

HNDFUE Collaborative Impact Assessment and Asset Classification

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Response to National Energy System Operator (NESO) regarding HNDFUE Impact Assessment and Asset Classification

Dear David,

We are writing to you in response to the letter NESO published advising us of the outcome of the Asset Classification for the Holistic Network Design Follow Up Exercise (**HNDFUE**) Collaborative Impact Assessment (30 September 2025) and the subsequent network design change for projects from the ScotWind HNDFUE.¹

In this letter, we respond to your request for us to consider the asset classification for the infrastructure proposed in the revised network design under the HNDFUE. We have set out the relevant publications and regulatory framework used in making our determination of the resulting classifications for assets in this region.

Should you have any questions regarding any of the matters raised in this letter, please contact the Offshore Coordination Team at offshore.coordination@ofgem.gov.uk to discuss.

Yours faithfully,

Stuart Borland
Deputy Director, Offshore Network Regulation

¹ [Letter to Ofgem - HNDFUE Collaborative Impact assessment Outcome Summary | NESO](#)

Background

The Holistic Network Design Follow up Exercise

The Beyond 2030 report,² published in March 2024, included the HNDFUE, which incorporated ScotWind projects that were omitted in the Holistic Network Design (**HND**). The designs presented showcased a £58 billion direct investment for offshore and onshore network upgrades, supporting the generation of an additional 21 GW of electricity generated from offshore wind.

The Impact Assessment

Following the publication of the HNDFUE, parties involved progressed to the next stage of the design known as the Detailed Network Design. Over the course of this work, stakeholders collaborate to identify suitable design solutions to deliver the required infrastructure.

These focused on operability challenges associated with an offshore meshed network compared to radial connections, including anticipated supply chain issues linked to the requirement for more equipment, and a perceived increased risk associated with delivering an offshore meshed network. These changes are then examined through NESO's Impact Assessment process.³ This process assesses multiple variations of the offshore network topology, which included fully radial and partially coordinated options.

This process ensures changes made to the March 2024 HNDFUE keep the project compliant with the original design objectives, as any deviations from the baseline HNDFUE have potentially far-reaching implications for the transmission network, consumers, the environment, and wider industry.

Changes to the HNDFUE

The outcome of the Impact Assessment has resulted in a change in the design (**Figure 1a**). This has subsequently resulted in the requirement to change the asset configuration for the HNDFUE network, including:

- Each offshore wind farm now connects directly to the onshore network without the interconnectivity offshore.
- CampionWind now connects to a new proposed substation in the Emmock area in Angus, Scotland and to Lincolnshire Connection Node (LCN) in Lincolnshire, England. Morven remains connected to just north of the Branxton area in East Lothian, Scotland.

² [Beyond 2030 | NESO](#)

³ [HND and HNDFUE Impact Assessment Process | NESO](#)

