

ESO Offshore Coordination Quarterly Update

Holistic Network Design and Follow Up Exercise, Codes, Connections and Multipurpose Interconnectors (MPIs)

September 2023

1. Introduction

In July 2022 we published *A Holistic Network Design for Offshore Wind*¹, a first of its kind, integrated approach for connecting 23GW of offshore wind to Great Britain (GB). Since then, we have been progressing work on the Holistic Network Design Follow Up Exercise (HNDFUE). The scope of the HNDFUE has been agreed through Terms of Reference, which can be found on the Department for Energy and Net Zero's (DESNZ) Offshore Transmission Network Review (OTNR) website². In November 2022, we published the Holistic Network Design Follow Up Exercise Methodology³, which provides an overview of our approach to developing HNDFUE design.

In June 2023, we published our first update⁴ to provide an overview of the ongoing Offshore Coordination work by the ESO. This update provides an overview of progress since then.

A summary of the topics outlined in this document:

- **HNDFUE ScotWind** – an update on the final recommended design and governance.
- **HNDFUE Innovation and Targeted Oil and Gas (INTOG)** – an update on the HNDFUE INTOG process.
- **HNDFUE Celtic Sea** – an update on Celtic Sea progress following The Crown Estate's market update.
- **HND** – an update on the progress of our HND Infrastructure Delivery Groups.
- **Offshore Hybrid Assets (OHAs) and Multipurpose Interconnectors (MPIs)** – an update on the Ofgem established the MPI Framework Discussion Group (MFDG) and detail on the ESO led Workstream 4.
- **Code Modifications** – an update on the inflight commercial code modifications.
- **Connections Reform** – an update following the recent consultation.

2. HNDFUE

2.1 ScotWind

We have concluded an important phase of the ScotWind Holistic Network Design Follow Up Exercise (HNDFUE), meeting the Terms of Reference (ToR) set by the Offshore Transmission Network Review (OTNR), a UK Government led review.

We are continuing to work with the Office of Gas and Electricity Markets (Ofgem) during their asset classification process, and Transmission Owners and developers to determine wider grid reinforcements that will also be needed across the electricity system, develop connection agreements, and agree delivery timescales.

The final recommended design for ScotWind projects in scope of the HNDFUE will be published as part of the second Transitional Centralised Strategic Network Plan (TCSNP2), as we move towards a whole system approach to network planning that will be undertaken by the Future System Operator (FSO), once established.

¹ <https://www.nationalgrideso.com/future-energy/pathway-2030-holistic-network-design/holistic-network-design-offshore-wind>

² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1151585/otnr-holistic-network-design-follow-up-terms-of-reference-v4.pdf

³ <https://www.nationalgrideso.com/document/270851/download>

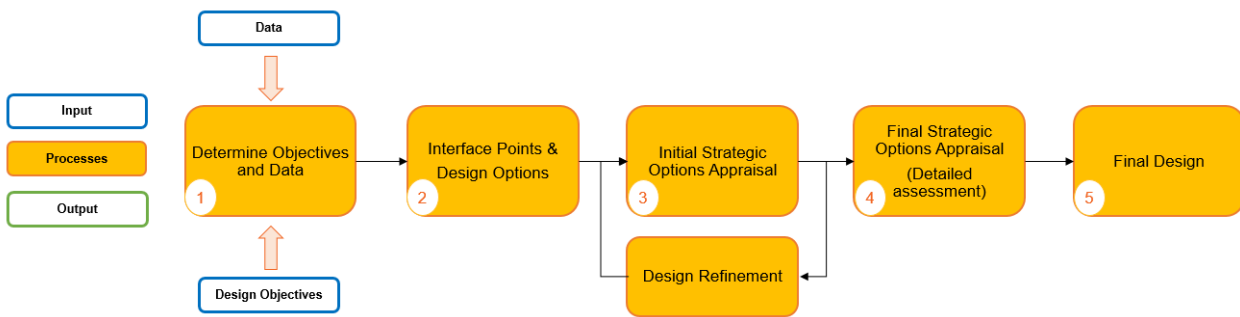
⁴ <https://www.nationalgrideso.com/document/281131/download>

