected known total expenditure of £10.6 billion over the RIIO-T3 period. This investment could contribute sustained economic benefit to UK GDP of around £2 billion per annum and create 11,500 jobs over the long-term. This is expected to save consumers across GB over £167 per year in constraint costs by 2030 AND SP Energy Networks have also outlined £5.4 billion of supply chain agreements.

Offshore wind especially has been hit by the detrimental impact of the amendment to the Immigration Act 1971 (s11A) on the offshore wind sector and the concurrent cessation of the Offshore Wind Workers Visa Immigration Rules Concession 2017 (April 2023) by implementing an industry-specific solution that enables offshore wind deployment.
Currently there are not enough offshore workers from the UK to crew the vessels needed for installing, operating and maintaining offshore renewable energy infrastructure. To achieve our clean energy ambitions, the UK needs to double installation vessels by 2026 and triple them by 2029. Scottish Renewables, RenewableUK, Offshore Energies UK, International Marine Contractors Association, Global Underwater Hub and NOF Energy have been engaging closely with the UK Government on the need to create a bespoke arrangement for offshore worker visas to avoid this barrier to deployment quickly worsening.

The British Ports Association suggests 70% of UK ports are already at or near to their ceiling in terms of available power from the grid. To provide ports with the power they need to operate, electrify and

expand to deliver critical renewable energy activities and attract key manufacturing inward investors the UK Government should prepare guidance for ports on how to prepare for and access additional grid resource as well as establish their own clean power generation and explore solutions such as microgrids. The guidance should take a regional approach to power and be future proofed taking into account the increasing demand arising from the use of electrification products such as electric vehicles and heat-pumps. To support this the UK Government should establish a port electrification fund to support investment in grid infrastructure for the ports around the UK.

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

Bolstering the UK supply chain will be critical to achieving the energy transition and greater energy security. The UK energy supply chain has decades of experience in the capabilities which floating offshore wind requires such as deep-water experience, offshore operations expertise, a strong health and safety track record and the knowledge to deliver major capital infrastructure projects. This sits alongside world-class skills in subsea systems, subsea engineering and subsea electrical systems and cables.

In addition, the opportunity Clean Power 2030 presents is the ability to create a home-grown electricity supply that operates independently from volatile gas markets with prices easily influenced by global trends and geopolitics. Increased investment in the UK supply chain will grant further opportunity to assure more energy security and efficiency, as the UK will not as reliant on external supply chains, while also furthering economic growth in UK.

Finally, the global race to net-zero will cause a strain on global supply chains and resources. A strong UK energy supply chain will help to avoid bottlenecks and supply chain shortages throughout the buildout phase of Clean Power 2030 and beyond, therefore aiding in energy security while also creating economic opportunity for ports and manufacturers throughout the UK.

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

Renewable technologies rely on critical materials like lithium, cobalt, and rare earth metals, which face supply chain constraints. Limited local manufacturing and processing capabilities make the UK reliant on imports, exposing businesses to potential supply disruptions and cost increases. Scottish Renewables welcomes steps taken on the UK Critical Minerals Strategy setting out plans for improving the resilience of critical minerals supply chains and increasing our security of supply. The Zero-Waste Scotland Energy Infrastructure Materials Mapping report identified that to meet increasing renewable energy demands in Scotland, up to 241 Mt of materials, including up to 230 Mt of materials of interest could be required in Scotland by 2050.

In alignment with the Critical Minerals Strategy, the UK industrial Strategy should seek to collaborate with international partners building upon strong trade agreements and relationships to create reliable supply chains and ensure price stability of the materials essential to the construction and operations of our home-grown renewable energy assets. In addition, to reduce reliance on imports of essential materials like steel and critical minerals, the UK Industrial Strategy should prioritise the development of green steel and a circular economy approach. RDI funding could also be used to support projects investigating novel ways to reducing use of critical minerals in renewable energy projects.

Research conducted by the Coalition for Wind Industry Circularity found that building the capabilities to refurbish wind turbine parts in the UK would drive the creation of a circular supply chain for renewables in the UK, potentially generating £10 billion for the UK economy, more than 20,000 full-time equivalent jobs by 2035, and preventing more than 800,000 tonnes of parts from being scrapped. We would encourage the Industrial Strategy to build on this enormous opportunity for the future with the UK having access to a European market worth almost £10 billion.

The UK Government should also ensure the plan to launch a UK Carbon Morder Adjustment Mechanism (CBAM) in January 2027, as confirmed in the Budget, is carefully thought through. In particular, we need to see full assessment of the real cost implications of this mechanism. We also recognise that the application of CBAM to materials but not finished products could incentivise offshoring from the UK. This is because the manufacture of large assets requires high volumes of raw

material that cannot be sourced in the UK, for example transformers requiring the supply of grain oriented electrical steel. The UK Government should continue negotiations on linking the UK Emissions Trading Scheme (UK ETS) with the EU ETS to provide UK carbon price stability and support HMT revenues. Resolving the discrepancy in carbon pricing between the UK and EU trading schemes to avoid lost revenue of £3.5 to £8 billion for the UK Government between 2025-2030 according to industry analysis.

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