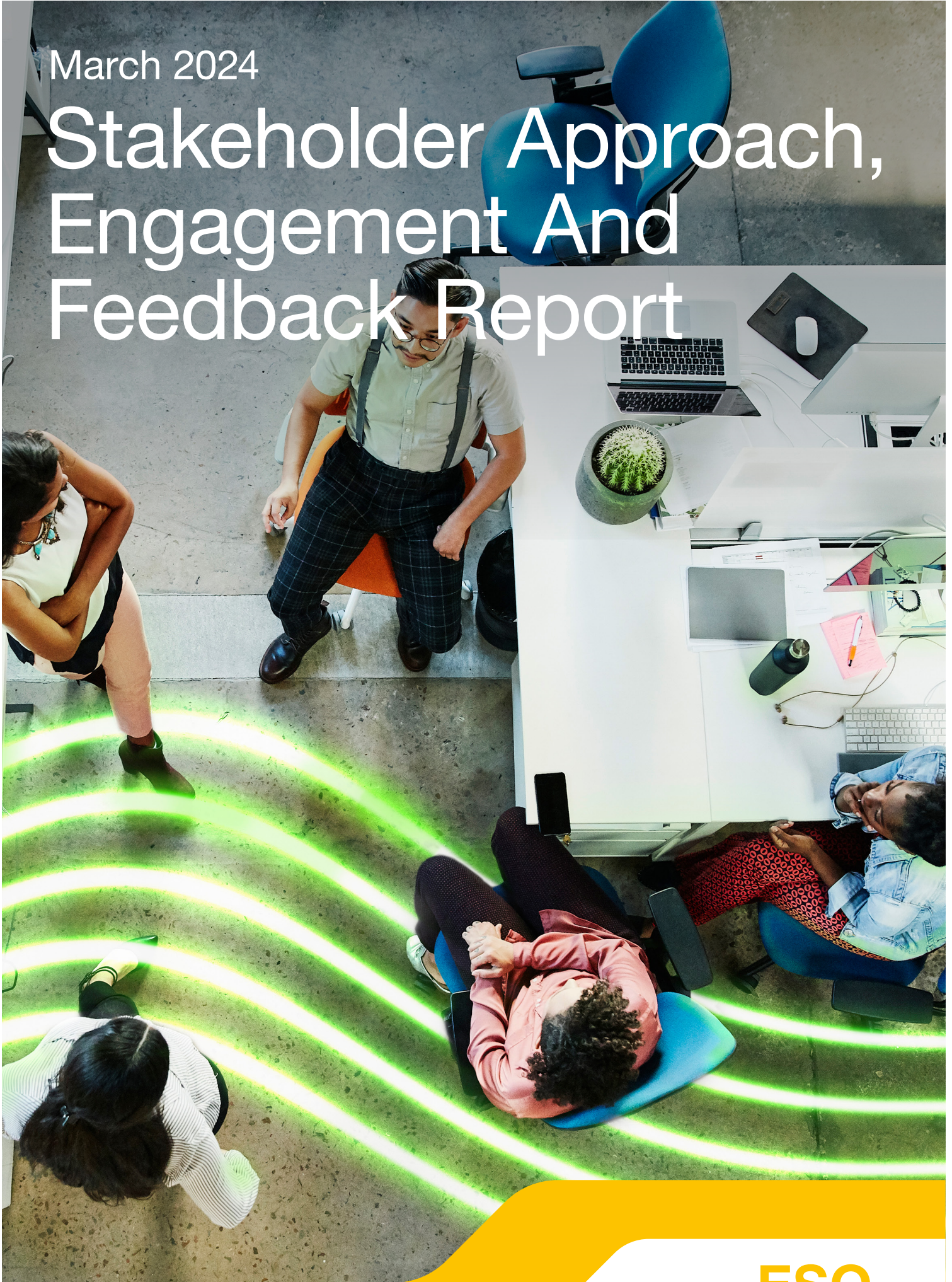


March 2024

# Stakeholder Approach, Engagement And Feedback Report



**ESO**

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## 1 Background and context

This Stakeholder Annex is a summary of the stakeholder engagement that we undertook to develop the *Beyond 2030* Report. This Annex includes a list of the stakeholders that we engaged and describes our methods, interfaces, and governance processes through which we engaged these stakeholders. It also includes a high-level summary of some of the feedback we received and what we did with this feedback.

### Context

In March 2024, we published the *Beyond 2030* Report which is one of the intermediate steps in our transition to the enduring Centralised Strategic Network Plan (CSNP). The *Beyond 2030* Report recommends one coordinated onshore and offshore network design that has the potential to connect up to 86 GW of offshore wind, facilitating the Government’s decarbonisation plans. This supporting stakeholder annex describes the stakeholder engagement that took place to support the development of the *Beyond 2030* report.

Throughout 2023/2024 we have been working with Great Britain’s Transmission Owners (TOs) and using data from the *2023 Future Energy Scenarios (FES)*<sup>1</sup> to assess the need of Great Britain’s transmission system. We use inputs from the FES to model and understand the power flows and constraints on a future network and recommend new network options to minimise these constraints. This is key to helping us understand where investment is needed to develop Great Britain’s transmission system to facilitate the UK’s net zero carbon targets as outlined in the *Sixth Carbon Budget*<sup>2</sup>.

The *Beyond 2030* Report also includes an offshore network design that connects 21 GW of offshore wind from the second ScotWind leasing round. This is in addition to the integrated offshore design in the first *Holistic Network Design (HND)* published in 2022<sup>3</sup>.

Once the future system needs and the final offshore design were complete, we assessed 62 onshore reinforcement options that were submitted to us by Great Britain’s TOs. From this assessment, we recommended a ‘path’ that facilitates the future needs of the system, balancing against four design criteria. These criteria are shown below.