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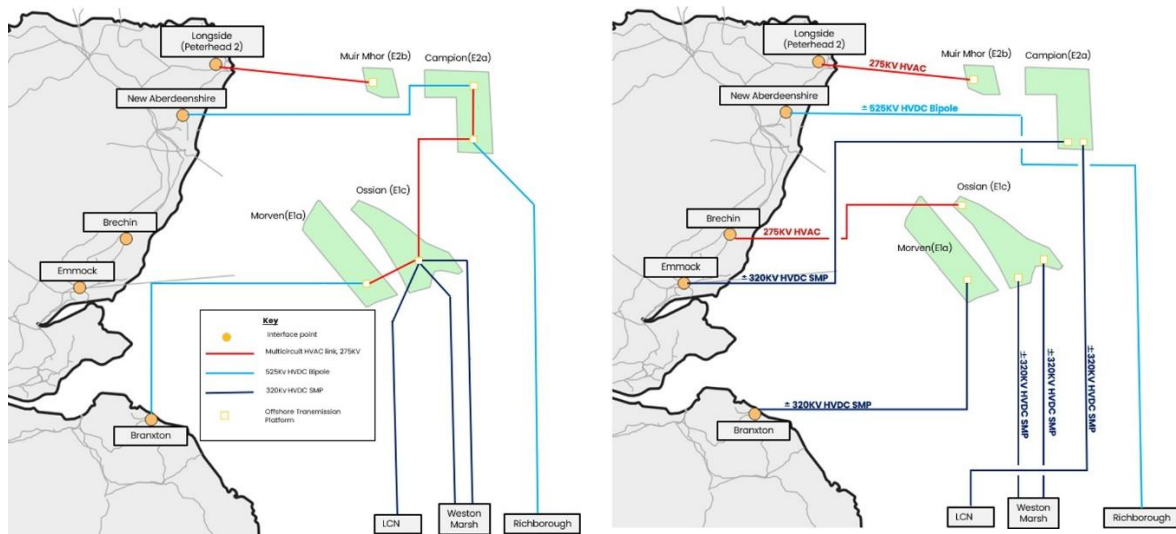
- Two of Ossian’s connections into Weston Marsh substation in Lincolnshire are retained, with its third link now connecting to a new proposed substation in the Brechin area of Angus, Scotland.
- A new HVDC offshore link is created between a new substation in Aberdeenshire and the Richborough area in Kent.

These assets result in a lower offshore component cost than the original recommended HNDFUE design, due to its simpler offshore topology. The design also provides a simpler offshore network, addressing the delivery parties’ operability and commercial concerns with the original recommended HNDFUE design.

The new configuration (**Figure 1b**) was deemed by NESO’s Impact Assessment to provide the greatest overall benefit in economic, deliverability, and environmental terms, of four proposed design changes from the baseline HNDFUE.

These changes were presented to the HND Board on 28 August 2025, who confirmed that the necessary considerations had been applied, and the required process had been followed, therefore the outcome of the Impact Assessment is now finalised.

Figure 1- Previous and Latest designs for the HNDFUE Collaborative Offshore Network



a. Previous design – A interconnected HNDFUE Collaborative Offshore Network

b. Latest design – A radial HNDFUE Collaborative Offshore Network

Asset Classification

With the introduction of a new design, NESO asked us to consider the activities by the assets in this design for the purposes of licensing, which requires a new classification. We have applied the asset classification principles and methodology as set out in our

April 2024 decision, which outlined classifications for the HNDFUE assets.⁴ In addition to the following definitions, we set out classifications in Table 1 below and give further detail on the process as applied to each asset in Annex 1.

Ofgem has provided these asset classification publications as it was appropriate for regulatory clarification to accompany a novel network design process. However, Ofgem no longer considers it necessary to classify assets beyond the initial design of the HND/HNDFUE, or resultant changes brought on by Impact Assessments. This is because asset classification was intended to act as guidance for Transmission Owners (TO) and developers and was implemented to help TOs and wind farm developers who were subject to a new strategic network planning activity. With that in mind, we believe that prospective developers should now be able to consider how their business model fits within the licensable activities under the Electricity Act 1989.

Radial offshore transmission

We consider a radial offshore solution to be a transmission system which fulfils both of the following criteria:

- Infrastructure is used for transmission in an area of offshore waters of electricity generated by a single generating station in such an area, and
- Infrastructure connecting a single offshore generating station directly to a point on the transmission system owned by a TO. This point may be physically located onshore or offshore, and its designation as onshore or offshore will be determined by its primary electrical function (primary usage), as opposed to its location.

Non-radial offshore transmission

We consider a non-radial offshore solution to be a transmission system which fulfils both of the following criteria:

- Infrastructure used for transmission in an area of offshore waters of electricity generated by two or more generating stations in such an area, and
- Infrastructure connecting two or more offshore generating stations to a point on the transmission system owned by a TO. This point may be physically located onshore or offshore, and its designation as onshore or offshore will be determined by its primary electrical function (primary usage), as opposed to its location.

