DOGGER BANK D
WIND FARM
Preliminary Environmental Information Report

Volume 1
Chapter 2 Need for the Project

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Glossary

Term	Definition
Development Consent Order (DCO)	A consent required under Section 37 of the Planning Act 2008 to authorise the development of a Nationally Significant Infrastructure Project, which is granted by the relevant Secretary of State following an application to the Planning Inspectorate.
Effect	An effect is the consequence of an impact when considered in combination with the receptor's sensitivity / value / importance, defined in terms of significance.
Environmental Impact Assessment (EIA)	A process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information and includes the publication of an Environmental Statement.
Environmental Statement (ES)	A document reporting the findings of the EIA which describes the measures proposed to mitigate any likely significant effects.
Impact	A change resulting from an activity associated with the Project, defined in terms of magnitude.
The Applicant	SSE Renewables and Equinor acting through 'Doggerbank Offshore Wind Farm Project 4 Projco Limited'.
The Project	Dogger Bank D (DBD) Offshore Wind Farm Project, also referred to as DBD in this PEIR.
Wind Turbines	Power generating devices located within the DBD Array Area that convert kinetic energy from wind into electricity.

2 Need for the Project

2.1 Introduction

1. This chapter of the Preliminary Environmental Information Report (PEIR) explains the need for Dogger Bank D Offshore Wind Farm (hereafter 'the Project' or 'DBD'), to meet UK policy commitments and legally binding decarbonisation targets. The Project will support the UK in progressing towards the goals of reducing greenhouse gas (GHG) emissions to net zero, enhancing national energy security and affordability, and providing economic opportunities.

2. In December 2024, the UK Government published the "Clean Power 2030 Action Plan" (UK Government, 2024a). Clean Power 2030 is a step in the UK's journey to achieving its energy policy aims of delivering a secure, low-carbon and low-cost electricity supply for consumers on the way to delivering national net zero carbon emissions by 2050[1]. The action plan explains the need for a rapid expansion in the UK's low-carbon electricity generation capacity and sets out the actions the Government proposes to take to deliver that capacity against the timeframes required.

3. The action plan states that delivering Clean Power 2030 *"paves the way to decarbonising the wider economy by 2050 as we pursue 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."* The action plan sets out ranges for the operational capacity of major low-carbon generation technologies by 2030 and 2035 which will, if achieved, deliver the Government's Clean Power target. Delivering this target aligns with the UK's ambitious 2030 Nationally Determined Contribution (NDC) commitment made under the 2015 Paris Agreement (United Nations, 2015) and will help meet the Sixth Carbon Budget.

4. The action plan includes a Clean Power Capacity Range for operational offshore wind energy of 43GW to 50GW by 2030 and a Capacity Range of 72GW to 89GW by 2035. These ambitious targets will only be met by the crucial contribution of developments such as this Project.

5. Generation of energy from renewable sources has been recognised by the UK Government as being fundamental to UK energy policy and the development of a low-carbon economy. The Project has the potential to export up to approximately 1.5GW of secure, renewable power supplied to the UK electricity network, placed in a context which would be equivalent to at least 3% of the 2030 Clean Power Capacity Range, or approximately 2% of the 2035 Capacity Range. The Project would, if consented, help facilitate the energy transition set out by national climate change and renewable energy policies and legislation.

6. As the Project will generate electricity over 100MW, it is classed as a Nationally Significant Infrastructure Project (NSIP). The Project would contribute to the following aims:

- Reducing GHG emissions (**Section 2.3.1**);
- Decarbonisation of the power sector (**Section 2.3.2**);
- Increasing the security of energy supply (**Section 2.3.3**);
- Increasing energy affordability (**Section 2.3.4**); and
- Providing economic opportunities (**Section 2.3.5**).

7. These aims are consistent with Defra's Marine Environment Policy Statement (Defra, 2025) whereby "*making Britain a clean energy superpower is critical to our country - to cut bills, create jobs, deliver energy security with cheaper, zero-carbon electricity by 2030 and to meet our net zero target*" whilst "*supporting the growth of offshore wind to help de-risk and accelerate planning decisions for offshore wind while protecting and enhancing the marine environment*".

