Department for
Energy Security
& Net Zero

Policy paper

Solar roadmap: United Kingdom powered by solar (accessible webpage)

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Contents

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Ministerial foreword

Ed Miliband MP, Secretary of State for Energy Security and Net Zero

Solar is at the heart of our mission to make the United Kingdom a clean energy superpower. It is one of the cheapest and quickest to build power sources we have. And every solar panel we install helps us take back control of our energy supply – protecting families, businesses and the public finances from the rollercoaster of fossil fuel markets controlled by petrostates and dictators. That is why in our first weeks in office I reconvened the Solar Taskforce to raise our ambitions for solar.

This is an incredibly exciting time for solar in the UK. More than 1.5m homes across our country now have solar installed, and since this government came to office my department has consented almost 3GW of nationally significant solar projects – nearly 3 times as much as the previous 14 years combined. But we know we need to go further to deliver our goals for clean power by 2030 and beyond.

Solar offers huge potential to boost our energy independence, bring down bills and tackle the climate crisis. It also presents a significant economy and industrial opportunity. We estimate that the solar sector could support around 35,000 jobs by 2030, double the number it supports today.

This Roadmap presents the final conclusions of the Solar Taskforce, setting out the steps government and industry will take to seize these opportunities – from installing solar on as many new newbuild homes as possible through the Futures Homes Standard to exploring how to maximise the potential of solar canopies on car parks.

We will push ahead on a solar rooftop revolution, while tackling the barriers of planning, grid, supply chains and skills. Publishing this Roadmap is just the beginning of our journey – and we will establish a joint government and industry Solar Council to drive progress towards our ambitions.

I want to thank everyone who has contributed to the Solar Taskforce and Roadmap and look forward to continuing to work with industry and others in the months and years ahead.

Ed Miliband MP, Secretary of State for Energy Security and Net Zero
Co-chair, UK Solar Taskforce

Foreword from Chris Hewett

Chris Hewett, CEO of Solar Energy UK

Solar Energy UK (SEUK) has been delighted to co-chair this Taskforce with the UK Government, on behalf of the entire solar industry. From the outset we have engaged in the process as a genuine collaboration between industry and policymakers to reach a common goal of a trebling of solar capacity by 2030. The Clean Power Action Plan identifies that 45-47GW is our ambition for all solar by 2030, but it also confirms there is grid capacity available for up to an additional 10GW, should the system need it. To maximise the chances of achieving the clean power targets, the solar industry will be aiming to deliver at the top end of the country's needs.

This work of Ministers and officials has been strengthened by the leadership of senior players in the industry on the Taskforce itself and the subgroups on networks, skills, supply chain and innovation, rooftop solar and communications. I want to thank all of them for their time and expertise.

Solar energy is among the lowest cost, and most popular, forms of power generation in the UK, and unlocking its potential will increase Britain's energy security, drive down bills as well as be a major contributor to preventing dangerous climate change. The fact that it can be deployed rapidly in so many ways from household rooftops, to warehouses, to reservoirs and large-scale solar farms, is the key ingredient to this potential.

This Roadmap sets out what policy changes will support the delivery of the Clean Power Action Plan ambitions, and the consequent investment, job creation and reduction of greenhouse gas emissions. It also sets out what the solar industry can offer as its own contribution to this national effort. We recognise that Scotland, Northern Ireland and Wales will have their own ambitions, and we will work with those governments to meet their targets / vision / objectives. We will:

- Lead the way on supply chain sustainability;
- Contribute to local communities with the development of a Community Benefit Protocol for areas in the vicinity of new solar farms;
- Develop a programme of activities on training and career opportunities;
- Publish and promote consumer protection guidance, in collaboration with MCS; and

- Publish and promote consumer engagement best practice for industry developers to follow.

The solar industry is committed to delivering on the government's Clean Power Mission and this Roadmap sets the course we need to follow.

Chris Hewett, CEO of Solar Energy UK
Co-Chair, UK Solar Taskforce

Foreword from Chris Stark

Chris Stark, Head of Clean Power 2030

In the UK, we have pioneered policies to grow renewable industries, attract investment and deploy clean energy technologies at a scale that was once thought impossible.

Clean Power 2030 is the next stage, our ambitious but achievable mission to grow Britain's clean energy infrastructure, reduce Britain's dependency on imported oil and gas, secure key industries and ready the country for the growth in electrical demand over the next 20 years.

Solar generation is the best example of a clean technology that can bring substantial bill savings and energy system benefits at multiple scales, from household rooftops to efficient, well-sited installations on the scale of whole power stations. The Clean Power Action Plan seeks 45-47GW of installed solar capacity by 2030, a once-in-a-generation increase. This will only be possible with a mission-focus, industry and government working in partnership to grow solar at pace, and fundamental reforms to the queue of projects waiting to connect to the grid. This Solar Roadmap, developed through the Solar Taskforce, puts us on the right path.

The Roadmap makes clear the opportunities for the UK solar industry, providing jobs and opportunities throughout the country if we can capture the solar opportunity at all scales. With our solar objectives now aligned through this Roadmap, the momentum behind clean power continues to grow.

Chris Stark
Head of Clean Power 2030

Executive Summary

The UK Solar Roadmap issued by the UK Government and produced through collaboration with industry presents a comprehensive strategy and clear plan of action to achieve the significant increase in solar deployment needed to support the delivery of clean power by 2030, as set out in the government's Clean Power Action Plan. [footnote 1] Every family and business in Britain is paying the price of the UK's exposure to volatile fossil fuel markets. This underlines the importance of investing in solar now, to protect both families and businesses from the rollercoaster of fossil fuel prices that we do not control. Solar has a unique role here given the potential for deployment on rooftops to reduce consumer bills immediately.

The Clean Power Action Plan calls for the rapid acceleration of solar deployment, from over 18GW [footnote 2] at present to 45-47GW by 2030 with scope to exceed the 47GW upper limit, subject to system need, noting the potential of additional rooftop solar to further boost deployment. [footnote 3] The roadmap outlines practical actions for industry and government to overcome the challenges to delivering this ambition within the next 5 years and boost the UK's energy security. The Roadmap also sets the stage for longer-term growth beyond 2030, and commits to actions to support new, good quality jobs, through the ramp up of solar deployment. We know that taken together, the actions in this Roadmap will support the rapid increase of solar deployment we need for affordable, secure energy and so the UK can play its part in tackling the climate crisis.

UK energy security and net zero policies cover areas where power is devolved to Scotland, Wales and Northern Ireland as well as areas where power is reserved (within the Northern Ireland settlement reserved or excepted) to the UK Government.

The Roadmap recognises that the devolved governments have separate ambitions and supporting policies for renewable technologies. These complement the ambitions and actions set out in the Roadmap and we will continue to work with the devolved governments to ensure that we are able collectively to realise the opportunities and benefits of solar across all parts of the UK.

Roadmap Highlights

Chapter 2 – Deployment Scenarios

This chapter explores the potential scenarios for the deployment of solar based on the latest pipeline evidence, relative to the 45-47GW by 2030 set out in the Clean Power Action Plan. [footnote 4] This underscores the potential to achieve or even exceed the clean power range, but that significant further action is required to ensure the timely implementation of reforms to do so.

This Chapter also provides an illustration of what achieving 45-47GW solar might mean in terms of homes powered, growth in skills, and demands on land. We estimate up to 0.4% of total UK land would be required to deliver solar under deployment assumptions consistent with the Clean Power range.

Chapter 3 – Rooftop Solar
Government and industry are determined to unleash a rooftop revolution across the UK. This chapter focusses on how the government and industry will work together to overcome the challenges that until now have stood in the way of rooftop deployment across commercial, domestic and public-sector rooftop solar:

- Outlining the huge potential of Great British Energy to play a crucial role in ramping up solar deployment, such as its recent announcement to enable around 200 schools and up to 200 hospitals in England to install rooftop solar. This will help to drive down energy bills for schools and hospitals.
- Setting out new initiatives for new and existing homes through the Warm Homes Plan and Future Homes and Buildings Standards.
- Issuing a call for evidence to assess the potential of solar canopies on outdoor carparks over a certain size.
- Tackling the complexity of stakeholder interactions by developing a standard form of contractual agreement for retrofit of rooftop solar on leased industrial/commercial buildings.

Chapter 4 – Electricity Networks
Electricity networks are fundamental to growth and energy security, in the context of a rapidly electrifying economy, and to delivering the ambition of 45-47GW by 2030. Government has set out radical reforms to the connections process to ensure we build the infrastructure the country needs and end the sclerotic and out of date system that was holding back British businesses waiting to connect to the grid. This chapter shines a light on:

- Connections Reform, which is streamlining the process for small-scale generation, and ensuring fairness across the Transmission and Distribution networks.
- Ofgem’s End-to-End review, which will improve the transparency of data and timescales.

- A range of actions to remove barriers to combined storage and solar projects and new-build domestic installations, as well as the standardisation of service across the sector.

Chapter 5 – Supply Chain and Innovation
This chapter focuses on the complex UK and global supply chains for solar, and ensuring their resilience, diversity, and sustainability. It makes clear the government's determination to eradicate the abhorrent practice of modern slavery and its commitment to ensuring that supply chains are free from the use of forced labour, including on members of Uyghur and other minorities in Xinjiang involved in the mining of polysilicon used in the manufacture of solar panels.

It details legislation and guidance to ensure businesses take action against modern slavery and explains the cross-government action currently taking place to understand where the government can go further, including:

- Adding measures to the Great British Energy (GBE) Bill to ensure that slavery and human trafficking is not taking place in GBE's business or supply chains.
- Empowering contracting authorities to exclude suppliers from government contracts who have committed labour market misconduct and/or environmental offences in the UK or overseas.
- Considering measures to strengthen Section 54 of the Modern Slavery Act 2015, including penalties for non-compliance, with details to be set out in due course.
- Supporting and engaging with industry standards such as the Solar Stewardship Initiative, as well as relevant civil society groups, and, if necessary, identifying where further action is needed.

The chapter also sets out how we intend to maximise the opportunities arising from further development and commercialisation of next generation and innovative solar technologies as well as upscaling production of balance of system components. Actions include setting up an online directory to provide practical support to solar manufacturing businesses, publication of an exemplary fair contracts document to support Small and Medium-size Enterprises (SMEs) and exploring opportunities to support the development of standards for next generation solar panels and emerging applications.

Chapter 6 – Skills
The rapid growth of the UK solar industry offers a generational opportunity to create a wealth of high-quality jobs throughout the UK. This chapter focuses on the opportunities and challenges to achieving this goal, such as:

- Understanding the skills and workforce requirements needed to fulfil our deployment ambitions.

- Ensuring the sector is an attractive place to work.
- Enabling the routes to competence for those who wish to join the sector.
- Equipping industry with the tools to manage the significant expansion in operations needed.

The UK Government has set up the Office for Clean Energy Jobs (‘OCEJ’), which aims to tackle the workforce and skills challenges across core energy and net zero sectors, including solar. The actions in this chapter will complement the work of OCEJ to help deliver a resilient, highly skilled, well-paid solar workforce. Key actions identified in the chapter include:

- Mapping current training infrastructure for solar in England to tackle the lack of understanding of the training offers available to the sector.
- Piloting regional careers fairs at colleges across England to make students aware of the breadth and variety of careers in the sector.
- Mapping routes to competency for vital core occupations, recommending the qualifications and experience necessary to demonstrate competence.

Chapter 7– Planning and Support Schemes
This chapter covers additional significant aspects of solar power such as reforming the planning system, financial support mechanisms and floating solar. This chapter highlights action on these including:

- Planning policy – the UK Government will ensure that the planning system in England supports the rapid increases in deployment needed to meet our ambitions. It has updated the National Planning Policy Framework (NPPF) to direct local decision makers to give significant weight to the benefits associated with renewable and low carbon energy generation. It has also legislated to increase the threshold at which solar projects enter the Nationally Significant Infrastructure Planning (NSIP) regime from 50MW to 100MW to allow more mid-sized solar projects to move through the local planning system, potentially, resulting in faster and cheaper consenting.
- Planning capability and capacity action – the UK Government has announced a £46 million package of investment into the planning system to support capacity and capability in local planning authorities.
- Training for planners – SEUK will work with representatives from the planning profession to review current training provision for the sector and ensure it is fit-for-purpose in supporting the delivery of renewables (including solar), including through university degrees.
- Contracts for Difference (CfD) – details the targeted reforms to the CfD mechanism that the government is driving forward to ensure it is able to support the volume of new capacity needed to deliver the Clean Power 2030 ambition whilst continuing to minimise the costs to consumers.

- Floating Solar – sets out how to further support growth of this and other innovative solar technologies by exploring their potential and reviewing how they are considered in the CfD scheme and in planning.

Chapter 8 – Working together to deliver our ambition
This chapter identifies the range of different parties which play key roles in delivering our solar ambitions, from communities and the public to business, academia, regulators and local government. We explore how solar can have a positive impact on others through good community engagement and benefits. This chapter also brings together the communications-focused actions of the other subgroups.

Key actions include:

- Community benefits - Government is proposing making it mandatory for developers of low carbon infrastructure (including solar) to provide community benefit funds. A working paper seeking views on introducing a mandatory community benefit fund scheme for low carbon energy infrastructure and seeking views on facilitating shared ownership of renewable generation infrastructure was published on 21 May 2025. [footnote 5]

- SEUK will publish later this year, a Community Benefits Protocol and guidance for solar energy companies and local communities in the vicinity of new solar farms wishing to enter into discussions on community benefit.
- Industry to develop a communications toolkit focusing on how to communicate the benefits of solar when engaging with local communities.

Monitoring and Evaluation
The development and publication of this Roadmap is the first step in an ongoing process to enable our ambition of 45-47GW by 2030. The UK Government will convene a new Solar Council, chaired jointly by government and industry, and attended by solar industry representatives, government departments, devolved governments and other relevant parties. The Council will monitor progress and drive delivery of the actions set out herein. It will also provide a platform for strategic engagement between the sector and the UK Government.

Introduction

One of the government's 5 national missions is to make the UK a clean energy superpower, including delivering Clean Power by 2030. In December last year, to help deliver the Plan for Change, the government published the Clean Power Action Plan, which set out the expansion of renewable

technologies required to achieve the 2030 ambition. At the heart of this transformative journey lies the radiant potential of solar energy – a boundless and renewable resource, that is cheap and can be deployed quickly across a range of locations.

The Clean Power Action Plan calls for the rapid acceleration of solar deployment, from over 18GW [footnote 6] at present to 45-47GW by 2030. This range reflects total solar capacity (ground mount and rooftop). It shows that there are a range of possible scenarios to get us to clean power. There is scope to exceed the 45-47GW Clean Power Capacity Range, subject to system need. Additional rooftop solar could significantly boost deployment.

As set out in the Clean Power Action Plan's Connections Reform Annex, [footnote 7] the National Energy System Operator (NESO) will use the top end of the government's 2030 pathway to underpin revised connection offers for projects in and before 2030. For solar, this means our current view is up to 47GW of projects which require Transmission Impact Assessments (TIAs) will be eligible for connections by 2030.

As confirmed by NESO, projects below the thresholds for a TIA do not need to align with the Clean Power Capacity Ranges for the purposes of connections reform. In effect this means small-scale solar is exempt from the strategic alignment element of connection reform. The Solar Taskforce has unlocked an Ofgem-approved increase to TIA thresholds, from 1MW to 5MW in England and Wales. NESO-led engagement with the Distribution Network Operators ahead of publishing the Clean Power Action Plan indicated that, subject to an available project pipeline, an additional 9-10GW of smaller-scale rooftop solar projects which would not be subject to TIAs could deploy before 2030. It is therefore possible this could yield around 57GW of total capacity in 2030. This is not a forecast of deployment and is closer to a theoretical maximum. [footnote 8]

Developers are adapting positively to our mission. Since publication, the Connections Reform Annex of The Clean Power Action Plan has been updated [footnote 9] to better reflect that they are planning and building more projects capable of connecting straight to the transmission network. We have therefore amalgamated the allocation for transmission and distribution capacity, allowing the most advanced projects to connect first, regardless of whether they are at transmission or distribution level.

Devolved governments
Delivering Clean Power by 2030 is a cross-UK mission. Devolved government ambitions include:

- **The Scottish Government** set out a draft solar vision for Scotland in their draft Energy Strategy and Just Transition Plan, published in January 2023. [footnote 10] The Scottish Solar Vision set actions to reduce barriers and facilitate greater deployment of solar in Scotland. The final solar vision is expected to be published shortly.