2.2 Innovation and Targeted Oil and Gas Leasing Round

Since the Crown Estate Scotland (CES) announcement of the Innovation and Targeted Oil and Gas (INTOG) leasing round outcome on 24 March 2023 we have been engaging with successful developers to find out more about their projects. This enabled us to confirm, which of these projects would be in scope of the Holistic Network Design Follow Up INTOG exercise. This is outlined in the *OTNR Pathway to 2030 Central Design Group and Network Design Terms of Reference*⁵.

We have been engaging with these developers, most recently in our INTOG Kick Off Meeting on 14 August. In this session with developers and Transmission Owners (TOs) we covered the process to date, generation in and out of scope, upcoming process, network design objectives and input data.

Having confirmed and recommended the offshore network design for HNDFUE ScotWind projects, we have now commenced the design process for INTOG, which will broadly follow the same high-level process as used for HNDFUE ScotWind as detailed below.



As previously advised INTOG recommendations will not re-open the HNDFUE (ScotWind) design. The ScotWind recommended design will be used as an input to the INTOG design process, with the final recommended design for INTOG projects being confirmed in Quarter One of 2024. Throughout the design exercise we will be engaging with relevant developers and stakeholders.

2.3 Celtic Sea

The Crown Estate (TCE) hosted a Market Update Webinar⁶ on 04 July where they shared a minded to spatial scenario, which is a new Project Development Area (PDA) combination that we had not previously designed for.

We have since been refreshing the interface point assessment for the minded to position. We will recommence our design work to reflect the final PDAs when they are confirmed by TCE in early autumn. This design work will include applying learnings from previous design work. It is still our intention to have a final recommended design in early 2024.

In June, we asked developers to provide views on interface points and the Celtic Sea HNDFUE process. We received 13 responses, which will inform our refreshed design process and appraisals.

We hosted a webinar for developers and the Celtic Sea Subgroup on 23 August 2023, where we shared an overview of our methodology; what we have achieved so far; and a sample of designs for TCE’s minded to PDA scenario.

We are now organising developer workshops for late autumn to seek feedback on the shortlist of designs. If you are a developer interested in the Celtic Sea and haven’t received any communications from us, please let us know by emailing box.OffshoreCoord@nationalgridESO.com.

⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1181581/otnr-hnd-fue-tor.pdf
⁶ Celtic Sea Floating Wind: July 2023 update | Celtic Sea Floating Wind: July 2023 update (thecrownestate.co.uk)

3. HND Infrastructure Delivery Groups

Work is continuing within the Offshore Coordination Project to progress with facilitating the delivery of the transmission infrastructure recommended in the HND.

3.1 Technical/Commercial Forums

To support developers of non-radial offshore network in the HND and Transmission Owners (TOs) overcome barriers to delivery, we originally established two forums, an East Coast Technical Forum and a Commercial Forum. Due to the interlinking of barriers, it was decided to merge these two forums into one to create a fortnightly Technical/Commercial forum. This forum is coordinated by the ESO and attended by TOs, HND developers with non-radial connections, Ofgem, DESNZ and the Scottish Government. The forum is well attended, and cross-cutting issues are being explored collaboratively, with members of the forums progressing actions where appropriate or escalating to other organisations/channels where the solution is not within the members' remit. Currently, the focus of the forums is delivery of the HND and, as such, membership of the groups covers those directly involved in this stage. As the ScotWind HNDFUE has been finalised we are now working to determine the appropriate approach to bringing additional stakeholders and/or issues into the scope of this work.

3.2 Impact Assessment Process

A significant piece of work that has been completed over the last three months is the development and implementation of an Impact Assessment process. As part of the Detailed Network Design (DND) phase, developers and TOs have identified design changes, which has required us to develop a process to assess the impact of these changes against the four design criteria, compared to the baseline of the HND. These changes may include a change in technology, a change in cable route or length, or a change of interface point.



