Volume 2: Chapter 2 – Established Need for the Proposed Development

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Appendices (Volume 4 of this EIAR)

There are no appendices associated with this Chapter.

Figures (Volume 3 of this EIAR)

There are no figures associated with this Chapter.

2. ESTABLISHED NEED FOR THE PROPOSED DEVELOPMENT

2.1 Overview

2.1.1 This Chapter explains the established need for the Proposed Development in terms of national planning policy. In summary, the Proposed Development is designated as a Class 3(b) National Development in its own right, being a new onshore high voltage electricity transmission overhead line (OHL) above 132 kV.

2.1.2 On that basis, the Proposed Development is supported by national planning policy in terms of National Planning Framework 4 (NPF4), which emphasises the need for strategic reinforcement of the transmission grid to connect and transmit from renewable energy development. It would contribute significantly towards the delivery of the UK and Scottish Government's Net Zero Targets.

2.1.3 By way of broader context, the established need is also explained from a technical and economic perspective by reference to the separate system planning and regulatory frameworks promoted and administered by: (i) the National Energy System Operator (NESO), and (ii) the energy regulator (Ofgem).

2.2 Established Need: National Planning Policy

2.2.1 Reference should be made to the Planning Statement which, together with this EIAR, accompanies the application for Section 37 Consent for the Proposed Development. In summary, the established need for the Proposed Development is shown from both energy and related national planning policy that: (i) supports the development of electricity transmission infrastructure; and (ii) supports renewable energy development that would address the urgent need for progress towards Net Zero goals.

Policy Support for Transmission Infrastructure

NPF4: National Development Status

2.2.2 NPF4 identifies 18 National Developments, described as: "*significant developments of national importance that will help to deliver the spatial strategy*"[1] . Developments proposed as National Developments are acknowledged as projects expected to provide substantive support to the economy of Scotland in terms of direct and indirect employment and business investment, with wider economic benefits. It adds that: "*Their designation means that the principle for development does not need to be agreed in later consenting processes, providing more certainty for communities, businesses and investors*"[2].

2.2.3 The Proposed Development falls within National Development 3: '*Strategic Renewable Electricity Generation and Transmission Infrastructure*' (ND3). The Statement of Need for ND3 provides:

> *"This national development supports renewable electricity generation, repowering, and expansion of the electricity grid.*
>
> *A large and rapid increase in electricity generation from renewable sources will be essential for Scotland to meet its net zero emissions targets. Certain types of renewable electricity generation will also be required, which will include energy storage technology and capacity, to provide the vital services, including flexible response, that a zero carbon network will require. Generation is for domestic consumption as well as for export to the UK and beyond, with new capacity helping to decarbonise heat, transport and industrial energy demand."*

[1] Scottish Government, 2023. *National Planning Framework 4*. Page 97. [Online] Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf.

[2] Scottish Government, 2023. *National Planning Framework 4*. Page 97. [Online] Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf.

The electricity transmission grid will need substantial reinforcement including the addition of new infrastructure to connect and transmit the output from new on and offshore capacity to consumers in Scotland, the rest of the UK and beyond. Delivery of this national development will be informed by market, policy and regulatory developments and decisions.[3]"

2.2.4 The location for ND3 is set out as being all of Scotland, and it is further explained that:

"Additional electricity generation from renewables and electricity transmission capacity of scale is fundamental to achieving a net zero economy and supports improved network resilience in rural and island areas."

2.2.5 The designation and classes of development which would qualify as ND3, are as follows:

"A development contributing to 'Strategic Renewable Electricity Generation and Transmission' in the location described, within one or more of the Classes of Development described below and that is of a scale or type that would otherwise have been classified as 'major' by 'The Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009', is designated a national development:

(a) on and offshore electricity generation, including electricity storage, from renewables exceeding 50 megawatts capacity;

(b) new and/or replacement upgraded on and offshore high voltage electricity transmission lines, cables and interconnectors of 132 kV or more; and

(c) new and/or upgraded Infrastructure directly supporting on and offshore high voltage electricity lines, cables and interconnectors including converter stations, switching stations and substations." (Emphasis added)[4].

NPF4: Policy 11

2.2.6 For the consideration of grid transmission development, Policy 11 'Energy' (page 53) is the lead NPF4 policy. The policy intent of Policy 11 is: *'to encourage, promote and facilitate all forms of renewable energy development onshore and offshore. This includes energy generation, storage, new and replacement transmission and distribution infrastructure and emerging low carbon and zero emission technologies including hydrogen and carbon capture utilisation and storage*." The Proposed Development aligns with that policy intent.