- **The Welsh Government's** target is to meet the equivalent of 100% of Wales's annual electricity consumption from renewable sources by 2035, and to continue to keep pace with consumption thereafter (there are no specific targets for various renewable technology types). Wales has a target for at least 1.5GW of renewable energy capacity to be locally owned by 2035. The Welsh Government recently consulted on a Just Transition Framework, [footnote 11] and has published a Net Zero Skills Action Plan, [footnote 12] outlining how skills will be a key enabler for delivering net zero. The planning system and building regulations are devolved to Wales and will have specific requirements and these need to be considered when developing in Wales.
- **The Northern Ireland Executive** has a target, passed in the Climate Change Act (Northern Ireland) 2022, for at least 80% of electricity consumption to be from renewable sources by 2030. There are no established targets for specific renewable technology types. However, the Energy Strategy for Northern Ireland identifies the need for a diverse mix of renewable sources. The draft Programme for government 2024-27 has an action to develop a Renewable Electricity Support Scheme that will help both in the delivery of self-sufficiency in affordable renewable energy and in achieving carbon targets.

The Solar Taskforce
The UK Solar Taskforce was established in May 2023 and re-assembled in Autumn 2024 to identify the necessary initiatives and new actions needed to meet the solar deployment ambition set out in the Clean Power Action Plan.

The core Taskforce group was supported by 5 subgroups focussing on identifying and delivering the actions needed to address challenges relating to electricity networks, rooftop solar, supply chains and innovation, skills and communications. A full list of the core Taskforce and supporting subgroup members can be found in the Acknowledgements.

Part 1: Setting Out

1. The role of solar in making Britain a Clean Energy Superpower

Solar energy is one of the cheapest forms of electricity generation and will play a key role in reaching clean power. It will enable cheap, efficient electricity to drive other sectors of the economy.

In recent years, the UK has witnessed sustained growth in its solar energy sector, with 18GW of solar capacity installed as of Q1 2025. [footnote 13] Solar is emerging everywhere. We are seeing projects ranging from ground-mounted installations to residential rooftops and commercial buildings. Even landfill sites are being constructed, as well as floating solar on lakes and watercourses.

The flagship CfD scheme is the main mechanism to incentivise large-scale renewable generation, including solar. Solar projects are also deploying on a merchant basis or through Power Purchase Agreements (PPAs) with commercial energy consumers.

Benefits of Solar
Solar generation provides a plethora of benefits. Firstly, the ramping up of rooftop solar deployment will reduce bills for households (around £500 a year for a typical UK home that installs solar, based on the current energy price cap) [footnote 14] and businesses that have installed solar panels. Ground-mounted solar is one of our cheapest electricity sources to build and operate at scale, with costs falling by around 50% since 2016, enabling the supply of low-cost power directly to the grid. [footnote 15], [footnote 16] The International Energy Agency now estimates that solar generation costs are lower than both fossil and non-fossil alternatives in most of the world [footnote 17]. The deployment of solar also boosts the UK's energy security, through diversifying the energy mix and reducing exposure to international fossil fuel markets.

Ramping up deployment is crucial for creating new, good quality jobs and promoting stable and consistent economic growth. Solar has the potential to drive a surge in job opportunities across various sectors, from manufacturing and installation to maintenance and research. We estimate that solar could support up to 35,000 direct and indirect jobs in Great Britain by 2030. [footnote 18]

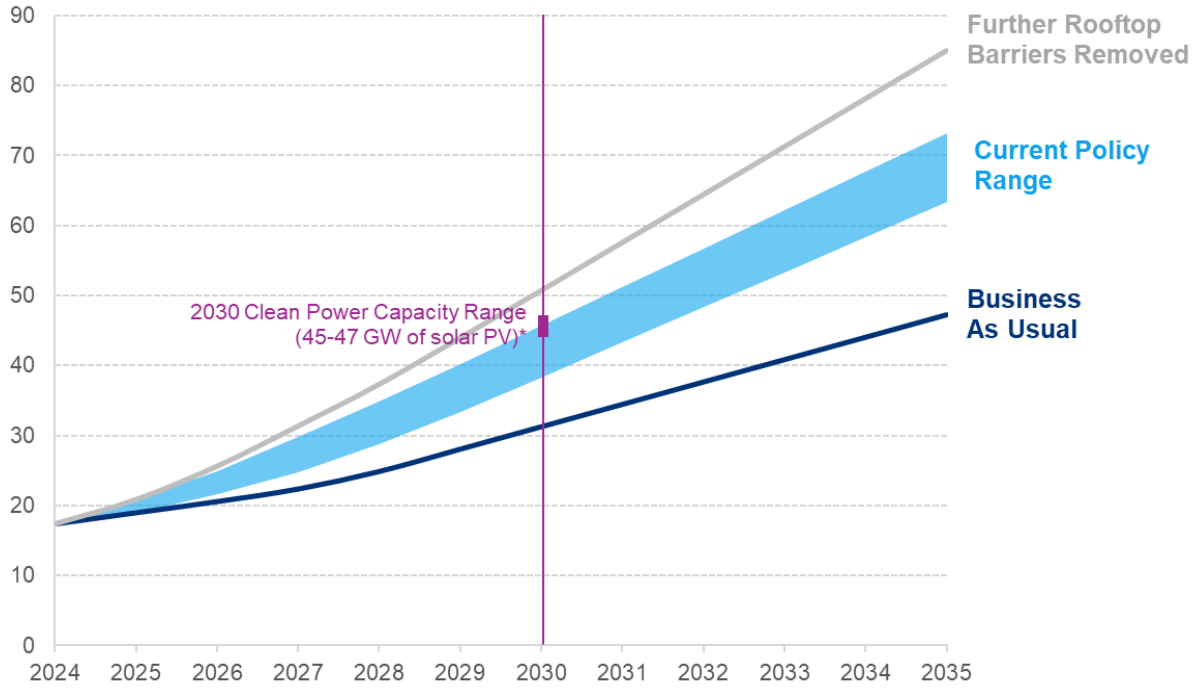
Speed of deployment is also a huge benefit of solar. Construction of a large-scale solar project can take as little as 1 year, and the deployment of rooftop solar is even quicker, which makes installing solar one of the fastest ways the UK can reduce its dependence on volatile fossil fuel markets.

2. Deployment Scenarios

A range of illustrative plausible scenarios have been developed to highlight the potential of solar deployment relative to the 45-47GW ambition set out in the Clean Power Action Plan. These scenarios cover all types of solar, including large-scale ground-mount, commercial and domestic rooftop for the period up to 2035, for Great Britain. [footnote 19]

Illustrative deployment scenarios show that reaching the Clean Power 2030 range is achievable, but will require significant action.

Figure 1: Illustrative solar deployment scenarios 2024-2035, Great Britain (GW)



*As noted above, although 45-47GW is our 2030 GB ambition for all solar, sufficient network capacity is available to exceed this level, subject to system need.

Business As Usual: No significant changes in policy, economic and infrastructure conditions.
In broad terms, solar is deployed at rates reflecting recent historic growth. In this scenario, capacity reaches c.30GW in 2030; well below the Clean Power Action Plan range; and around 45-50 GW by 2035.

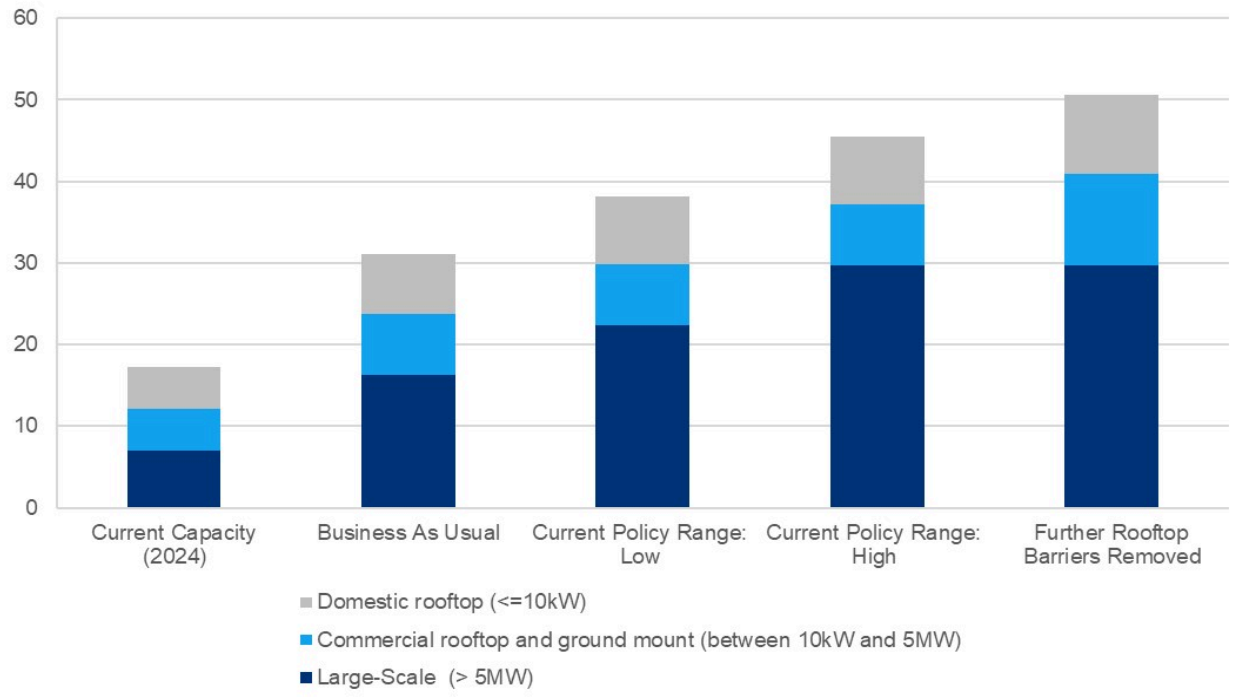
Current Policy Range: Favourable economic and infrastructure conditions under current policy.
The upper end of this range assumes implementation of planned connection reforms, and plentiful availability of skills, supply chain and finance. This leads to deployment which exceeds historic growth but is in line with the plans the government has set out. [footnote 20] At the upper end of this scenario, we would achieve 2030 deployment consistent with The Clean Power Action Plan (45-47GW), and 75GW by 2035.

Further Rooftop Barriers Removed: Additional policies to boost rooftop solar deployment.
In addition to the above, this scenario considers the potential impact of a range of future policies aimed at facilitating rooftop deployment, such as the Futures Homes Standard and measures aimed at removing barriers for

commercial rooftop. It is not a maximum – other policies such as the Warm Homes Plan and the role of Great British Energy are not explicitly captured. This scenario shows the potential for solar to even exceed the Clean Power range, should the system require it, reaching in excess of 50GW by 2030, and around 85GW by 2035.

The chart below shows estimated installed capacity by sub-group in the 3 scenarios by 2030, compared to the breakdown of current capacity.

Figure 2: Breakdown of illustrative 2030 solar capacity by sub-group and scenario (GW)



As seen in Figure 2, under the Current Policy scenario, of the capacity installed by 2030, around 60%-65% could be large-scale projects, around 20% domestic rooftop and around 15%-20% commercial rooftop and ground mount. Removing barriers for rooftop deployment could increase residential rooftop to around 10GW and commercial rooftop and ground mount to more than 10GW by 2030.

What could solar deliver by 2030 in the Current Policy scenario (high end)?

The following provides a snapshot of the potential of solar in 2030 versus today, under one of our illustrative deployment scenarios (Current Policy Range: High) – this scenario is consistent with solar deployment within the 2030 Clean Power range. [footnote 21]

What could 2030 deployment look like

	Today	2030
Homes powered (Ground-mount solar PV only, GB)	Equivalent of c.2 million	Equivalent of c.9 million
Jobs supported (Direct and indirect, (GB)	c.17,000	Up to 35,000
Land used (UK-wide)	0.1% of total UK land	Up to 0.4% of total UK land

Additional deployment potential
The above illustrative pathways are intended to represent a broad range of plausible deployment scenarios. However, the scenarios do not reflect the full technical potential for solar deployment (especially commercial rooftop), nor do they consider opportunities associated with new technologies such as floating solar on lakes, reservoirs or ponds.

Land use
We believe that increasing solar deployment can bring win-wins for communities and nature: skilled jobs, clean power and biodiversity gains. However, inefficiencies in the planning regime have distorted the market and held back growth. The government is taking action to streamline the process and reduce the time it takes to secure planning permission for major infrastructure projects (see Chapter 7 for further information).

We recognise that, as with any new development there will be questions about the effects of land use change and impacts on the local environment. It is important to strike a balance between local considerations and securing a clean, secure energy system for the future. This Roadmap sets out how, alongside ground mount projects, we plan to drive forward deployment of solar across multifunctional uses of space such as rooftops, car parks and water bodies whilst maintaining planning protections for our best agricultural land.The planning system considers the impacts of development on food production and planning policy and guidance for England is clear that wherever possible, developers should utilise brownfield, industrial, contaminated, or previously developed land. Where the development of agricultural land is shown to be necessary, lower-quality land should be preferred to higher-quality land. If a solar project proposes to use any best and most versatile agricultural land, [footnote 22] developers are required to justify using such land and design their projects to avoid, mitigate and where necessary, compensate for any impacts. [footnote 23]

The planning system also provides important checks and balances when new solar infrastructure is built, including environmental surveying and statutory environmental and habitat impact assessments. As solar sites

typically cause minimal disturbance to the ground, the remainder of the land on which they are installed can be used for plant growth and wildlife enhancements during the lifetime of the solar site. In some cases, these biodiversity benefits, including increases in the numbers of pollinators, can lead to increased productivity on adjacent agricultural land. [footnote 24] A recent study, from the Royal Society for the Protection of Birds and University of Cambridge found that, hectare for hectare, solar farms in East Anglia contained nearly 3 times as many birds compared to surrounding arable land. [footnote 25]

Solar and farming in combination can provide further financial opportunities, food production and environmental benefits through shared use of land. Many solar projects are designed to enable continued livestock grazing. Agrivoltaics, the integration of solar with arable farming, is also a rapidly developing industry, and government is working to understand the opportunities to exploit this technology.

The government recognises that there are concerns regarding the potential impact of solar developments on the viability of tenanted farm business holdings where planning permission has been obtained for solar development resulting in agricultural land taken out of the tenancy agreement. The Agricultural Holdings Act 1986 includes provisions to compensate a tenant for loss of land from from their holding resulting from a change of use that has received planning permission. The government wants to ensure that compensation is adequate and fair.

Going forward, at a strategic level, the Land Use Framework, and underpinning analysis, will ensure that food production and nature restoration are factored into the Strategic Spatial Energy Plan (SSEP) which will support a more actively planned approach to energy infrastructure across England, Scotland and Wales, land and sea.

With the potential for multifunctional use of solar sites, increased rooftop solar alongside ground-mounted sites, and the protections already in place in the planning system, we do not believe that increased solar deployment poses a threat to food security. [footnote 25]

The biggest risk to food security and the natural environment is the climate and nature crisis. That is why it is important that the UK takes a leadership role, working with partners around the world, in accelerating to net zero, including by rapidly expanding solar power generation.

Farming Case Study

David Mack and his father John are farmers of a 509-acre farm near Sheringham in North Norfolk, growing cereal crops, oil seed rape and sugar beet. In 2013, their renewable energy company Genatec obtained planning permission for a 3.6-megawatt solar farm on approximately 20

acres of moderate-quality agricultural land. Lark Energy subsequently constructed the site, which became operational in 2014. Consisting of over 15,000 solar modules, this small solar farm produces enough electricity annually to power more than 600 households. As part of the planning permission, the site also implemented a range of biodiversity and landscape improvements including the planting of hedges and copses around the farm. The site continues to serve an agricultural purpose through the grazing of 40 ewes and their lambs from April to October.

The solar farm produces 2 revenue streams for the farm business, lamb which is sold to the local butchers and the land rent. Both income streams underpin the small farm business to give it resilience against fluctuating crop prices.

After developing their small solar project, the Mack family realised the potential for providing solar farm maintenance activities and diversified their business to offer solar farm maintenance services across the UK. They now offer solar farm module cleaning and land management services (grass cutting, spraying off weeds, site inspections and implementation of habitat management plans) under the name Everblue Solar Limited.

As the farming industry shifts away from direct policy support and toward payments for public goods, along with a greater reliance on diversification income, the Mack family's understanding of integrating and managing solar farms within the rural setting is proving invaluable.