[1] Although the electricity generation and transmission network in Great Britain and Northern Ireland are served by different electricity market framework and are only connected through interconnectors, the Government's commitment to decarbonise and achieve net zero carbon emissions by 2050 extends across the UK. Where there are ambiguities in the Government's publications on the geographical scope of quantitative data (i.e. applicability to the UK as a whole or Great Britain alone), it should be noted that Northern Ireland represents approximately 3% of the UK electricity generation capacity and electricity supply. Therefore, any such ambiguity would not materially affect the quantitative data presented in the chapter.

2.2 National Policy Statements

8. National Policy Statements (NPS) are produced by the UK Government. Each NPS provides reasons for the policy set out in the statement and includes an explanation of how the policy takes account of government policy relating to the mitigation of, and adaptation to, climate change. They comprise the Government's objectives for the development of NSIP in a particular sector and state, including:

- How this will contribute to sustainable development;
- How these objectives have been integrated with other government policies;
- How actual and projected capacity and demand have been taken into account;
- Consideration of relevant issues in relation to safety or technology;
- Circumstances where it would be particularly important to address the adverse impacts of development; and
- Specific locations, where appropriate, in order to provide a clear framework for investment and planning decisions.

9. Of the 12 NPS published by DESNZ in 2023 which became designated in 2024, three are of relevance to the Project:

- Overarching NPS for Energy (EN-1) (DESNZ, 2023b);
- NPS for Renewable Energy Infrastructure (EN-3) (DESNZ, 2023c); and
- NPS for Electricity Networks Infrastructure (EN-5) (DESNZ, 2023d).

2.2.1 Critical National Priority Infrastructure

10. EN-1 sets out the national policy for energy infrastructure, detailing the policy context of nationally significant energy infrastructure and the need for such infrastructure. Predictions are made that at the current rate of climate change, the UK is expected to see an increase in frequency and intensity of extreme weather events, demonstrating the need for adaptation and resilience to climate change.

11. EN-3 considers the need for renewable energy infrastructure in order to achieve the transition to net zero and meet the Sixth Carbon Budget and the increasing electricity demand that is expected over the coming decades. EN-3 also highlights the role of offshore wind energy in decarbonising the electricity system as well as meeting the increase in electricity demand anticipated as other sectors also decarbonise.

12. EN-5 considers the importance of an electricity network which can ensure the security and reliability of the UK's electricity supply to meet increasing electricity demand. EN-5 notes that new electricity network infrastructure is needed to support new electricity generation by offshore wind and other technologies, storage and interconnection infrastructure.

13. Together the three NPS note that there is a policy presumption of an urgent need for Critical National Priority (CNP) infrastructure such as new offshore wind development and supporting onshore and offshore transmission infrastructure and related network reinforcements. Specifically, Paragraph 3.3.63 of EN-1 states: "*... the urgent need for CNP infrastructure to achieving our energy objectives, together with the national security, economic, commercial and net zero benefits, will in general outweigh any residual [adverse] impacts not capable of being addressed by application of the mitigation hierarchy.*" Therefore, these presumptions apply to DCO applications for CNP infrastructure such as the Project where the Applicant has demonstrated compliance with NPS requirements and the mitigation hierarchy, as well as any other legal and regulatory requirements.

14. These NPS highlight the need for new renewable energy infrastructure, such as the Project, in the face of climate change. Further detail on the NPS can be found in **Chapter 3 Policy and Legislative Context.**

2.3 Need for Renewable Energy

2.3.1 Reducing Greenhouse Gas Emissions

15. Renewable and low-carbon development is an adaptive measure to address climate change. The Government's Clean Power 2030 Action Plan states that offshore wind energy has a particularly important role as the backbone of the clean power system (UK Government, 2024). Government's Clean Power target requires that at least 95% of electricity generated in Great Britain is from clean sources, and that Great Britain generates more power than it consumes, from clean sources. Offshore wind contributes to a clean and secure source of electricity supply.

16. In 2019, following the recommendation of the Climate Change Committee (CCC), the UK became the first major economy to legislate for a 2050 net zero GHG emissions target through the Climate Change Act 2008 (2050 Target Amendment) Order 2019, committing the UK to a 100% reduction in GHG by 2050 compared to a baseline of 1990. This was followed in 2020 by setting out the UK's 2030 NDC to reduce GHG emissions by at least 68% compared to 1990 levels, aligning with the Paris Agreement's temperature goal (DESNZ and BEIS, 2022b).