Onshore transmission

Under the Electricity Act 1989, onshore transmission is not defined but for the purposes of the HND it is regarded as any transmission not falling within the definition of offshore

⁴ [April 2024 OTNR HNDFUE Asset Classification Decision | Ofgem](#)

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transmission⁵ and under the existing regime onshore transmission assets are owned by TOs.

Using the methodology indicated, we have classified the assets of the revised network design under the HNDFUE as follows:

Table 1 – Classification of assets

Circuit	Classification
E2b to Peterhead	Radial offshore transmission
New Aberdeenshire to Near Richborough	Onshore transmission (reinforcement)
E2a_1 to Emmock	Radial offshore transmission
E2a_2 to LCN	Radial offshore transmission
E1c_1 to Brechin	Radial offshore transmission
E1c_2 to Weston Marsh	Radial offshore transmission
E1c_3 to Weston Marsh	Radial offshore transmission
E1a to Near Branxton	Radial offshore transmission

⁵ As defined in section 6F(8) of the Electricity Act 1989.

Annex 1 – Asset Classification

Circuit	Legislative Review	Power Flow	Legal Verification	Classification
E2b to Peterhead	Infrastructure is used for transmission in offshore waters, of electricity generated by a single generating station. Used for conveying electricity generated by OWF to transmission system.	Unidirectional Flow from E2b to Peterhead2.	Wholly used to convey power generated offshore at E2b OWF to onshore substation.	Radial Offshore Transmission
New Aberdeenshire to Near Richborough	Infrastructure is used for transmission in offshore waters, of electricity generated onshore. Used for conveying electricity generated by onshore through transmission system.	Bidirectional flow from New Aberdeenshire substation to a substation near Richborough.	Neither wholly nor mainly used to convey electricity generated offshore, therefore onshore. Continues & completes North-South bootstrap reinforcement link.	Onshore Transmission (reinforcement)
E2a_1 to Emmock	Infrastructure is used for transmission in offshore waters, of electricity generated by a single generating station. Used for conveying electricity	Unidirectional flow, using E2a_1, to an onshore substation	Wholly used to convey power generated offshore at E2a OWF to onshore substation.	Radial Offshore Transmission

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	generated by OWF to transmission system.			
E2a_2 to LCN	Infrastructure is used for transmission in offshore waters, of electricity generated by a single generating station. Used for conveying electricity generated by OWF to transmission system.	Unidirectional flow, using E2a_2, to an onshore substation	Wholly used to convey power generated offshore at E2a OWF to onshore substation.	Radial Offshore Transmission
E1c_1 to Brechin	Infrastructure is used for transmission in offshore waters, of electricity generated by a single generating station. Used for conveying electricity generated by OWF to transmission system.	Unidirectional flow, using E1c_1, to an onshore substation	Wholly used to convey power generated offshore at E1c OWF to onshore substation.	Radial Offshore Transmission
E1c_2 to Weston Marsh	Infrastructure is used for transmission in offshore waters, of electricity generated by a single generating station. Used for conveying electricity generated by OWF to transmission system.	Unidirectional flow, using E2c_2, to an onshore substation	Wholly used to convey power generated offshore at E1c OWF to onshore substation.	Radial Offshore Transmission

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<p>E1c_3 to Weston Marsh</p>	<p>Infrastructure is used for transmission in offshore waters, of electricity generated by a single generating station. Used for conveying electricity generated by OWF to transmission system.</p>	<p>Unidirectional flow, using E1c_3, to an onshore substation</p>	<p>Wholly used to convey power generated offshore at E1c OWF to onshore substation.</p>	<p>Radial Offshore Transmission</p>
<p>E1a to Near Branxton</p>	<p>Infrastructure is used for transmission in offshore waters, of electricity generated by a single generating station. Used for conveying electricity generated by OWF to transmission system.</p>	<p>Unidirectional flow, using E1a, to a substation</p>	<p>Wholly used to convey power generated offshore at E1a OWF to onshore substation.</p>	<p>Radial Offshore Transmission</p>