Botley West Solar Farm

Environmental Statement

Volume 3

Appendix 14.1: Climate Change Policy

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14.1 National Planning Policy and Legislation

14.1.1 The Climate Change Act 2008 as amended (2019) commits the UK government to reducing greenhouse gas emissions by 100% of 1990 levels by 2050 and created a framework for setting a series of interim national carbon budgets and plans for national adaptation to climate risks.

14.1.2 At present, the Third, Fourth, Fifth and Sixth Carbon Budgets, set through The Carbon Budget Orders 2009, 2011, 2016 and 2021, are 2.54 $GtCO_2e$ for 2018-2022, 1.95 $GtCO_2e$ for 2023-2027, 1.73 $GtCO_2e$ for 2028-2032 and 0.97 $GtCO_2e$ for 2033-2037 respectively. The Sixth Carbon Budget is the first Carbon Budget that is consistent with the UK's net zero target, requiring a 78% reduction in GHG emissions by 2035 from 1990 levels.

14.1.3 The Climate Change Act also created the Committee on Climate Change (now Climate Change Committee) (CCC) to give advice on carbon budgets and report on progress. The Committee through its Adaptation Sub-Committee also gives advice on climate change risks and adaptation. Its advice regarding carbon and climate policy relevant to the Project is summarised below.

14.1.4 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations), as amended, set out the requirements for EIA for NSIPs. Of particular relevant to climate change are the following points:

- "The EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors-… climate…"
- "A description of the factors specified in regulation 5(2) likely to be significantly affected by the development … air climate (for example greenhouse gas emissions, impacts relevant to adaptation)"
- "A description of the likely significant effects of the development on the environment resulting from, inter alia—… (f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change."

Planning Policy Context

National Policy Statements

14.1.5 There are currently six energy National Policy Statements (NPSs), three of which contain policy relevant to the Project, specifically:

- Overarching NPS for Energy (NPS EN-1) which sets out the UK Government's policy for the delivery of major energy infrastructure (DESNZ, 2023a);
- NPS for Renewable Energy Infrastructure (NPS EN-3) (DESNZ, 2023b); and
- NPS for Electricity Networks Infrastructure (NPS EN-5) (DESNZ, 2023c).

14.1.6 These NPS' were first published in November 2023, replacing previous NPS' published in 2011, they have now come into force as of 17 January 2024.

14.1.7 NPS EN-1, NPS EN-3, and NPS EN-5 include guidance on what matters are to be considered in the assessment and also highlight a number of factors relating to the determination of an application and in relation to mitigation. These are summarised in Table 14.1 below.

Table 14.1: Summary of the NPS EN-1, NPS EN-3, NPS EN-5 document requirements relevant to climate change

Summary of NPS Requirement	How and where considered in the ES
NPS EN-1	
This NPS sets out how the energy sector can help deliver the Government's climate change objectives by clearly setting out the need for new low carbon energy infrastructure to contribute to climate change mitigation (section 2 of NPS EN-1).	Volume 1, Chapter 5: Need for the Project & Alternatives Considered
Section 4.10 of NPS EN-1 advises that the ES should set out how the applicant has considered the projected impacts of climate change, on the Project. Section 4.10 also states that applicants should demonstrate that proposals have a high level of climate change resilience built in, by setting out appropriate climate adaptation measures. In developing measures to support climate adaptation, applicants should maximise the use of nature-based solutions and integrated approaches (for example, hydrology and biodiversity solutions), alongside other conventional techniques.	Consideration of this, and justification for the scoping out of in-depth consideration of climate risk can be found within Volume 1, Chapter 14: Climate Change (Table 14.6). Within the table, typical manufacturing standards applicable to the Project are detailed that mitigate for the matters raised in the scoping opinion (ID – 3.8.1), laid out within Volume 1, Chapter 14: Climate Change (Table 14.3). Consideration of risks such as extreme weather events and increased ambient temperatures has been laid out within Volume 1, Chapter 6: Project Description **[EN010147/APP/6.3]**, in relation to solar PV manufacturing standards. The development of the Project has taken an integrated approach, considering hydrology, flood risk, soils, landscape and biodiversity and this is reflected in the Outline Landscape Management Plan, Outline Landscape and Ecology Management Plan**[EN010147/APP/7.6.3]**, Biodiversity Net Gain Plan **[EN010147/APP/6.5]**, Outline Soil Management Plan **[EN010147/APP/7.6.1]**, and Appendix 10.1: Flood Risk Assessment **[EN010147/APP/6.5]**.
GHG assessments should include 'A whole life GHG assessment showing construction, operational and decommissioning GHG impacts, including impacts from land use change…Where there are residual emissions, the level of emissions and the impact of those on national and international efforts to limit climate change, both alone and where relevant in combination with other developments at a regional or national level, or sector level, if sectoral targets are developed' (paragraph 5.3.4 of NPS EN-1).	An assessment of the construction, operation and maintenance, and decommissioning emissions associated with the Project within Volume 1, Chapter 14: Climate Change (section 14.9), as well as the overall net whole life emissions in section Volume 1, Chapter 14: Climate Change (section 14.10). Emissions associated with the Project are contextualised within the UK carbon budgets in Volume 1, Chapter 14: Climate Change (section 14.9). The assessment is supported by Volume 3, Appendix 14.2: Greenhouse Gas Calculations **[EN010147/APP/6.5]**.
The Secretary of State must be satisfied that the applicant has as far as possible	