17. To achieve these targets, the UK Government committed to implementing carbon budgets to limit GHG emissions covering five-year periods in alignment with the required decarbonisation trajectory, through The Carbon Budget Order 2021 (UK Government, 2021). One of the key steps to meet the Sixth Carbon Budget is through the expansion of low-carbon energy supplies, with net zero electricity production expected by 2035, and offshore wind energy expected to become "*the backbone of the whole energy system"* growing to at least 100GW by 2050 (CCC, 2020).

18. The most recent CCC Progress Report to Parliament (CCC, 2024a) states that current plans only cover a third of the emissions reductions required to meet the 2030 targets (68% compared to 1990 levels), and as a priority action, annual offshore wind installations must increase by at least three times to reach net zero, alongside similarly unprecedented expansions in onshore wind (a doubling of installations) and solar (a five-fold increase in installations). In October 2024, the CCC advised that the UK's 2035 NDC emissions reduction target should be 81% below 1990 levels (CCC, 2024b). The UK Government confirmed the 2035 NDC target in January 2025 (UK Government, 2025).

19. The CCC also highlights the achievement of the Third Carbon Budget from 2018 to 2022, with the largest contribution to emissions reductions being attributable to an increase in renewable energy generation.

20. However, the CCC report that outside of the electricity supply sector, the rate of emissions reduction must more than double to meet the 2030 NDC and conclude that *"This will require substantial increases in the rates of reduction in most sectors outside of electricity supply"*. The decarbonisation of other sectors is largely reliant on the availability of sufficient quantities of low-carbon electricity as a source of energy to substitute for the carbon-emitting fuels currently used within those sectors. It therefore follows that the development of new low-carbon electricity generation infrastructure also needs to accelerate.

21. Offshore wind energy generated by the Project will provide a supply of clean energy to the UK electricity network, which has the potential to replace more GHG intensive forms such as fossil fuel-based generation and enable the UK to achieve its international and national climate change commitments. Further details on international, national, regional and local legislation and plans can be found in **Chapter 3 Policy and Legislative Context**.

2.3.2 Decarbonisation of the Power Sector

22. GHG emissions associated with the UK's power sector reduced by approximately 70% between 2005 and 2022 (UK Government, 2024b). The reduction in emissions can be attributed to the closure of all UK coal fired power stations, and the rollout of new UK renewable generators, the operational capacity of which stands at over 45GW at the end of 2024 (UK Government, 2024a). In 2005, just 4.4% of UK electricity generation was from renewable sources. By 2022, that share had increased to 41.7%, and in 2023 was 46.4% (UK Government, 2024b).

23. Achieving the Government's Clean Power target would reduce the operational carbon intensity of UK generation from 171 gCO^2e/kWh in 2023 to well below 50 gCO^2e/kWh in 2030. Achieving this reduction by 2030 and maintaining it thereafter is a key enabler to using low-carbon electricity to displace fossil fuels in other sectors, such as transport, heating and industry and so locking in further carbon emissions reductions. Future energy scenarios modelling undertaken by National Energy System Operator (NESO), which supports the 'Clean Power Capacity Ranges' set out in government's Clean Power 2030 Action Plan, and indicates that offshore wind energy should contribute approximately 48% to 53% to Great Britain's energy mix in 2030 on a pathway to net zero by 2050 (NESO, 2024).

24. The Clean Power 2030 Action Plan highlights the significant challenge ahead to prioritise those projects which are ready to connect, and which are aligned with achieving the Government's Clean Power target while also delivering the infrastructure required to facilitate their connection.

25. The Project is fully considered as part of the Holistic Network Design (HND) process led by NESO (formerly known as National Grid Electricity System Operator) in 2022, which provided an integrated approach to network planning for connecting 23GW of new offshore wind generation to Great Britain's electricity network (NESO, 2022). The HND process ensures that the delivery of new infrastructure to bring power to grid and decarbonise the power sector would be undertaken cohesively and create maximum benefit for consumers, local communities and the environment.

26. Alongside increasing renewable generation capacity to progress towards the decarbonisation of the UK economy, futureproofing is required to ensure that the UK electricity network has the infrastructure and transmission capacity to accommodate the increasing supply and changing mix of electricity generation. NESO published their 'Beyond 2030' blueprint in 2024 (NESO, 2024b), which builds on the HND process to facilitate the connection of an additional 21GW of offshore wind generation, as well as other low carbon energy sources.

