VOLUME 2: CHAPTER 2 – ESTABLISHED NEED FOR THE PROPOSED DEVELOPMENT

Figures (Volume 3 of this EIA Report)

There are no figures associated with this chapter.

Appendices (Volume 5 of this EIA Report)

There are no appendices 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 kilovolt (kV). 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 network to connect to and transmit from new renewable energy developments. It would contribute significantly towards the delivery of the United Kingdome (UK) and Scottish Government's Net Zero Targets.

2.1.2 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 the National Energy System Operator (NESO)[1], and the energy regulator, the Office of Gas and Electricity Markets (Ofgem).

2.2 Established Need: National Planning Policy

2.2.1 Reference should be made to the Planning Statement which, together with this Environmental Impact Assessment (EIA) Report, 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*"[2]. 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*"[3].

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.

[1] As of 1st October 2024 National Grid ESO became known as the National Energy System Operator (NESO).

[2] National Planning Framework 4 Page 97 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

[3] National Planning Framework 4, *https:/ Page 97/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*

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.

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."[4]

2.2.4 ND3 encompasses 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."[5]

NPF 4: 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**"*. The Proposed Development, as enabling works within this definition, therefore draws express policy support from NPF4, Policy 11.

[4] National Planning Framework 4, Page 103, 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] National Planning Framework 4, Page 103, 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

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[6]. At the UK level, the British Energy Security Strategy (BESS[7]) recognised the separate issues over the cost of living from rising gas prices and sets out a 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 regards 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 emissions 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: (i) a transmission system planning exercise encompassing the entire National Grid (considering the upgrades necessary to accommodate the UK generation and demand requirements); and (ii) the regulatory approval from Ofgem as part of its ongoing assessment process. 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'

2.3.2 In July 2022, National Grid ESO published the Pathway to 2030 Holistic Network Design (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 GW and 11 GW (through the Crown Estate Scotland 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 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 HND).

2.3.3 In summary, National Grid ESO 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.

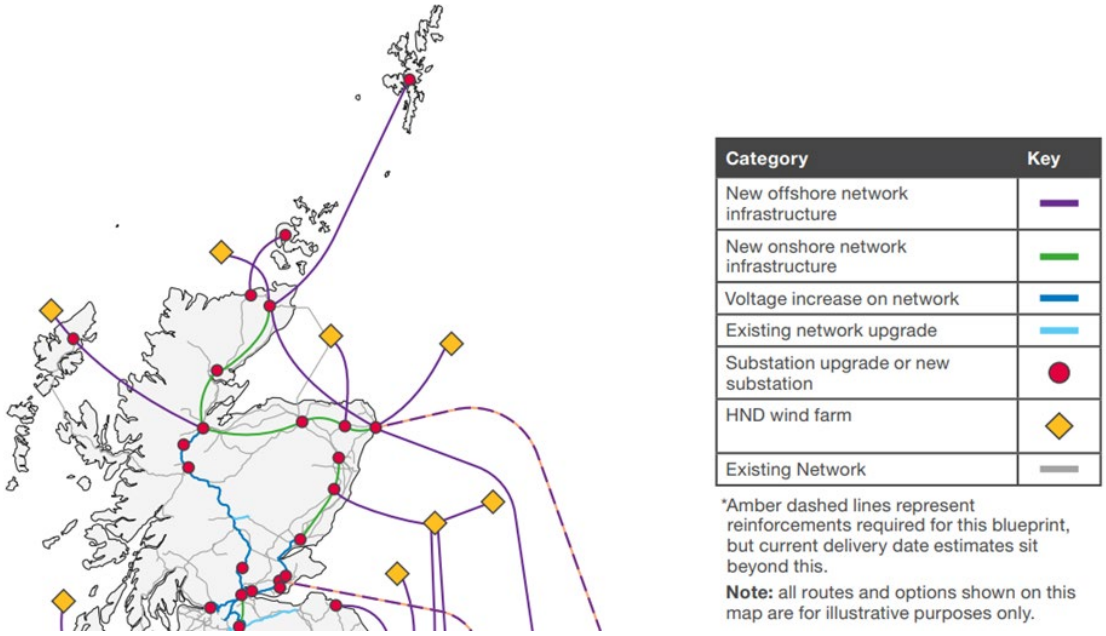
[6] Reference is made to: (i) the Scottish Energy Strategy (2017) https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2017/12/scottish-energy-strategy-future-energy-scotland-9781788515276/documents/00529523-pdf/00529523-pdf/govscot%3Adocument/00529523.pdf ; (ii) Energy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