2.2.7 Moreover, the substantive policy text provides inter alia that: "*Development proposals for all forms of renewable, low-carbon and zero emissions technologies **will be supported**. These include: (ii) **enabling works, such as grid transmission and distribution infrastructure***" (Emphasis added). The Proposed Development, as enabling works within this definition, therefore draws express policy support from NPF4, Policy 11.

Policy Support for Renewable Energy

2.2.8 In addition to drawing direct policy support from NPF4, the Proposed Development is consistent with the Scottish Government's broader policy support for the deployment of renewable energy[5]. At the UK level, the British Energy Security Strategy (BESS[6]) recognised the separate issues over the cost of living from rising gas prices and sets out a

[3] Scottish Government, 2023. *National Planning Framework 4*. Page 103. [Online] Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf.

[4] Scottish Government, 2023. *National Planning Framework 4*. Page 103. [Online] Available at:https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf.

[5] Reference is made to: (i) Scottish Government, 2017. The Scottish Energy Strategy. [Online] Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2017/12/scottish-energy-strategy-future-energy-scotland-9781788515276/documents/00529523-pdf/00529523-pdf/govscot%3Adocument/00529523.pdf ; (ii) Scottish Government, 2018. Energy Efficient Scotland: route map.[Online] Available at: https://www.gov.scot/publications/energy-efficient-scotland-route-map/ ; and (iii) Scottish Government, 2023. Draft Energy Strategy and Just Transition Plan. [Online] Available at: https://www.gov.scot/publications/draft-energy-strategy-transition-plan/.

[6] UK Government, 2022. British Energy Security Strategy. [Online] Available at: https://www.gov.uk/government/publications/british-energy-security-strategy.

plan to increase the supply of electricity from zero-carbon British sources to deliver affordable, clean, and secure power in the long-term.

2.2.9 In April 2024, the Scottish Government announced that an interim target of a 75% reduction on the baseline 1990 national greenhouse gas levels by 2030 would not be achievable. New legislation is now set to be introduced with regard to the ongoing management and monitoring of emissions to 2045, but at present the net zero 2045 target remains in place. The fact that the interim 2030 targets will not be reached emphasises that, while progress has been made with respect to greenhouse gas emission being reduced and the deployment of renewable energy in Scotland, there is still a requirement to deploy additional clean energy resource to meet Scotland's energy and climate change objectives.

2.3 Established Need: Technical and Economic Need

2.3.1 There is an established technical and economic need for the Proposed Development, as shown from:

- a transmission system planning exercise encompassing the entire National Grid (considering the upgrades necessary to accommodate the UK generation and demand requirements); and
- the regulatory approval from Ofgem as part of its ongoing assessment process.

2.3.2 In short, the need for the Proposed Development has been carefully assessed and established as part of those regimes.

System Planning

HND and NOA Refresh (2022) – 'Pathway to 2030'

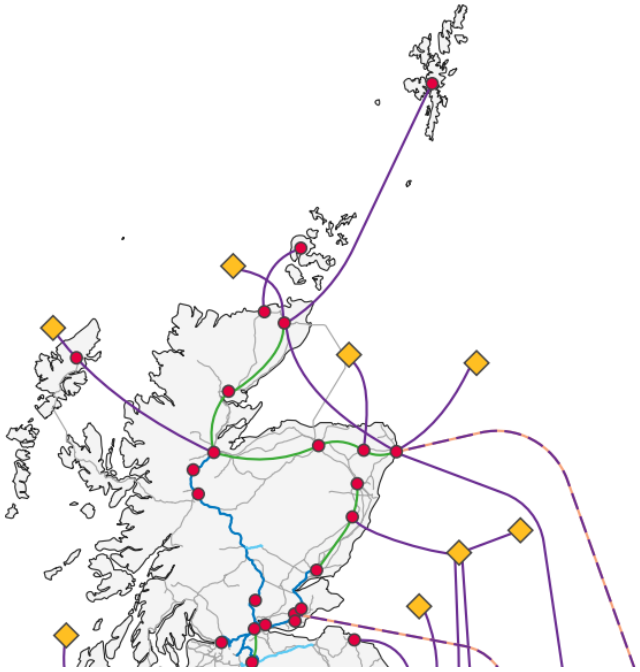
2.3.3 In July 2022, National Grid ESO (as of 1 October 2024 now known as the National Energy System Operator (NESO)) published the *Pathway to 2030 Holistic Network Design* (*Pathway to 2023 HND*), setting out the electricity transmission network infrastructure required to enable the forecasted growth in renewable electricity across Great Britain, in light of the UK and Scottish Government's 2030 offshore wind allocations of 50 gigawatt (GW) and 11 GW (through the Crown Estate and ScotWind leasing rounds) which are the main driver for these upgrades. This study confirmed the need for a significant and strategic increase in the capacity of onshore and offshore electricity transmission infrastructure to support the UK and Scottish Governments' commitments to meet legally binding net zero targets. The *Pathway to 2023 HND* supplemented the Network Options Assessment (NOA) Refresh, published in July 2022, which confirmed the requirement for the delivery of the onshore infrastructure to support 11 GW allocated by ScotWind by 2030 (in conjunction with the identified offshore infrastructure identified in the *Pathway to 2023 HND*).