27. A Strategic Spatial Energy Plan, which builds upon the NESO's Holistic Network Design (2022) and Beyond 2030 (2024) plans, will offer a longer-term spatial plan for the energy system beyond 2030. These connection reforms are ongoing; however, this plan will ultimately support a coordinated approach to upgrading the UK's electricity network and connections to deliver a decarbonised electricity system and support the achievement of the Government's Clean Power target.

2.3.3 Energy Security

28. Energy security means ensuring that there is sufficient electricity to always meet demand under foreseeable demand and supply conditions while protecting consumers by shielding them from exposure to volatile international energy markets. Energy security will bring benefits to consumers, the climate and the economy. Increased energy security will ensure reliable and consistent energy supplies to consumers, reduce bills and support economic growth as highlighted throughout several reports including the Clean Power 2030 Action Plan (UK Government, 2024a).

29. Exposure to global fossil fuel markets leaves the UK vulnerable to volatility in world energy market prices, political pressure, physical supply disruptions and the knock-on effects of supply challenges in other countries. The Government's Clean Power 2030 Action Plan (UK Government, 2024a) states that *"the only way to guarantee our energy security and protect billpayers permanently is to speed up the transition away from fossil fuels and towards homegrown clean energy"*. The Strategy and Policy Statement for Energy Policy in Great Britain (DESNZ, 2024b) states that "*energy security is a top priority for the government*", and also notes the Government's strategic priorities, one of which being "*an energy system which is fair, safe, secure and resilient, including from supply shocks, changes in the international environment and the impacts of climate change*".

30. NPS EN-1 highlights the importance of energy security to economic prosperity and social well-being, and highlights that the wider objective for energy infrastructure includes "*contributing to sustainable development and ensuring that our energy infrastructure is safe*" (DESNZ, 2023b). Electricity demand is expected to double by 2050 due to the electrification of sectors such as transport, heating and industry (DESNZ, 2023f), therefore a secure and affordable supply from renewable sources, such as offshore wind energy, is required to deliver an affordable, safe and reliable system and reduce the reliance on fossil fuels (DESNZ, 2023b).

31. The development of significant new renewable energy infrastructure, such as the Project, provides a vital opportunity for the UK to strengthen energy security, reduce vulnerability to global price volatility and meet the increasing UK energy demand whilst working towards net zero. The Government is expecting an increase in planning applications with the Clean Power target.

32. The Project, if consented, would contribute to delivering the Government's Clean Power target by increasing the share of UK electricity generation from UK-based low-carbon sources, thereby reducing national GHG emissions and supporting energy security.

2.3.4 Energy Affordability

33. Decarbonisation and energy security are critical considerations for future energy system planning. The third 'leg' of the energy trilemma is affordability.

34. NPS EN-1 notes that wind energy is one of *"the lowest cost ways of generating electricity, helping reduce costs and providing a clean and secure source of electricity supply"* and that a *"secure, reliable, affordable, net zero consistent system in 2050 is likely to be composed predominantly of wind and solar*" (DESNZ, 2023b).

35. The Contracts for Difference (CfD) scheme is the Government's main mechanism for supporting low carbon electricity generation. It was introduced under the Energy Act 2013 to incentivise investment in renewable energy by providing developers of projects with high upfront costs and long lifetimes with direct protection from volatile wholesale prices. The CfD scheme also protect consumers from paying increased support costs when electricity prices are high and encourages continued investment in UK renewables. The CCC's 2024 Progress Report to Parliament also notes that enabling Government policies such as the CfD scheme, among other factors, has contributed to the growth in renewable energy generation and reductions in deployment costs for offshore wind (CCC, 2024a).

36. The CfD scheme has supported the development of offshore wind since the first CfD-backed projects started their CfD contracts in 2017. Since then, CfD have been awarded to projects totalling 22GW of capacity, with 7GW already operational (LCCC, 2025).

37. The Government's Clean Power 2030 Action Plan describes the importance of the CfD scheme to bringing forward new offshore wind developments. Given the urgent and unprecedented need for new offshore wind capacity to come forward, the Government has proposed a package of targeted reform to the CfD mechanism to *"ensure it is able to support the volume of new capacity – in particular, fixed-bottom offshore wind – needed to deliver the renewable contribution to the Clean Power 2030 target whilst continuing to minimise the costs of doing so to consumers"* (UK Government, 2024a). Dogger Bank D will consider the most commercially economical funding route for the Project which may include participation in a future CFD scheme or other means.