Objective	Description
 <b>Economic and efficient costs</b>	The network design should be economic and efficient, ensuring best value for bill payers
 <b>Deliverability and operability</b>	The network design should be deliverable, and the resulting system should be safe, reliable and operable
 <b>Environmental impact</b>	Environmental impacts should be avoided, minimised or mitigated by the network design, and best practice environmental management incorporated in the network design
 <b>Local community impact</b>	Local community impacts should be avoided, minimised, or mitigated by the network design

Table 1: Four Design Objectives

<sup>1</sup> <https://www.nationalgrideso.com/document/283101/download>

<sup>2</sup> <https://www.theccc.org.uk/publication/sixth-carbon-budget/>

<sup>3</sup> <https://www.nationalgrideso.com/document/262681/download>

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The results from this assessment went through a two-stage executive-level governance process with the TOs, the Office of gas and Electricity Markets (Ofgem), Scottish and Welsh Devolved Governments and the Department for Energy Security and Net Zero over winter 2023/2024. We then published the *Beyond 2030* Report with endorsement from our key stakeholders.

## 2 Introduction

### Developing our engagement with stakeholders

Following our *Holistic Network Design (HND)* publication, we sought views on how to improve our stakeholder engagement approach. We achieved this by seeking feedback and reflections via:

- Lessons learned reviews
- In-person engagement
- Seeking written feedback on the onshore and offshore methodologies.

These activities helped to inform and shape the changes that we made to the methodologies. The key themes from the feedback received along with our responses are available in Appendix G and Appendix 1 of the onshore and offshore methodologies. These include:

- The permanent membership of the HND Central Design Group (CDG) as per the updated Terms of Reference have been revised to include environmental, community and developer representatives.
- Providing greater transparency as early in the process as possible.
- Scheduling longer feedback window(s) for stakeholders in the project plan.
- Inviting developers to take part in design recommendation decisions earlier in the process.

Stakeholders appreciated being given the opportunity to provide feedback on the methodologies.

### Stakeholder engagement principles for *Beyond 2030*

Our overarching engagement principles across all *Beyond 2030* activity is to:

- Use existing interfaces with Transmission Owner (TO) partner organisations and other stakeholders to exchange, challenge and review information shared with our organisations.
- Listen to and consider feedback from our commercial stakeholders to facilitate the development of our operable new network.
- Gather feedback from stakeholders advising on our four design criteria to allow us to best assess the options available.
- Update UK Governments and the Office of Gas and Electricity Markets (Ofgem) on the progress of recommendations and seek guidance where appropriate.
- Implement a two-stage governance process meeting with senior TOs, government and Ofgem.

## Engagement with key stakeholders

Throughout the development of *Beyond 2030* Report we have sought feedback from various stakeholder groups to incorporate feedback into our plan. These groups include:

### Non-ministerial government departments/independent National Regulatory Authority

- The Office of Gas and Electricity Markets (Ofgem) and Marine Management Organisation (MMO)

### Political representatives

- UK Government Ministers, Members of Scottish Parliament, Members of Parliament, and local authorities/councillors

### The Crown Estate and Crown Estate Scotland

### Commercial stakeholders

- In scope ScotWind offshore wind developers
- Technology providers

### Great Britain's onshore Transmission Owners (TOs):

- National Grid Electricity Transmission (NGET), Scottish and Southern Electricity Networks Transmission (SSEN-T) and Scottish Power Transmission (SPT)

### Statutory Environmental stakeholders

- Natural England, The Wildlife Trusts, Historic England, Scottish Environment Protection Agency (SEPA), Historic Environment Scotland, Natural Resource Wales, NatureScot, Marine Management Organisation (MMO), Department for Environment Food & Rural Affairs (Defra) and Joint Nature Conservation Committee (JNCC)

### Trade associations

- RenewableUK
- Scottish Renewables

### UK Government departments and Devolved Governments

- Departments for Energy Security and Net Zero, Environment, Food & Rural Affairs (Defra), Levelling Up, Housing and Communities (DLUHC), and the Scottish and Welsh Governments.

# ESO

## Engagement overview

### Central Design Group engagement

In developing the offshore and onshore network designs, we have continued to utilise groups established to support delivery of the HND, including the HND CDG and its associated subgroups. We also hold forums to support developing the *Network Options Assessment* (NOA). As our onshore analysis expanded to account for the four design criteria for the first time for Beyond 2030, we engaged with the CDG stakeholder groups to gather feedback on these new assessments. Stakeholders in these groups included TOs, the Department for Energy Security and Net Zero, Devolved Governments, Ofgem, in scope ScotWind developers, and environmental and community representatives.

### Transmission Owner engagement

To successfully undertake our role in recommending a set of network needs, it is critical that we collaborate with Transmission Owners. We regularly shared, challenged, and reviewed project data to ensure we were creating the most efficient set of recommendations which underpin Beyond 2030. To achieve this, we established various interfaces with the TOs across different levels and areas of our organisations. This ensured that we get the input and engagement we need to make effective assessments for the future network.

We have also worked with TOs using established forums to identify the needs of the system. This collaborative exercise is an essential first step in system planning as we need to understand what is required of a future system before we recommend options.

### Ofgem, the Department for Energy Security and Net Zero and Devolved Government engagement

The recommendations made in the plan enable us to facilitate ambitious targets set in government policy, so by nature these are transformational and nationally significant. Ofgem, Department for Energy Security and Net Zero and Welsh and Scottish Governments have an important role to play in approving the investments in the plan. That is why we have regularly briefed these stakeholders throughout the analysis process and explained the rationale for the decisions and content within the recommendations.