Part 2: Actions to Address Key Challenges

3. Rooftop Solar

Many consumers are already experiencing the benefits of solar power, with over 1.5 million domestic solar installations in the UK. With the right conditions in place, there is potential for millions more to install rooftop solar. With rooftop solar, households can save money on their bills and take greater control of their energy use; we estimate that a typical UK home could save around £500 a year from installing rooftop solar, based on the current energy price cap. [footnote 26] Rooftop solar can also be used in

conjunction with battery storage and used at peak times, enabling consumers to consume the energy they produce.

However, we know we need to go much further and faster to bring down energy bills for households, improve our energy security, reduce our reliance on volatile fossil fuel markets and create thousands of highly skilled jobs across the country. That is why the government has called for a rooftop revolution and will be setting out significant action through the Future Homes Standard and Warm Homes Plan, to maximise the number of solar-powered homes where appropriate. There is also huge potential for commercial buildings, which offer large roof spaces, and for public sector buildings, including social housing, to contribute to solar deployment.

Government has already taken strides to realise this potential. In March 2025, Great British Energy (GBE) announced its first major project, which will enable around 200 schools and up to 200 hospitals in England to install rooftop solar power and complementary decarbonisation technologies. This will help drive down energy bills for schools and hospitals, and increase NHS solar generation by 300%.

The cost of a typical 3.5kW rooftop solar installation was around £9,000 in 2013/14 (adjusted to 2024 prices), but prices have fallen over the last decade to £6,500 in 2024/25 [footnote 27].

However, there are still challenges to overcome, including grid connections, stakeholder engagement and finance.

Until now, one of the main challenges facing commercial rooftop solar deployment was the need for planning permission for installations over 1MW generation capacity. However, now that the 1MW cap has been removed the planning process has been simplified for larger non-domestic rooftop installations, enabling more solar projects to benefit from the flexibilities and planning freedoms permitted development rights offer.

Outdoor carparks also provide great potential to deploy solar canopies. These provide clean electricity, as well as potential for electric vehicle charging and shelter for cars. Following the implementation of a new permitted development right to allow for the installation of solar canopies in non-domestic off-street carparks in England, it is now easier and quicker to deploy this technology.

Action 1: To capitalise on this progress and potential opportunity, this year the government published a call for evidence to assess the potential to drive the construction of solar canopies on outdoor carparks over a certain size. Responses are currently being analysed.

Case Study - Leeds City Council’s Stourton Park & Ride – the UK’s first fully solar-powered park and ride

The Stourton Park & Ride, which opened in 2021, is the first fully solar-powered park & ride in the country. Developed by Leeds City Council, it boasts a 1.2MWp solar generational capability of Solar Car ports, a Smart HV/LV infrastructure, a high spec 500kW/950kWh Battery Energy Storage System (BESS) and 26 EV Charging Units. It is an example of how to push the boundaries on every front, with solar, curved carport frames, behind the meter batteries and future proofed EV charging points combining to overcome the constraints of a 400kW grid site connection. The result is an innovative renewable electricity system that improves Yorkshire's local electric vehicle charging network whilst providing better connectivity and reducing carbon emissions in the city by 471,000kg of CO2 per year.

Plug-in solar [footnote 28] can provide opportunities for households to adopt solar more cheaply, particularly for those in rented accommodation or flats. Currently, UK regulations do not allow plug-in solar to be used in the UK, but the government is working to explore its potential.

Action 2: Government will conduct a safety study this year with the aim of unlocking opportunities for plug-in solar over the next few years.

Alongside lower electricity bills, there are many extra benefits for householders that invest in rooftop solar. These include improved Energy Performance Certificate (EPC) scores and property valuation. [footnote 29] But barriers remain. This chapter sets out what the government and industry are doing to address them.

Domestic
Finance - Warm Homes Plan

Research has shown that the upfront costs, as part of wider concerns around financing, [footnote 30] are a key barrier to some households deploying rooftop solar.

Action 3: Through the Warm Homes Plan, the government will help households take up measures like solar panels, helping them save money on their bills. Further detail will be set out by October.

The government is investing £13.2bn in the Warm Homes Plan over the Spending Review period, to help households take up measures like solar panels, heat pumps, batteries and insulation. This support will lower bills and strengthen our energy security by cutting our reliance on volatile international fossil fuel markets that we don't control, as well as reducing emissions. Officials will also work with the finance sector on the role government may play in scaling up and mobilising low-cost lending to support households with the up-front costs of energy efficiency and clean energy upgrades.

Finance - Private Green Finance

Scaling unsecured green home finance (including personal loans, point-of-sale finance, and leasing) for solar installations in domestic properties faces many barriers at present, including regulatory risks associated with some of the rights and protections afforded by the Consumer Credit Act 1974 (CCA). The government is committed to CCA reform and as part of that will explore how reform could support the rollout of green finance products, while also maintaining robust consumer protections. CCA reform is split into 2 phases. The Phase 1 consultation is now open until July 21 2025 with a focus on information requirements, sanctions and criminal offences. The government plans to consult on Phase 2 later this year which will cover the cross-cutting theme of green finance.

Action 4: The Green Finance Institute (GFI) will work with government, the finance sector, consumer rights organisations, and other relevant industry bodies to facilitate rooftop solar and provide financial solutions for all suitable customers (for detail, see Appendix I).

The government has also funded extensive innovation work to support the development of the green finance market for home decarbonisation. The Green Home Finance Accelerator (GHFA) programme, [footnote 31] which launched in October 2022, has provided £20 million of grant funding to support UK finance providers and other organisations including FinTech and energy providers, to develop a diverse range of innovative green home finance products and services. This includes an innovative solar-as-a-service project, Sunsave's Electric Roof Project, which piloted installation at no upfront cost, with long-term service relationships and monthly subscription-type payments for homeowners instead.

E.ON's Optimised Energy-as-a Service project explored how innovative finance models, specifically those resembling Energy as a Service (EaaS), could support the uptake of whole house retrofit solutions such as solar PV, battery storage, and air source heat pumps. This pilot included supplementary financing options that would enable consumers to install a heat pump as part of the overall package. The GHFA pilot projects conclude by the end of June 2025. Outputs from all 13 pilot projects are expected to demonstrate proof-of-concept across a range of financing models and encourage and inform further innovation amongst finance providers and other market players.

A list of green mortgages and unsecured green home finance products currently available in the UK can be found on the GFI website, [footnote 32] some of which support solar installations.

Finance - Social Landlords

There are opportunities for bill savings in social housing. The government is working to reduce bills for social housing tenants by fitting solar through the

Warm Homes: Social Housing Fund (WH:SHF).

The WH:SHF offers landlords the opportunity to install solar on social housing as part of a package of measures to take a home to EPC C. [footnote 33] Wave 3, which began delivery in April 2025, is expected to install solar on tens of thousands of social homes. Government is also planning to consult on proposals to introduce a Minimum Energy Efficiency Standard for the social rented sector (SRS MEES). If introduced, MEES may stimulate the installation of solar on many social homes. There may be further opportunities to incentivise the installation of solar onto social housing beyond the WH:SHF and SRS MEES.

Action 5: UK Government to consult on MEES for social rented sector and consider additional ways in which social landlords can be supported and further incentivised to provide solar to their tenants.

Regulations
Regulations - Future Homes Standard

As part of the Plan for Change, the government has committed to build 1.5 million new homes over the course of this Parliament and introduce new standards that will ensure they are fit for a net zero future.

Action 6: UK Government will publish the Future Homes Standard this Autumn. The new Standard will ensure solar panels are installed on the vast majority of new build homes once it comes into force, saving households hundreds of pounds a year on their energy bills.

Including solar alongside low-carbon heating, such as heat pumps, and high levels of energy efficiency will cut people's energy bills and boost the nation's energy security with clean, homegrown power. Full details will be confirmed when the regulations are published this Autumn.

Regulations - Energy Performance Certificates

Action 7: The government intends to introduce a "smart readiness" metric as part of wider EPC reform. If introduced, this will better capture the value of solar. The government intends to introduce these changes in 2026.

Government recently consulted on EPC reform as a key step to achieving Clean Power by 2030 and accelerating to Net Zero. If implemented as proposed, reformed EPCs will provide consumers with accurate information about the energy performance of their buildings allowing them to make informed investment and purchase decisions. Government also recently consulted on increasing minimum energy efficiency standards in the domestic private rented sector. The consultation included proposals for rented homes to achieve EPC C or equivalent by 2030.

In Scotland and Northern Ireland, the responsibility for energy certificates and private rented energy efficiency standards are devolved. The Scottish Government has conducted its own consultations on EPC reforms and minimum energy efficiency standards and plans to implement revised regulations independently.

Regulations - Property Valuation

Rooftop solar drives down bills. It can also increase the value of your property and assist with flexibility in the electricity system. It is vital that the value of these benefits is captured by households.

Action 8: Government and Industry will work with Royal Institution of Chartered Surveyors (RICS) to ensure that solar is valued properly on residential properties. [footnote 34]

Government and industry are collaborating with RICS to standardise valuation practices, reflecting the true benefits of solar installations in the housing market.

Commercial Rooftop Solar

Commercial rooftops [footnote 35] include municipal buildings, industrial and manufacturing buildings, offices and warehouses. Research commissioned by the UK Warehousing Association (UKWA) and conducted by Delta-EE highlighted the significant contribution that the warehouse sector could make to delivering on the solar ambition. There is a clear commercial case for rooftop solar in industrial and commercial sectors. UKWA estimates that solar has the potential to reduce annual electricity costs by 40-80% and could save the warehouse sector £3 billion per year. The UK's 20% largest warehouses alone can provide 75 million square metres of roof space, [footnote 36] which is estimated to support around 15GW of rooftop solar capacity.

Building Regulations and Non-Domestic Buildings

The government wants to help landlords and tenants take back control of their energy security through deployment of rooftop solar.

Action 9: Two options for the Future Buildings Standard were proposed at consultation stage, both of which would lead to solar deployment on new non-domestic buildings. UK Government is currently considering the proposals and feedback from the consultation on Future Standards and will publish a response this Autumn.

Rooftop solar on new non-domestic buildings will, where appropriate, play an important role in the drive for solar and the Future Standards this year will ensure our new buildings are fit for a net zero future.

Stakeholder Interactions

Most commercial leases place repairing obligations upon tenants, meaning the tenant has to maintain the building. These complex commercial lease agreements can hold back rooftop solar deployment.

Action 10: UKWA and the wider logistics industry will work with real estate and solar industries to:

- Streamline the approach to installing rooftop solar on leased commercial buildings and address the challenges posed by the traditional lease structure;
- Develop guidance on how contractual agreements between landlords and tenants can be made to accommodate rooftop solar.

Equipping tenants and landlords with knowledge on how their contractual agreements can allow for rooftop solar installation, repair and end of lease arrangements will enable faster deployment of rooftop solar. UKWA and Syzygy Consulting conducted a stakeholder mapping exercise and hosted an Industry Roundtable with DESNZ last year. This included discussion between major UK real estate owners and national occupiers in finding mutually acceptable solutions whereby the owner of a building is able to successfully fund an onsite solar installation with an occupier in situ.

Finance

It can be challenging to secure finance for behind-the-meter solar installations if the end-user does not have a strong credit rating. This means commercial rooftop or small onsite solar tends to be restricted to major corporates, leaving a large part of the market untapped. In particular, the growth of the UK's active PPA market (whereby a corporate buyer agrees to purchase electricity from a renewable energy producer over a defined period of time), is subject to a range of challenges. This includes a lack of demand for long-term fixed price PPAs from across the whole breadth of the corporate sector and limited credit strength required to underpin project financing based on PPAs.

Action 11: The National Wealth Fund (NWF) will explore potential structures to finance solar projects or portfolios [footnote 37] pursuing innovative business models, including those entering into PPAs with sub-investment grade counterparties.

Action 12: The DBT Industrial Strategy team will coordinate a Steering Group across Whitehall and arm's-length bodies to consider potential government intervention to promote Corporate PPAs.

Great British Energy and the Public Sector
The government announced in March 2025 that GBE will enable around 200 schools and 200 hospitals in England to install rooftop solar. Further detail on how funding will be allocated will be set out in due course. This is

just the start. GBE, in support of the Local Power Plan, will also turbocharge support for community and local energy, working with Mayoral Strategic Authorities, Local Authorities, Community Energy Groups and devolved governments, providing funding and support at all stages of project development – to increase significantly the roll out of local renewable energy projects across the UK.

Action 13: The government is committed to schools deploying solar. Great British Energy and government have match funded the installation of solar on around 200 schools and 200 hospitals to be deployed in 2025/2026.

Government should lead by example and facilitate the installation of solar on all public sector buildings where feasible. It has published Solar on the Government Estate: A Senior Leaders' Handbook. [footnote 38] This document is a primer for senior leaders, setting out the high-level strategic arguments for solar on their estate, and signposting more in-depth and comprehensive guidance where appropriate.

During the remit of the Solar Taskforce, members and officials fed into discussion and planning around the development of the Department for Education's Net Zero Accelerator Service to create a 'one stop shop' to fund and deliver decarbonisation initiatives across the education estate in England. This will help schools take back control of their energy through clean power and save money on their bills.

Local and Community Energy
Local communities must be at the centre of local project development and directly benefit from clean energy projects.

GBE, in support of the Local Power Plan, will enhance support for local and community energy by providing funding, capacity and capability support at all stages of project development, driving the growth of the local and community energy sector.

This will ensure that local communities directly benefit from clean energy projects through increased energy security and resilience, good jobs and economic growth. This work to support local and community energy must go hand in hand with action to address the barriers faced by community energy projects. GBE will build on the Department's current support for the sector; this includes the Local Net Zero Hubs Programme, which will support local authorities in England to develop net zero projects and attract commercial investment. On 21 March 2025, government announced an additional £6.8 million for Local Net Zero Hubs across England. On the same day, GBE's Community Fund was launched, providing £5 million in grant funding for community energy groups. This will ensure continuity from the £10m Community Energy Fund previously delivered by the Hubs, which allows rural and urban communities across England to access grant funding to develop local renewable energy projects for investment, including for solar.

Government is also keen to work with key local stakeholders on the policy and delivery areas which affect them. For example, the government runs the Community Energy Contact Group to strengthen our engagement with the community energy sector. On local supply challenges, GBE will work closely with DESNZ as well as Ofgem and other key stakeholders to address the regulatory barriers to local energy supply.

Additionally, the NWF offers low-cost, long-term lending to local authorities delivering infrastructure projects that align with their net zero and economic growth mandate. This includes the financing of solar projects developed by local authorities, with a minimum ticket size of £5m. The NWF also offer a local authority advisory service, currently at no charge, that provides impartial advice on the commercial and financial aspects of a project.

Installation Standards and Consumer Protection for Domestic Solar
While domestic consumers can install any kind of solar installation, they mostly choose rooftop solar. These consumers deserve rigorous consumer protections if something goes wrong. According to research conducted by Citizens Advice and the Microgeneration Certification Scheme, some consumers are confused as to whom to turn to if something were to go wrong with their installation.

Action 14: Government is pursuing reform of consumer protections: further details will be announced in due course.

The government is reviewing the broader consumer protection landscape and will bring forward wider system reforms to ensure consumers can have confidence in the quality of installations and protections when upgrading their homes.

4. Electricity Networks

As more and more renewable energy projects are developed, the number of grid connection requests across all technologies, both at transmission and distribution levels, has surged. This demand, combined with network capacity challenges, has created a connection queue, and ultimately sees many solar projects getting delayed, curtailed or cancelled.

The government is therefore committed to a fundamental and urgent reform of the connections process, as set out in the Clean Power Action Plan. The Clean Power Action Plan included connections capacity allocations for solar for 2030 and 2035, with regional breakdowns for England and Wales, and Scotland, to help align the connection queue with 2030 Clean Power. Zombie projects will no longer hold up the queue for connections, allowing the National Energy System Operator (NESO) to prioritise businesses which will drive growth and deliver energy security.

Ofgem approved NESO's 'first ready, first connected' **connections reform** proposals on 15 April 2025 to prioritise viable projects in the connections queue that meet the UK's strategic needs. These reforms will help us to deliver renewables faster and cheaper. This will provide energy security and bring down consumer bills in the long run.

Moreover, as part of the Connections Action Plan, Ofgem is conducting an end-to-end review of the connections process. The current system isn't serving customers adequately. Standards of service vary between Distribution Network Operators (DNOs), and developers report lengthy delays, poor communication, and a lack of transparency. Ofgem will consider changes to the regulatory framework to improve customer service and timely delivery. The review covers all sizes of connections from solar panels on domestic properties to the largest transmission connections. The consultation on these changes closed in February, and Ofgem's response will be published in due course.