2.3.5 Economic Opportunities

38. The 2017 UK Clean Growth Strategy highlights economic opportunities such as technical innovation, job creation and new industries, noting the 430,000 jobs in low carbon businesses at the time of publication, and the positive impacts of low carbon technologies being exported across the world (UK Government, 2017). The strategy states that the UK's low carbon economy could grow by an estimated 11% per year between 2015 and 2030 and could deliver between £60 billion and £170 billion of export sales of goods and services by 2030, driving economic growth and boosting earning power. In terms of offshore wind, the UK is the second biggest global market behind China, accounting for 22% of global offshore wind operating capacity in 2023, and 17% of the UK's electricity generation mix (The Crown Estate, 2023). British companies are increasingly benefitting from exports in areas such as cable installation, repairing equipment, construction work and consulting, helping to drive UK economic growth.

39. The Office of National Statistics (ONS) reported in 2021 that electricity generation from wind power has increased by 715% between 2009 and 2020, and the UK turnover from wind energy was around £6 billion in 2019, coupled with an increase in employment from offshore wind, with around 7,200 full-time equivalent employees in 2019 (ONS, 2021). The report by ONS notes the importance of offshore wind energy to meet the United Nations Sustainable Development Goals, in particular Goal 7: Affordable and Clean Energy, and that by 2050, 90% of electricity generation will be from renewables, 70% of which from solar and wind.

40. Continued public support for, and investment in, the UK offshore wind industry will create a circle of cost reduction and economic growth, with innovation support in key supply chain areas increasing UK competitiveness in the global market (ORE Catapult, 2017). The UK content of UK offshore wind projects (defined as goods, manufacturing or services contributed by any company (including UK subsidiaries of overseas parents) headquartered in the UK) is estimated to increase to 65% by 2030 from 32% in 2017, benefitting the UK economy and exports. Increased UK content is expected in areas of manufacturing, supply, installation and operations and maintenance.

41. According to the Offshore Wind Skills Intelligence Report (OWIC, 2023), the existing UK offshore wind workforce has increased to over 32,000 direct and indirect jobs in 2023. To deliver the 50GW offshore wind target by 2030, the report forecasts that the number of jobs supported by the industry will increase to over 100,000 direct and indirect jobs by 2030, needing to attract and retain over 10,000 people a year to the industry. To meet this target, a People and Skills Plan was published by OWIC in 2024 to "*create quality jobs, develop high-level skills and build the diverse workforce for the future required between now and 2030, to support delivery of the UK's clean energy, net-zero and energy security targets*", which identifies the need for training and education (OWIC, 2024). The Crown Estate highlights that "*each large offshore wind farm adds £2-3bn to the economy [...] and investment in new offshore wind projects will create an economic opportunity worth up to £92bn for the UK by 2040*" (The Crown Estate, 2024b).

42. The Industrial Growth Plan highlights the success of offshore wind in the UK, contributing £2 to £3 billion of gross value for each gigawatt of offshore wind installed and exporting £1 to £2 billion a year (Renewable UK, OWIC, The Crown Estate and Crown Estate Scotland, 2024). The Plan also notes the ability of the UK to lead technological innovations, including a focus on the consideration of materials used at the innovation stage to reduce impacts to climate change.

43. The Clean Power 2030 Action Plan quotes a £30 billion investment in generation assets, and £10 billion investment in transmission network assets on average per year between 2025-2030 to support the growth of the clean energy system and support for hundreds of thousands of jobs, as part of the wider transition to net zero (UK Government, 2024a).

44. **Chapter 30 Socioeconomics, Tourism and Recreation** considers anticipated expenditure from the construction, operation and maintenance and decommissioning of the Project.