### In scope ScotWind developer engagement

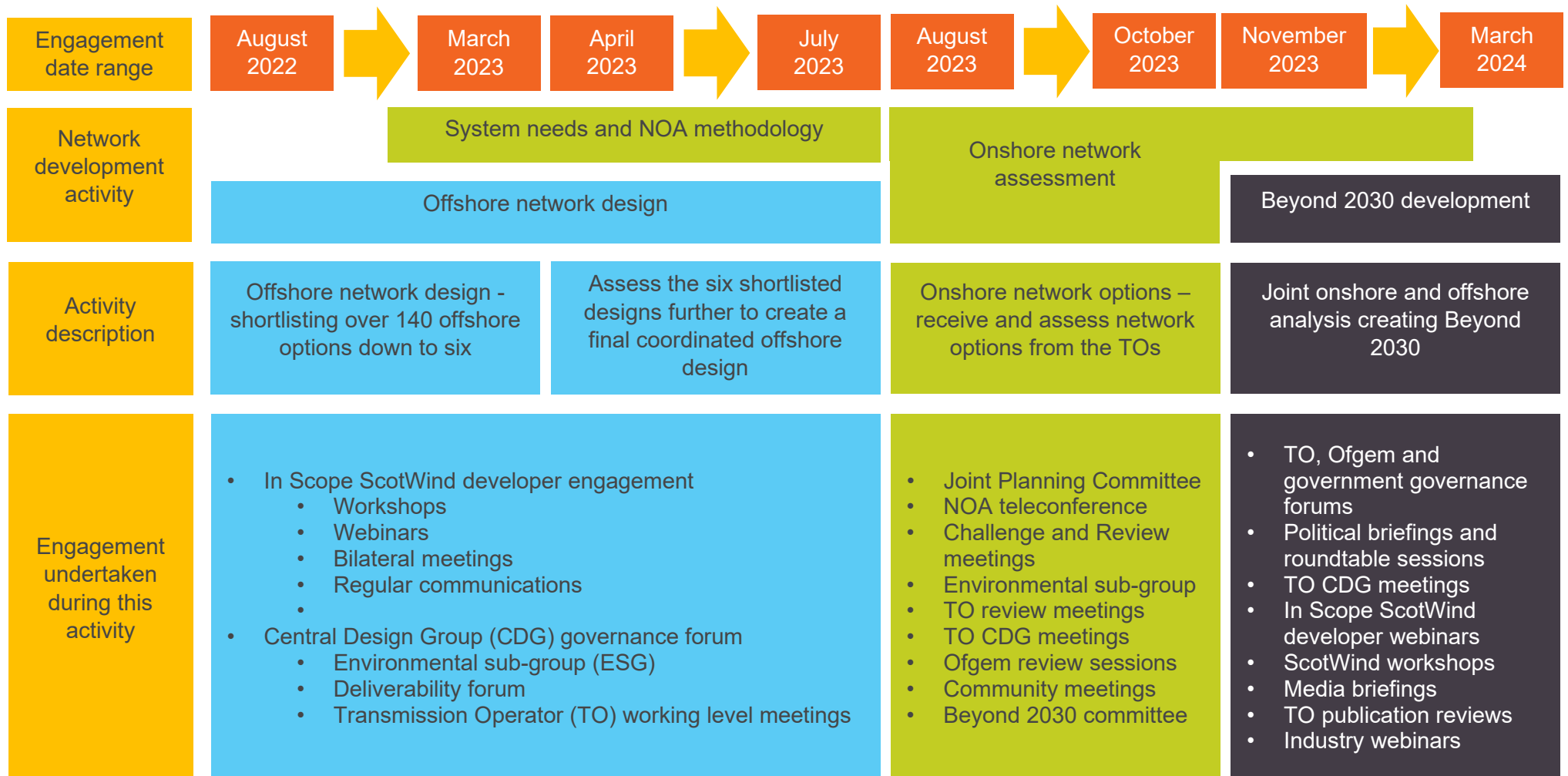
The development of Beyond 2030 onshore and offshore recommendations required engagement with in scope ScotWind developers, who have an interest in understanding when and where their projects will be connected to the transmission system. Throughout the development of the *Beyond 2030* Report, we have kept developers informed and engaged regularly during the offshore design process. As we have reached key milestones in the development of the recommendations in the offshore network design, we have provided stakeholders with updates.

### Broader interest stakeholders

During the build-up and release of the report, we have implemented a comprehensive programme of engagement with wider stakeholders sharing key messages, opening a conversation around Great Britain's future network through the 2030s.

## 3 Our engagement process

We have been engaging with our stakeholders from August 2022 through to March 2024. During this time, we have delivered three main activities: the offshore network recommendations, the onshore network recommendations and the *Beyond 2030* Report. The diagram below lists the engagement undertaken during each activity.





# ESO

## Key numbers for engagement between August 2022 and March 2024

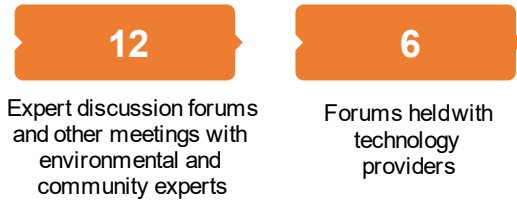
### Governmental departments, Ofgem, The Crown Estate and Crown Estate Scotland



### Transmission Owners



### Environmental and community experts



### In Scope ScotWind developers



# ESO

## Governance and stakeholder forums

The Offshore Transmission Network Review (OTNR) Pathway to 2030: CDG and Network Design Terms of Reference<sup>4</sup> sets out the governance for the Holistic Network Design (HND) and Holistic Network Design Follow Up Exercise (HNDFUE). It outlines how the CDG and its subgroups should be consulted and used for ensuring chosen designs are selected by properly considering the four network design objectives. It is relevant to report on this document as the HNDFUE makes up part of the *Beyond 2030* Report. We also used the Environmental Subgroup which is part of the CDG to evaluate our assessments for the offshore appraisals.