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

HND Follow Up Exercise (2024): 'Beyond 2030'

2.3.4 In 2024, the NESO further reviewed the onshore and offshore network reinforcements as part of their HND Follow Up Exercise (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 HND and NOA Refresh). This confirmed the onshore and offshore reinforcements identified as part of the 2022 HND and NOA Refresh were required with the scopes developed to date at that point, as set out in the Map at **Plate 1.1** of the Beyond 2030 Report.

Plate 1.1: Map of 2030 network infrastructure including HND offshore coordinated system [8]



2.3.5 In summary, the NESO's HND, NOA Refresh and associated HND FUE set out the required onshore and offshore transmission works (including the Proposed Development) 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

Accelerated Strategic Transmission Investment Framework

2.3.6 To enable the delivery of the required transmission infrastructure for 2030 (as identified within the 'Pathway to 2030' exercise), Ofgem established a new regulatory framework for the Transmission Operators (TO), 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.

2.3.7 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

[8] Map obtained from NESO's Beyond 2030 report (Figure 1): neso.energy/document/304756/download

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*."

2.3.8 In order to deliver these significant benefits, Ofgem emphasised that "*A multi-party approach between Governments, the TOs and Ofgem is required…*[9]"

2.3.9 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[10]. 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*)."

2.3.10 Separately, Ofgem and the Department for Business, Energy and Industrial Strategy (BEIS), now known as 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 exercise, with their roles set out in the ESO's Pathway to 2030 Publication[11].

2.3.11 The OTNR[12] set out the support to deliver a holistic network design for a coordinated onshore and offshore network to 2030 through the ESO's Holistic Network Design methodology [13]. This methodology was delivered in consultation with the CDG (consisting of NESO and the UK's TOs with Ofgem and BEIS as observers) to support the 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

2.3.12 In terms of Section 9 of the Electricity Act 1989, SSEN Transmission, as a licensed TO, 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

[9] ASTI Framework Decision, Page 5, https://www.ofgem.gov.uk/sites/default/files/2022-12/ASTI%20decision%20doc%20-%20Final_Published.pdf.
10 ASTI Framework Decision, Appendix 1, Page 80, https://www.ofgem.gov.uk/sites/default/files/2022-12/ASTI%20decision%20doc%20-%20Final_Published.pdf
[11] NESO Holistic Network Design July 2022 www.neso.energy/document/262681/download
[12] Section 1 of the Offshore Transmission Network Review: Summary of Outputs , available at : https://www.gov.uk/government/publications/offshore-transmission-network-review/offshore-transmission-network-review-summary-of-outputs
[13] https://www.neso.energy/document/239466/download

development, construction and operation of SSEN Transmission and other TO 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.

2.3.13 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[14].

2.3.14 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[15]; and (ii) its ultimate accountability to Ofgem during the "*full project and cost assessment"* stage of the ASTI framework[16] to demonstrate to Ofgem that the design of the Proposed Development is economic and efficient, so that funding can be obtained.

[14] ASTI Framework Decision, Page 37, https://www.ofgem.gov.uk/sites/default/files/2022-12/ASTI%20decision%20doc%20-%20Final_Published.pdf.

15 In addition to its other duties under Schedule 9 to the Electricity Act 1989 (Preservation and Amenity of Fisheries)

16 ASTI Framework Decision, Table 5, Page 14 and Section 5.36, Page 35, https://www.ofgem.gov.uk/sites/default/files/2022-12/ASTI%20decision%20doc%20-%20Final_Published.pdf.