Summary of NPS Requirement	How and where considered in the ES
assessed the GHG emissions of all stages of the development (paragraph 5.3.8 of NPS EN-1).	
With regards specifically to mitigation: *"a GHG assessment should be used to drive down GHG emissions at every stage of the Project and ensure that emissions are minimised as far as possible for the type of technology"*, (paragraph 5.3.5 of NPS EN-1)	Committed mitigation measures to reduce emissions associated with the Project, particularly by embodied carbon reductions, are detailed within Volume 1, Chapter 14: Climate Change (section 14.8) **[EN010147/APP/6.3].**
Applicants should look for opportunities within the proposed development to embed nature-based or technological solutions to mitigate or offset the emissions of construction and decommissioning (paragraph 5.3.6 of NPS EN-1).	The development of the outline design of the Project has taken an integrated approach, considering hydrology, flood risk, soils, landscape and biodiversity. This is reflected in the Outline Landscape Management Plan**[EN010147/APP/7.6.3]**, Biodiversity Net Gain Plan **[EN010147/APP/6.5]**, Outline Soil Management Plan **[EN010147/APP/7.6.1]**, and Appendix 10.1: Flood Risk Assessment **[EN010147/APP/6.5]**.
Steps taken to minimise and offset emissions should be set out in a GHG Reduction Strategy, secured under the Development Consent Order. The GHG Reduction Strategy should consider the creation and preservation of carbon stores and sinks including through woodland creation, hedgerow creation and restoration, peatland restoration and through other natural habitats (paragraph 5.3.7 of NPS EN-1).	A GHG Reduction Strategy has been prepared and submitted alongside the ES (Volume 3, Appendix 14.3: Outline GHG Reduction Strategy **[EN010147/APP/6.5]**).
The Secretary of State should be content that the applicant has taken all reasonable steps to reduce the GHG emissions of the construction and decommissioning stage of the development (paragraph 5.3.9 of NPS EN-1).	Committed mitigation measures to reduce emissions associated with the Project, particularly by embodied carbon reductions, are detailed within Volume 1, Chapter 14: Climate Change (section 14.8) **[EN010147/APP/6.3].**
The Secretary of State should give appropriate weight to projects that embed nature-based or technological processes to mitigate or offset the emissions of construction and decommissioning within the proposed development. However, in light of the vital role energy infrastructure plays in the process of economy wide decarbonisation, the Secretary of State must accept that there are likely to be some residual emissions from construction and decommissioning of energy infrastructure (paragraph 5.3.10 of NPS EN-1).	The design of the Project has incorporated nature-based solutions, where practicable, such as in the development of biodiversity enhancement measures and in the outline design of the Project, which has taken into account hydrology, flood risk, landscape and biodiversity considerations. This is reflected in the Outline Landscape Management Plan, Outline Landscape and Ecology Management Plan **[EN010147/APP/7.6.3]**, Biodiversity Net Gain Plan **[EN010147/APP/6.5]**, Outline Soil Management Plan **[EN010147/APP/7.6.1]**, and Appendix 10.1: Flood Risk Assessment **[EN010147/APP/6.5]**.
Operational GHG emissions are a significant adverse impact from some types of energy infrastructure which cannot be totally avoided.	The purpose of the Project is to generate and provide renewable energy that feeds into the UK Electricity Grid. Emissions arising from the operational phase of the project have been assessed within Volume 1, Chapter 14: Climate Change (section 14.9),resulting in a significant beneficial effect.

