Chapter 3: Planning Policy Context

Glyn Taff Solar Farm – Environmental Statement

04/03/2025

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3. PLANNING LEGISLATION AND POLICY

INTRODUCTION

3.1. This Chapter of the EIA provides an overview of the international to local planning policy framework taken into consideration in the topic assessments. Further details on compliance with National, Regional and Local policy is provided in the Planning Statement. The following policies and plans have been considered in the EIAR:

- International Context
  - The Kyoto Protocol (1997)
  - The Paris Agreement (2015)
- National Context
  - Future Policy Wales Edition 12 (PPW)
  - The National Plan 2040 (FW 20240)
  - National Development Framework for Wales (NDF)
- Local Context
  - Rhondda Cynon Taf Local Development Plan (RCTLDP)

INTERNATIONAL CONTEXT

The Kyoto Protocol (1997)

3.2. From a global context, the 2005 'Kyoto Protocol' provided a framework for international action on climate change at a global level. As part of this, the Kyoto Protocol brings the United Nations Framework Convention on Climate Change (UNFCCC) into consideration by committing industrialised countries and economies to limiting and reducing greenhouse gas emissions in accordance with agreed individual targets (UNFCCC, 1997). The Convention asks those countries to adopt policies and measures on mitigation and to report periodically.

3.3. Although the Kyoto Protocol technically remains in force, the Paris Agreement (below) has, in effect, superseded the Kyoto Protocol as the principal regulatory instrument governing the global response to climate change. In summary, the Paris Agreement involves all nationals, encouraging voluntary and nationally determined contributions that seeks to prioritise renewable energy development as part of broader climate strategies. The Paris Agreement builds on the Kyoto Protocol and involves a more collaborative and widespread effort to scale up renewable energy projects globally.

The Paris Agreement (2015)

3.4. The Paris Agreement was adopted on December 12, 2015 at COP21 in Paris, France under the UN Framework Convention on Climate Change (UNFCCC). This deal marked a critical turning point toward a zero carbon and climate resilient world. For the first time, 189 countries united under a single agreement to combat climate change and adapt to its impacts. The deal aims to:

- Limit global temperature increase to well below 2 degrees Celsius above pre–industrial levels, whilst ambitiously pursuing efforts to limit the temperature increase to 1.5 degrees Celsius;
- Mobilise and enhance support for climate change mitigation and adaptation in developing countries by providing 'climate finance'; and
- Provide a framework for transparency and accountability on countries progress of mitigation, adaptation, and support.

NATIONAL CONTEXT

Future Wales: The National Plan 2040

3.5. In February 2021 the Welsh Government launched *Future Wales: The National Plan 2040*[1], the highest-level framework guiding national planning policy. Approved by Senedd Cymru in Autumn 2020, Future Wales now sets the overall direction for development in Wales—superseding any previous national or local policies that are inconsistent with its vision—and provides the context within which renewable energy projects must be assessed.

3.6. *Future Wales* establishes a strategic spatial framework that not only directs the siting of nationally significant developments but also emphasises the importance of low-carbon energy in achieving well-being and environmental goals. Recognising that energy supply accounted for 29% of Wales' greenhouse gas emissions in 2018, the Plan highlights Wales' opportunity to become a world leader in renewable energy technologies. While significant potential exists in wind and tidal resources, there is also substantial scope for solar energy development. The Welsh Government's support for both large-scale and community-scale projects ensures that the planning system actively leads the transition to a low-carbon future.

3.7. Key to this framework are Policies 17 and 18, which set out criteria for renewable and low carbon energy projects. Policy 17 – Renewable and Low Carbon Energy and Associated Infrastructure articulates a strong commitment to developing renewable energy from all technologies and at every scale. In this spirit, solar energy projects must be evaluated on their ability to help meet national and international targets such as generating 70% of consumed electricity from renewable sources by 2030 while delivering demonstrable social, economic, environmental, and cultural benefits. New grid infrastructure linked to such developments should also be designed to minimize visual impacts on local communities.

3.8. Policy 18 – Renewable and Low Carbon Energy Developments of National Significance outlines the specific criteria that all large-scale renewable projects, including solar developments, must satisfy. These criteria require that:

- The project avoids unacceptable adverse impacts on the surrounding landscape, including areas of outstanding natural beauty;
- There are no detrimental visual effects on nearby communities or dwellings;
- The integrity of internationally designated conservation sites and nationally protected habitats is maintained;
- Biodiversity is enhanced through proactive measures;
- Potential issues such as shadow flicker, noise, and other disturbances are minimised; and

[1] Welsh Government (2019, updated 20 Feb 2025) *Future Wales: the national plan 2040.* Available at: https://www.gov.wales/future-wales-national-plan-2040

- A clear decommissioning plan is in place, with cumulative impacts of renewable energy schemes carefully considered.

3.9. The Proposed Development has been designed to align fully with the forward-thinking principles of *Future Wales* and the criteria established under PPW. By ensuring that the project delivers net social, economic, environmental, and cultural benefits and by addressing potential impacts through careful site selection, design, and planning it is considered that the scheme supports Wales' renewable energy targets and commitment to a low carbon future.

Future Policy Wales Edition 12 (PPW)

3.10. Planning Policy Wales (PPW) Edition 12[2] establishes the Welsh Government's commitment to transitioning towards a low-carbon economy, with renewable energy playing a central role in addressing climate change, reducing greenhouse gas emissions, and improving energy security. The policy framework promotes the efficient deployment of renewable and low-carbon energy generation across Wales, ensuring that planning authorities facilitate sustainable energy development while balancing environmental and social considerations.