45. Locally, the East Riding Local Plan Update (East Riding of Yorkshire Council, 2025) touches on supporting renewable energy as a key sector in East Riding, describing it as "*a significant and rapidly growing sector*" and noting the presence of the estuary, ports and associated marine assets in the Humber. The Local Plan Vision Update states that by 2039, "*The opportunities presented by the renewable and low carbon energy sector will have been embraced and maximised, creating employment opportunities, helping to decarbonise the East Riding as far as possible, reducing greenhouse emissions and increasing fuel security*". In addition, the Plan highlights the proximity of existing ports to many of the offshore wind farm zones in the North Sea, providing benefits to the transportation of offshore wind turbines and attracting businesses in the renewable and low carbon energy sectors.

46. The Hull Local Plan (Hull City Council, 2017) notes the city's proximity to the Humber Port complex, describing it as the location of one of Europe's largest wind turbine manufacturing plants, and goes on to describe the ambition for Hull to become a major national centre for offshore renewables, promoting local economic opportunities.

2.4 Dogger Bank D Offshore Wind Farm Contribution

47. The Project, if consented, will contribute to the Government's Clean Power 2030 target and contribute to the delivery of a low-carbon, secure and affordable energy system. Such a system is necessary for the UK to achieve the legally binding net zero by 2050 target, as legislated in the Climate Change Act 2008 (2050 Amendment) Order 2019.

48. The need for such a development is also highlighted throughout many governmental reports, strategies, and relevant NPS, many of which note the increasing demand for electricity, which is expected to double by 2050. The governmental reports and strategies also acknowledge the need to reduce GHG emissions while protecting energy security by transitioning away from using fossil fuels and towards renewable energy sources. This will be achieved through increasing the capacity of operational low-carbon electricity generation facilities in the energy mix. In 2023, renewables accounted for 46.4% of UK electricity generation, with offshore wind energy contributing 17% (UK Government, 2024b).

49. As stated in **Section 2.1**, the Project has the potential to export up to approximately 1.5GW of renewable energy once fully operational, which is capable of powering the equivalent of 2.5 million typical UK homes per year (based on information available at the time of writing) and equivalent to approximately 3% of the 2030 Clean Power Capacity Range and approximately 2% of the 2035 Capacity Range). **Chapter 31 Climate Change** presents the estimated carbon benefits from the Project's electricity generation and its net contributions to the UK's decarbonisation efforts.

50. Further to contributing to decarbonisation of the power sector and the UK economy and reducing GHG emissions, the Project will contribute to the local and national economy through investment and employment in the UK offshore wind workforce throughout all phases of the Project. This includes roles in skilled technical positions, such as engineering, project management, roles in information technology, finance, administration, and logistics (see **Chapter 30 Socio-Economics**, **Tourism and Recreation** for further details). Increasing UK produced renewable energy will also reduce the UK's exposure to international energy markets, thereby shielding UK consumers from the effects of volatility in those markets and enhancing energy security.

51. NPS EN-1 and EN-3 reinforce the significant role offshore wind energy must play in meeting electricity demand and decarbonising the UK's energy system. The Project directly aligns with the key national policy drivers and supports delivery of the UK's Clean Power target, with a clear need case for the Project established.

References

Climate Change Committee (CCC) (2020). The Sixth Carbon Budget – The UK's Path to Net Zero. Available at: https://www.theccc.org.uk/publication/sixth-carbon-budget/.

CCC (2024a). 2024 Progress Report to Parliament. Available at: https://www.theccc.org.uk/publication/progress-in-reducing-emissions-2024-report-to-parliament/

CCC (2024b). Advice on the UK's 2035 Nationally Determined Contribution. Available at: Letter: Advice on the UK's 2035 Nationally Determined Contribution (NDC) - Climate Change Committee

Department for Energy Security and Net Zero (DESNZ) (2023a). Powering Up Britain. Available at: https://assets.publishing.service.gov.uk/media/642468ff2fa8480013ec0f39/powering-up-britain-joint-overview.pdf

DESNZ (2023b). Overarching National Policy Statement for Energy (EN-1). Available at: https://assets.publishing.service.gov.uk/media/65bbfbdc709fe1000f637052/overarching-nps-for-energy-en1.pdf

DESNZ (2023c). National Policy Statement for Renewable Energy Infrastructure (EN-3). Available at: https://assets.publishing.service.gov.uk/media/65a7889996a5ec000d731aba/nps-renewable-energy-infrastructure-en3.pdf

DESNZ (2023d). National Policy Statement for electricity networks infrastructure (EN-5). Available at: https://assets.publishing.service.gov.uk/media/65a78a5496a5ec000d731abb/nps-electricity-networks-infrastructure-en5.pdf