Summary of NPS Requirement	How and where considered in the ES
Operational emissions will be addressed in a managed, economy-wide manner, to ensure consistency with carbon budgets, net zero and our international climate commitments (paragraphs 5.3.11 and 5.3.12 of NPS EN-1).	
NPS EN-3	
Provides the primary policy for decisions by the Secretary of State on applications they receive for nationally significant renewable energy infrastructure defined at section 1.6 of NPS EN-3.	Volume 1, Chapter 5: Need for the Project & Alternatives Considered **[EN010147/APP/6.3].**
Paragraph 2.4.11 of NPS EN-3 states that 'Solar photovoltaic (PV) sites may also be proposed in low lying exposed sites. For these proposals, applicants should consider, in particular, how plant will be resilient to: • increased risk of flooding; and • impact of higher temperatures.	Volume 1, Chapter 14: Climate Change (Table 14.6) **[EN010147/APP/6.3]** provides justification for not assessing the impact of higher temperatures in relation to its impact on the Project any further. Consideration of flood risk shall be addressed within Volume 1, Chapter 10: Hydrology and flood risk of the ES **[EN010147/APP/6.3].**
NPS EN-5	
With regards to climate change adaptation, applicants must consider how the development is vulnerable to, and how it has been designed to be resilient to the increased risks of flooding, wind and storm events, heightened temperatures, and subsidence resulting from climate change (paragraph 2.3.2 of NPS EN-5).	Consideration of this, and justification for its scoping out of further consideration within Volume 1, Chapter 14: Climate Change (Table 14.6) **[EN010147/APP/6.3]**.
"The climate-warming potential of SF6 is such that applicants should, as a rule, avoid the use of SF6 in new developments. Where no proven SF6-free alternative is commercially available, and where the cost of procuring a bespoke alternative is grossly disproportionate, the continued use of SF6 is acceptable, provided that emissions monitoring and control measures compliant with the F-gas Regulation and/or its successors are in place" (paragraph 2.10.14 - 2.10.15 in NPS EN-5).	SF6 has been considered in Volume 1, Chapter 14: Climate Change (paragraph 14.5.23)
(Paragraph 2.3.2 - 2.3.3 of NPS EN-5) *Applicants should in particular set out to what extent the proposed development is expected to be vulnerable, and, as appropriate, how it has been designed to be resilient to:* • *Flooding, particularly for substations that are vital to the network; and*	Volume 1, Chapter 14: Climate Change (Table 14.6) **[EN010147/APP/6.3]** provides justification for not assessing these impacts in relation to its impact on the Project any further. Consideration of flood risk shall be addressed within Volume 1, Chapter 10: Hydrology and flood risk of the ES**[EN010147/APP/6.3]**.

Summary of NPS Requirement	How and where considered in the ES
especially in light of changes to groundwater levels resulting from climate change • *Higher average temperatures leading to increased transmission losses* • *earth movement or subsidence caused by flooding or drought (for underground cables)* *Section 4.9 of EN-1 advises that the resilience of the project to the effects of climate change must be assessed in the Environmental Statement (ES) accompanying an application. For example, future increased risk of flooding would be covered in any flood risk assessment.*	Consideration of higher average temperatures leading to transmission losses has been laid out within Volume 1, Chapter 6: Project Description **[EN010147/APP/6.3]**, in relation to solar PV manufacturing standards.

National Planning Policy Framework

14.1.8 The National Planning Policy Framework (NPPF) was published in 2012 and updated in 2018, 2019 and 2021 (Department for Levelling Up, Housing and Communities, 2021). The NPPF sets out the Government's planning policies for England.

14.1.9 sets out a summary of the NPPF policies relevant to this chapter.

Table 14.2: Summary of NPPF requirements relevant to this chapter

Policy	Key Provisions	How and where considered in the ES
14. Meeting the challenge of climate change, flooding, and coastal change. Paragraph 157 and 159.	*'The planning system should support the transition to a low carbon future in a changing climate… New development should be planned for in ways that: avoid increased vulnerability to the range of impacts arising from climate change… and can help to reduce greenhouse gas emissions..*	Volume 1, Chapter 14: Climate Change**[EN010147/APP/6.3]**, section 14.9 provides an assessment of the GHG emissions associated with the Project.