3.11. The Welsh Government recognises a range of renewable energy technologies, including solar power, wind energy, biomass, geothermal, and hydroelectric power. These are identified as key contributors to meeting national and international climate change targets. In line with this, local planning authorities are expected to identify opportunities for renewable energy development within their respective areas and create policies that enable their successful implementation.

3.12. For solar power specifically, PPW acknowledges its growing role in energy generation and the adaptability of solar technologies across a variety of scales, from small rooftop installations to large-scale solar farms. Local Development Plans (LDPs) are required to include policies that actively support appropriate renewable energy proposals, particularly where they align with national objectives of increasing energy production from sustainable sources.

3.13. PPW Edition 12 also emphasises the need for careful environmental consideration when determining applications for renewable energy developments. While renewable energy generation is a priority, it must be balanced against the protection of designated landscapes, biodiversity, and the historic environment. Planning applications for solar farms, for example, should include impact assessments on landscape character, local amenity, and potential ecological effects. Where adverse impacts are identified, mitigation measures should be incorporated to ensure developments remain environmentally and socially sustainable.

3.14. In respect of the locational context of the site, Rhondda Cynon Taf County Borough Council has integrated the principles of PPW into its local planning framework, recognising the importance of renewable energy in contributing to both national and regional climate action

[2] Welsh government (2024) *Planning Policy Wales Edition 12*. Available at: https://www.gov.wales/sites/default/files/publications/2024-07/planning-policy-wales-edition-12.pdf

targets. The Revised Local Development Plan (LDP) 2022-2037 identifies the need to increase renewable energy production and reduce reliance on carbon-intensive energy sources.

3.15. Policy AW12 of the LDP directly supports renewable energy development, including solar farms, provided that proposals do not have significant negative impacts on environmental quality, local biodiversity, or public health. This aligns with national guidance by ensuring that while renewable energy infrastructure is encouraged, it is implemented responsibly and in harmony with the local landscape.

3.16. Within the Pontypridd and Glyn Taff areas, there has been an increased focus on harnessing renewable energy potential. The council has approved various renewable energy projects, including solar installations, demonstrating a proactive approach to achieving sustainability targets. Large-scale solar projects, where they align with national and regional policies, are likely to be supported, provided that they address key considerations such as land use compatibility, grid connectivity, and cumulative

LOCAL CONTEXT

3.17. As set out above, Future Wales establishes that applications for Developments of National Significance must be determined in accordance with its framework, which now forms an integral part of the Development Plan. Local Development Plans (LDPs) remain central to the planning process and cover the site. The relevant Development Plan documents are as follows:

- The Rhondda Cynon Taf LDP (up to 2021) adopted on 2 March 2011[3];

3.18. The LDP is currently undergoing review with updated plans incorporate enhanced provisions for renewable energy, including the promotion of solar installations, to support sustainable development and a low-carbon future.

3.19. The relevant policies within the respective LDPs are summarised below;

- **Policy CS2:** Development in the South;
- **Policy CS10:** Minerals;
- **Policy AW2:** Sustainable Locations;
- **Policy AW5:** New Development;
- **Policy AW6:** Design and Placemaking;

[3] Rhondda Cynon Taf (2011) *Rhondda Cynon Taf Local Development Plan 2006-2021.* Available at: https://www.rctcbc.gov.uk/EN/Resident/PlanningandBuildingControl/LocalDevelopmentPlans/LocalDevelopmentPlan20062021.aspx

- **Policy AW7:** Protection and Enhancement of the Built Environment;
- **Policy AW8:** Protection and Enhancement of the Natural Environment;
- **Policy AW12:** Renewable and Non-Renewable Energy – this policy now explicitly encompasses solar energy developments;
- **Policy AW13:** Large-Scale Renewable Energy Development – while previously focused on windfarm developments, the criteria have been updated to include large-scale solar energy projects;
- **Policy AW14:** Safeguarding of Minerals; and
- **Policy SSA23:** Special Landscape Areas.

Renewable Energy Policy Framework

3.20. This section refers to solar energy policy and the emissions reduction legislative framework, with reference to relevant international, UK, and Welsh Government provisions. The framework of international agreements, legally binding targets, and climate change advisory reports provides the basis for national energy policy and emissions reduction law. This framework underscores the imperative for solar energy, from which the proposed solar development can draw significant support.

3.21. Relevant Government policy is a material consideration. New Government policy does not need to be explicitly reflected in national planning policy to be material; its weight, determined through a reasonable and rational approach, remains a planning judgement for the decision maker.

3.22. The proposed solar development must therefore be assessed against the backdrop of key UK and Welsh Government energy and climate policies, legislative provisions, and national planning policy and advice.

3.23. There is clear and consistent policy support at all levels—from international to local—for the deployment of solar energy to combat the global heating crisis, diversify the energy mix, enhance energy security, and meet legally binding emissions reduction targets.

3.24. Government solar energy policy, alongside associated solar and electricity targets and the drive for economic recovery post-Covid-19, is a critical consideration. Given the rapidly evolving nature of public policy in this area, it is essential to remain clear on the current position.

Need for the Development

3.25. According to the IPCC[4], human activities are estimated to have caused approximately 1°C of global warming above pre-industrial levels due to the rise of greenhouse gas emissions which trap heat in the earth's atmosphere. The main sources of greenhouse gas emissions are natural systems e.g., forest fires, and human activities such as the burning of fossil fuels like coal which alone has increased temperatures by 0.3°C[5]. Greenhouse gas emissions are increasing by 1.5% annually which is shifting us from the relatively stable Holocene to the Anthropocene.