Networks for Ground Mount

Large-scale solar projects have faced some of the longest delays and costs as a result of the connections queue. It is important that viable projects are able to connect quickly, in order that they can come online by 2030 and deliver clean power in line with the government's ambitions.

The utility-scale sector is also changing. More projects are seeking to connect directly to the transmission network. As the connections reform process continues, it will be important that networks facilitate and accommodate the modern solar industry.

Timing of Submissions

Historically, there has been no formal requirement for how quickly a DNO should submit a project or scheme to NESO once the distribution connection offer has been accepted by the customer. Although the Energy Networks Association (ENA) Queue Management User Guide (2020) states that 'it is for the customer to decide', the customer has rarely been able to influence the process. As a result, timescales can vary significantly between DNOs, and customers lack clarity on when their project will be submitted.

However, Ofgem, NESO, industry, and the networks have been working quickly to improve this process. On 15th April 2025, Ofgem approved a code modification (CMP434) which will set reforms to the connections process – this includes introducing clear minimum standards which networks must meet regarding the timeliness within which they submit projects to NESO for transmission evaluation. From June this year, all DNOs will be required to submit project information to NESO within the relevant Gate Two window for which the project has submitted the information. There are currently planned to be 2 Gate Two application windows per year.

Transmission / Distribution Interface

As connections reform is introduced, applicants for capacity on the distribution system should not be disadvantaged compared to those connecting to the transmission system. Timings should be based on application date, rather than when the DNO passes the application to NESO. Progress on milestones should be based on the date that milestone is achieved, not when the distribution company notifies NESO of the event happening.

Action 15: NESO and network companies, when implementing connections reform, should ensure that the process of assigning queue position is fair across Transmission and Distribution.

Clock starts and technical competency

Once a Project Progression application has been made by the DNO, it can take significant time (sometimes several months) before it is considered or deemed technically competent by NESO Until this time, it is possible for transmission projects to be offered connections [footnote 39] that, in effect, jump ahead of distribution projects that may have been in the queue for some time.

Action 16: Ofgem will ensure that its end-to-end review includes recommendations around timely assessment and communication of transmission impacts and any required works/ costs.

Accepted Demand Data

Many solar projects now include battery storage (hybrid projects),adding a demand component to the connection which needs to be considered when assessing the impact on the existing network. Generation and demand-side response projects above 50kW holding connection agreements are listed in DNOs' Embedded Capacity Registers (ECR, developed under DCUSA), with the dataset held on the ENA website. [footnote 40] There are no equivalent registers for demand projects. Developers of hybrid projects have to submit connection applications to determine whether there is network capacity available, burdening DNO planning teams.

Action 17: DNOs, with the support of ENA and industry, to consider expanding the Embedded Capacity Registers (ECRs) to include demand project data. [footnote 41], [footnote 42]

Super-grid transformers

Costs of supergrid transformers are an example of where reinforcement costs urgently need to be reviewed. How the cost of new supergrid transformers is allocated is a postcode lottery. Grid Supply Points (GSPs) with more than one user (infrastructure sites) see these costs socialized.

However, there is uncertainty as to when/if existing or new GSPs will become infrastructure sites, particularly regarding ‘tertiary’ connection uptake and the design/location of new GSPs.

Action 18: Networks/Ofgem to continue work reviewing charging arrangements for Supergrid Transformers and should provide an update to industry by June 2025.

Options could include costs being fully socialised through transmission or distribution use of system charges or through an alternative more appropriate solution. Ofgem provided an update on the state of the issue in March 2024, since which point Ofgem, ENA and wider industry have been considering how best to progress it to resolution noting the significant external dependency on the Review of Electricity Market Arrangements and other areas of charging reform.

Planning consent for power lines on wood poles

Under the Planning Act 2008 (which so far as relevant extends to England and Wales), a Development Consent Order is the means of obtaining permission to construct and maintain developments categorised as Nationally Significant Infrastructure Projects (NSIPs). The connection of solar projects to the electricity network often requires the construction of new distribution power lines which frequently suffer planning delays. Currently, 132kV overhead wood pole lines over 2km in length are considered NSIPs despite their low visual impact.

Action 19: DESNZ and MHCLG will consider reforms to planning requirements for distribution power lines carried on wooden poles.

Networks for Rooftop

Rooftop solar panels will be connected to the distribution network. Different standards and approaches across the regional DNOs can cause confusion and uncertainty for those seeking to install rooftop solar.

As the deployment of rooftop solar continues to grow, it will be vital for DNOs to make the connections process as easy as possible, streamlining and harmonising approaches where appropriate.

Residential solar connection process

In general, residential rooftop solar projects above 3.68kW [footnote 43] per phase must receive DNO approval. [footnote 44] This can lead to installers limiting domestic solar projects to 3.68kW to avoid extra work and time involved, even where a rooftop could accommodate more panels. One DNO has raised this to 5kW, encouraging larger installations of residential solar. Ofgem has also proposed, in its End-to-End review consultation, an obligation on DNOs to review the 3.68kW threshold.

DNOs have recently launched a new connection process, introducing ‘Fast Track’ approvals for generation smaller than 14.72kW. DNOs must still approve the generator before it can be connected, but the response period is now 10 working days.

Action 20: DNOs, through the ENA and with input from industry, should continue to review their approaches to connecting residential rooftop solar projects.

Connection of Solar on New Build [footnote 45]

Distribution network design tends to take a worst-case approach to assessing the impact of solar generation on sites where electricity is consumed, and battery storage is considered as a problem rather than an opportunity for the network. Solar connections for large non-domestic new buildings are not sized for feasible solar generation but limited to current on-site demand. Solar installers have also raised concerns around the repeated need for witness testing and unrealistic assessment of the contribution of solar to network faults.

Action 21: DNOs, with the support of the ENA and input from industry, should consider (i) how better to facilitate solar installations on large non-domestic new buildings; and ii) developing a common approach to witness testing.

Action 22: When offering flexible connection requiring ‘active network management’, wireless communication should be considered instead of digital signalling cables from substation to generation.

Streamlining the connections process for large new buildings built with pre-installed solar panels will facilitate increased utilisation of commercial rooftops, and reduce construction delays and costs. There is the potential for wireless communications to update the system, removing the need for further infrastructure where active management is required.

Independent Distribution Network Operators

Independent Distribution Network Operators (IDNOs), coordinated by the Independent Networks Association (INA), are typically responsible for owning and operating discrete networks in business parks and airports. IDNOs are not restricted by geography in the same way as DNOs but are still licensed by Ofgem. However, there is little uniformity across their operations and their delivery of service. This can add unnecessary complexity to large-scale project management, particularly in the adoption of rooftop solar in the commercial sector.

Action 23: IDNOs – through the INA and liaising with the ENA where appropriate - will review connections processes and procedural consistency with respect to solar customer connections.

Action 24: Ofgem to undertake a review of the regulatory arrangements governing iDNOs by the end of 2025, including considering whether regulation should be brought into alignment with other DNOs.

Cross-cutting actions

Some aspects of the Taskforce's actions apply to ground-mounted and rooftop solar alike. These areas can provide efficiency gains across the sector, by reflecting modern deployment, aligning service standards, and providing useful data.

Transmission Impact Assessments

An issue for small solar projects connecting to distribution networks is a requirement to seek a transmission impact assessment (TIA) before connecting.

Action 25: Ofgem to increase the TIA threshold in England and Wales to 5MW.

Recently we have seen SSEN - Transmission raise the threshold for TIA from 50kW to 200kW on mainland Scotland, which has seen a positive impact on solar projects connecting to the SSEN distribution network. Following discussions in the Solar Taskforce, Ofgem, NESO, and networks agreed an action to prioritise work to increase the TIA threshold from 1MW to 5MW in England and Wales. Ofgem approved this change in May 2025.

Action 26: DNOs, with the support of the ENA, to promote and publicise treatment of generation which is to be submitted to TIA, whilst continuing to explore the adoption of best practice when connecting zero-export projects above the TIA threshold.

Promoting best practice and standardising treatment across DNO regions will improve the experience of rooftop customers seeking to connect. It will remove inconsistencies, and may reduce delays for zero-export projects.

Data Definitions

There is not a clear and consistent position across the sector on what constitutes commercially sensitive data. This can cause delays to processes for grid connection. Although Ofgem and ENA have produced guidance, knowledge gaps remain, and work is still required to ensure all stakeholders have the same understanding of what qualifies as commercially sensitive data.

Action 27: Ofgem, working with networks companies, will continue to develop sector-wide understanding on what counts as commercially sensitive data.

A sector-wide definition would allow applicants (and potential applicants) to understand the likelihood of projects in the queue going ahead and the impact of new demand applications. The current information shared by UK Power Networks is good practice and should be adopted more widely.

Post acceptance engagement

In some cases, it can take months to organise the kick-off meeting following the acceptance of a connection offer. This can introduce significant delays, difficulties and uncertainties in planning project finance and programmes.

Action 28: Ofgem, as part of their end-to-end review of connections, obligations and incentives, [footnote 46] will consider introducing additional post-acceptance standards to improve the current levels of service.

Battery Storage modelling inconsistencies

Battery energy storage systems (BESS) have historically been treated as additional generation and demand. This overstates their impact on the network. BESS co-located with solar should instead be assessed by network companies as reducing output when there is peak generation and contributing output at times of peak demand. In other words, benefiting rather than hindering the electricity system.

Action 29: Network companies, ENA and industry, should continue to consider harmonising and publishing their modelling methodologies related to BESS, P2, P28, P18 and other planning assumptions. Developers should assist networks companies with their assessments by providing BESS profiles for non-firm connections.

DNOs, Transmission Operators and NESO have been working collaboratively to update modelling assumptions. However, DNO remodelling only applies to applications received from 30 September 2023 onwards. It is still also necessary to ensure a consistent approach between transmission and distribution networks in applying the network planning assumptions. [footnote 47]

Streamlining the connections process will be crucial, if we are to achieve the government's ambitions for solar. The actions above will reform the connections queue, review the experience of connecting customers, and simplify processes for those developing solar projects.

5. Supply Chain and Innovation

There is a once-in-a-generation opportunity to grow the solar supply chain and manufacturing capacity in the UK where it makes economic sense to do

so, and supports our Clean Power 2030 mission. A strengthened solar supply chain can create good new jobs and significant export opportunities, build domestic capability, and increase energy security by reducing reliance on imports. While the UK is unlikely to be able to compete in the existing global market for conventional solar panels, there is scope to grow industries producing balance of system components (broadly all components apart from solar panels), [footnote 48] creating opportunities for key industries like steel. Other areas with potential include innovative panel applications, storage, and services. As a world leader in cutting edge solar research and development, we have the opportunity to further crystallise our position as a nation that drives the development and adoption of new solar technologies, such as Artificial Intelligence (AI). Additionally, sectors like assembly, business services, and new energy infrastructure construction are going to be crucial for the growth of the UK solar industry.

The Current State of Global and UK Supply Chains and Innovation

The Taskforce mapped the current state of global and UK supply chains (including related services) and reviewed the solar innovation landscape. This took into account existing UK evidence on solar value chains, including a report by Baringa on renewable supply chains. [footnote 49] A summary of findings is set out in Annex II. Whilst these highlight the strong position of China in conventional solar panel manufacturing, [footnote 50] they underline the diversification of other areas of the supply chain, with the UK well placed to capture opportunities associated with the manufacture of balance of system components, batteries and innovative technologies.

Power Roll

Power Roll's unique solar film is based on a patented micro-groove architecture, utilising established roll to roll manufacturing processes. Invented in the UK, they have successfully proven the science; protected the technology, through a global patent portfolio; and are now demonstrating and optimising manufacturability in a pilot factory in County Durham.

With the completion of a current fundraising round, Power Roll is preparing to construct a first of its kind commercial factory in the Northeast, enabling annual production of 100MW, scaling to 1GW, producing 6 million square meters of solar film annually and over a 20-year period saving 95 million tonnes of CO2. The UK plant will create hundreds of jobs as well as serving as an important inflection point for the international deployment of the solar film through a global licencing model, with support in place from established blue-chip manufacturing partners, suppliers, and potential customers.

Maximising Investment Opportunities

The UK has several pioneering organisations and companies developing balance of system components and innovative solar value chain products. New emerging technologies include lightweight and flexible perovskite modules, tandem models, balance of system components such as steel racking and cabling as well as battery storage and panel assembly. Alongside this is the development of floating solar and space based solar power. The UK is also a leader on smart grid integration and has a strong position in innovative operations and maintenance processes, with a growing interest in end-of-life recycling and AI for manufacturing and the operation of projects.

Financial support for scaling up manufacturing and innovation

UK Government-backed finance options have been available to help UK companies, including those involved with solar, to develop and scale their business through several organisations including the British Business Bank (BBB), the National Wealth Fund (NWF) and UK Export Finance (UKEF) (see Annex II for further information). The UK Government encourages renewable developers including solar companies accessing its flagship CfD scheme to grow the supply chain through the Supply Chain Plan process. [footnote 51] It also supports supply chain innovation through a range of schemes, such as the Energy Entrepreneurs Fund, and initiatives funded by UK Research and Innovation (UKRI).

Clean Power 2030 is a signal to investors to locate in the UK, building strong domestic supply chains. However, the Taskforce identified that there may be some gaps for solar companies in areas not already covered by existing public funding mechanisms, such as support for Technology Readiness Level 5/6 products [footnote 52] or smaller funding requests (e.g. below £25m), which can be a particular barrier for SMEs looking for smaller investments.

Action 30: The UK Government will consider the case to further support companies looking to scale up production of innovative solar technologies and processes and balance of system components.

Providing practical support to business

The Taskforce also identified a number of practical challenges to setting up and building factories and facilities, including financing, identifying suitable sites, obtaining land at reasonable cost, complex planning systems, and delays in network connection to factories. The solar supply chain must manage a significant increase in turnover if it is to deliver 45-47GW by 2030. This will require all key players to be capable, competent and focused on adding value.

There is a range of information and support for UK businesses available including on investment support, [footnote 53] export support, [footnote 54] Help to Grow campaign, [footnote 55] and business expansion in the UK, [footnote 56]

all of which can be applied to solar, as well as guidance on Overseas Business Risks. [footnote 57] Additional business support specifically for Scotland, [footnote 58] Wales, [footnote 59] and Northern Ireland [footnote 60] can be found at the respective references. However, the Taskforce suggested that there is a lack of awareness of this support, particularly amongst new players, so it is important to consider how best to bring this information together and tailor it to the needs of the solar sector.

Action 31: UK Government will work with industry to create an online directory for solar manufacturing businesses.

Action 32: SEUK will work with industry to develop an exemplary fair contracts and fair payment document

The directory will consolidate and tailor existing information, support and contacts across various government departments and agencies, building on the existing general business support highlighted above. This bank of knowledge can then be promoted throughout the sector, so all solar businesses are aware of the support offered.

Well defined conditions of contract and quick payment routes through the supply chain will also help deliver these objectives and ensure that there are fewer barriers to entry for new entrants and SME companies joining the supply chain. Contracts will be fair and ensure that risks lie with those most able to manage them.

Support for Commercialising and Upscaling Innovative Technologies and Processes

The UK has a rich Research and Development (R&D) landscape across many solar PV and solar thermal technologies, services, and processes, but upscaling these new technologies to commercialisation and manufacturing is proving challenging. There are several examples of companies seeking to locate new plants overseas to benefit from more supportive regimes.

Standards and certification for innovative panel technologies such as thin film and perovskite cells

For any new innovative product, standards and certifications are important for quality assurance, safety, reliability, and performance, as well as sustainability. Existing International Electrotechnical Commission standards for silicon photovoltaic cells are not well suited to next generation solar technologies such as silicon-perovskite tandem cells, which have significantly different physical and performance characteristics. This uncertainty constrains the development of such goods and undermines investor confidence.

As more UK companies are increasing resources to scale up innovation, there will be a greater demand for certification, qualification, R&D, and outdoor testing facilities. Whilst UK companies are currently able to use

overseas facilities, this presents significant risks and limitations, such as IP leakage risks, high costs, low prioritisation against local companies, uncertain future access and project delays. The above can result in limited R&D progression and missed opportunities for the UK industry.

Action 33: UK Government will explore opportunities to support the development of standards for next generation solar panels and emerging applications.

Action 34: UK Government and the National Physical Laboratory will explore long-term possibilities for establishing a PV innovation and infrastructure platform including a solar technology measurement and characterisation laboratory.