As well as this governance process, we also had a dedicated Beyond 2030 governance programme which engaged senior level representatives from key stakeholder groups to endorse the final recommendations. This governance process has developed from previous network development cycles to include engagement and input from Devolved Government, the Department for Energy Security and Net Zero, the Office of Gas and Electricity Markets (Ofgem) and senior Transmission Owners (TOs).

## Beyond 2030 specific governance forums

The purpose of the Electricity Infrastructure Plan Advisory Forum ('the Forum') is to provide strategic oversight and advice in the development and output of the HND. At the initial stage the forum had an opportunity to scrutinise an overview of the recommendations which led to refinements of the report and particularly the recommendations that underpin the report. The second round of governance provided a further opportunity for refinements to messaging in the report and to confirm their endorsement of the recommendations following changes made from previous governance round.

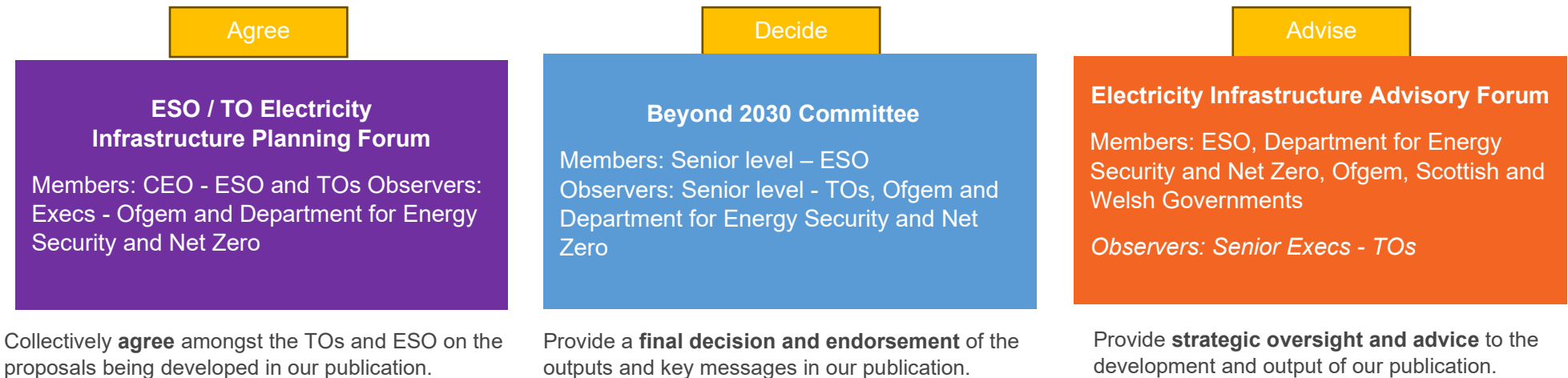
The forum provides us and TOs with a formal decision-making body, with input and advice from Ofgem and the Department for Energy Security and Net Zero as part of the development process for the HND.

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<sup>4</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1181581/otnr-hnd-fue-tor.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1181581/otnr-hnd-fue-tor.pdf)

# ESO

The structure builds on those used previously as part of the *Network Options Assessment* (NOA) and the Holistic Network Design Follow Up Exercise (HNDFUE), allowing us to provide more transparency and discuss progress at three key milestones.



# ESO

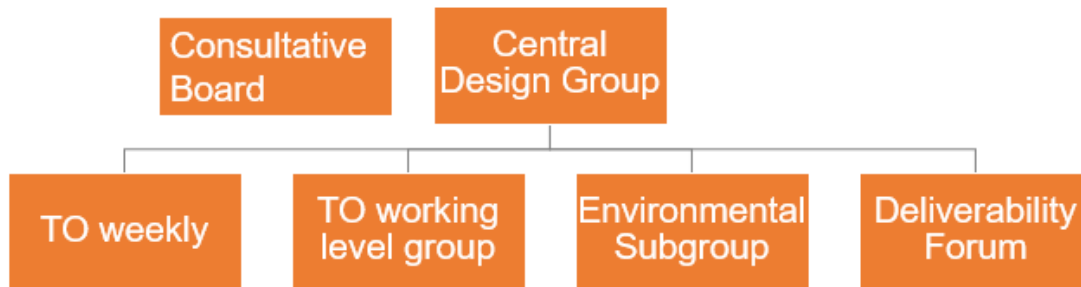
It was critical that we collaborated, discussed, and reached agreement with project partners and key stakeholders on various areas of the *Beyond 2030* Report. We had regular touchpoints where we sought feedback on developing areas of the plan and discuss analysis at different levels within organisations and working on different elements of the plan. Below is a summary of some key forums:

Central Design Group (CDG) and CDG consultative Board			
SSEN-T, SPT, NGET, RenewableUK, Scottish Renewables, Ofgem, Scottish and Welsh governments, Department for Energy Security and Net Zero, JNCC, Local authority representative			
CDG sub groups			
Weekly TO meeting	TO working level	Deliverability Forum	Environmental sub-group
SSEN-T, NGET, SPT	SSEN-T, NGET, SPT	TOs, OFTOs, In Scope ScotWind developers representatives, HVDC centre, manufacturers, cable manufactures	SSEN-T, NGET, SPT, Department for Energy Security and Net Zero, Ofgem, Scottish Government, MMO, JNCC, DEFRA, Natural England, Natural Resources Wales, SEPA, Historic England, The Wildlife Trusts, The Crown Estate
NOA T-Conference			
SSEN-T, NGET, SPT			
Joint Planning Committee			
SSEN-T, NGET, SPT			

# ESO

## Central Design Group and subgroups

The design process relied on key analysis and information from Great Britain's three onshore TOs: NGET, SSEN-T and SPT - as inputs into the design. To facilitate collaboration with the TOs, community, environmental representatives, developer trade association representatives and technology providers, we established the Central Design Group (CDG) and subgroups.