3.26. The increases in global temperatures because of human activity has already been devastating, for example, the economic consequences of the damage caused by 315 mainly climate related natural disasters in 2018 was estimated at roughly £104 billion[6]. This kind of economic damage occurred at just 1°C over pre-industrial levels, the impacts at 1.5°C - 2°C or even 5°C would see an increase in frequency and intensity of disaster events – including increases in hot extremes in most inhabited regions, heavy precipitation in several regions and the probability of drought in some regions - and would be even more damaging to the global economy. Unfortunately, this is looking to be our future reality as the IPCC project warming of between 1.5°C and 2°C to be incredibly likely with the levels of greenhouse gas emissions that continue to be emitted.

3.27. The IPCC project a global mean sea level rise of between 0.26m to 0.77m by 2100 for 1.5°C scenario, however a worst case marine ice sheet instability and/or irreversible loss of Greenland ice sheet could result in a multi-metre-rise in sea level which may be triggered at around 1.5°C to 2°C of warming above pre-industrial levels. The potential consequences of sea level rise of this magnitude include displacement, coastal erosion and land loss[7] which would cause economic devastation as evidenced by the Stern Report's (2006, cited in Wade, 2015, p. 8) warning that at 3°C or 4°C warming, sea levels would cause floods costing the UK 0.2% to 0.4% of GDP annually[8]. Moreover, up to 187 million people globally could be displaced[9].

3.28. The IPCC also state an increased risk to health, livelihoods, food security and water at warming of between 1.5°C and 2°C, with the availability of water and food threatened by continued warming due to prolonged periods of drought or excessive rainfall. That can give rise to social problems such as conflicts regarding access to limited supplies of food and water[10] and displacement/migration that is already evident in islands like Funafuti[11].

[4] https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_summary-for-policymakers.pdf
[5] https://www.clientearth.org/latest/news/fossil-fuels-and-climate-change-the-facts/#:~:text=Coal%20is%20the%20dirtiest%20of%20the%20fossil%20fuels,a%20third%20of%20the%20world%E2%80%99s%20total%20carbon%20emissions.
[6] https://link.springer.com/article/10.1007/s10311-020-01059-w
[7] https://researchportal.bath.ac.uk/en/publications/climate-change-impacts-and-adaptation-in-cities-a-review-of-the-l
[8] https://publications.parliament.uk/pa/cm200708/cmselect/cmtreasy/231/231.pdf
[9] https://www.bbc.co.uk/newsround/48352985
[10] https://pubmed.ncbi.nlm.nih.gov/28051192/
[11] https://www.sciencedirect.com/science/article/abs/pii/S0959378008000903

3.29. Wales has not been unaffected by the effects of climate change to this point with seaside towns like Aberystwyth more frequently experiencing extreme flood events due to the continuous rise of sea levels[12]. This is projected to get much worse as annual temperatures in Wales are expected to rise by between 1.3 and 2.3°C by the 2080s from a 1981-2000 baseline, which will see an increased prevalence of extreme heatwave events impacting on people's health and wellbeing, with their magnitude depending on the degree of change that is experienced[13]. Moreover, winter rainfall is expected to increase by between 7% to 13% by the 2080s from a 1981-2000 whilst sea levels could rise by approximately 43 to 76cm by the 2080s, compared to a 1981-2000 baseline. Such rises could lead to an increase in likelihood of associated risks, such as saltwater intrusion of agricultural land, flooding of coastal communities and flooding of infrastructure, businesses and homes. Summer rainfall is expected to decrease by between 18% to 26% by the 2080s which could lead to periods water scarcity may become more prevalent under these scenarios, leading to possible implications in agriculture and industry.

3.30. The economic, social and environmental consequences of climate change could therefore be highly damaging to Wales in the long term if greenhouse gas emissions continue to rise and temperatures along with it. Therefore, it is key that Wales plays its part in a global effort to reduce its greenhouse gas emissions with the sector key to reducing greenhouse gas emissions being the energy sector. Energy related emissions (typically involving fossil fuels) are and have been the main driver behind greenhouse gas emissions in the atmosphere. The 3 highest emitting sectors across Wales in 2021 were the 'Industry and Business' (39%) sector, the Electricity and Heat Production (17%) sector and the Transport (16%) sector which collectively accounted for 72% of all greenhouse gas emissions[14]. The link between these three sectors is that they are currently fuelled by fossil fuels explaining the high levels of greenhouse gases they emit. This however presents an opportunity for decarbonisation of these sectors through the mass deployment of renewable energy sources like solar combined with their electrification. The IPCC recognises the importance of renewables in this stating[15] that the deployment of renewable sources of energy is essential to stabilize greenhouse gas levels in a timeframe sufficient to allow ecosystems to adapt naturally to climate change, ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

3.31. The Welsh government recognise the importance of reducing greenhouse gas emissions in an effort to avoid climate change. This is shown by the passing of *The Environment (Wales) Act 2016*[16] which requires the Welsh Government to reduce emissions of greenhouse gases in Wales to net Zero by 2050 and establishes a framework of interim emissions targets and carbon budgets to set five yearly carbon budgets. Moreover, the Welsh Government have