Work is underway on standards for next generation solar technologies. Through the work of the British Standards Institute , the UK is already a leading voice in this area. If the UK is able to influence the development of international standards for emerging technologies, it will support and cut costs for UK manufacturers exporting to other countries. This is because UK manufacturers will be utilising these standards domestically and will not have to adapt processes or production methods to export to other markets.

Establishing an innovation and infrastructure platform would further support this goal, by bringing together a network of national laboratories, universities, industrial stakeholders, and governmental organisations to coordinate and concentrate expertise, providing greater independence and simplified access, focusing on areas of UK strengths where there are opportunities to maintain global leadership.

Intellectual Property

At the World Trade Organisation (WTO), there are currently proposals discussing the role of intellectual property rights in relation to accessing climate-related technologies, including solar.

Action 35: The UK will continue to support evidence-based policymaking to ensure UK innovation is not undermined, engaging constructively in discussions to make sure UK priorities are represented at the WTO when necessary.

This will ensure a balanced intellectual property (IP) framework which will help underpin successful R&D activity. The international IP framework (WTO TRIPS Agreement), which sets the minimum standards for the protection and enforcement of intellectual property rights for all WTO members, is a critical tool to support commercialisation through voluntary licensing and technology transfer partnerships.

Other innovative technologies and processes

Further actions to help maximise the potential for other specific emerging technologies are set out in Appendix 1, listing all Roadmap Actions. These cover AI, Agrivoltaics and Battery Cell Innovation.

Tackling modern slavery in solar supply chains

Members of Uyghur and other minorities in Xinjiang, China, continue to suffer serious violations of their human rights by the authorities of the People's Republic of China. It is estimated that Xinjiang produces between a third and one half of the world's solar-grade polysilicon, a key component used in the manufacture of solar panels, as well as a range of other components used by the electronics sector. There has been reporting [footnote 61] that some companies involved in the global supply chains of solar equipment and polysilicon may be linked to forced labour. This has been further complicated by issues with traceability and transparency in these parts of the supply chain. The government's Overseas Business Risk Guidance [footnote 62] for China and the Foreign, Commonwealth and Development Office's (FCDO) Annual Human Rights Reports [footnote 63] provide further detail of the situation in Xinjiang and China more widely.

This government is clear that no company in the UK should have forced labour in its supply chain, including Great British Energy (GBE). The government has already committed that GBE's strategic priorities will include an overarching expectation to tackle forced labour, becoming a sector leader in this space, as the British public would rightly expect from a company they own. This includes the appointment of a senior leader on ethical supply chains and modern slavery. The Great British Energy Act has set out in law that "measures to ensure that slavery and human trafficking is not taking place in its business or supply chains" is on the list of GBE objects. This latest commitment will support domestic suppliers, alongside those across the world, who have the highest possible standard of safe supply chain practices.

Alongside this, the Procurement Act 2023, which came into force in February 2025, strengthens the government approach to modern slavery, empowering public sector contracting authorities to reject bids and terminate contracts with suppliers which are known to use forced labour themselves or anywhere in their supply chain. [footnote 64] Use of the Modern Slavery Assessment Tool (MSAT) [footnote 65] is also encouraged for public sector organisations with existing suppliers. This tool has been designed to help public sector organisations work in partnership with suppliers to improve protections and reduce the risk of exploitation of workers in their supply chains. The UK Government has also co-sponsored the development and publication of Action Sustainability's "Addressing Modern Slavery and Labour Exploitation in Solar PV Supply Chains Procurement Guidance' [footnote 66] to provide further tools to industry to ensure the responsible sourcing of solar panels.

Section 54 of the Modern Slavery Act 2015 places a requirement on businesses with a turnover of £36m or more to publish a slavery and human

trafficking statement each financial year, setting out the steps they have taken to prevent slavery and human trafficking in their operations and supply chains. The purpose of these provisions is to provide transparency, whereby businesses monitor their supply chains with rigour, are open about their risks and how they are mitigating them, listen to their workers and act when issues are found. Section 54 was designed to allow scrutiny by consumers, investors, and civil society to hold businesses to account.

The government is considering how it can strengthen the Section 54 regime, including penalties for non-compliance. It will set out the next steps in due course. The Home Office is currently working with a wide group of stakeholders from business, academia and civil society to update the Section 54 Modern Slavery Act statutory guidance. This will further support businesses to produce high quality statements, which are underpinned by effective measures to prevent and effectively respond to instances of modern slavery in supply chains.

The UK Government also supports and promotes voluntary due diligence approaches taken by UK businesses to respect human rights across their operations and supply relationships, as steered by the UN Guiding Principles on Business and Human Rights (UNGPs) and the Organisation for Economic Co-operation and Development Guidelines on Multinational Enterprises. This year, the FCDO is carrying out a National Baseline Assessment (NBA) on the implementation of the United Nations Guiding Principles on Business and Human Rights. The NBA will contribute to the evidence base to inform the UK's approach to tackling business-related human rights abuses, including in global supply chains.

The Solar Stewardship Initiative

The UK solar sector has been proactive in its response to this issue and the UK Government has been monitoring progress carefully. SEUK, working with its European counterpart, SolarPower Europe, and other international trade bodies co-initiated a solar supply chain sustainability assurance scheme, the Solar Stewardship Initiative (SSI). [footnote 67] The SSI's multi-stakeholder Governance Board is the main decision-making body of the initiative. It has allocated 3 (out of their 12) seats to civil society organisations, which carry voting rights.

Since its inception in 2022, the SSI has developed 2 standards focussed on improving governance, sustainability and transparency throughout the global solar value chain. As part of the SSI's ESG Standard, solar manufacturing sites are audited by independent third-party assessment bodies on governance and business ethics; environment; and human and labour rights and other Environmental, Social, and Governance (ESG) requirements. The first site certifications against this standard were awarded at the end of 2024. [footnote 68] The SSI's second standard, the Supply Chain Traceability Standard, provides a robust framework for tracing silicon (or other semiconducting materials) throughout the solar supply

chain. The first audits against this standard will take place over 2025, with the first certifications expected later in 2025 / early 2026.

The SSI is developing guidance for PV buyers at all levels and is due to issue a draft for consultation later this year. The SSI is also referenced in the Tackling Modern Slavery in government Supply Chains Guidance. [footnote 69] SEUK has also developed supplementary guidance to enhance due diligence within global solar supply chains, including a Supply Chain Statement and a Responsible Sourcing FAQ to support the industry's efforts. [footnote 70]

Action 36: The UK Government is clear that there should be no procurement of solar panels where there is evidence of forced labour. Through the Procurement Act, government will empower contracting authorities to exclude suppliers from government contracts who have committed labour market misconduct and/or environmental offences in the UK or overseas. Additionally, government will support and engage with industry standards such as the SSI and, if necessary, identify where further action is needed, so we can prevent government, and wider UK contracts from being awarded to those who cannot meet ethical and industry-specific standards.

Action 37: The UK Government and SEUK will engage with relevant civil society groups to discuss the ongoing work of the SSI and the diversification of supply chains.

The government is determined to eradicate the abhorrent practice of modern slavery and continues to review how best to tackle forced labour in supply chains, which includes engagement with relevant civil society groups. The government will assess and monitor closely the effectiveness of the SSI as the scheme is rolled out, alongside other relevant standards, existing measures and other policy tools, and will take further action if necessary.

Ensuring Sustainable, Resilient, Secure and Diverse Supply Chains

Strengthening and diversifying supply chains

Diversification of supply chains can boost resilience, reduce risk, improve sustainability and enhance overall competitive capacity. The UK Government is developing a new Trade Strategy which will support the UK's energy transition in alignment with the Clean Power Action Plan, ensure resilient and reliable global supply chains and reduce dependence on other countries. The government is also collaborating with the Global Clean Power Alliance (GCPA), a new international coalition committed to accelerating the global clean energy transition by bringing key stakeholders together in a unique forum. Working with international partners through the GCPA and other bilateral and multilateral initiatives to diversify and

strengthen supply chains has the potential to support new sources for critical clean power components, address bottlenecks and keep costs low.

Making efficient use of primary resources

Implementing policies that enable us to make the most effective use of important resources such as critical minerals, in tandem with building a more geographically diverse supply chain can mitigate the risks of overdependence on one area, encourage competition, drive up standards, and ensure we are able to match supply with increasing levels of global demand.

A secure supply of critical minerals is vital to our Industrial Strategy, economic growth, and clean energy transition. In order to ensure that the UK can identify the minerals which are of high economic importance but susceptible to external shocks, DBT funds the Critical Minerals Intelligence Centre (CMIC) to provide expert analysis and insights into critical mineral supply chains. CMIC published the results from their latest criticality assessment at the end of November 2024. DBT will use the latest criticality assessment alongside industry engagement to inform a new Critical Minerals Strategy.

The circular economy and recycling

The government has committed to maximising the use of resources and reducing waste by moving to a circular economy. To progress delivery, DEFRA have convened a taskforce of experts from across government, industry, academia and relevant NGOs. [footnote 71] The taskforce will help to develop a Circular Economy Strategy and a series of roadmaps detailing the interventions that the government and others will make on a sector-by-sector basis.

Solar has huge potential in the circular economy: for example, Tata Steel who provide steel for solar racking are developing a process to recycle steel from solar farms in their electric arc furnaces.

To maximise these opportunities, it will be important to ensure that effective systems are in place to deal with cumulative increases in solar panels coming offline over around the next 10 to 15 years. [footnote 72], [footnote 73] Currently the UK has a handful of solar panel disposal companies beginning to recycle using crushing techniques. This recovers materials which mostly can't be used in a new panel without further purification. France is developing more advanced techniques which can recover an estimated >65% of a panel's mass and even more of its value at a small scale. [footnote 74] There is scope to build on this work, with some UK universities and companies interested in developing technologies that could further increase the proportion of valuable materials recovered. Recovery of these materials, such as silicon, could increase the circularity of the solar panel lifecycle, reducing our reliance on imported new materials.

Actions to better understand the current solar panel recycling landscape and consider the case for supporting the development of new innovative recycling processes are set out in Appendix 1 listing Roadmap Actions.

6. Skills

From project design and panel installation to manufacturing and marketing, the solar sector encompasses a broad and interrelated spectrum of roles. Organisations vary from solar-exclusive to those with solar as a minor segment, while job roles range from regulated positions to those shaped by market-driven levers. The sector boasts an estimated 17,000 diverse businesses [footnote 75] with multiple trade bodies reflecting varied skills and specialisms.

The rapid growth of the UK solar industry offers a generational opportunity to create a wealth of high-quality jobs. At this crucial juncture, we must put the structures in place to build the skilled workforce needed now and in the decades to come. In the context of high demand for technically skilled staff across the whole energy sector, a failure to take action risks labour shortages, skills gaps, a retraction in training infrastructure, the loss of key skills and potentially costly, urgent intervention further into the future. Key to this mission will be ensuring that the workers of today and tomorrow see the solar industry as a place where they can build successful and fulfilling careers, regardless of their background.

This work is crucial to delivering clean power by 2030, and achieving this will require participation from across government, including Great British Energy. The Department for Education (DfE) and Skills England will work to make the skills system clearer, more joined up and responsive to skills needs, and as the HR department for the Growth Mission, the Department for Work and Pensions (DWP) will support employers to recruit workers and fill vacancies, helping address workforce needs. DESNZ's Office for Clean Energy Jobs (OCEJ) will coordinate work to build the skilled workforce we need for the clean energy and net zero transition, setting out its wider approach in the upcoming Clean Energy Workforce Strategy later this year. This will support our ambition to establish the UK as a Clean Energy Superpower.

The Wider Picture

Education and skills policy is a devolved matter across most of the UK, with Scotland, Wales, and Northern Ireland each adopting their own approach. Despite these regional differences, all 3 nations have identified similar challenges to those highlighted in this chapter, which are being addressed with wide-ranging packages of reform. In Scotland, informed by 2 research projects, [footnote 76] reform is being enacted through the Purpose and

Principles framework (for post-school education, research and skills) and James Withers' review. In Wales this is primarily through the Net Zero Skills Action Plan and the Flexible Skills Programme, [footnote 77] supported by Medr, their new Commission for Tertiary Education and Research. [footnote 78] Similarly, the Skills Strategy for Northern Ireland [footnote 79] and the Green Skills Action Plan [footnote 80] set out the challenges, and actions needed, for the Northern Irish skills landscape. It is also clear that the need for a well-trained and competent solar workforce is not exclusive to the UK. The Global Solar Council, working with the Global Wind Organisation, are establishing the Solar Training Standards Initiative to develop international standards for solar training courses, with representation from the UK solar industry to ensure standards are consistent with domestic regulations and guidance.

Understanding Solar Skills Within Net Zero
For the solar sector to transform its workforce, we must first understand the state of solar skills and how to collaborate with allied sectors to address common challenges.

Data

The latest Low Carbon and Renewable Energy Economy (LCREE) survey estimates there were around 9,000 direct full-time equivalents (FTEs) [footnote 81] and 8,500 indirect FTEs working in the sector in 2022 across the UK. [footnote 82] As the sector expands, we estimate this number to grow significantly. DESNZ analysis suggests that solar PV could support up to 35,000 direct and indirect jobs in GB, to support the solar capacity required for Clean Power by 2030.

The Taskforce took on the task of mapping these skills and occupations, understanding where the gaps in knowledge and training infrastructure are, and recommending solutions to deliver a workforce that can sustain supply and demand, fulfil our deployment ambitions and create a resilient, high-skilled, well-paid industry.

Action 38: DESNZ [footnote 83] will continue to engage with Office for National Statistics (ONS), industry, trade unions and skill bodies to improve solar sector data.

This action builds on the initial assessment of the clean energy skills challenge that was published alongside the Clean Power Action plan, [footnote 84] with the OCEJ focusing on improving the consistency, quality, and availability of data on the UK's clean energy workforce. This will include monitoring the labour market and collaborating with the ONS, employers and relevant sector skills bodies to collect, share, and improve workforce data for the sector. As part of this, engagement with trade unions will be key to ensure issues like job quality, pay, and terms and conditions are at the forefront of discussions. Skills England will support by providing an authoritative view of England's national and regional skills needs, combining

the best available statistical data with insights generated from employers and other key stakeholders. [footnote 85] They will ensure that there is a comprehensive suite of apprenticeships, training and technical qualifications for individuals and employers to access, in line with the forthcoming Industrial Strategy and aligned with skills gaps and what employers need.

Spread of training opportunities

The solar sector requires skills and professional competencies from a range of occupations. Whilst the sector utilises sector-agnostic training, there is also a clear need for specific solar training. However, there is wide recognition that the sector needs to improve the visibility and clarity of its training provision to the existing and future workforce. This includes highlighting joined-up training provision that reaches across various trades and competencies necessary for the installation of net zero-related technologies.

Action 39: UK Government [footnote 86] and industry will map current solar training provision in the UK, covering government- and industry-funded training.

Action 40: Industry will engage with government skills bodies to explore models for effective delivery of solar skills training, at regional and local levels.

Developing a comprehensive overview of existing solar-specific training will help to clarify the current skills landscape and expedite the adoption of relevant training opportunities, benefiting employers and prospective employees alike. We also recognise the importance of tailoring training provision to local needs and resourcing, and drawing on the expertise of existing skills bodies will help to optimise the impact of interventions into the delivery of training. With an effective feedback loop back into DfE, Skills England will play an especially crucial role in advising DfE on how to best shape the growth and skills offer. Furthermore, through over 600 Jobcentres and the broader employment support system which supports millions of customers across Britain into new or different roles, DWP will broaden the range of employers supported, including through an enhanced focus on skills and careers, with the new Jobs and Careers Service.

Routes to competence

There are few clear paths to competency within the solar sector, due in part to its novelty and cross-over of roles with adjacent sectors.

Action 41: SEUK, working with standard-setting bodies, [footnote 87] will produce a map of routes to competency for vital core occupations, [footnote 88] recommending the qualifications and experience necessary for employees to demonstrate competence.

With increased demand and higher quality requirements, including in amendments to Building Regulations [footnote 89] and the Building Safety Act 2022, [footnote 90] documented routes to competency must be created, so we have the skills and behaviours to deliver competent, reliable and robust installations. This will provide much needed clarity to those entering the solar workforce, offering them clear insights into career planning, progression, and expertise.

Readying the sector for expansion

To generate good jobs and secure energy security, it is essential that the skills-centred infrastructure currently supporting the solar sector continues to evolve. Key to this will be highlighting employment pathways, engaging with training providers and promoting opportunities widely.