DESNZ (2023e). Powering Up Britain: Net Zero Growth Plan. Available at: https://www.gov.uk/government/publications/powering-up-britain/powering-up-britain-net-zero-growth-plan

DESNZ (2023f). Transmission Acceleration Action Plan. Available at: https://assets.publishing.service.gov.uk/media/65646bd31fd90c0013ac3bd8/transmission-acceleration-action-plan.pdf

DESNZ (2024a). Energy Trends, UK, January to March 2024. Available at: https://assets.publishing.service.gov.uk/media/667c0c3e7d26b2be17a4b38e/Energy_Trends_June_2024.pdf

DESNZ (2024b). Strategy and Policy Statement for Energy Policy in Great Britain. Available at: https://assets.publishing.service.gov.uk/media/6631ff75ed8a41eeaf58c0eb/strategy-and-policy-statement-for-energy-policy-in-great-britain.pdf

DESNZ (2024c). Contracts for Difference (CfD) Allocation Round 6: results. Available at: https://www.gov.uk/government/publications/contracts-for-difference-cfd-allocation-round-6-results

DESNZ (2024d). UK Energy Trends July to September 2024. Available at: Energy Trends December 2024

DESNZ and Department for Business, Energy and Industrial Strategy (BEIS) (2021). Net Zero Strategy: Build Back Greener. Available at: https://assets.publishing.service.gov.uk/media/6194dfa4d3bf7f0555071b1b/net-zero-strategy-beis.pdf

DESNZ and BEIS (2022a). British Energy Security Strategy. Available at: https://assets.publishing.service.gov.uk/media/626112c0e90e07168e3fdba3/british-energy-security-strategy-web-accessible.pdf

DESNZ and BEIS (2022b). UK's Nationally Determined Contribution, updated September 2022. Available at: https://www.gov.uk/government/publications/the-uks-nationally-determined-contribution-communication-to-the-unfccc

Department for Environment, Food and Rural Affairs (Defra) (2024). Understanding climate adaptation and the third National Adaptation Programme (NAP3). Available at: https://www.gov.uk/government/publications/third-national-adaptation-programme-nap3/understanding-climate-adaptation-and-the-third-national-adaptation-programme-nap3#climate-risks-and-opportunities

East Riding of Yorkshire Council (2025). East Riding Local Plan Update (2025-2039). Available at: https://www.eastriding.gov.uk/planning-permission-and-building-control/planning-policy-and-the-local-plan/local-plan-update/

Hull City Council (2017). Hull Local Plan 2016 to 2032. Available at: https://www.hull.gov.uk/downloads/file/101/hull-local-plan-2016-to-2032

Intergovernmental Panel on Climate Change (IPCC) (2023). Climate Change 2023 Synthesis Report. Available at: https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf

Low Carbon Contracts Company (LCCC) (2025). Contracts for Difference. Available at: https://www.lowcarboncontracts.uk/our-schemes/contracts-for-difference/

Met Office (2024a). Climate Summaries. Available at: https://www.metoffice.gov.uk/research/climate/maps-and-data/summaries/index

Met Office (2024b). UK Climate Extremes. Available at: https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-climate-extremes [Accessed: 10 September 2024]

National Audit Office (2023). Decarbonising the power sector. Available at: https://www.nao.org.uk/wp-content/uploads/2023/03/decarbonising-the-power-sector.pdf [Accessed: 10 September 2024]

National Energy System Operator (NESO) (2022). A Holistic Network Design for Offshore Wind. Available at: https://www.neso.energy/publications/beyond-2030/holistic-network-design-offshore-wind [Accessed: 10 September 2024].

NESO (2024a). Advice on Achieving Clean Power for Great Britain by 2030. Available at: https://www.neso.energy/document/346651/download [Accessed: 10 September 2024].

National Grid ESO (2024b). Beyond 2030. Available at: https://www.neso.energy/publications/beyond-2030 [Accessed: 10 September 2024].

Office for National Statistics (ONS) (2021). Wind Energy in the UK: June 2021. Available at: https://www.ons.gov.uk/economy/environmentalaccounts/articles/windenergyintheuk/june2021#:~:text=Wind%20power%20is%20one%20of,in%20the%20Energy%20White%20Paper. [Accessed: 10 September 2024].