[12] What is climate change doing to Wales? - BBC News
[13] CCRA-Evidence-Report-Wales-Summary-Final.pdf (ukclimaterisk.org)
[14] https://www.gov.wales/sites/default/files/publications/2024-02/greenhouse-gas-emissions-infographic-2021.pdf
[15] https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_summary-for-policymakers.pdf
[16] https://www.legislation.gov.uk/anaw/2016/3/contents

made it clear that renewables will play a fundamental role in achieving net zero as they are aiming for 70%[17] of national electricity demand to be met through renewables by 2030 and 100% by 2035[18]. In 2022 Welsh renewable electricity generation relative to consumption stood at 59%[19] highlighting the significant increase in renewable energy capacity to be permitted and operational within a very short timeframe to meet these ambitious aims, especially with the electrification of the transport and other sectors which will only increase electricity demand[20]. This is recognised by the National Infrastructure Commission in Wales[21] who state that current levels of renewable energy generation suggest that significant additional interventions will be necessary to achieve the target 2035 renewable energy target and 2050 net zero target. Therefore, whilst the deployment of small solar schemes, such as the Proposed Development at roughly 500 kW, in and of themselves do not offer a significant contribution towards Welsh renewable energy targets, the mass deployment of these schemes across Wales will add up and are therefore essential to meet Welsh renewable energy targets, allowing the country to play its part in reducing greenhouse gas emissions.

Guidance, Policy Context and Legislation

3.32. There is a wide range of Government legislation, policy and guidance which support the transition to Net Zero and the continued deployment of renewable and low carbon energy infrastructure. The UK is a party to the United Nations Framework Convention on Climate Change (UNFCCC) and as such has signed up to international climate change obligations, such as the Kyoto Protocol and the Paris Agreement.

3.33. The Climate Change Act 2008[22] sets in legislation the UK's approach to tackling and responding to climate change. It introduced the UK's long-term legally binding 2050 target to reduce greenhouse gas emissions by at least 80% relative to 1990 levels. In June 2019, the Government amended this headline target to a 100% reduction (compared to 1990 levels) by 2050 (otherwise known as net zero). Since 1990, the UK has cut greenhouse gas emissions by 40%.

3.34. The diversification of agricultural and land-based business within the rural area is supported by the Government and is acknowledged to help support a prosperous and rural economy. With the impending risks of shortfalls resulting from the loss of future subsidies, changes to carbon taxes on fertilisers and inheritance tax, many farmers are looking to diversify their businesses to supplement their income to provide stability for the agricultural sector. As of 2020 around 40% of farms in Wales employed some form of diversification[23] with diversification projects ranging from campsites and farm shops to installing renewable and low

[17] https://www.gov.wales/sites/default/files/consultations/2023-01/energy-targets-review-graphing-outputs_0.pdf
[18] https://www.gov.wales/wales-aims-meet-100-its-electricity-needs-renewable-sources-2035
[19] https://www.regen.co.uk/publications/energy-generation-and-use-in-wales/
[20] https://www.gov.wales/sites/default/files/publications/2024-10/energy-use-in-wales-report-2022.pdf
[21] https://nationalinfrastructurecommission.wales/renewable2050/#:~:text=The%20Welsh%20Government%20has%20set,achieve%20net%20zero%20by%202050.
[22] https://www.legislation.gov.uk/ukpga/2008/27/contents
[23] https://www.bbc.co.uk/news/uk-wales-51226004

carbon energy schemes such as Battery Energy Storage Systems, solar farms and wind farms. The diversification of agricultural land to provide low carbon energy storage is a widely accepted form of agricultural diversification and is acknowledged to provide significant financial stability to existing farmsteads and rural businesses, with development now the second most common diversified activity with Farmers in England (approximately 22% of farms with diversified activities).

Clean Power 2030 Action Plan (2024)[24]

3.35. The UK Clean Power 2030 Action Plan outlines the UK Government's strategy to transition to a clean power system by 2030. It outlines that delivering Clean Power by 2030 is key to decarbonising the wider economy by 2050 with the electrification of heat in buildings, transport, and industry. By 2050, annual electricity demand is likely to at least double. Clean power by 2030 prepares us for the rapid growth in power demand expected over the 2030s and 40s. Key points from the plan include:

3.36. To achieve the Clean Power 2030 plan, the UK government has outlined a need for 45-47 GW of solar power.

3.37. Regulatory reform of the grid connection to ensure Clean Power 2030 is better integrated into planning and decision making will accelerate the expansion and upgrade of transmission and distribution networks.

3.38. Upgrading the planning system itself by equipping organisations with the flexibility they need to manage the increased caseload it faces will be essential.

3.39. The electricity market will be reformed so that it works in tandem with support schemes to deliver the right investment and operational signals and that any sector-specific barriers to deployment are addressed, to enable the huge volume of deployment that will underpin Clean Power 2030.

3.40. Actions will be taken to improve the flexibility of the wider electricity system such as the release of a Low Carbon Flexibility Roadmap and market reforms to provide batteries and consumer-led flexibility with appropriate and fair access to, and utilisation within, relevant markets.

3.41. The UK Government is determined to drive the development of low carbon long-duration flexibility.

3.42. The UK Government is keen to support and accelerate the delivery of strong domestic supply chains to give developers greater route-to-market certainty and to reskill and upskill workers across the economy so that a lack of skilled workers in the renewables industry does not become a bottleneck to achieving Clean Power by 2030.