Installers, installers, installers

Electricians, roofers, groundworkers and other built environment trades are crucial for the safe and reliable installation of solar panel systems, putting them at the heart of the government's rooftop revolution. The focus for industry and the government should therefore be on boosting opportunities for individuals to enter skilled employment in trade disciplines. This will include improving progression rates from classroom-based Further Education courses into apprenticeships and other industry-recognised routes to competence.

In July 2024, the Secretary of State for Education announced an internal review of post-16 qualifications. The government will continue to reform qualifications to guarantee quality and to unlock opportunity for young people and adults. All new technical qualifications align to the employer-led occupational standards published by Skills England. [footnote 91] Ongoing information sharing between government and industry is required, both to monitor progress in boosting numbers of newly qualified and competent tradespeople and to manage any transitional issues as employers and education providers adjust to a reformed system.

DESNZ will also support Microgeneration Certification Scheme-recognised training provision in solar installation on residential rooftops via the Warm Homes Skills Programme, the first phase of which opened for bidding in late April and will provide £8m of government-funded retrofit skills training. Training for Phase 1 will commence in August and run until July 2026, supporting training providers across England set to provide training for solar installations, growing the supply chain of installers with the help of government funding.

Action 42: UK Government will build on the Warm Home Skills Programme by continuing to find opportunities to increase the uptake of recognised training provision in solar installation to grow the supply chain of competent installers.

Action 43: SEUK, Electrical Contractors Association, National Federation of Roofing Contractors and other trade bodies, to consider how to attract and retain the appropriate number and calibre of new installers.

By expanding access to practical, solar-specific training, they will be empowered to begin their journey toward verified competence and long-term success in the industry. Built environment tradespeople also offer a pool for subsequent recruitment and development into higher-level roles such as grid connection, project management and design. The number of competent tradespeople qualifying in the UK must grow to meet expansion in renewables of all kinds, including a significant increase in electricians qualifying to work on solar installations. [footnote 92]

Training, upskilling, and apprenticeships

The solar sector can offer secure, well-paid careers via accessible reskilling and upskilling courses, including for skilled persons transferring from other industries. As most of the solar workforce in 2030 is likely to consist of those already employed across the UK today, it is crucial that the sector is able to understand and access training provision offered by the government. [footnote 93]

Action 44: SEUK will produce and promote guidance to businesses and colleges, highlighting routes for potential employees to transition into the solar sector, including modular courses, [footnote 94] DWP Sector-based Work Academy Programmes (SWAPs) and DfE's Skills Bootcamps. [footnote 95]

This will provide interested parties with clear, accessible and relevant information on entry into the sector, highlighting the diversity of pathways available and how best to utilise them.

Created by employers, apprenticeships are designed to support an apprentice to achieve occupational competence and support employers to develop the skilled workforces they need. Apprenticeships are for anyone aged 16 and over, from young people taking the first steps in their careers to older workers looking to retrain. Apprenticeships such as such as level 3 "Maintenance and Operations Engineering Technician" are not solar-specific, but they can still support the development of solar-related skills. Recognising the potential of tailored training, industry has set up a trailblazer group with Skills England [footnote 96] in order to explore demand, content and timescales for new sector-based apprenticeships in England, or revisions to existing standards.

The government continues to offer financial support to encourage employers of all sizes to offer apprenticeships. Our reformed Growth and Skills Offer will deliver greater flexibility for learners and employers, including through foundation and shorter apprenticeships in targeted sectors. We will ensure that we continue to consider the needs of smaller employers when developing our offer.

Case Study: Bringing Trained People into the Solar Industry via SWAPs

GenCarbon, in collaboration with Jobcentre Plus (JCP) and Moulton College, identified suitable candidates in receipt of benefits before training them to be proficient in solar panel installation to address the shortage of skilled staff for GenCarbon's commercial solar projects.

JCP's SWAP allows employers to approach them to create bespoke training to fill positions that a company may struggle to fill, sourcing suitable candidates from their local customer base. As the sponsoring company, GenCarbon's role included creating a course with Moulton College and interviewing successful candidates. The 3-week course focused on hands-on training and theory, preparing students for careers in solar installation and a guaranteed job interview for candidates at its conclusion. Seven out of 11 students from the first course ending in October 2023 went onto join GenCarbon's delivery team in the Midlands. A year on, out of the 48 trainees who have completed the course and been interviewed, 56% have been employed by GenCarbon, with 70% retained. [footnote 97]

Case Study: Mission Renewable

Mission Renewable is an initiative within the Mission Community group of charities, focused on engaging the UK's Armed Forces with the renewables sector. The initiative helps companies access and retain ex-Forces talent, opening up opportunities for Service leavers, veterans, and their families.

Their vision is to support the growth of the renewable energy industry by leveraging the unique skills and potential of the UK's Armed Forces Community by making the renewables sector an attractive choice for Service leavers and their families. A key avenue for engagement with Service leavers and veterans is the National Transition Event, [footnote 98] held annually by Mission Community at Silverstone. SEUK exhibited in 2024, giving Service leavers a chance to learn more about the solar sector, and for the sector to better understand the talent potentially available. Feedback indicates that this was a mutually beneficial experience.

Awareness and outreach

Solar is a relatively young sector, [footnote 99] however, much of its workforce is aging, having transitioned into the sector from the wider energy and

construction sectors. Many of these workers are expected to retire in the next 5-10 years. We therefore need more new entrants from all areas of society. As part of this, we need to raise awareness of the sector and dispel common misconceptions, such as the belief that solar-related roles pertain to engineering and science only. The communications chapter contains further recommendations on how to increase public awareness and attract new entrants to the sector.

Action 45: SEUK will (i) run annual regional careers fairs; and (ii) prepare a "schools pack" to provide schools and careers hubs with teaching materials on solar, encouraging industry to support outreach initiatives, such as "Solar PV for Schools". [footnote 100]

Action 46: UK Government and industry to use existing lines of communication with schools and the wider education, skills, and careers sectors, [footnote 101] including devolved governments, [footnote 102] to promote solar career opportunities.

Enticing sufficient talent into the solar sector will require raising awareness of the opportunities of offer, using a wide range of platforms to maximise outreach and engagement. To kickstart this mission, in Spring 2024 and 2025, the Taskforce piloted regional careers fairs at colleges across England [footnote 103] to make students aware of the breadth and variety of careers in the solar sector.

Collaboration between industry and Further Education sector

Some solar employers report that they feel disconnected from education providers. Local businesses are too often unaware of available training in their area, while education providers receive limited engagement from the sector, making it a struggle to formulate their teaching offering and meet local solar workforce needs.

Action 47: Industry will better support the further education sector by: (i) connecting local colleges with businesses by fostering industry ambassador events to link learners, tutors and employers; and (ii) increasing engagement with Local Skills Improvement Plans and further education Employer Liaison Groups.

Bridging the gap between industry and further education will necessitate opening and strengthening channels of engagement. By deepening these ties, including through reciprocal arrangements where industry professionals can directly pass on their skills to learners, and existing FE teachers can spend time in industry, the quality and accessibility of teaching can be enhanced, delivering mutual benefits to educational institutions and industry alike.

Equality, Diversity and Inclusion

An inclusive culture should be a key priority for any company. Adopting the principles of Equality, Diversity and Inclusion (EDI) ensures that a business can attract and retain the best talent. To deliver the energy transition, the solar sector workforce must be representative of the community it serves and have diversity of thought, which is vital when tackling challenges and engaging with customers and stakeholders. Otherwise, the solar sector will needlessly restrict its pool of potential employees.

There are many initiatives members of the solar sector can go to for information and/or advice on best EDI practices, such as: POWERful Women, [footnote 104] Tackling Inclusion & Diversity in Energy [footnote 105] (TIDE), Equate Scotland [footnote 106] and the Fairness Inclusion and Respect programme of the Supply Chain Sustainability School. [footnote 107]

Director training

The rapid growth of the solar sector from now to 2030 will mostly be driven by existing companies. To ensure these companies both survive and thrive in this period of opportunity, they will need to make progress on multiple fronts, including governance, processes, procedures, and leadership.

Action 48: Industry has developed a course for strategic leaders, including Directors, [footnote 108] training for growth and effective leadership of their businesses, and will promote the uptake of the Help to Grow Management scheme. [footnote 109]

The course will help to equip Directors with the skills needed to enable growth without sacrificing quality, health, safety and welfare.

Case Study: Net Zero Future Leaders Programme

The Future Leaders programme was developed by industry to equip emerging leaders in the sector to understand and prepare for net zero. With much of the sector's training in solar related design and installation skills, this programme was developed to fill a gap in support of high potential individuals who can provide leadership to public and private sector organisations in the net zero economy. Since the first cohort 3 years ago, it has supported over 50 individuals. Find further information about the Future Leaders programme (https://www.yournavigator.co.uk/future-leaders-programme). [footnote 110]

7. Planning and support schemes [footnote 111]

Planning reform

This government inherited a planning system in urgent need of reform. New infrastructure is essential for missions to grow the economy and deliver clean power by 2030. The majority of 2030 Clean Power projects are already in the pipeline, and so there is a major opportunity in rewiring the planning systems and unblocking bottlenecks to ensure projects can receive timely decisions and get building.

That is why we are taking decisive action. The Planning and Infrastructure Bill will speed up and streamline the planning process to build more homes of all tenures and accelerate the delivery of major infrastructure projects in alignment with our industrial, energy, and transport strategies. For energy projects in particular we will simplify the consenting process for major infrastructure projects [footnote 112]. We will bring forward new and improved National Policy Statements (NPSs). We will develop a review process allowing them to be updated every 5 years, giving increased certainty to developers and communities. And we will replace the current systems of environmental assessment with Environmental Outcomes Reports which will deliver a more effective and outcome-focused tool for managing the effects of development on the natural environment.

Updates to the National Planning Policy Framework [footnote 113]

In the meantime, the government published in December 2024 an updated, growth-focused NPPF to increase support for clean power projects, accelerate to net zero and safeguard environmental resources. [footnote 114]

The revised NPPF **directs decision makers to give significant weight to the benefits associated with renewable and low carbon energy generation, and proposals' contribution to meeting a net zero future**. In doing so, this aims to increase the likelihood of local planning authorities granting permission to renewable energy schemes including solar, thereby contributing to reaching the government's Clean Power targets by 2030. To provide further clarity to developers and decision makers, MHCLG will be updating planning practice guidance in 2025 to support the application of the new policies for renewable and low carbon energy development.

Changes to the Nationally Significant Infrastructure Project threshold

It is vital that developers use the most efficient and proportionate planning route to seek consent for their energy projects. To support this, government has legislated to increase the threshold at which solar projects enter the NSIP system from 50MW to 100MW, reflecting the technological advances in solar technology since 2008 (when the original threshold was set). This will mean that more solar projects will be decided at a local level, allowing more mid-sized projects to move through the local planning system, potentially resulting in faster decisions, and at a lower cost. This change will come into force on 31 December 2025, to provide a transition period for industry.

Updates to National Policy Statements

The NPSs for energy were designated and came into effect in January 2024, alongside other low carbon technologies. Solar infrastructure is considered to be of a Critical National Priority for the provision of nationally significant low carbon infrastructure. This recognises the urgent need for these projects to achieve our energy objectives, and provide wider national security, economic, commercial, and net zero benefits. The government is currently consulting on updates to the NPSs for energy, including EN-3 on renewable energy, so that the Planning Inspectorate and other organisations involved in examining projects are given the clarity they need to provide robust advice on infrastructure critical for delivering Clean Power 2030.

It is important that these new initiatives are effectively communicated to all those involved in planning, developing and consenting solar projects and that where relevant associated policies and guidance is informed by those with relevant solar specific expertise.

Action 49: The UK Government and industry will continue to promote awareness across the sector of the various policy measures set out above and ensure that processes are designed in a way that takes solar into account.

This will ensure that the planning system works effectively for solar, leading to speedier decisions, streamlined processes and a reduction in costs.

Planning funding, resources, capability and capacity

There are an unprecedented number of planning applications for ground mount solar and other energy projects at various stages in the planning system. Feedback from industry to the Taskforce has suggested that all areas of the planning system in Great Britain are stretched, with limited capacity, resources, and finances for the Planning Inspectorate, Local Authorities and Statutory Consultees leading to delays and inconsistencies in assessing applications. Helping to reduce these issues will ensure that sufficient solar projects are up and running quicker, to meet the 2030 targets.

We need local planning authorities to have sufficient resources to be able to provide a high-quality planning service and timely planning decisions. Following consultation, the government announced in December 2024 that it intends to take forward measures through the Planning and Infrastructure Bill to enable local planning authorities to set their own fees to meet the costs of their planning service. This measure will support the resourcing of local planning authorities. The government is also proposing to develop secondary legislation to enable cost recovery for relevant services provided by local authorities in relation to NSIP applications/ proposed applications for development consent under the Planning Act 2008.

The UK Government has announced a £46 million package of investment into the planning system to support capacity and capability in local planning authorities, including through the recruitment and training of 300 graduate and apprentice planners and the development of skills needed to implement reforms and unlock housing delivery.

To complement the wider government actions and funding commitments outlined above, the solar sector will provide technical input into current training provision and materials for those involved in planning decisions.

Action 50: SEUK will work with representatives from the planning profession to review current training provision for the sector and ensure it is fit-for-purpose in supporting the delivery of renewables (including solar), including through university degrees.

Action 51: SEUK will produce factsheets on solar installations to aid the upskilling of planners and councillors and help plug the gap in expertise needed to effectively assess solar applications.

These actions will help facilitate more timely decisions and reduce errors and inconsistencies in the decision-making process which can cause delays in the determination of planning applications.

Spatial Planning

Going forward we need a clear central strategy to provide certainty on what a future reformed energy system might look like by optimising locations of energy infrastructure to futureproof our energy system. That is why the UK Government has committed to the production of Great Britain's first ever strategic spatial energy plan (SSEP) for electricity generation and storage infrastructure, including relevant hydrogen assets, to give industry more certainty to upgrade Britain with confidence.

The UK, Scottish and Welsh government's jointly commissioned the National Energy System Operator to begin work on the SSEP in October 2024. [footnote 115] The first iteration of the SSEP will cover infrastructure for electricity generation and storage and will set out the location, quantities and types of electricity and hydrogen infrastructure required to meet future energy demand. The location will be at zonal level as opposed to specific sites.

Land Use Framework

In tandem, the government has recently consulted on land use in England, the outcomes of which will inform the development of a Land Use Framework, to be published later in the year. [footnote 116] Over the next 25 years, England's landscapes will need to change to support climate change mitigation and adaptation, economic growth, housing delivery, food production, clean energy, and meeting statutory targets for nature.

The Land Use Framework will set out the government's vision for long-term land use, change principles for land use decision making and priority areas for policy change. It will help ensure we appropriately plan where to build 1.5 million new homes and the energy infrastructure needed to achieve Clean Power by 2030.

Regional Engagement

Regional Mayors and Combined Authorities can prospectively play a crucial role in the achievement of the 45-47GW ambition, given their capacity to oversee policy delivery over a wide geographic area and across local authority boundaries.

Action 52: SEUK will actively engage with any Regional Mayor or Combined Authority interested in taking forward discussions about solar deployments in their regions and will support its members in doing the same where such opportunities arise.

Strong engagement between the solar industry and regional representatives can help to ensure that solar projects are approached strategically and maximise the potential economic benefits for the region.

Contracts for Difference

The CfD scheme is the UK Government's main mechanism for supporting new low-carbon electricity generation projects in Great Britain. It guarantees a set price per MWh of electricity for 15 years, indexed to inflation. CfDs are 15-year private law contracts between low-carbon electricity generators and the Low Carbon Contracts Company, an UK Government-owned company that is operationally independent.

CfDs are awarded through regular, competitive auctions; the lowest-priced bids are successful, which drives efficiency and cost reduction and is a low-cost way to secure clean electricity. To date, over 7GW of solar capacity has been awarded contracts across 4 allocation rounds.

As set out in the Clean Power Action Plan, the government is developing targeted reforms to the CfD mechanism to ensure it is able to support the volume of new capacity needed to deliver the renewable contribution to the Clean Power 2030 ambition whilst continuing to minimise the costs to consumers. Building on the success of last year's Allocation Round 6 (AR6), the government launched its AR7 contract consultation in March 2025 on proposals to provide greater certainty to investors and a better deal for consumers. The consultation included proposals to increase the target commissioning window for solar projects to reflect the increasing size of solar projects in the UK's pipeline. The consultation also discusses potential changes to CfD contract terms that would give longer market certainty once contracts are awarded, including consideration of the merits of increasing the current 15-year CfD term to reduce overall project costs. To move ahead with longer contracts for any technology, the government would need

evidence that this is in the interests of consumers. We requested evidence to support this as part of this consultation exercise. Government will analyse responses to the consultation and provide its response in summer 2025.