2.3.4 In summary, NESO was clear in 2022 that further reinforcement of the electricity transmission network is needed to connect the new, large-scale, renewable sources of energy in Scotland.

Pathway to 2023 HND Follow Up Exercise (2024): 'Beyond 2030'

2.3.5 In 2024, the NESO further reviewed the onshore and offshore network reinforcements as part of their *Pathway to 2023 HND* follow up exercise (*Pathway to 2023 HND* FUE), called "Beyond 2030", to facilitate the connection of an additional 21 GW of offshore wind from the ScotWind leasing round (beyond the 11 GW previously set out in the *Pathway to 2023 HND* and NOA Refresh). This confirmed the onshore and offshore reinforcements identified as part of the 2022 *Pathway to 2023 HND* and NOA Refresh were required with the scopes developed to date at that point, as set out in the Map at Figure 1 of the Beyond 2030 Report:

Figure 1: Map of 2030 network infrastructure including *Pathway to 2030 HND* offshore coordinated system[7]



Category	Key
New offshore network infrastructure	
New onshore network infrastructure	
Voltage increase on network	
Existing network upgrade	
Substation upgrade or new substation	
HND wind farm	
Existing Network	

*Amber dashed lines represent reinforcements required for this blueprint, but current delivery date estimates sit beyond this.

Note: all routes and options shown on this map are for illustrative purposes only.

2.3.6 In summary, the NESO's *Pathway to 2030 HND*, NOA Refresh and associated *Pathway to 2030 HND* FUE set out the required onshore and offshore transmission works (including the Proposed Development as new onshore transmission works) that support the large-scale delivery of electricity generated from offshore wind, taking electricity from where it is generated to where it is needed across Great Britain.

Ofgem: Regulatory Approval Process

ASTI Framework

2.3.7 To enable the delivery of the required transmission infrastructure for 2030 (as identified within the *Pathway to 2030 HND* exercise), Ofgem established a new regulatory framework for the Transmission Operators (TOs), including SSEN Transmission, to obtain regulatory approval of the economic case for delivery (and funding) of qualifying infrastructure projects identified as part of the 'Pathway to 2030' exercise (discussed above). This process is known as the Accelerated Strategic Transmission Investment (ASTI) framework.

2.3.8 This process demonstrates the regulatory support by Ofgem for the delivery of the onshore infrastructure identified by NESO. Ofgem has, for example, emphasised the significant benefit of this new transmission infrastructure being delivered for consumers (and, conversely, the risk of any delay in its provision). Reference is made to Section 2.3 of Ofgem's decision on the ASTI Framework (dated 15 December 2022) (the 'ASTI Framework Decision'), which states:

> *"Delivering the Government's ambitions will bring significant benefits to the British energy system in terms of its overall resilience, security of supply and decarbonisation of the sector. However, there are also significant potential consequences if the required onshore transmission upgrades are not delivered by 2030, including capacity not being able to be connected in a full and safe manner, increased constraints, and constraint costs that are ultimately passed on to consumers' energy bills."*

2.3.9 In order to deliver these significant benefits, Ofgem emphasised that '*A multi-party approach between Governments, the TOs and Ofgem is required…*'[8].

[7] Map obtained from NESO's Beyond 2030 report (Figure 1). NESO, 2024. *Beyond 2030*. Figure 1. [Online] Available at: neso.energy/document/304756/download.

[8] Ofgem, 2022. *Decision on accelerating onshore electricity transmission investment*. Page 5. [Online] Available at: https://www.ofgem.gov.uk/sites/default/files/2022-12/ASTI%20decision%20doc%20-%20Final_Published.pdf.