Committee on Climate Change – Progress Report 2024[25]

[24] Clean Power 2030 Action Plan - GOV.UK

[25] https://www.theccc.org.uk/publication/progress-in-reducing-emissions-2024-report-to-parliament/

3.43. In June 2024 the Climate Change Committee published it's 2024 Progress Report to Parliament. The report acknowledges that:

3.44. "the UK has committed to reduce emissions in 2030 by 68% compared to 1990 levels, as its Nationally Determined Contribution (NDC) to the Paris Agreement. It is the first UK target set in line with Net Zero. Now only six years away, the country is not on track to hit this target despite a significant reduction in emissions in 2023. Much of the progress to date has come from phasing out coal-generated electricity, with the last coal-fired power station closing later this year. We now need to rapidly reduce oil and gas use as well

3.45. Last year saw a significant fall in emissions, as well as some good progress on policy by the previous Government: confirmation of the zero-emission vehicle mandate; leaving the Energy Charter Treaty, which is not Net Zero-aligned; and an increase to total funding and individual grants for heat pumps in homes via the Boiler Upgrade Scheme, which has led to a significant increase in take-up.

3.46. However, this is not enough. Our assessment is that only a third of the emissions reductions required to achieve the 2030 target are currently covered by credible plans. Action is needed across all sectors of the economy, with low-carbon technologies becoming the norm".

3.47. The report acknowledges that the UK should currently be in a phase of rapid investment and delivery. Yet almost all indicators for low-carbon technology roll-out suggest we are off track, with rates needing to significantly ramp up. In order to achieve current commitments by 2030 it is expected that:

3.48. "Annual offshore wind installations must increase by at least three times, onshore wind installations will need to double and solar installations must increase by five times."

Powering Up Britain (2023)[26]

3.49. The Government published 'Powering Up Britain' in March 2023 which brings together our Energy Security Plan and Net Zero Growth Plan to set out how we will ensure the system is fit for the future, achieve net zero by 2050 and boost economic growth.

British Energy Security Strategy (2022)[27]

3.50. The Government published British Energy Security Strategy in April 2022. The British Energy Security Strategy reaffirms the urgent need for the UK to rapidly develop not only a decarbonised energy system but one that is more self-sufficient. The strategy demonstrates that it is the Government's ambition to develop an energy system which is not so heavily reliant on imported oil and gas (which saw significant spikes in global cost and the overall cost of living following the impacts of the COVID-19 pandemic and Russia's invasion of Ukraine) and on more reliant on decentralised renewable energy. As a key facilitator to this ambition, the

[26] https://www.gov.uk/government/publications/powering-up-britain
[27] https://www.gov.uk/government/publications/british-energy-security-strategy

Energy Security Strategy acknowledges the need to rapidly increase the UK's solar capacity significantly, setting a target to reach 70 gigawatts (GW) of solar capacity by 2035.

Industrial Decarbonisation Strategy, BEIS (March 2021)[28]

3.51. The Industrial decarbonisation strategy, published in March 2021, sets out how industry in the UK can decarbonise in line with national net zero commitments whilst remaining competitive and without pushing emissions abroad. The strategy recognises that reaching the net zero target will require extensive, systematic changes across all sectors, including industry and emphasises that the 2020s will be a crucial decade to lay the foundation to enable the switch away from fossil fuel combustion to low carbon alternatives, including electrification, hydrogen, and biomass.

3.52. The report sets out that in order to deliver on net zero commitments, a minimum of 20TWh of fossil fuel use will need to be replaced by low carbon alternatives in 2030. The scale and pace of decarbonisation required to achieve this target is therefore urgent.

3.53. The modelling presented within the report indicates that electrification of industry could reduce emissions by between 5 MtCO2e and 12.3 MtCO2e per annum by 2050 and emphasises that as new technologies emerge and renewable electricity prices continue to drop, electrification will become a more attractive option for industry.

3.54. The report states that if targeted scenarios are to be realised, the electricity network will need to accommodate significant increased demand from the electrification of industrial processes and will therefore need to be fit for purpose to achieve this to achieve net zero. Increasing renewable energy production will thus make a positive contribution towards achieving this objective.

The Energy White Paper (2020)[29]

3.55. The Energy White Paper (EWP) was first presented to Parliament on 14 December 2020 and built upon the Prime Minister's Ten Point plan for a Green Industrial Revolution. The EWP sets out ambitious plans offering support for a variety of technologies and committing funds to support the growth of low-carbon green-technologies. Central to the aims of the EWP is the commitment to achieve Net Zero and tackle climate change.

3.56. The EWP begins with a statement from the former Secretary of State for Business, Energy and Industrial Strategy (BEIS), Alok Sharma MP:

3.57. "The government presents this white paper at a time of unprecedented peacetime challenge to our country. Coronavirus has taken a heavy toll on our society and on our economy. But we will overcome COVID-19 and rebuild our economy, building back better and levelling up the country. As we do so, we must address the intergenerational challenge of climate change.

[28] https://www.gov.uk/government/publications/industrial-decarbonisation-strategy
[29] https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future

Unchecked, the impact of rising global temperatures represents an existential threat to the planet. So, building back better means building back greener.

3.58. This white paper puts net zero and our effort to fight climate change at its core, following the Prime Minister's Ten Point Plan for a Green Industrial Revolution. The Ten Point Plan sets out how government investment will leverage billions of pounds more of private investment and support up to 250,000 jobs by 2030.