Further details on the specific roles of us as the Electricity System Operator (ESO), the CDG and the CDG subgroups are explained in the HNDFUE Methodology and Terms of Reference.

The CDG worked with the OTNR governance groups to ensure that the offshore network design met the four design criteria.

- Through the CDG and its subgroups, we worked closely with the onshore TOs and other key stakeholders as the ScotWind offshore wind network was developed. The group met to support milestones in the project plan, to discuss project updates, stakeholder insights, share information and to manage issues and risks. Ofgem, the Department for Energy Security and Net Zero and members of the Devolved Governments also attended. Technology providers (representatives from the supply chain) were invited to provide input on the technology required for the construction of the final recommended design.
- As part of the Final Strategic Options Assessment (FSOA), the CDG met as a Consultative Board which met twice:
  - The first session covered the discounting of any of the HNDFUE shortlisted designs, insight into which of the remaining options were ranked best at this time, and an opportunity for the group to provide feedback at this crucial stage.
  - The second and final session focussed on the remaining shortlisted options, discounting options with accompanying rationale until there was a single and final recommended HNDFUE design. We asked organisations to discuss and provide a statement on the designs before they were discounted.

The CDG working level and subgroups include:

### Working level and subgroups with the Transmission Owners

- We met once or sometimes twice a week with the TOs to discuss progress, documentation, and requirements for input from the TOs.
- TO working level group: This working level group met weekly to discuss technical elements of the methodology and other technical studies.

# ESO

CDG TO meetings have covered a variety of topics throughout the HNDFUE including, but not limited to:

- Methodology documents
- Design rules
- Interface points
- Notional reinforcements
- Program updates
- Timelines
- Stakeholder engagement and feedback from other stakeholder groups.

These meetings have been imperative to gather TO feedback and consult on HNDFUE.

The CDG TO and working level meetings have allowed for the TOs to work collaboratively with us, ensuring that programme milestones are achieved and subsequent stakeholder engagement with in scope ScotWind developers and wider groups is effective and happens in a timely manner.

## Environmental subgroup (ESG)

- The ESG brings together environmental stakeholders to provide advice on environmental impacts of technically viable options being considered when developing the HNDFUE.
- We meet with the ESG monthly and have covered a variety of topics throughout HNDFUE including methodology documents, BRAG (Black Red Amber Green) descriptions for the design rules and Options Appraisal Summary Table (OAST) documentation. These meetings have been imperative to gather environmental feedback for the HNDFUE process.

## ESG engagement schedule for HNDFUE

Date	Activity
September 2022 to March 2023	Discuss and gather feedback on the HNDFUE methodology, BRAG descriptions for the design objectives, share design options and gather feedback on OASTs.
April 2022 to September 2022	Shared and received feedback on the onshore methodology, onshore environmental appraisals and HNDFUE recommended design options.
October 2023 – February 2024	Shared the onshore environment and community appraisal documentation and updated the group on the Habitats Regulations Assessment (HRA) shared for feedback.

## Deliverability Forum

- The **Deliverability forum**: was formed to support the development of the HNDFUE Design Rules and Technology Assumptions with technical experts from across the industry. Members of the forum include: TOs; OFTOs; in scope ScotWind developer Representatives; Manufacturers; and Research Centres.
- Changes made to the Designs Rules following the Deliverability Forum’s feedback includes:
  - Decreasing the symmetric monopole upper limit to 1.5 GW from 1.8 GW.
  - Reducing the maximum length of AC circuits to 150 km from 200 km.
- We also met with manufacturers to seek their insights into the deliverability of the designs and earlier on in the process we asked for costs for different technology types.

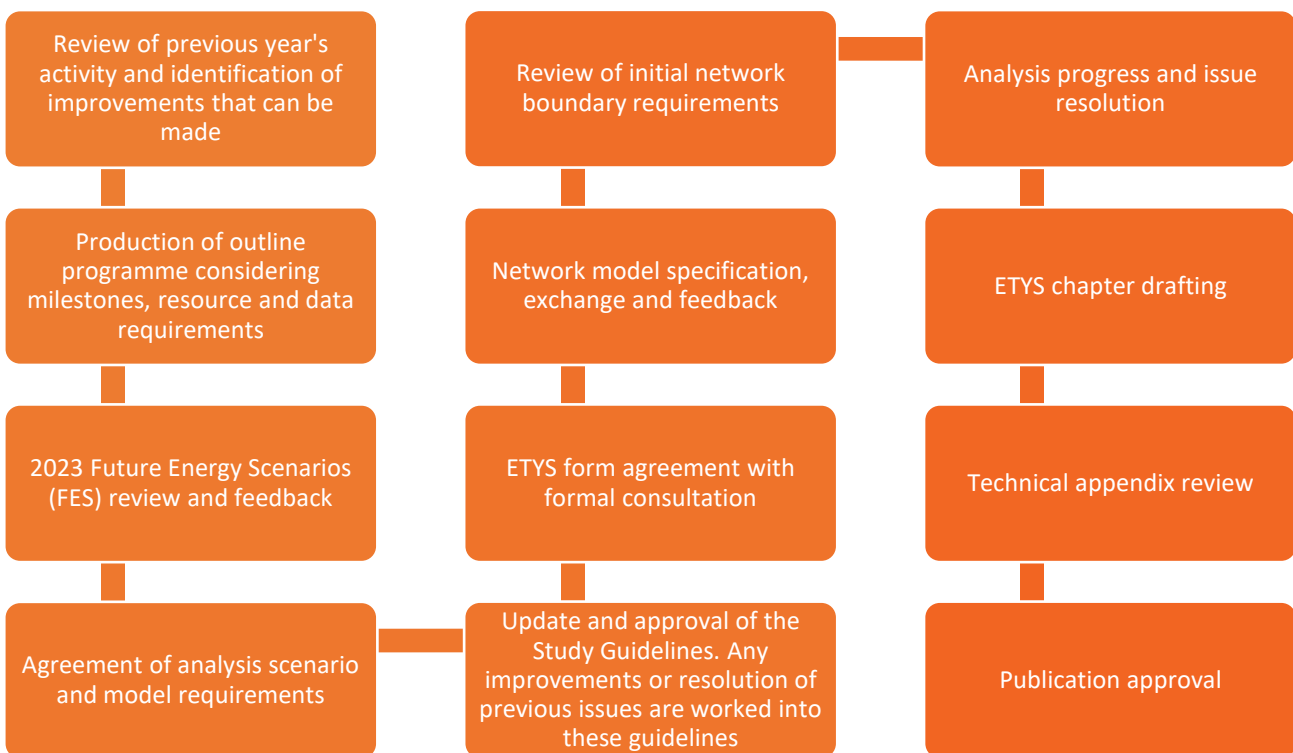
Date	Activity
October 2022	Discussion on the design rules and technology assumptions feedback
November 2022	Bilateral discussion on unit costs feedback
December 2022	Discussion on design rules and technology assumptions feedback
Spring 2023	Bilaterals with manufacturers to feed into the unit costs for different technology types
Summer 2023	Bilaterals with manufacturers to seek feedback on the shortlist of the designs and their deliverability appraisals
January 2024	Review of design rules and technology assumptions following potential design changes identified as part of the Detailed Network Design (DND). This will be relevant to the Innovation and Targeted Oil and Gas (INTOG) and Celtic Sea design exercises