14.1.10 The Planning Practice Guidance (Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities and Local Government, 2023) supports the NPPF and provides guidance across a range of topic areas, including climate change. It recommends the consideration of future climate risks and promotes the implementation of suitable adaptation and mitigation strategies to manage any climate risk.

Draft NPPF Updates

14.1.11 On 30 July 2024, the UK Government published proposed reforms to the NPPF (Ministry of Housing, Communities and Local Government, 2024), this is a draft

document that is out for consultation, with consultation closing 24 September 2024.

14.1.12 Particularly relevant to this chapter is alterations suggested to paragraph 164 which is set out below in para 14.1.13 (deleted text presented with strikethrough, proposed new text underlined).

14.1.13 ~~In determining planning applications~~ Local planning authorities should support planning applications for all forms of renewable and low carbon development. When determining planning applications for ~~renewable and low carbon~~ these developments, local planning authorities should:

a. not require applicants to demonstrate the overall need for renewable or low carbon energy, and give significant weight to the proposal's contribution to renewable energy generation and a net zero future;

b. recognise that even small-scale and community-led projects provide a valuable contribution to ~~significant~~ cutting greenhouse gas emissions;

c. in the case of applications for the repowering and life-extension of existing renewable sites, give significant weight to the benefits of utilising an established site.~~; and approve the application if its impacts are (or can be made) acceptable.~~

14.1.14 The proposed alterations to paragraph 164 of the NPPF shifts policy further in favour of renewable energy applications, clearly stating that local planning authorities should support planning applications for all forms of renewable and low carbon development.

14.2 National Energy and Climate Change Policy and Guidance

Clean Growth Strategy, 2017

14.2.1 The 2017 Clean Growth Strategy for the UK (Department for Business, Energy and Industrial Strategy (BEIS), 2017) contains a key objective of 'Delivering Clean, Smart, Flexible Power' and details specific policies through which this can be achieved:

- Policy 33 of the report states the government's intention to phase out the use of unabated coal for electricity production by 2025;
- Policy 35 sets the government's intentions to improve the route to market for renewable technologies;
- Policy 36 details plans to target a total carbon p rice in the power sector which will give businesses greater clarity on the total price they will pay for each tonne of emissions.

14.2.2 The Strategy discusses a potential low-carbon pathway whereby annual emissions are as low as 16 $MtCO_2e$ by 2032. The report states *"this could be achieved by [among other things] growing low carbon sources such as renewables and nuclear to over 80 per cent of electricity generation, and phasing out unabated coal power".*

Energy White Paper: Powering Our Net Zero Future, 2020

14.2.3 The Energy White Paper (HM Government, 2020) builds on the Ten Point Plan for a green industrial revolution, a policy paper that sets out the governments ambitions to *"build back better, support green jobs, and accelerate our path to net zero".* The Energy White Paper builds on this by setting out energy-related measures in a long-term strategic vision, working towards the net zero emissions target for 2050. It establishes a shift from fossil fuels to cleaner energy in terms of power, buildings and industry, whilst creating jobs and growing the economy. In addition to this, the best solutions should be determined for very low emissions and reliable supply, keeping cost low for consumers. The White paper affirms the position that *"Onshore wind and solar will be key building blocks of the future generation mix, along with offshore wind."*

14.2.4 Focusing on electricity is key for the transition away from fossil fuels and decarbonising the economy by 2050. Some commitments from this white paper include:

- Accelerate the deployment of clean electricity generation through the 2020's
- Invest £1 billion in UK's energy innovation programme to develop the technologies of the future such as advanced nuclear and clean hydrogen
- Ensure that the transformation of the electricity system supports UK jobs and new business opportunities, at home and abroad
- Make sure that energy system information about supply and demand is used to drive greater efficiency and lower costs.

14.2.5 The Net Zero Innovation Portfolio has been developed, and aims to *"accelerate the commercialisation of innovative low-carbon technologies, systems and processes in power, buildings and industry to set the UK on the path to net zero and create world-leading industries and new jobs."* It looks to focus on ten priority areas, including flexibility in decarbonisation of the energy system.