3.59. The way we produce and use energy is therefore at the heart of this. Our success will rest on a decisive shift away from fossil fuels to using clean energy for heat and industrial processes, as much as for electricity generation. These are more than academic considerations; the shift to net zero will affect us all. This white paper presents a vision of how we make the transition to clean energy by 2050 and what this will mean for us as consumers of energy in our homes and places of work, or for how businesses use energy to produce goods and services.".

3.60. The EWP subsequently seeks to put in place a strategy for the wider UK energy system that transforms energy and supports a green recovery (page 4).

3.61. On Page 5, the EWP sets out the Government's 'Compelling case for tackling climate change'. The key points presented are (inter alia):

3.62. "We need to act urgently. The future impacts of climate change depend upon how much we can hold down the rising global temperature. To minimise the risk of dangerous climate change, the landmark Paris Agreement of 2015 aims to halt global warming at well below 2°C, while pursuing efforts to limit it to 1.5°C, increasing measures to adapt to climate change, and aligning financial systems to these goals.

3.63. At the global scale, however, we are not presently on track to reach the temperature goal of the Paris Agreement. Based on current national pledges, and assuming the level of ambition does not change, the world is heading for around 3°C of warming by the end of the century.

3.64. The cost of inaction is too high. We can expect to see severe impacts under 3°C of warming. Globally, the chances of there being a major heatwave in any given year would increase to about 79 per cent, compared to a five per cent chance now. Many regions of the world would see what is now considered a 1-in-100-year drought happening every two to five years."

3.65. "To meet the temperature goal of the Paris Agreement, the world must collectively and rapidly reduce global emissions to net zero over the next 30 years. Success will mean we are less exposed to flood and heat risks and preserve our national security, our prosperity, and our natural world which are threatened by the global disruption of climate change."

3.66. The UK Government recognises that decarbonising the energy system over the next thirty years means replacing, as far as it is possible to do so, fossil fuels with clean energy technology such as renewables (EWP, page 9). The EWP identifies how clean energy will become the predominant form of energy, entailing in a potential doubling of electricity demand and consequently a fourfold increase in low-carbon electricity generation (EWP Introduction, page

10). The Government recognises that growing and supporting green jobs across the country in green industries will also support a green recovery from COVID-19 (page 16).

3.67. The EWP states that (page 43):

3.68. *"While we are not planning for any specific technology solution, we can discern some key characteristics of the future generation mix. A low-cost, net zero consistent system is likely to be composed of predominantly wind and solar. But ensuring the system is also reliable, means intermittent renewables need to be complemented by technologies which provide power, or reduce demand, when the wind is not blowing, or the sun does not shine. Today this includes nuclear, gas with carbon capture and storage and flexibility provided by batteries, demand side response, interconnectors and short-term dispatchable generation providing peaking capacity, which can be flexed as required".*

3.69. Looking forward, page 44 of the EWP which provides a long-term forecast for the energy system for 2050, stating that:

3.70. *"By 2050, we expect low-carbon options, such as clean hydrogen and long-duration storage, to satisfy the need for peaking capacity and ensure security of supply at low cost, likely eliminating the reliance on generation from unabated gas."*

Renewable Energy Deep Dive: Recommendations – Update 3 (March 2024) [30]

3.71. The Renewable Energy Deep Dive Biannual Recommendations Update 3 is a report published by the Welsh Government. It outlines the progress and recommendations for significantly scaling up renewable energy in Wales. It has the vision for Wales to generate renewable energy to at least fully meet our energy needs and utilise surplus generation to tackle the nature and climate emergencies and promotes actions to reduce energy demand and maximise local ownership retaining economic and social benefits in Wales.

Net Zero Wales: Carbon budget 2 (2021 – 2025) [31]

3.72. Net Zero Wales (NZW) is a strategic plan by the Welsh Government aimed at reducing greenhouse gas emissions to achieve net-zero carbon emissions by 2050. It sets out the Welsh Government's policies and proposals for meeting the second carbon budget period 2021-2025 as required under The Environment (Wales) Act 2016 whilst also laying the groundwork for further reductions to meet the 2030 target, ultimately reaching net-zero by 2050.

3.73. NZW states that for the electricity and heat emissions sector to meet carbon budget 2 and enter onto a pathway for delivering net zero emissions across Wales by 2050 *"increasing electricity from low carbon and variable renewables"* will be essential.

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[30] https://www.gov.wales/renewable-energy-deep-dive-biannual-recommendations-update-3-community-and-local-energy-html

[31] Welsh Government (2022) *Net Zero Strategic Plan*. Available at: https://www.gov.wales/sites/default/files/publications/2022-12/welsh-government-net-zero-strategic-plan.pdf

3.74. NZW proposes a range of policies in relation to decarbonising the electricity sector and meeting the targets of Carbon Budget 2 and net zero by 2050, of particular relevance are polices:

3.75. Policy 22 – Increasing renewable energy developments on land through our planning regime which states that the Welsh Government will improve and unify the consenting of energy projects in Wales to provide a quicker and more proportionate consenting regime for energy infrastructure.

The Climate Change (Interim Emissions Targets) (Wales) (Amendment) Regulations (2021)[32]

3.76. The Climate Change (Interim Emissions Targets) (Wales) (Amendment) Regulations 2021 set updated targets for 2030 and 2040, increasing emissions reductions from 45% and 67% to 63% and 89%, respectively. These interim targets align with the 2050 goal and prioritise climate action in the 2020s in line with the Climate Change Committee's recommendations.