While the HND is non-binding, deviations from the recommendations may have wider implications for the transmission network and other industry processes. It is important that we understand the full impact of any design changes, as there may be consequences that are not immediately obvious, and the ESO is best placed to conduct this holistic assessment.

A structured approach is needed given there may be multiple impact assessments required, multiple parties may be involved in any one assessment, and the work involved needs to be planned alongside other deliverables for all parties involved. We have therefore, with stakeholder engagement and feedback, developed an Impact Assessment process. We will run impact assessments every two months, which we will endeavour to complete within four to six weeks, although it should be noted that the timeframe for completing an impact assessment could be extended if there is a need to assess multiple options. We will keep the frequency and duration of impact assessments under review and look at adapting the approach if required. We are also engaging with Ofgem and DESNZ to establish an appropriate governance process across network planning activities, changes to network plans and wider impacts.

Further to the implementation of the assessment process, we have also shared a *You Said, We Did* document⁷, which provides context on the need for a process, communicates how stakeholder feedback has been taken into account and answers questions regarding various elements of the process. We value the feedback and input received during the development of the process.

A summary of approved design changes will be shared via these regular updates.

⁷ <https://www.nationalgrideso.com/document/286771/download>

4. Offshore Hybrid Assets & Multipurpose Interconnectors

The launch of the OTNR (Offshore Transmission Network Review) in 2020 saw the establishment of four workstreams, one of which was Multi-Purpose Interconnectors (MPI), which is relevant to the three temporal workstreams of Early Opportunities, Pathway to 2030 and Enduring Regime.

An MPI combines the network infrastructure for offshore generation, wind in this case, with an interconnector to form a more efficient use of offshore assets and reduce costs to end consumers and minimise disruption to our coastal communities through coordination. These types of projects have now been rebranded as Offshore Hybrid Assets (OHA) to align with similar projects in the European Union. These encompass a Non-standard Interconnector (NSI) or an MPI.

The key differences between the two are that an NSI combines an interconnector with offshore generation in non-GB waters, whereas an MPI combines an interconnector with offshore generation in GB waters.

4.1 MPI Framework Discussion Group (MFDG)

As a result of the large number of areas identified required consideration for an MPI, Ofgem established the MPI Framework Discussion Group (MFDG). The purpose of the MFDG is to develop proposals for the commercial and regulatory frameworks that will apply to MPIs and the windfarms that connect to them. These proposals will then be subject to the usual industry consultation processes prior to being finalised by the relevant authority and implemented.

The MFDG has established four workstreams (WS):

- WS1 – Contracts for Difference: Lead: DESNZ
- WS2 – Licensing Lead: Ofgem
- WS3 – Charging and Market Arrangements Lead: Ofgem and DESNZ
- WS4 – Operability Lead: ESO

These workstreams and the MFDG are open to any interested party.

Ofgem expect to have the MPI Initial Project Assessment (IPA) decision by March 2024.

Through these workstreams, the ESO, interconnector and offshore wind developers, Ofgem and DESNZ are working closely to explore and understand topics including:

- Licensing arrangements and Asset classification.
- Capacity, charging, access arrangements & support schemes.
- Operability of OHAs.
- Contractual arrangements including the industry Codes and Standards to be applied.
- Market arrangements including bidding zone configuration.
- Interaction with European markets and European network planning.
- Interaction with wider framework reforms, for example Review of Electricity Market Arrangements⁸ (REMA).

⁸ <https://www.nationalgrideso.com/future-energy/projects/net-zero-market-reform>

DESNZ and Ofgem published two consultations at the end of May 2023 (now closed) and as this update is published, the responses are being considered. The two consultations are as follows and are available on the Ofgem website are:

- Ofgem Consultation on the Regulatory Framework for Offshore Hybrid Assets: Multipurpose Interconnectors and Non-standard Interconnectors
- Ofgem/DESNZ consultation on the market arrangements for Multipurpose Interconnectors

As a result of the consultations, it is envisaged, that further work will need to be done and the MFDG and associated workstreams will take this forward as required.