National Infrastructure Strategy, 2020

14.2.6 The National Infrastructure Strategy (HM Treasury, 2020) focuses on the investment and delivery of infrastructure, which is fundamental to delivering net zero emissions by 2050. The strategy sets out the UK Government's plans to deliver on this target, decarbonising the economy and adapting to climate change. Crucially, the strategy states the following in relation to renewables:

- *"To deliver net zero, the share of generation from renewables needs to dramatically increase. While the UK leads the world in the deployment of offshore wind, greater generation capacity will need to come from onshore wind and solar as well. As recommended by the National Infrastructure Commission (NIC), the next auction round for Contracts for Difference in 2021 will include technologies such as onshore wind and solar PV"* (page 51)

- Work towards meeting the net zero emissions target by 2050 – Decarbonise the UK's power, heat and transport networks, and take steps to adapt to climate change impacts. This will require increased investments in network infrastructure, storage and increased renewable and low carbon generation capacity.
- It is anticipated that the bulk of the low-carbon generation needed by 2050 will be provided by low cost renewables.
- Reducing emissions across whole sectors of the economy must be done in a sustainable way that minimises cost.

The Sixth Carbon Budget: The UK's Path to Net Zero, 2020

14.2.7 The UK Gov has, in accordance with the recommendations of the independent Climate Change Committee (CCC, 2020a) set "its Sixth Carbon Budget to require a reduction in UK emissions of 78% by 2035 relative to 1990. This will be a world-leading commitment, placing the UK decisively on the path to Net Zero by 2050 at the latest, with a trajectory that is consistent with the Paris Agreement."

14.2.8 Meeting the recommended budget will require major investment, with the upscaling of low carbon markets and supply chains. These *"investments should also be made resilient to the expected impacts of climate change"* (page 13) Key objectives should be:

- reducing demand and improving efficiency: require changes that will reduce carbon-intensive activities and the improvement of efficiency in the use of energy and resources;
- take-up of low carbon solutions: phase out fossil fuel generation by 2035 and replacement of high carbon power such as gas boilers with lower carbon options.
- expansion of low carbon energy supplies: increasing renewables to 80% of generation by 2050, with interim targets of 60% by 2030 and 70% by 2035; and
- electricity generation: will require a significant expansion of low carbon generation; This includes low cost renewables, with more flexible demand and storage.

14.2.9 Increasing the renewables penetration in the UK electricity mix to 80% by 2050 will largely be met with intermittent, non-dispatchable generation types. The CCC suggest that on average, 3 GW per year of solar generation will need to be installed to reach renewable supply targets.

14.2.10 The budget report also breaks the economy down into sectors and provides emissions projections for each, these show the necessary decarbonisation trends that must be attained to reach net zero. The pathway for the manufacturing and construction sector shows it must reduce emissions by 70% by 2035, and 90% by 2040 from 2018 levels. It is recommended that this will be achieved by fuel switching, carbon capture and storage, and improvements to resource and energy efficiency.

Policies for the Sixth Carbon Budget and Net Zero, 2020

14.2.11 This policy report accompanies the CCC's advice on the Sixth Carbon Budget, and sets out the broad policy changes that could deliver the budget and the UK's net zero target (Committee on Climate Change, 2020b).

14.2.12 The report identifies carbon leakage as an issue of importance to the UK's climate targets, and as such is relevant to consider within the policy context of the Project. Carbon leakage may occur if, for cost reasons related to climate policies, production is transferred to another country resulting in increased emissions in that country.

14.2.13 "The design of policies to reduce UK manufacturing emissions must ensure that it does not drive manufacturing emissions overseas". While this would reduce reported UK emissions, it would not reduce global emissions and would be damaging to the UK economy. Such policies could include measures to apply either border carbon tariffs or minimum standards to imports of selected emissions-intense products. As with any recommendation from the CCC, an independent advisory body to the UK government, it should be considered that their recommendations bear influence on the future direction of travel in relation to UK climate policy.

Industrial Decarbonisation: Net Zero Carbon Policies to Mitigate Carbon Leakage and Competitiveness Impacts, 2020

14.2.14 This research paper (Sturge, 2020) was commissioned by the CCC to address concerns regarding the impact of carbon policies on carbon leakage. The paper focuses on recommendations to enable deep decarbonisation of UK industry in line with net zero pathways, whilst also mitigating carbon leakage and competitiveness impacts.