Floating Solar

Floating solar PV (FPV) refers to photovoltaic panels installed on water bodies like lakes, reservoirs, or ponds. These panels are mounted on floating structures, utilising water surface area to generate renewable energy, thereby reducing pressure on land. The FPV market is a relatively new sector, with the first international pilot projects installed in 2006-07 and major commercial project installations in 2015.

FPV can provide an opportunity for behind the meter energy solutions which both reduce reliance and pressures on the grid network and could assist in decarbonising 'hard to decarbonise' energy-intensive sectors, particularly where a private wire solution can meet electricity demand and be deemed a suitable option. It can support hydrogen production by co-locating with electrolysers and may contribute to climate adaptation. Covering drinking water (and other man-made) reservoirs can reduce evaporation and growth of problematic algal species that will be exacerbated in a changing climate.

However, as with any nascent technology the FPV sector faces some challenges in scaling up deployment and costs are currently higher than those for conventional ground mount solar, which mean it's ability to compete in the CfD is limited.

Action 53: The UK Government will consider further support for FPV by keeping under review how it and other innovative solar technologies are considered in the Contracts for Difference scheme.

Any changes to the scheme would need to take into account wider impacts including costs to consumers. But a CfD contract could help improve/derisk the economics of projects so that developers and supply chain companies can start to invest and bring forward innovative solar projects at scale.

The floating solar sector have also indicated that the planning requirements for this technology can be unclear and/or a burden to applicants. In some circumstances development on and around water bodies can benefit from permitted development rights (PDRs). Water companies wishing to install floating solar can benefit from PDRs if they are using the electricity generated themselves as part of their statutory duties. In all other cases, floating solar proposals require a planning application.

Action 54: The UK Government will explore how planning levers could further support floating solar projects.

This will provide further certainty to developers and potentially help speed up deployment of this innovative and exciting technology.

8. Working with Others to Deliver our Ambition

To realise the full potential of solar in the UK, collaboration across multiple organisations, industries and communities is essential. To deliver the Roadmap's recommendations effectively, it is important to understand who the key stakeholders are, their perspectives and priorities and how communications strategies can be tailored to reach them.

Stakeholder Strategy
The Taskforce has developed a high-level stakeholder map highlighting the key influencers and decision-makers that should be considered when planning solar initiatives across commercial rooftop, residential rooftop and ground mount projects. It provides a framework for mapping diverse communities to enable inclusive policy development and effective engagement. See Annex III for further information.

To support engagement with stakeholders, the Taskforce considered some common misconceptions related to ground mount and rooftop solar. The table in Appendix II has been created to address these and can be used as a reference tool for use with communication and marketing materials.

Rooftop Solar
The Taskforce identified a current lack of awareness regarding the benefits of domestic and commercial solar, as well as the potential savings that can be made, as a barrier to deployment. In addition, homeowners lack trusted information about the advantages of investing in solar. For instance, understanding how solar contributes to EPC scores, ESG ratings, and property valuations remains a challenge. Similarly, commercial businesses need better insights into the implementation and benefits of rooftop solar.

Action 55: The UK Government to update the solar panel page on the current Energy Efficient Home campaign website to help promote solar policy and solar deployment. [footnote 117]

Action 56: UK Warehousing Association (UKWA) to develop and distribute a toolkit for owners and occupiers on the steps needed to install rooftop solar on warehouses. This will include information on design, permissions, legal considerations, grid connections, finance and insurance.

Ground Mount Solar

Community Benefits

Local communities have a vital role to play in helping us deliver our net zero and energy security ambitions and it is important that they can benefit from,

and participate in, the deployment of new low carbon energy technologies in their local areas.

Through the Clean Power Action Plan, the government has made it clear that where communities host clean energy infrastructure, government will ensure they benefit from it. There are many possible approaches in this area including community funds and direct support for households, and community ownership. Provision of flexible community benefit funds that can be tailored to local contexts and preferences will maximise the impact of community benefit packages, helping to ensure a lasting legacy that reaches a wide pool of beneficiaries.

Government published a working paper [footnote 118] on 21 May 2025 seeking views on introducing a mandatory community benefit fund scheme for low carbon energy infrastructure including solar. The working paper is also a call for evidence seeking views on facilitating shared ownership of renewable generation infrastructure.

In the meantime, SEUK will publish later this year, a voluntary community benefits protocol and guidance for solar. This will provide a benchmark for the sector and will apply to projects above 5MW capacity (excluding rooftop installations and small 'behind-the-meter', community-owned, or community-led solar farms).

The Scottish Government is consulting on a refresh of its Good Practice Principles for community benefits for onshore and offshore net zero energy infrastructure and commissioned research on the provision of community benefits across different renewable energy technologies. This includes working with the solar sector to find a suitable level of community benefit that is reflective of the sector's costs but also delivers a lasting legacy for communities. The information and views gathered will inform a refresh of the Scottish Government's onshore and offshore Good Practice Principles in the latter part of 2025.

The Welsh Government have produced guidance on local and shared ownership which also covers community benefits. [footnote 119]

Community engagement

Good community engagement is vital for new infrastructure and energy projects, including ground mount solar important. SEUK's 'Community Engagement Good Practice Guidance', [footnote 120] published on 16 July 2024 seeks to promote effective engagement with people local to solar farm developments, from design through construction, operation, and decommissioning. The guidance looks to support developers, operators, and those in the supply chain with the sustainable delivery of ground mounted solar projects through good relationships with their neighbouring communities. Equally, the guidance will be useful to local authorities and

communities as a referencing material for engaging with solar industry developers and operators.

The guidance has been designed to consider ground-mounted projects greater than 5MW, across England, Wales, Scotland, and Northern Ireland. It refers to statutory requirements as appropriate. It is designed to go beyond the minimum engagement requirements specified by the UK's planning systems but can't be considered statutory guidance.

To further support and promote this guidance, industry will lead in taking forward the following new actions:

Action 57: Industry to promote SEUK's Community Engagement Good Practice Guidance.

Action 58: SEUK will create a template for ground mount solar energy developers to use when stakeholder mapping.

Action 59: SEUK will create a communications toolkit focusing on how to communicate the benefits of solar when engaging with local communities. This will include developing case studies to highlight good community engagement.

For an in-depth approach to effective community engagement for solar projects see Annex III.

Skills and Supply Chains

The rapid upscaling of solar will bring thousands of new, highly skilled jobs and provides an incentive to rapidly scale a sustainable UK solar supply chain and manufacturing capacity. The following actions aim to raise awareness of these important opportunities:

Action 60: As announced in the Clean Power Action Plan, government will explore options for an industry-led public awareness campaign, working across government and industry to: coordinate messaging, promote opportunities, improve diversity and help employees and employers navigate the skills landscape.

Action 61: SEUK and Industry will promote careers through all allied industry events and platforms, including the Institute of Environmental Management and Assessment's Green Careers Hub. [footnote 121] These will signpost the varied careers on offer and progression opportunities within the solar sector, offering interconnected and collaborative resources and sector-specific careers information resources.

Action 62: Industry will publicise case studies and examples of how the circular economy can apply to the solar value chain.

Part 3: Implementing the Roadmap and Assessing our Achievements

9. Monitoring and Evaluation

The successful implementation of the UK Solar Roadmap relies on robust management, monitoring of progress and evaluation of the effectiveness of the actions by both the UK Government and the Solar Industry.

Progress will be overseen by the Solar Council a new forum that will continue to bring together the Solar industry, UK Government and other relevant parties. The Council will provide a platform for strategic engagement between the government and the sector and will:

- Work to secure, enable and accelerate the deployment of solar at all scales required for Clean Power 2030 and beyond.
- Drive delivery of the Roadmap actions, monitor and assess progress and work collaboratively to tackle implementation challenges.
- Keep ahead of and respond to key emerging threats and opportunities, realigning priorities and action as needed.

The Council will be jointly chaired by Michael Shanks MP, Parliamentary Under Secretary of State for Energy Security and Net Zero and Chris Hewett, CEO, Solar Energy UK. It will meet 3 times a year and for the first time later this year.

The government is taking a data-driven approach to monitoring the delivery of the Solar Roadmap. The Solar Council will track:

- The Solar pipeline to 2030 and beyond, and identify where challenges are emerging and what actions we can take to keep on track.
- Progress against delivering the actions and key performance indicators designed to understand whether the actions are having the desired impact.
- Wider economic and financial factors influencing the solar sector, with the potential to either boost or hamper progress.

The detailed approach to monitoring and evaluation will be agreed by the Solar Council later this year.

10. Acknowledgements

The development of the UK Solar Roadmap has been overseen by the UK Solar Taskforce, established to drive forward the actions needed by the UK Government and industry to meet the solar deployment ambition of 45-47GW by 2030. The success of the Solar Taskforce is the result of the collaborative efforts and commitment of many individuals and organizations. We would like to express our gratitude to all those who contributed to this initiative.

The Taskforce was set up by the previous government and initially co-chaired by Rt Hon Graham Stuart MP, then Minister of State for Energy Security and Net Zero, and subsequently by Andrew Bowie MP, then Minister for Nuclear and Renewables. The Taskforce was reconvened by the government in July 2024 and co-chaired by Rt Hon Ed Miliband, Secretary of State for Energy and Net Zero, alongside our industry co-chair Chris Hewett, Chief Executive of Solar Energy UK. The Taskforce was ably supported by our Deputy chairs, Michael Shanks MP, Minister for Energy; Sarah Redwood, Director, Renewable Electricity, DESNZ; and Gemma Grimes, Director of Policy and Delivery, Solar Energy UK.

The chairs were supported by a core membership made up of expert representatives from the solar industry, investment companies and others:

- Ben Fawcett, EDF Renewables
- Alex Desouza, Lightsource bp
- Liz Cammack, Segen
- Mark Wakeford, EVO Energy
- Adam Howard, National Wealth Fund
- ure Bank
- Ross Grier, Next Energy Capital
- Ian Rippin, Microgeneration Certification Scheme
- Lawrence Slade, Energy Networks Association

Finally, we would like to thank each of the following companies for accepting the exciting challenge of being part of the first UK Solar Taskforce and their unwavering support on developing this Roadmap:

- 2 Degrees Kelvin
- Anesco
- B3 New Energy

- BEAMA
- Bluefield Development
- British Solar Renewables
- Caplor Energy
- Community Energy England/Bristol
- Community Energy London
- Custom Solar
- EDF Renewables
- EVO Energy
- Eco2Solar
- Eden Renewables
- Electrical Contractors’ Association
- Electricity North West
- Electricity System Operator
- Emtec Group
- Energy Coop
- Energy Networks Association
- Energy and Utility Skills Partnership
- Eversheds Sutherland
- Exagen
- Future Homes Hub
- GivEnergy
- Green Finance Institute
- Gridserve, Innovo Renewables
- Institute of Apprenticeships and Technical Education
- Institute of Engineering and Technology
- Institute of Environmental Management and Assessment
- JBM Solar
- Lightsource bp
- Local Government Association
- Loughborough University
- Microgeneration Certification Scheme
- Mitie

- My Energi
- Naked Energy
- National Farmers Union
- National Federation of Roofing Contractors
- National Grid Electricity Distribution
- National Grid Electricity System Operator
- National Grid Electricity Transmission
- National Open College Network
- National Wealth Fund
- NextEnergy Capital
- Novogrid
- Octopus Energy
- Ofgem
- Oxford PV
- POWERful Women
- PS Renewables
- Photon Energy
- Power Roll
- Prologis
- REW (formerly JBM Solar)
- RWE
- Regen
- Renewable Energy Association
- Roadnight Taylor
- SFW Communications
- SP Energy Networks
- SSE Renewables
- SSE Solar & Battery
- Schroders Greencoat
- Segen
- Solarport Systems
- South Thames College Group
- Statkraft

- Syzergy Consulting
- Tata Steel
- TechUK
- Thames Water Ventures
- The Association for Renewable Energy and Clean Technology
- The Royal Institution of Chartered Surveyors
- UK Green Building Council
- UK Power Networks
- UK Warehousing Association
- Viridian Solar
- Zestec

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1. Clean power 2030: action plan (https://www.gov.uk/government/publications/clean-power-2030-action-plan)
2. Government statistics: Solar photovoltaics deployment (https://www.gov.uk/government/statistics/solar-photovoltaics-deployment)
3. There is scope to exceed the 47GW upper limit, subject to system need, noting the potential of rooftop solar to further boost deployment. NESO engagement with the DNOs indicates that an additional 9-10GW of rooftop solar projects, (which are not subject to the Transmission Impact Assessments), could deploy before 2030. It is therefore possible that the Clean Power Action Plan solar capacity range of 45-47GW could yield 54-57GW (subject to the pipeline of solar rooftop projects).
4. NESO-led engagement with the Distribution Network Operators (DNOs) indicated that an additional 9-10GW of smaller-scale rooftop solar projects which would not be subject to Transmission Impact Assessments could deploy before 2030. It is therefore possible that the 2030 Clean Power solar capacity range of 45-47GW could yield around 54-57GW in 2030.
5. Community benefits and shared ownership for low carbon energy infrastructure (https://www.gov.uk/government/publications/community-benefits-and-shared-ownership-for-low-carbon-energy-infrastructure)
6. Government statistics: Solar photovoltaics deployment (https://www.gov.uk/government/statistics/solar-photovoltaics-deployment)
7. Clean power 2030 Action plan: Connections reform annex (https://assets.publishing.service.gov.uk/media/6776751e6a79200ddfa21b83/clean-power-2030-action-plan-connections-reform-annex.pdf)
8. All further references to the 2030 solar capacity range in the Roadmap should therefore be interpreted as follows: 45-47GW is our GB ambition

for all types of solar by 2030, but there is grid capacity available for up to an additional 10GW, should the system need it.

9. Clean power 2030 Action plan (https://www.gov.uk/government/publications/clean-power-2030-action-plan)
10. Scottish Government: Draft energy strategy transition plan (https://www.gov.scot/publications/draft-energy-strategy-transition-plan/)
11. Welsh Government: Consultation - Just transition framework (https://www.gov.wales/sites/default/files/consultations/2023-12/consultation-just-transition-framework.pdf)
12. Welsh Government: Net zero skills Action plan (https://www.gov.wales/net-zero-skills-action-plan)
13. Government statistics: Solar photovoltaics deployment (https://www.gov.uk/government/statistics/solar-photovoltaics-deployment)
14. See further details in chapter 3.
15. 'Build and operate' refers to the Levelised Cost of Electricity (LCOE) – see published DESNZ estimates by technology: Electricity generation costs 2023 (https://www.gov.uk/government/publications/electricity-generation-costs-2023). Solar PV (>5 MW) received the lowest price of any technology in the last 2 Contracts for Difference allocation rounds (AR5 and 6).
16. The LCOE of ground-mounted solar projects decreased from £92/MWh in 2016 to £47/MWh in 2025, based on 2020 prices. Sources can be found here: BEIS electricity generation costs November 2016 (https://www.gov.uk/government/publications/beis-electricity-generation-costs-november-2016) and BEIS electricity generation costs 2020 (https://www.gov.uk/government/publications/beis-electricity-generation-costs-2020)
17. This also includes wind power, see: IEA Renewables 2024: Electricity (https://www.iea.org/reports/renewables-2024/electricity)
18. See Annex I for detail on methodology underpinning this estimate.
19. Providing estimates of medium to longer-term deployment is inherently challenging and uncertain, as it is dependent on a wide range of factors. As such, these estimates are provided to show an 'order of magnitude' plausible range of deployment under different scenarios rather than precise estimates. Further detail on methodology is presented in Annex I.
20. Large-scale solar deployment is informed by current pipeline and rooftop deployment informed by the most recent evidence. Barriers that could lead to greater attrition of future pipeline projects drive the lower end of the range.
21. More details are provided in Annex I – Analytical methodologies
22. This relates to land falling under Natural England's 'best and most versatile agricultural land' classifications (grades 1, 2, 3a), See: Guide to

assessing development proposals on agricultural land (https://www.gov.uk/government/publications/agricultural-land-assess-proposals-for-development/guide-to-assessing-development-proposals-on-agricultural-land)

23. Planning is devolved. For further information on policies in Scotland, Northern Ireland and Wales see:
Scotland: Renewables planning advice index (https://www.gov.scot/publications/renewables-planning-advice-index/)
Wales: Planning policy and guidance - energy (https://www.gov.wales/planning-policy-and-guidance-energy)
Northern Ireland: Revised regional strategic planning policy (https://consultations2.nidirect.gov.uk/dfi-1/revised-regional-strategic-planning-policy/)
24. H. Montag, G Parker & T. Clarkson. 2016. The Effects of Solar. Farms on Local Biodiversity; A Comparative Study (https://www.clarksonwoods.co.uk/projects/projects_solarresearch.html)
25. RSPB news: Solar farms managed for nature boost bird numbers and biodiversity (https://www.rspb.org.uk/whats-happening/news/solar-farms-managed-for-nature-boost-bird-numbers-and-biodiversity)
26. This is based on government's published Home Energy Assessment tool (https://www.gov.uk/improve-energy-efficiency), which allows the user to produce an estimate of the bill savings they could expect from solar given the characteristics of their home. The figures are based on a typical 3.5kW south-facing installation using the Standard Assessment Procedure (SAP) methodology. The costs and savings individuals experience will be affected by factors such as how often they heat their home, the precise technical details of their installations, and future energy prices. The savings displayed are based on the April 2025 price cap. As energy prices change, so will the estimates of savings
27. This is based on the median price (£/kW) for 0-4kW installations - Solar PV cost data (https://www.gov.uk/government/statistics/solar-pv-cost-data). Estimates rounded to the nearest £500.The inflation index used is the 'All items CPI' as published by the ONS in January 2025: CPI index 00: All items 2015=100 (https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/d7bt/mm23)
28. Plug-in solar refers to a small solar panel system where the electricity generated is directly plugged into a household power socket. These are typically used on balconies, garden sheds or terraces.
29. Solar Energy UK: The value of solar property (https://solarenergyuk.org/resource/the-value-of-solar-property-report/). The Value of Solar Property is a ground-breaking report that looks at the financial benefits of residential rooftop solar systems.
30. Adoption of rooftop solar photovoltaic panels in the UK (https://www.gov.uk/government/publications/adoption-of-rooftop-solar-photovoltaic-panels-in-the-uk), Basis Social, July 2021.