## Other regular stakeholder forums

### Joint Planning Committee Electricity Ten Year Statement subgroup

To co-ordinate the publication and information contained, the Joint Planning Committee (JPC) subgroup was formed. The JPC is a formal planning group defined in the system operator transmission code to co-ordinate planning activity among us and TOs. The subgroup meets every two weeks, discusses, and agrees activities which report on the needs of Great Britain's transmission system over the next ten years. This is an important process in underpinning the network recommendations.

Throughout 2023, the JPC enabled the development of *Electricity Ten Year Statement (ETYS)*. The purpose of the meetings is set out in the diagram below:



The ETYS group also works closely with the NOA production under license condition C27 of our Transmission Licence. The same FES backgrounds and network analysis supports both.

Some discussions with the TOs involve confidential System Operator Functions Information so are had outside the ETYS subgroup, either by e-mail or by teleconference.



# ESO

## NOA teleconference

These meetings take place with the TOs and ESO at a working level and consistently take place every two weeks.

Date	Activity
May - July 2023	<ul style="list-style-type: none"> <li>• Make TOs aware of the things we are considering as part of methodology.</li> <li>• Engage with them ahead of consultation.</li> <li>• Discuss what works well and what hasn't worked well.</li> <li>• Informing them ahead of consultation sharing methodology to review ahead of consultation.</li> </ul>
July - September 2023	<ul style="list-style-type: none"> <li>• Discussion with the TOs around option development and meeting system requirements. TOs provide us with a status update on how their options development is progress.</li> </ul>
September 2023 - January 2024	<ul style="list-style-type: none"> <li>• ESO performs quality assurance of the options submitted by TOs. Present and ask questions regarding these processes.</li> <li>• ESO status updates on the analysis and results of onshore options assessment.</li> <li>• Discussions on the report structure and key messaging.</li> </ul>

## Other Stakeholder engagement

### Engagement with in scope ScotWind developers on coordinated offshore HNDfUE design

In line with our collaborative approach to stakeholder engagement, we have hosted thirteen project-wide events to engage with ScotWind developers of offshore wind farm projects which are in scope of the HNDfUE, and shared written updates on project progress in between these:

Date	Purpose
August - November 2022	Provided an overview of HNDfUE including the Terms of Reference (ToR), scope of works, methodology and timeline. We also shared engagement plans, governance processes and boundary transfer requirements.
February 2023 - June 2023	Updated group on project progress including the shortlisted designs, Final Strategic Options Process (FSOA) and how this would work. We also provided further clarity on our engagement. We followed this with the outcome of step 1 of the FSOA process, and the onshore reinforcement overview for each shortlisted design.
July 2023 – September	Engaged around the FSOA summary including the updated offshore BRAG ratings for each of the 6 shortlisted designs. We also provided the onshore reinforcement overview of the designs and the FSOA outcome which included poor performing designs and draft recommended design.
December 2023 - January 2023	Held drop-in sessions providing updates on the Beyond 2030 report, connection contracts, codes and standards and upcoming engagement

# ESO

## Workshops

We hosted four in-person workshops with the HNDFUE developers, Transmission Owners (TOs), Department for Energy Security and Net Zero, Ofgem, Crown Estate Scotland, RenewableUK, Scottish Renewables and Scottish Government, since the official start of the project in August 2022 and at key milestones throughout the project:

Date	Purpose
August 2022	Provide an overview of the HNDFUE Terms of Reference (ToR), scope, methodology, timeline, stakeholder engagement and information / data requirements from in scope ScotWind developers.
November 2022 (Three days)	Listen, understand and feedback on the HNDFUE material and to collaborate with other stakeholders and ask questions
February 2023 (two days)	Share our short-listed designs and to seek initial feedback from in scope ScotWind developers.
July 2023 (two days)	Share our draft recommendation.

We held several question-and-answer sessions throughout these workshops and created opportunities for detailed discussions between in scope ScotWind developers and our subject matter experts.

The format evolved throughout the design process based on stakeholder feedback:

- Each workshop started with a plenary group session, where we shared and discussed project updates relevant to everyone. This was an opportunity for stakeholders to ask questions, provide insights and thoughts for us to take away.
- We took the opportunity to have three-way discussions with each in scope ScotWind developer and the TOs where we could discuss project specific updates and queries, including any confidential project information.
- There were also opportunities for in scope ScotWind developers to collaborate and discuss projects with the other attendees.
- At the last workshop we facilitated discussions for stakeholders involved in the projects that were electrically coordinated or connecting to similar onshore areas, in the draft final recommended design.