The Climate Change (Net Welsh Emissions Account Credit Limit) (Wales) Regulations (2021)[33]

3.77. The Climate Change (Net Welsh Emissions Account Credit Limit) (Wales) Regulations 2021 revise carbon budgets for 2021-2025 and 2026-2030, setting average reduction targets of 37% and 58% below baseline levels, respectively. Additionally, they impose a 0% limit on the use of carbon offsets for 2021-2025, reinforcing the emphasis on direct emissions reductions.

The Climate Change (Carbon Budgets) (Wales) (Amendment) Regulations (2021)[34]

3.78. The Climate Change (Carbon Budgets) (Wales) (Amendment) Regulations 2021 ensure that carbon budgets remain aligned with Wales' net-zero trajectory, providing regulatory certainty for the renewable energy sector.

Prosperity for All: A Low Carbon Wales (2019) [35]

3.79. Prosperity for All: A Low Carbon Wales is the first statutory decarbonisation plan produced by the Welsh Government. It is a comprehensive plan outlining a collection of 100 policies and proposals aimed at helping Wales meet its carbon budget for 2016-2020 and achieve its emission reduction targets for 2030.

3.80. The sector pathways chapters in this Plan set out how policies and proposals contribute to meeting sector emission reduction pathways. In relation to the power sector, this plan has the ambition to make low carbon electricity the main source of energy in Wales. It sets a target to reduce emissions by 37% from baseline levels by the year 2030 by: (1) reducing overall power generation from fossil fuels; (2) increasing the deployment of renewable energy to meet the target for Wales to generate 70 per cent of its electricity consumption from renewable energy by 2030; and (3) increasing support for innovation in the Power Sector.

[32] https://www.legislation.gov.uk/wsi/2021/338/made
[33] https://www.legislation.gov.uk/wsi/2021/334/made
[34] https://www.legislation.gov.uk/wsi/2021/332/made
[35] https://www.gov.wales/prosperity-all-low-carbon-wales

3.81. Policy 26 – 'Implementing Energy Consenting, Planning & Permitting policy' states that *"the planning system in Wales plays a key role in facilitating clean growth and decarbonisation, and helps build resilience to the impacts of climate change. Achieving our strategic decarbonisation goals is highlighted as a key driver, which all development plans must support."*

Environment (Wales) Act 2016

3.82. The Environment (Wales) Act 2016[36] is a piece of legislation passed by the Welsh Government aimed at promoting the sustainable management of natural resources in Wales. The Act sets out a framework for integrating environmental, social, and economic considerations into decision-making processes. It includes provisions on biodiversity, climate change, waste management, and flood risk management, among other areas.

3.83. Furthermore, the Act places a duty on Welsh Ministers to set targets for reducing greenhouse emissions and also to set carbon budgets. Section 29 'The 2050 emissions target;' legally binds Wales to achieving at least 100% decarbonised system by 2050, demonstrating the Welsh Government's commitment to net-zero emissions.

Planning Balance

3.84. In regard to the Planning Balance in the context of the proposed solar development, it is essential to address key considerations when determining whether planning permission should be granted for the proposed solar farm. First, the acceptability of the development in accordance with the Development Plan and national policies related to renewable energy should be highlighted.

3.85. The site is located adjacent to the Pre-Assessed Area (PAA) for solar energy in Future Wales, offers a unique opportunity to contribute to renewable energy generation while minimising visual and landscape impacts. The careful consideration of such impacts, as assessed in the Landscape and Visual Impact Assessment (LVIA), demonstrates that the site can accommodate the proposed solar farm while maintaining an acceptable balance with the surrounding landscape. At the forefront of the planning assessment is the recognition of the urgent and growing need to generate electricity from renewable sources.

3.86. Wales faces a critical challenge in achieving its net-zero greenhouse gas (GHG) emissions target by 2050, and solar energy, as a powerful renewable resource, plays a key role in meeting this challenge. This urgency is strongly underpinned by both international climate commitments and national targets, including Wales' own goal of generating 70% of its electricity from renewable means by 2030, and 100% by 2035.

3.87. The proposed solar farm aligns with these broader policy imperatives and provides a foundational contribution to meeting Wales' climate and energy goals. The policy framework

[36] Welsh Government (2016) *Environment (Wales) Act 2016*. Available online: https://www.legislation.gov.uk/anaw/2016/3/contents

for renewable energy, as set out in Future Wales and the Planning Policy Wales (PPW) documents, unequivocally supports the deployment of solar energy within designated areas.

3.88. The proposed solar farm would act as a tangible step forward in addressing the climate emergency, contributing directly to the reduction of carbon emissions and enhancing Wales' energy resilience. While the proposed development site lies outside an identified Pre-Assessed Area for solar energy, the provisions of *Future Wales* have demonstrated that such developments may still be acceptable provided they contribute to the overall renewable energy capacity that Wales must urgently increase. The landscape's ability to accommodate the proposed development has been affirmed by the LVIA, and this means that any potential adverse landscape or visual impacts are not of significant concern in the overall balance. The planning decision must recognise that Wales is in the midst of a climate emergency, and the deployment of renewable energy technologies such as solar is not just desirable but necessary. Added to the policy imperative for decarbonisation, solar energy will be essential to meeting ambitious climate targets and securing a prosperous, sustainable future for Wales. The benefits of solar energy extend beyond simply reducing carbon emissions; they also contribute to energy security and the local economy as part of a green recovery. In light of the pressing global heating crisis, the demonstrated need for renewable energy, and the substantial long-term benefits of solar energy development, it is clear that the advantages of the proposed solar farm outweigh any minor environmental mitigations. The proposal aligns strongly with national commitments to renewable energy generation, net-zero emissions, and climate action. On balance, it is concluded that planning permission should be granted for the proposed solar farm, subject to appropriate and reasonable conditions that ensure the project's minimal impact and continued alignment with national policy goals. This decision will be essential for advancing Wales' efforts toward a sustainable and climate-resilient future. for 29 seconds

3.89. The proposed solar farm development has been carefully evaluated within the context of the national planning policy, and its acceptability is clear. Central to the planning balance is the need to deliver renewable electricity in order to meet both Wales's international obligations and its national target of achieving net zero greenhouse gas emissions by 2050. This proposal is in step with the objectives outlined in Future Wales and Planning Policy Wales, which firmly support the expansion of renewable energy and recognize solar power as a key contributor to reducing emissions and diversifying our energy mix.