ONS (2024). UK trade in goods, year in review: 2023. Available at: https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/articles/uktradeingoodsyearinreview/2023 [Accessed: 10 September 2024].

Offshore Renewable Energy Catapult (ORE Catapult) (2017). The Economic Value of Offshore Wind. Available at: https://cms.ore.catapult.org.uk/wp-content/uploads/2017/12/SP-0012-The-Economic-Value-of-Offshore-Wind-1.pdf[Accessed: 10 September 2024].

Offshore Wind Industry Council (OWIC) (2023). Offshore Wind Skills Intelligence Report. Available at: https://www.owic.org.uk/media/gf5ddwxt/offshore-wind-skills-intelligence-report-2023.pdf [Accessed: 10 September 2024].

OWIC (2024). People and Skills Plan 2024. Available at: https://3c588115-556c-4078-9547-344b9bf6665b.usrfiles.com/ugd/1c0521_5de49989eb3b45ad87dd600212c088fd.pdf [Accessed: 10 September 2024].

Renewable UK, OWIC, The Crown Estate and Crown Estate Scotland (2024). 2024 Offshore Wind Industrial Growth Plan. Available at: https://www.renewableuk.com/media/rqvlqzu0/offshore-wind-industrial-growth-plan.pdf

The Crown Estate (2023). Offshore Wind Report 2023. Available at: https://www.thecrownestate.co.uk/our-business/marine/offshore-wind-report-2023 [Accessed: 10 September 2024].

The Crown Estate (2024a). UK offshore wind industry gearing up for a new era of sustainable growth. Available at: UK offshore wind industry gearing up for a new era of sustainable growth [Accessed: 10 September 2024].

The Crown Estate (2024b). Offshore wind industry unveils Industrial Growth Plan to create jobs, triple supply chain manufacturing and boost UK economy by £25 billion. Available at: https://www.thecrownestate.co.uk/news/offshore-wind-industry-unveils-industrial-growth-plan-to-create-jobs [Accessed: 10 September 2024].

UK Government (2017). The Clean Growth Strategy. Available at: https://assets.publishing.service.gov.uk/media/5ad5f11ded915d32a3a70c03/clean-growth-strategy-correction-april-2018.pdf [Accessed: 10 September 2024].

UK Government (2019). Climate Change Act 2008 Order 2019. Available at: The Climate Change Act 2008 (2050 Target Amendment) Order 2019 [Accessed: 10 September 2024].

UK Gov (2020a). The Ten Point Plan for a Green Industrial Revolution. Available at: https://assets.publishing.service.gov.uk/media/5fb5513de90e0720978b1a6f/10_POINT_PLAN_BOOKLET.pdf [Accessed: 10 September 2024].

UK Government (2021). The Carbon Budget Order 2021. Available at: The Carbon Budget Order 2021 [Accessed: 10 September 2024].

UK Government (2024a). Clean Power 2030 Action Plan: A new era of clean electricity. Available at: Clean Power 2030: Action Plan: A new era of clean electricity [Accessed: 10 September 2024].

UK Government (2024b). Digest of UK Energy Statistics 2024. Available at: https://www.gov.uk/government/statistics/digest-of-uk-energy-statistics-dukes-2024 [Accessed: 10 September 2024].

UK Government (2025). United Kingdom of Great Britain and Northern Ireland's 2035 Nationally Determined Contribution. Available at: United Kingdom of Great Britain and Northern Ireland's 2035 Nationally Determined Contribution (NDC) [Accessed: 10 September 2024].

United Nations (2015). The Paris Agreement. Available at: The Paris Agreement | United Nations [Accessed: 10 September 2024].

List of Acronyms

Acronym	Definition
AR6	Allocation Round 6
BEIS	Department for Business, Energy and Industrial Strategy
BESS	British Energy Security Strategy
CCC	Climate Change Committee
CfD	Contracts for Difference
DBD	Dogger Bank D Offshore Wind Farm
DESNZ	Department for Energy Security and Net Zero
GHG	Greenhouse gas
IPCC	Intergovernmental Panel on Climate Change
NAP3	Third National Adaptation Programme
NDC	Nationally Determined Contribution
NPS	National Policy Statements
NSIP	Nationally Significant Infrastructure Project
ONS	Office for National Statistics
PEIR	Preliminary Environmental Information Report