## Webinars and forums

Building on the workshops, we held three remote webinars.

Date	Purpose
October 2022	Share the HNDFUE methodology and process, project updates, projects in scope, overview of the governance arrangements, timeline, engagement plan, and introduction to the November 2022 regional workshops.
mid-June 2023	Explain the detail of the final strategic options appraisal process, HND transmission infrastructure delivery work, next steps, and engagement.
end of June 2023	Share the outcome of the first step of the FSOA.

Following the sharing of our draft offshore recommendation, we were keen to continue to meet and engage with these developers, on the NOA 8 analysis and Beyond 2030 development.

Date	Purpose
September 2023, December 2023, January 2024, February 2024	Provide an awareness of the NOA 8 analysis being undertaken, network infrastructure benefits and the Beyond 2030 development.
December 2023 and February 2024	Provide a regular touchpoint to share progress on commercial aspects and wider engagement.

Supporting these, in September 2023 we invited the developers of projects which are electrically connected in the final design recommendation to join the Infrastructure Delivery Forum and to form a HNDFUE subgroup, or cluster. The forum meets every two to three weeks to support developers of non-radial offshore network in the HND, HNDFUE and TOs overcome barriers to delivery.

### Individual project discussions

In addition to these developer-wide events, it was important to have individual project discussions, to discuss project specific updates and queries, and anything else confidential, with each developer and relevant TO(s).

There were additional ad hoc touch points with developers, before the February 2023 workshops, after sharing the initial OASTs in May 2023 and in July 2023.

We held over 120 ad hoc discussions which provided a transparent platform for the developers and TOs and the foundation for us to build a trusted partnership with them.

### Written communications

Written communications supplemented our engagement as part of our approach of being as transparent as possible:

- At key project milestones, we shared the associated key material and requested formal feedback on it.
- We provided six “briefing” documents providing detailed engagement plans, and our response to questions raised and feedback provided by developers.
- We also provided additional workshop and webinar supporting information, and requests for feedback on the events:

Date	Purpose
December 2022	We shared our first briefing document, providing an overview of the feedback that was provided during the November workshops and an update on answers to the questions raised that we took away.
February 2023	We shared a pack of information relating to the short listed designs, in advance of the February workshop, to provide attendees with the opportunity to assess the designs and to provide transparency on all of the options assessed. We sought feedback at the workshop.
March 2023	In our second briefing document, we provided a summary of the February workshops, our initial analysis of the feedback received, and a summary of our key milestones, engagement plans and next steps.
March 2023	We shared the Initial Strategic Options Appraisal Documents with the developers and requested their feedback.
May 2023	We provided a summary of the feedback on the shortlist of designs and Initial OASTs and our response, together with an update on our key milestones, engagement plans and next steps.
May 2023	As we finalised the offshore design, we were keen to share our detailed engagement plans for our three key touch points, described in the section on “Engagement with in scope ScotWind developers on coordinated offshore HNDFUE design” above.
June 2023	We shared a summary of the questions raised on the final strategic options appraisal (FSOA) and HND transmission infrastructure delivery processes.
July 2023	Following governance, we provided confirmation of the final design recommendation.
December 2023	Following the drop-in session, we shared a summary of the questions raised and ongoing queries.
January 2024	We shared our detailed engagement plans for the beginning of 2024.
February 2024	Similarly to December, we shared a summary of the questions raised during the drop-in session and an update on those raised previously.

## Discussing onshore results with Stakeholders

To deliver the required recommendations it is necessary to collaborate with partner organizations such as TOs and Ofgem. Ad hoc meetings were set up to discuss specific themes such as asset classification, appraisal scores and other project information.

## Ofgem engagement

As we recommend strategic investments, it is important that we discuss our assumptions and methodology with Ofgem as we progress through the development of the onshore and offshore network recommendations and report. It is important to hold regular dialogue with the regulator as they need to understand the rationale for the recommendations we make. In addition to engagement with Ofgem at an Executive level through our Electricity Infrastructure Advisory Forum, we have also run working level discussions with them throughout the Beyond 2030 development.

Date	Purpose
January - May 2023	Propose and discuss the assumption throughout the Beyond 2030 that the HND is treated as built. Building on the foundation of the previous iteration and aligns with the ASTI. Making sure necessary measures in place to meet net zero.
Summer 2023	We received feedback in the NOA methodology consultation and have taken this on board for next year.
Autumn 2023	Continued to brief Ofgem on how the results were progressing as we were realising initial findings.
Winter 2023/2024	We have briefed Ofgem on the development of the onshore Beyond 2030 results. We undertook discussions about how we are treating the HND FUE 'enabling works' in the onshore assessment.

## TO challenge and review sessions

Challenge and review sessions with the TOs create an engagement opportunity to share information and discuss proposed reinforcement options submitted by the TOs. The TOs submit data to us via System Requirement Forms which we analyse and discuss through these meetings. We run a quality assurance process on the data provided and discussed the results of this assessment in these meetings.

Date	Purpose
July - September Four sessions with each TO (every two weeks)	The purpose for each challenge and review session was to review network boundary capabilities, reinforcement options and progress towards handover.

## Engaging around the community objective within the report

One of the design objectives that we assess network options against is the impact to "community". We work with our consultants RPS to validate the results of the appraisals submitted to us by the TOs. The assessment criteria which we measure community was adopted from the HND FUE ToR and carried forward on the onshore elements also. We therefore set up a meeting with Scottish and Welsh devolved administrations and the Department for Energy Security and Net Zero to discuss how the community assessment is carried out and what the results were. Highlighting the challenges and opportunities throughout the new network development.