31. Carbon Trust: Green Home Finance Accelerator (GHFA) (https://programmes.carbontrust.com/ghfa/)
32. Green Finance Institute: Green mortgages (https://www.greenfinanceinstitute.com/products-solutions/green-mortgages/) and Unsecured green home loans (https://www.greenfinanceinstitute.com/products-solutions/unsecured-green-home-loans/).
33. Solar only installed when recommended by a qualified retrofit coordinator following PAS2035:2023.
34. Following the updated RICS Red Book valuation guidance that expands sustainability (https://www.rics.org/profession-standards/rics-standards-and-guidance/sector-standards/valuation-standards/red-book/red-book-global) consideration in values, the government and industry will to work with RICS on the creation of the new RICS residential sustainability and valuation professional statement commencing early 2024, which will underpin how sustainability influences values. This will align with Sustainability and ESG in commercial property valuation (https://www.rics.org/profession-standards/rics-standards-and-guidance/sector-standards/valuation-standards/sustainability-and-commercial-property-valuation) guidance that ensures the energy-efficiency and carbon footprint of commercial property is reflected in values.
35. While this section relies heavily on the data associated with warehouses, we find that many of the challenges are the same across the board [reference needed].
36. LCP Delta Report for UKWA: Investment case for rootop solar power in warehousing, August 2022 (https://www.ukwa.org.uk/wp-content/uploads/2022/09/Investment-Case-for-Rootop-Solar-Power-in-Warehousing-August-2022.pdf).
37. These must meet the NWF's minimum ticket size of £25m for private sector-led projects.
38. Solar on the government estate: a senior leaders handbook, February 2025 (https://gpp.civilservice.gov.uk/wp-content/uploads/2025/02/Solar-on-the-Government-Estate-A-Senior-Leaders-Handbook-February-2025.pdf)
39. NESO has a licence obligation to provide a transmission connection offer within 3 months. This does not apply to assessing transmission impacts of distribution connections.
40. Databases – Energy Networks Association (ENA) (https://www.energynetworks.org/links) (Accessed 30 July 2024).
41. Relevant CAP Action - 3.5a Providing more transparent and accessible pre-application data (pp48-50)
42. Relevant Industry Action - ENA's 'Rising to Britain's Net Zero Challenge' - Strengthen and tighten the application process (pp10-12)
43. Corresponding to 16 amps.

44. As set out in Engineering Recommendations G98 (up to 3.68kW) and G99 (above 3.68kW).
45. 3.5c Ensuring consistency including the allocation of costs (p57).
46. Relevant CAP action - 3.5d Standards, Obligations and Incentives (pp59-61)
47. 3.5c Ensuring consistency including the allocation of costs (pp55-56), Strategic Connections Group Battery Storage Connections Action Plan.
48. BoS could for example include transformers and invertors, switchgear, steel racking and cabling.
49. The Baringa UK renewables deployment supply chain readiness study (https://www.gov.uk/government/publications/uk-renewables-deployment-supply-chain-readiness).
50. International Energy Agency: Analysis of Solar PV Global Supply Chains (https://www.iea.org/reports/solar-pv-global-supply-chains/executive-summary).
51. To qualify for a CfD Allocation Round, solar and onshore wind applicants with a generation capacity of 300MW or above must provide National Grid ESO (as the delivery body) with a Supply Chain Plan Statement from the Secretary of State approving their project. Supply Chain Plan Statements are provided if the Secretary of State is satisfied that the project is likely to make a 'material contribution' to the development of supply chains.
52. Technology Readiness Levels assess the maturity of technology by assigning level from 1 to 9, where 1 indicates that the basic principles have been observed, and 9 is actual technology, qualified through successful mission operations. Level 5/6 includes products which are ready to be tested, (level 5), or demonstrated, (level 6), in relevant environments.
53. Business.gov.uk: Find investment opportunities (https://www.great.gov.uk/international/investment/)
54. Business.gov.uk: Find the right support for your business (https://www.business.gov.uk/)
55. Help to grow campaign (https://helptogrow.campaign.gov.uk/)
56. Expand your business in the uk/guide/ (https://www.great.gov.uk/international/expand-your-business-in-the-uk/guide/)
57. Overseas business risk (https://www.gov.uk/government/collections/overseas-business-risk)
58. Find business support in Scotland (https://findbusinesssupport.gov.scot/)
59. Business Wales (https://businesswales.gov.wales/)
60. Practical advice for Northern Ireland Business (https://www.nibusinessinfo.co.uk/)
    Support for business - Invest Northern Ireland

(https://www.investni.com/support-for-business)
Industrial Decarbonisation for Northern Ireland (https://idni.eco/funding).

61. Sheffield Hallam University:
In broad daylight: Uyghur forced labour in global solar supply chains (https://shura.shu.ac.uk/29640/)
Over-exposed: Uyghur region exposure assessment for solar industry sourcing (https://shura.shu.ac.uk/34917/)
62. Overseas business risk: China (https://www.gov.uk/government/publications/overseas-business-risk-china/overseas-business-risk-china)
63. Human rights and democracy reports (https://www.gov.uk/government/collections/human-rights-and-democracy-reports)
NB the last report was published in July 2023 for 2022.
64. The Act provides contracting authorities with stronger powers to exclude suppliers where there is compelling evidence of modern slavery within supply chains, expanding mandatory exclusion grounds which apply if the supplier or any connected person has been convicted of certain offences under Modern Slavery legislation. It also introduces a central debarment list which will contain names of suppliers who must be excluded across the public sector.
65. text
66. Supply Chain Sustainability School: Practical procurement guidance launched to combat modern slavery in solar PV supply chains (https://www.supplychainschool.co.uk/solar-pv-guidance/)
67. Solar Stewardship Initiative: Driving a more responsible, transparent, and sustainable solar value chain (https://www.solarstewardshipinitiative.org/)
68. Solar Stewardship Initiative: Certified sites (https://www.solarstewardshipinitiative.org/certified-sites/)
69. PPN0223: Tackling modern slavery in government supply chains (https://assets.publishing.service.gov.uk/media/65fac64eaa9b76001dfbdb93/PPN_0223_-_Tackling_Modern_Slavery_in_Government_Supply_Chains_-_Guidance.pdf)
PPN009: Guidance on tackling modern slavery (https://assets.publishing.service.gov.uk/media/67fe409e393a986ec5cf8d53/2025-04-11_PPN_009_Guidance_on_tackling_modern_slavery.pdf)
70. Solar Energy UK: Solar supply chains: sustainability issues and action (https://solarenergyuk.org/resource/solar-supply-chains-sustainability-issues-and-Action/)
71. Circular Economy Taskforce (https://www.gov.uk/government/groups/circular-economy-taskforce)
72. Joule article: The value of stability in photovoltaics (https://www.cell.com/joule/pdf/S2542-4351(21)00496-7.pdf)

73. Ofgem: Feed-in tariffs (FIT) (https://www.ofgem.gov.uk/environmental-and-social-schemes/feed-tariffs-fit)
74. ROSI Solar: Our expertise for a sustainable PV industry (https://www.rosi-solar.com/photovoltaic-modules-recycling/)
75. More information can be found here:
    ONS dataset: Low carbon and renewable energy economy estimates (https://www.ons.gov.uk/economy/environmentalaccounts/datasets/lowcarbonandrenewableenergyeconomyfirstestimatesdataset)
76. Climate Exchange:
    First report: Workforce and skills requirements in Scotland's solar industry (https://www.climatexchange.org.uk/projects/workforce-and-skills-requirements-in-scotlands-solar-industry/)
    Second report: Mapping the current and future workforce and skills requirements in Scotland's onshore wind industry (https://www.climatexchange.org.uk/publications/mapping-the-current-and-future-workforce-and-skills-requirements-in-scotlands-onshore-wind-industry/)
77. Covering government funding for apprenticeships, and other support for employers to upskill staff.
78. For 2024-25, over £70m has been allocated to Further Education Colleges for part-time courses, including the Personal Learning Account programme to upskill and reskill workers, focusing on net-zero skills.
79. Launched in March 2022.
80. Developed by the Department for the Economy, with the Green Skills Delivery Group.
81. This is estimated FTEs (full-time equivalents) which provides an indication of workloads across a sector, rather than numbers employed in it.
82. ONS dataset: Low carbon and renewable energy economy estimates (https://www.ons.gov.uk/economy/environmentalaccounts/datasets/lowcarbonandrenewableenergyeconomyfirstestimatesdataset)
83. Through the Office for Clean Energy Jobs.
84. Clean Power 2030: Action plan - assessment of the clean energy skills challenge (https://www.gov.uk/government/publications/clean-power-2030-action-plan-assessment-of-the-clean-energy-skills-challenge)
85. Such as the recently published Skills for growth and opportunity (https://www.gov.uk/government/publications/skills-england-skills-for-growth-and-opportunity), which presents findings of Skills England's analysis and engagement with sectors on the growth and skills offer, and skills needs assessments for 10 priority sectors, including clean energy.
86. Through DfE and Skills England, in their roles to ensure the workforce is equipped with the skills needed to power economic growth.
87. Including DfE and Skills England.

88. Aligning with Skills England occupational maps (https://occupational-maps.skillsengland.education.gov.uk/). These maps provide information on all the different training options with apprenticeships, T Levels and HTQs. They show how occupations at different levels link together and provide workforce and career planning information.
89. Legislation.gov.uk: The Building Regulations etc. (Amendment) (England) Regulations 2023 (https://www.legislation.gov.uk/uksi/2023/911/made).
90. Legislation.gov.uk: Building Safety Act 2022 (https://www.legislation.gov.uk/ukpga/2022/30).
91. Approved post-16 technical qualifications (https://www.gov.uk/government/publications/approved-post-16-technical-qualifications)
92. The Electrotechnical Skills Partnership: The Solar Power Challenge 2035 (https://www.the-esp.org.uk/wp-content/uploads/2023/12/898-TESP-Solar-PV-Dec-2023.pdf)
93. Support for workers to benefit from thousands of clean power jobs (https://www.gov.uk/government/news/support-for-workers-to-benefit-from-thousands-of-clean-power-jobs)
94. Modular and short training courses – funded by individuals and/or employers – were identified as a tool to rapidly equip people with the right skills in Skills England: Sector skills needs assessments clean energy industries (https://assets.publishing.service.gov.uk/media/683d6938f17469e343ebb98e/Sector_skills_needs_assessments_Clean_Energy_Industries.pdf).
95. Through Jobcentre Plus, DWP work coaches offer tailored advice to DWP customers based on their existing skills and experience and identify where a SWAP or Skills Bootcamp may be an appropriate routeway into work.
96. The trailblazer group was originally approved by the Institute for Apprenticeships and Technical Education (IfATE) and has now been transferred to Skills England following IfATE's abolition and the transfer of its functions to the Secretary of State.
97. Moulton College: Moulton College launches solar installation course in conjunction with local energy firm (https://www.moulton.ac.uk/about/latest-news/moulton-college-launches-solar-installation-course).
98. The UK's largest Armed Forces community event of its kind: The National Transition Event (NTE) (https://www.nationaltransitionevent.com)
99. Government statistics: Solar photovoltaics deployment (https://www.gov.uk/government/statistics/solar-photovoltaics-deployment)
100. More information can be found at: "Power to the pupils": Solar PV for schools (https://www.gov.uk/government/publications/power-to-the-pupils-solar-pv-for-schools)

101. This will include sharing information and updates with Jobcentre Plus (JCP) (for schools advisers, employer advisers, and work coaches), and with career practitioners, via the National Careers Service and the Careers and Enterprise Company (CEC).
102. Such as Skills Development Scotland's Careers Service and the Developing the Young Workforce programme.
103. With South Thames College representing London and the South East, Exeter College representing the South and the South West, Moulton College representing the Midlands, and Harrogate College representing the North.
104. Powerful Women (https://powerfulwomen.org.uk/)
105. Tackling Inclusion and Diversity in Energy (TIDE) (https://www.energyedihub.uk/)
106. Equate Scotland: Women in science, technology, engineering and maths (https://equatescotland.org.uk/)
107. Supply Chain Sustainability School: Fairness, inclusion and respect training (https://www.supplychainschool.co.uk/topics/fir/)
108. More information about the Moulton College Solar Industry Leaders Programme (https://www.moulton.ac.uk/l/solar-industry-leaders-programme).
109. More information here:
Small Business Charter: Help to grow management (https://smallbusinesscharter.org/help-to-grow-management).
110. The future leaders programme 2025 (https://www.yournavigator.co.uk/future-leaders-programme).
111. Planning policy is devolved and details of the consenting processes for solar projects in Scotland, Wales and Northern Ireland are set out on the devolved governments' websites.
112. Solar projects above 50MW capacity and 350MW in Wales are decided by the Secretary of State for Energy Security and Net Zero through the Nationally Significant Infrastructure Project (NSIP) regime in accordance with the energy National Policy Statements (NPSs). Between July 2024 and March 2025, the Energy Secretary consented 7 nationally significant solar projects with a combined capacity of over 3GW.
113. In England, under the Town and Country Planning Act 1990 (TCPA), local planning authorities are currently responsible for most renewable and low carbon energy development of 50MW or less installed capacity, including solar farms, in accordance with National Planning Policy Framework and associated Planning Policy Guidance on Renewable and Low Carbon Energy
114. National planning policy framework (https://www.gov.uk/government/publications/national-planning-policy-framework--2)

115. See: Strategic Spatial Energy Plan: commission to NESO (https://www.gov.uk/government/publications/strategic-spatial-energy-plan-commission-to-neso)
116. See the Land use in England consultation (https://www.gov.uk/government/consultations/land-use-in-england)
117. The UK Government's Energy Efficient Home (https://energy-efficient-home.campaign.gov.uk/) website supports its wider 'Warm and Fuzzy' campaign activity to promote heat pump uptake. This website will promote a range of energy efficiency measures for consumers to take, and will include a dedicated page on Solar, outlining the key benefits of installing solar panels, costs and savings, and outlining available government support schemes: Solar panels (https://energy-efficient-home.campaign.gov.uk/solar/).
118. Community benefits and shared ownership for low carbon energy infrastructure (https://www.gov.uk/government/publications/community-benefits-and-shared-ownership-for-low-carbon-energy-infrastructure)
119. Welsh Government: Local and shared ownership of energy projects: guidance (https://www.gov.wales/local-and-shared-ownership-energy-projects-guidance)
120. Solar Energy UK: Community Engagement Good Practice Guidance (https://solarenergyuk.org/wp-content/uploads/2024/07/CGPG2024.pdf)
121. Green Careers Hub: Solar energy (https://www.greencareershub.com/green-future/green-economy/solar-energy/)