2.3.10 The Proposed Development is within the scope of the ASTI Framework. Reference is made to the ASTI Framework Decision, Appendix 1, which lists the relevant projects[9]. In relation to these projects, Ofgem observed at **Section 3.14** of the ASTI Framework Decision that:

> ***"By including projects within the list of ASTI projects, we are accepting the needs case for these projects in terms of the technical capabilities reflected in the HND/NOA Refresh****. This does not mean that the projects within ASTI may not evolve and change as they progress through the planning process and more detailed design. We will assess the detailed project design choices when the projects have been further developed and we will undertake a full Project Assessment (PA) following TOs' request for full project costs (see Chapter 5 for details of the new assessment process)." (Emphasis added).*

2.3.11 Separately, Ofgem and the Department for Business, Energy and Industrial Strategy (BEIS), now the Department for Energy Security and Net Zero (DESNZ), through the establishment of the Offshore Transmission Network Review (OTNR) and Central Design Group (CDG), have supported and endorsed the *Pathway to 2030 HND* exercise, with their roles set out in NESO's *Pathway to 2023 HND* Publication[10].

2.3.12 The OTNR[11] set out the support to deliver a Holistic Network Design for a coordinated onshore and offshore network to 2030 through NESO's Holistic Network Design methodology[12] . This methodology was delivered by NESO in consultation with the CDG (consisting of NESO and the UK's Transmission Operators with Ofgem and BEIS as observers) to support the *Pathway to 2023 HND* with the objective to deliver an economic, efficient, operable, sustainable and coordinated National Electricity Transmission System (NETS), which includes onshore and offshore assets required to connect offshore wind. This includes connections and associated strategic onshore infrastructure necessary to connect offshore generation to facilitate the 2030 offshore wind targets and the 2045 and 2050 net zero targets.

Licence Duties

2.3.13 In terms of Section 9 of the *Electricity Act 1989*, SSEN Transmission, as a transmission licence holder, is required to "*develop and maintain an efficient, co-ordinated and economical system of electricity transmission*". These statutory duties are important to the end-consumers of electricity transmitted on the network: the costs of the development, construction and operation of SSEN Transmission and other Transmission Owner assets (under Frameworks such as ASTI) are recovered from the end consumer in the form of electricity bill payments across the UK. In practice, a percentage of all UK electricity bills is apportioned to paying for Transmission works, meaning that the increases in the costs of construction and operation translates into increases in the amount paid by electricity users.

2.3.14 Consistent with the statutory duties on SSEN Transmission, Ofgem's role during the ASTI Framework is to ensure that only the '*efficient cost*' of delivering the Proposed Development will be passed to the end consumer[13].

2.3.15 In light of the above, when developing the design of the Proposed Development for the purposes of its application for Section 37 Consent, SSEN Transmission has been cognisant of: (i) its Section 9 licence duties;[14] and (ii) its ultimate accountability to Ofgem during the '*full project and cost assessment'* stage of the ASTI framework[15] to demonstrate

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[9] Ofgem, 2022. *Decision on accelerating onshore electricity transmission investment*. Appendix 1, Page 80. [Online] Available at: https://www.ofgem.gov.uk/sites/default/files/2022-12/ASTI%20decision%20doc%20-%20Final_Published.pdf.
[10] NESO, 2022. Holistic Network Design. [Online] Available at: https://www.neso.energy/publications/beyond-2030
[11] UK Government, 2023. Offshore Transmission Network Review: Summary of Outputs. Section 1. [Online] Available at: https://www.gov.uk/government/publications/offshore-transmission-network-review/offshore-transmission-network-review-summary-of-outputs.
[12] NESO, 2022. *Holistic Network Design – Methodology*. [Online] Available at: https://www.neso.energy/document/239466/download.
[13] Ofgem, 2022. Decision on accelerating onshore electricity transmission Investment. Page 37. [Online] Available at: https://www.ofgem.gov.uk/sites/default/files/2022-12/ASTI%20decision%20doc%20-%20Final_Published.pdf.
[14] In addition to its other duties under Schedule 9 to the *Electricity Act 1989* (Preservation of Amenity and Fisheries: Scotland).
[15] Ofgem, 2022. Decision on accelerating onshore electricity transmission Investment. Table 5, Page 14 and Section 5.36, Page 35. [Online] Available at: https://www.ofgem.gov.uk/sites/default/files/2022-12/ASTI%20decision%20doc%20-%20Final_Published.pdf.

to Ofgem that the design of the Proposed Development is economic and efficient, so that funding can be obtained to deliver the project.