

Written evidence submitted by Solar Energy UK (IND0004)

Introduction

1. Solar Energy UK welcomes the opportunity to submit written evidence to the Energy Security and Net Zero Committee's inquiry into 'Industrial strategy for clean power'. As the trade association for the solar and energy storage industry we represent over 400 organisations throughout the value chain, from small and medium-sized companies to global brands. Our mission is to empower the UK solar transformation, catalysing our members to pave the way for 60GW of solar energy capacity by 2030.
2. Since 2023 we have also worked extensively with the Department for Energy Security and Net Zero on the development of the 'UK Solar Roadmap', a joint government-industry strategy for delivering national solar deployment targets. This is due to be published in early 2025.
3. The clean energy transition provides an enormous economic opportunity for the UK, fundamental to which is the development of strong and robust domestic supply chains. From the perspective of the solar industry, while the market for certain products – notably solar panels – is dominated by China, there is considerable scope for UK firms and manufacturers to provide 'balance of systems' components such as the racking and cabling used in solar installations, as well as leading the development of innovative technologies and applications, drawing on the UK's world-leading position in research and development (R&D). We welcome the focus the Committee's inquiry places on growing the UK's domestic supply chains and the economic and security benefits this can deliver.

Summary

4. We make the following key points in this written submission:
 - Capitalising on the UK's strengths in R&D is crucial to realising the economic potential of emerging solar technologies. There are a number of interventions which can help achieve this including facilitating collaboration between universities, research organisations and corporates; utilising Innovate UK by offering specific funding opportunities for solar technology; and creating an eco-system that promotes companies developing new technologies to stay in the UK.
 - The forthcoming Contracts for Difference (CfD) auction round, AR7, includes a requirement for large solar projects of more than 300 MW to produce a supply chain plan which provides opportunities for policy interventions. In offshore wind the new Clean Energy Bonus is being introduced to support investment in domestic supply chains, and in future auction rounds Government should explore whether a comparable, solar-specific initiative could be implemented. Looking beyond the CfD scheme itself, consideration should also be given to how solar technology could be promoted on the Crown Estate and other government assets and whether supply chain initiatives can be linked to this.
 - Expanding the electricity network is critical to achieving the Government's clean power objectives. Achieving this will require action in a number of different areas, including strategic investment in the network and clarity and consistency across policy interventions.

- The urgent need to develop a skilled clean energy workforce is currently one of the key constraints on supply chain capacity. In the solar industry, and across all sectors involved in the generation, transmission and storage of power, the size of the workforce will need to dramatically increase if the Government's plans for 2030, 2035 and beyond, are to be met. We believe there is a strong case for establishing a network of regional green skills hubs across the country to enable this – the [Mayor's Construction Academy](#) in London provides a potential model for this.
- Access to critical raw materials and their supply chains is of key importance to the UK's solar and energy storage industry. In the context of a highly competitive global market it is vital that the UK sector draws on materials that are relatively easily available to the UK supply chain – through the recycling and re-use of materials across the solar value chain, and the consideration of alternative materials, closer to home. Traceability of raw materials and transparency of supply chains will also continue to be essential as the net zero transition accelerates.

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

5. Within the solar industry, capitalising on the UK's strengths in R&D is crucial to realising the economic potential of emerging solar technologies. There are a number of interventions that would help achieve this including: facilitating collaboration between universities, research organisations and corporates in cutting edge energy solutions; utilising Innovate UK by offering specific funding opportunities for solar and energy technology development; creating an eco-system that promotes companies developing new technologies to stay in UK, including through funding, support and access to R&D and testing facilities; and promoting new energy technologies.

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?

6. In the forthcoming CfD auction round, AR7, large solar projects of more than 300MW will require a supply chain plan which is welcome and provides opportunities for policy interventions to promote the domestic supply chain. Within offshore wind a new Clean Industry Bonus scheme is being introduced in AR7, which will provide additional revenue to applicants who choose to invest in more sustainable supply chains. In future auction rounds the Government should explore whether a comparable, solar-specific initiative could be introduced to support investment in domestic supply chains.
7. Looking beyond the CfD scheme itself, the Government could also explore how solar technology can be promoted on the Crown Estate and other government assets, such as the NHS estate, and whether supply chain initiatives can be linked to this. For example, from an international perspective the United States' Build America Buy America Act was enacted in 2021 and requires Government funded infrastructure projects to procure the materials needed for construction from domestic sources. Consideration could be given to whether any principles from initiatives such as this could be adapted effectively within a UK context.

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

8. Expansion of the electricity network is critical to achieving the Government's clean power objectives, as at present it is not uncommon for new projects to be given grid connection dates in the late 2030s. Achieving this requires action in a number of different areas, including strategic investment in the network, as well as clarity and consistency across policy

interventions such as the National Energy Systems Operator's Connections Reform and Strategic Energy Planning programmes and the Reform of Electricity Markets Arrangements (REMA) process.

9. One further point we are keen to highlight is the urgent need to develop a skilled clean energy workforce, which is currently one of the major constraints on supply chain capacity. From the perspective of the solar industry specifically, data from the Office of National Statistics' [Low Carbon and Renewable Energy Economy](#) (LCREE) survey suggested that an estimated 9,000 full-time equivalent workers were employed in the solar sector in 2022, although this will need to dramatically increase over the coming years to meet the Government's deployment targets. We will be able to provide further data on the employment needs in the UK solar and storage sector later in the spring.
10. In order to build the skilled workforce needed to meet demand at pace, Solar Energy UK believes that there would be considerable value in the UK government establishing a network of regional green skills hubs across the country, particularly in areas where significant renewable energy developments are planned or in development. A potential model for this is the [Mayor's Construction Academy](#), which has been set up in London to build the construction workforce needed to meet the city's housing targets and we think that there is a strong case for adopting this model within the clean energy sector.

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

11. Growing the domestic supply chain would deliver significant benefits in terms of energy security by reducing the UK's reliance on other countries for materials and components, and in doing so provide greater certainty for firms as well as driving down carbon emissions. It would also enable a higher proportion of energy infrastructure investment to remain within the UK, in the form of highly skilled, and highly sought-after jobs.

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

12. Access to critical raw materials and their supply chains is of key importance to the UK solar and energy storage industry, and there are a number of ways in which this can potentially be addressed.
13. Ensuring that the UK sector can draw on materials which are relatively easily available for the UK supply chain is vital, particularly in the context of a highly competitive global market. Two examples include the use of recycled materials, reducing the need for materials extraction, and possible alternatives to the use of critical materials:
 - a. The production of solar racking (mounting) systems, produced in the UK using recycled steel, has great potential through the work of Tata Steel and other parties. Similarly, in years to come we will see more and more solar installations reach the end of their productive life and require decommissioning. As we do, it is crucial that we develop an effective circular economy so that materials from decommissioned systems can be recycled and re-used within the solar sector wherever possible, which will reduce our dependence on importing other critical raw materials from abroad.
 - b. The use of alternative materials is also worth further consideration. Sodium, for example, is around 1,000 times more abundant than lithium, which may represent a more accessible and secure material for use in UK battery energy storage systems.
14. Lastly, ensuring the traceability of raw materials and transparency around how and where they are mined from remains a crucial concern, and robust initiatives for assessing this will

continue to be essential as the net zero transition accelerates. Solar Energy UK has for instance established the [Solar Stewardship Initiative](#) in partnership with Solar Power Europe (the European trade association), which is developing standards around responsible solar production and sourcing to support efforts to eliminate forced labour from solar supply chains.

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