14.2.15 The suggested policies have not yet been incorporated by the UK Government, however they do highlight that carbon leakage is an issue that must be considered, and work is currently being undertaken to address it. It is relevant for the Project to consider this due to the global nature of solar supply chains, resulting in a significant source of the Project's GHG emissions arising from outside of the UK's territorial boundary.

Environmental Audit Committee: Carbon Border Tax Measures, 2021

14.2.16 The Environmental Audit Committee (EAC) has announced an inquiry into carbon border adjustment mechanisms (CBAM) in order to address carbon leakage and reduce the carbon footprint of imported goods. In turn, this may prompt other manufacturing countries to decarbonise.

14.2.17 This carbon border adjustment mechanism, should it be implemented, will play a role in enabling the UK to meet its environmental objectives whilst considering wider impacts, risks and opportunities.

14.2.18 The government has committed to implementing a UK CBAM by 2027.

Update on Carbon Leakage Mitigations, 2022

14.2.19 This written statement from the Financial Secretary to the Treasury (UK Parliament, 2022) outlines the measures that the UK Government is intending to implement to address carbon leakage. A consultation on developing the UK emissions trading scheme has been launched, which seeks to address how a net zero carbon cap and trade market may be established.

14.2.20 No policies have been implemented, but a consultation will be opened in late 2022 into a range of carbon leakage mitigation options, including measures such as product standards and a carbon border adjustment mechanism.

Net Zero Strategy: Build Back Greener, 2021

14.2.21 This strategy (BEIS, 2021) sets out the UK's long-term plans to meet net zero emissions by 2050 and gives the vision for a decarbonised economy in 2050.

14.2.22 The policies detailed in the strategy will be phased in over the next decade or beyond in order to continue decarbonisation towards net zero. They also aim to keep the UK on track to meet upcoming carbon budgets.

14.2.23 This strategy brings forward the ambition for a fully decarbonised power system by 15 years, building on the targets set out in the Energy White Paper and the 10 Point Plan for a Green Industrial Revolution. The ambition is to fully decarbonise the UK's power system by 2035, with electricity sourced predominantly from wind and solar generation, supported by nuclear power in addition to an increase in energy storage capacity, gas with CCS, and hydrogen to increase the flexibility of supply.

14.2.24 A key commitment of the strategy, under section 3i: Power, is to accelerate deployment of low cost renewable generation, such as wind and solar, predominantly through the mechanism of the Contract for Difference (CFD) auctions.

14.2.25 Further, the strategy outlines aims to support the decarbonisation of the construction and building sector. Reporting on embodied carbon in buildings and infrastructure is sought to be improved, alongside reductions in embodied carbon by way of material substitution, where appropriate, and resource efficiency.

14.2.26 The strategy recognises the importance of addressing the risks of carbon leakage, so policy interventions within the UK do not lead to increased emissions elsewhere. Options will continue to be explored to mitigate carbon leakage, with key efforts to address it through global action on industrial decarbonisation and climate regulation, with continued monitoring of related global policy developments.

UN Climate Change Conference of Parties (COP26), 2021]

14.2.27 The CoP are (typically) annual climate summits, attended by world leaders globally, where the effects of measures introduced to limit climate change are discussed.

14.2.28 At the COP26 summit in November 2021, parties voted to adopt the draft COP26 report (UNFCC, 2021), known as the Glasgow Climate Pact. This included commitments to phase down the use of coal and supports a common timeframe and methodology for national commitments on emissions reductions. Countries were tasked to return in 2022 with more ambitious 2030 emissions reductions targets, and to continue to work towards limiting warming to 1.5 degrees as established in the 2015 Paris agreement at COP21.

14.2.29 As a result of the Glasgow Climate Pact, the UK government updated their Nationally Determined Contributions in September 2022, providing more detail on how the contributions would be met. However, the original target of a 68% reduction in greenhouse gas emissions by 2030 (compared to 1990 levels) originally announced in December 2020, was unchanged.