5. Codes

In our June update, we outlined the Connection and Use of System Code⁹ (CUSC) Modification Proposals (CMPs) relating to Offshore Coordination that are being considered and provided an overview of the Codes and Standards Subgroup. Further to this update, we have made progress on the following modifications to the CUSC:

- **CMP402 - Extension of current User Commitment Principles to incorporate Anticipatory Investment (AI).** As highlighted previously, we raised a CUSC Code Modification in December 2022 following Ofgem's final decision announcement on AI. Following the consultation phase which concluded on 21 June 2023, we have put forward an alternative solution to our original proposal. In terms of next steps, we expect the modification to go to Ofgem in December 2023 and that the extension of User Commitment principles for AI will be implemented into CUSC in Quarter Two 2024.
- **CMP411 – Introduction of AI within the section 14 charging methodologies.** CMP411 was raised in February to implement Ofgem's policy decision and seeks to introduce AI and a mechanism for the recovery of AI costs within the Section 14 charging methodologies. The Workgroup consultation closed on 07 July 2023 and modification is due to go to Ofgem from a decision in December 2023 with implementation due for Q2 2024.
- **CMP419 – Review the generation zoning methodology.** This modification looks to review the existing generation zoning methodology to incorporate offshore assets connected as part of the HND to enable the wider tariff to be applied to offshore generators. This modification seeks to also revisit the issue of zoning further to the expectations set out as part of the authority decision on CMP324 and CMP325¹⁰. This modification was raised in August 2023 and working groups to discuss the proposal are due to start in October 2023.
- **CMP376 - Queue Management.** Development of this code modification was resumed in September 2022 and, if introduced, would create the ability to terminate a project if it has not met pre-agreed milestones. This modification went to Ofgem in June 2023 and a decision is due in November 2023.



⁹ <https://www.nationalgrideso.com/industry-information/codes/connection-and-use-system-code-cusc>

¹⁰ CMP324 & CMP325: Generation Zones – changes for RII0-T2' & 'Rezoning – CMP324 expansion | ESO (nationalgrideso.com)

6. Connections Reform

Our Connections Reform programme¹¹ recently held a six-week consultation to obtain views on our proposals. We received over 75 responses from a wide range of industry stakeholders, all of which are vital to ensure we deliver the changes needed to reform the connections process for the future. We are currently undertaking a full review to understand the full breadth of feedback and recommendations received. In September 2023, we will be going back to our stakeholder governance groups to establish our final recommendations, as well as refine our proposals on how to implement and transition to a new operating model. We are aiming to publish our final recommendations and implementation plan by the end of November 2023.

We have also initiated a five-point plan¹² to update the existing connections process for the electricity transmission grid to complement its programme of longer-term reform, including our Transmission Entry Capacity (TEC) Amnesty, which recently received support from Ofgem¹³ to progress further.

Please get in touch with the Connections Reform team via box.connectionsreform@nationalgrideso.com and subscribe to the mailing list¹⁴. We are also hosting a Connections seminar¹⁵ in London on 16 October 2023, where you can join us to discuss how we're improving the connections process for customers to speed up the transition to a zero-carbon electricity system.

We hope this update provides clarity and insight on what we are working on, and what you can expect from us over the coming months.

If you have questions, please get in touch with us via box.OffshoreCoord@nationalgridESO.com. Our next *Quarterly Update* will be in December 2023.

Offshore Coordination, **ESO**

¹¹ <https://www.nationalgrideso.com/industry-information/connections/connections-reform>

¹² <https://www.nationalgrideso.com/industry-information/connections/what-are-we-doing-now-our-five-point-plan>

¹³ <https://www.ofgem.gov.uk/publications/letter-support-facilitate-processing-tec-amnesty>

¹⁴ <https://subscribers.nationalgrid.co.uk/h/d/26CD448E3AF68228>

¹⁵ <https://www.eventbrite.co.uk/e/eso-connections-seminar-tickets-685436197117?aff=oddtcreator>