3.90. The location of the proposed solar farm has been rigorously assessed. Although part of the site lies outside traditionally pre-assessed areas for renewable developments, detailed visual and landscape evaluations have demonstrated that the site is capable of accommodating the project without unacceptable adverse impacts. The assessments confirm that any potential visual or environmental effects are minor compared to the considerable benefits of generating clean, renewable energy.

3.91. There is an urgent policy imperative to transition to a net zero economy, a challenge that has become even more pressing with the declaration of a climate emergency. This development supports the ambitious targets set for 2030 and 2050, contributing to the reduction of fossil

fuel dependence and the stabilization of greenhouse gas levels. The proposed solar farm not only reinforces the strategic shift towards a low-carbon economy but also plays a critical role in ensuring a secure and resilient energy supply for the future.

3.92. When weighing the benefits against any limited negative impacts, the advantages of the proposed solar development are compelling. The project will significantly contribute to reducing greenhouse gas emissions, enhancing energy security, and supporting a green economic recovery, all of which are essential for addressing the global heating crisis. In light of the robust policy framework and the urgent need for renewable energy solutions, the benefits of this solar farm demonstrably outweigh any potential drawbacks.

3.93. It is therefore concluded that, subject to appropriate and reasonable conditions, planning permission should be granted for the proposed solar farm. This decision would not only be consistent with local and national planning policies but would also represent a decisive step forward in meeting our collective climate objectives and securing a sustainable energy future for Wales.

CONCLUSION

3.94. The renewable energy policy framework establishes a robust basis for advancing solar energy, drawing on a range of international agreements, legally binding targets, and climate change advisory reports that underpin both national energy policy and emissions reduction law. This framework emphasises the imperative of deploying renewable energy technologies to meet critical emissions reduction targets, and it supports solar energy as a key element in the transition to a low-carbon future.

3.95. The policy environment is supported at multiple levels. International commitments, such as those under the UNFCCC, Kyoto Protocol, and Paris Agreement, together with the UK's Climate Change Act 2008, provide a strong legal foundation for reducing greenhouse gas emissions. At the national level, UK and Welsh Government initiatives, including the Environment (Wales) Act 2016 and updated carbon budgets, reinforce the drive toward a net-zero future. Even where new government policies are not explicitly reflected in existing planning policy, they remain a material consideration in decision-making, ensuring that the deployment of solar energy is aligned with the broader legislative and strategic context.

3.96. The urgency of action is underscored by the impacts of climate change as documented by the Intergovernmental Panel on Climate Change (IPCC). Human activities have already increased global temperatures by approximately 1°C above pre-industrial levels, and further warming could lead to devastating economic and environmental consequences. Past climate-related disasters, which caused significant economic damage, highlight the critical need for prompt and effective measures. In Wales, the effects of climate change are already evident, with increasing risks of flooding, sea level rise, and extreme weather events affecting communities

and infrastructure. These challenges reinforce the need for a rapid transition to renewable energy sources to mitigate further damage.

3.97. Solar energy is recognised as a vital component of this transition. Consistent policy support across international, UK, and Welsh levels affirms its importance for diversifying the energy mix, enhancing energy security, and achieving legally binding emissions reduction targets. The economic benefits of expanding solar energy include supporting recovery efforts following the Covid-19 pandemic and contributing to sustainable growth and job creation. Although individual solar schemes, such as the proposed 500 kW development, may have modest capacity, their mass deployment across Wales is essential to significantly decarbonize the energy sector, particularly when coupled with broader electrification initiatives in industry, transport, and heating.

3.98. National strategies further reinforce this vision. Initiatives such as the Clean Power 2030 Action Plan and the British Energy Security Strategy outline ambitious targets for increasing solar capacity and upgrading grid infrastructure. These plans highlight the need for rapid regulatory reform and significant investment to accommodate the substantial expansion of renewable energy. Complementary reports, including the Renewable Energy Deep Dive Update and Net Zero Wales, detail policies and targets aimed at scaling up renewable energy to meet both short- and long-term decarbonisation objectives. With goals set for 70% of national electricity demand to be met through renewables by 2030 and 100% by 2035, it is clear that solar energy plays a central role in the overall strategy to reduce greenhouse gas emissions and secure a sustainable energy future.

3.99. In conclusion, the renewable energy policy framework confirms that solar energy is a critical element in the decarbonisation strategy required to address the challenges posed by climate change. The integration of international, national, and local policy measures creates a coherent and legally supported environment that facilitates the rapid deployment of renewable energy technologies. The proposed solar development not only contributes to meeting these ambitious emissions reduction targets but also supports broader economic and environmental goals, ensuring that Wales can play its part in the global effort to transition to a resilient, low-carbon energy system.