British Energy Security Strategy, 2022

14.2.30 Building on the ten point plan for a green industrial revolution and the net zero strategy, this policy paper is focussed on delivering *"secure, clean and affordable British energy for the long term"*, (BEIS, 2022) and references solar projects in the following statements:

- "*With the sun providing enough daily energy to power the world 10,000 times over, solar power is a globally abundant resource. There is currently 14 GW of solar capacity in the UK split between large scale projects to smaller scale rooftop solar. The cost of solar has fallen by around 85% over the past decade, and can be installed in just one day on a domestic roof. We expect a five-fold increase in deployment by 2035."*
- "*For ground-mounted solar, we will consult on amending planning rules to strengthen policy in favour of development on non-protected land, while ensuring communities continue to have a say and environmental protections remain in place."*
- "*We will also support solar that is co-located with other functions (for example, agriculture, onshore wind generation, or storage) to maximise the efficiency of land use. We have also included solar in the latest Contracts for Difference auction round and will include it in future rounds."*

14.3 Local Energy and Climate Change Policy

The Oxfordshire Energy Strategy

14.3.1 In response to the UK Governments clean growth challenge, the Oxfordshire Local Enterprise Partnership (OxLEP) published the Oxfordshire Energy Strategy, it *"seeks to harness, leverage and scale-up low carbon initiatives to have a more significant impact".*

14.3.2 The objectives of the Oxfordshire energy strategy are to:

- Secure a smart, modern, clean energy infrastructure – including increased electricity grid capacity - which supports our planned housing, industrial and commercial growth, and changing energy requirements;
- Lead nationally and internationally to reduce countywide emissions by 50% compared with 2008 levels by 2030 and set a pathway to achieve zero carbon growth by 2050. We will realise the economic benefits of this low carbon transition by supporting:
  - ambitious and innovative clean generation projects across the county, both in urban and rural areas, and in growth locations;
  - projects that reduce energy demand and increase energy efficiency for domestic, industrial, commercial buildings and transport energy
- Enhance energy networking and partnership working across Oxfordshire to focus on the low carbon energy challenges and funding opportunities created through the Clean Growth Strategy and the Oxfordshire Industrial Strategy.

14.3.3 Section 4.1.3 – Technologies: *'The majority of the low carbon energy needed In Oxfordshire is likely to be met by solar PV – delivered through household and community schemes and a number of larger scale developments.'*

West Oxfordshire District Council Local Plan (WODCLP) 2011-2031

14.3.4 **Section 3** of the WODCLP sets out the council's core objectives. **Objective CO17** sets out an objective to minimise the use of non-renewable natural resources and promote more widespread use of renewable energy solutions.

Vale of White Horse District Council Local Plan (VWHLP) 2031 Part 1 (adopted 2016)

14.3.5 The VWHLP identifies a number of key challenges and opportunities that are faced by the district and these are focused around four thematic areas. One of which is *'protecting the environment and responding to climate change'.*

14.3.6 **Core Policy 41: Renewable Energy** - The Council encourages schemes for renewable and low carbon energy generation provided that they do not cause a significantly adverse effect to landscape and visual amenity, biodiversity, historic environment, local residential amenity and safe movement.

Cherwell District Council Adopted Cherwell Local Plan 2011-2031

14.3.7 Cherwell has a number of strategic objectives related to sustainable development **(S011-S015)**. In particular it seeks to promote decentralised and renewable or low carbon energy **(SO11)**.

14.4 Summary

14.4.1 UK Carbon Budgets commit the UK to reducing GHG emissions by 100% of 1990 levels by 2050, with an interim target of a 78% reduction by 2035 in order

to ensure UK emissions remain consistent with the goal to limit warming to 1.5°C.

14.4.2 In order to achieve these emissions reductions, the deployment of clean electricity generation must be accelerated through the 2020s to decarbonise the energy system (HM Government, 2020). The Sixth Carbon Budget (2020) includes the key objective to phase out fossil fuel generation by 2035, and to increase renewable energy to 80% of generation by 2050. It is anticipated that this decarbonisation will be met largely by solar and wind power, with 3 GW per year of solar generation required to reach renewable supply targets (Committee on Climate Change, 2020).

14.4.3 The effects of construction and supply chain emissions (including those taking place outside of the UK), and any associated mitigation, must be taken into consideration when considering the significance of emissions. The manufacturing sector within the UK must reduce emissions by 70% by 2035 from 2018 levels (Committee on Climate Change, 2020). Further emissions from construction and manufacturing, which do not take place within the UK (they may result from carbon leakage), and therefore not considered within the UK Carbon Budgets, would still be of global importance and significance.

14.5 References

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