We invited feedback from these stakeholders on the processes, study areas and assessment results.

## 4. What our stakeholders told us and how their feedback helped to influence recommendations in the Beyond 2030 report

Throughout the development of the Beyond 2030 report we have requested and received feedback from stakeholders on a wide range of areas which has fed into the report's development. This has been through engagement previously outlined in the plan. Key areas that we've received feedback from stakeholders include:

- Environmental and community BRAG (Black, Red, Amber, Green) ratings for both the onshore and offshore appraisals. The appraisals are a desktop study of an area for each option submitted to us by the TOs.
- The content of the environment and community appraisals.
- The shortlisted offshore network options and their appraisal scores.
- The draft recommendations for both offshore and onshore designs.
- Feedback on the content laid out in the report and its supplementary maps.
- Feedback on the key messages outlined in the report.
- The methodologies we used to analyse and assess which options to recommend.

We also collaborated with stakeholders on areas, discussing analysis and sharing information across several areas such as:

- Cost reasonableness across the recommendations
- The development of the National Electricity Transmission System requirements across 2030
- Options assessment development

We have been in dialogue with many stakeholders throughout the development of the plan, this list covers some of the key areas of feedback. Due to the sensitive nature of some discussions, it is not appropriate to share all the information provided, but in the section below we highlight some areas of feedback that we have processed as part of the Beyond 2030 development.

## General feedback on the design process

Theme	Feedback	Response
Future proofing	<ul style="list-style-type: none"> <li>Stakeholders agreed with us that, where possible, offshore routes have been chosen to limit the number of 'pinch points' where cabling has limited area to land onshore.</li> <li>We were asked if there are benefits of considering coordination with the Holistic Network Design (HND) and Innovation and Targeted Oil and Gas (INTOG).</li> </ul>	<ul style="list-style-type: none"> <li>Our response was that there may be benefits to coordinate between HND and INTOG, however, developers of the HND require certainty in order to progress their projects. Amending the design to accommodate further leasing rounds would not provide this and would likely increase lead times and stall project progression.</li> </ul>
Consideration of four design objectives	<ul style="list-style-type: none"> <li>Stakeholders agreed that we had considered the Holistic Network Design Follow Up Exercise (HNDFUE) underlying principle of considering the four design objectives equally, in assessing our designs.</li> <li>Where the outcomes of our assessment for a particular design objective were close, we were asked if we could provide weighting to Deliverability.</li> </ul>	<ul style="list-style-type: none"> <li>We updated our assessment against the four design objectives at key milestones throughout the design to see the impacts of the design refinements on each of the four design objectives.</li> <li>Under the Terms of Reference (ToR) for the HNDFUE, we are required to provide equal weighting to each of the four network design objectives so were not able to change the weighting of the objectives.</li> </ul>
Requests for information	<ul style="list-style-type: none"> <li>Upon request, we provided various additional pieces of technical information and diagrams to assist with stakeholders' understanding and the development of the individual offshore wind farm projects.</li> </ul>	
Onshore vs offshore power transfers	<ul style="list-style-type: none"> <li>Stakeholders asked us why we had selected options through Scotland and not selected options that ran offshore from North Scotland to England which could bypass the need for onshore overhead circuits.</li> </ul>	<p>We assessed two offshore options (off the west and east coast) that ran from North Scotland via a High Voltage Direct Current (HVDC) cable and landed in Mid and Southern England. There are numerous reasons why these specific options didn't perform as well:</p> <ul style="list-style-type: none"> <li>HVDC offshore cables carry less power for a similar cost of the overhead AC line so the price is far higher for the amount of power transferred.</li> <li>They did not replace the need for the 'equivalent' onshore overhead circuit in the report.</li> <li>There is still significant environmental challenges with the offshore options</li> <li>Onshore network gives much more flexibility for connecting future</li> </ul>

Theme	Feedback	Response
		<p>generation and provides more resilient network.</p> <ul style="list-style-type: none"> <li>Offshore networks still need to get the power to where it's required onshore. These options for example still need significant onshore works.</li> </ul>
Signals for route development	<ul style="list-style-type: none"> <li>A stakeholder in the Beyond 2030 committee raised a concern that a proposed substation which would facilitate a key part of AC onshore spine would not be getting the right signal from the committee. This could have knock on consequence of the wider options in the main electrical spine later in the development process.</li> </ul>	<ul style="list-style-type: none"> <li>We considered this feedback and reassessed whether our recommendations could provide more appropriate signals to aid with wider network development. We judged that the signal could be clearer and that it was appropriate to incorporate the substation with the dependent option giving a 'proceed' signal to both. This would provide a signal which could more efficiently facilitate the development of the Scotland to England overhead AC spine.</li> </ul>
Impact of less offshore wind than expected.	<ul style="list-style-type: none"> <li>Stakeholders were interested in how the recommendations made in Beyond 2030, particularly the onshore options, should be prioritised. If there is a high level of attrition in offshore wind, does the need for these options fall away?</li> </ul>	<ul style="list-style-type: none"> <li>We explained and have provided stakeholders with information on our methodology for assessing the onshore options. The assessment considers four Future Energy Scenarios. Across the four scenarios we use, there is a wide range of offshore wind development rates. Our analysis shows that nearly all of these recommendations are required across all four of these scenarios.</li> </ul>



## Feedback on environmental impact

Theme	Feedback	Response
Querying appraisal BRAGs	<ul style="list-style-type: none"> <li>We received feedback that a particular landing point of an offshore option proposed in our initial recommendations was particularly constrained and the stakeholder felt this option was going to be very difficult to deliver. This would have taken the option's Environmental BRAG rating from Red to Black which means it would likely be undeliverable.</li> </ul>	<ul style="list-style-type: none"> <li>We considered this feedback and amended a route to bypass this landing point. This triggered a suite of extra design assessment where we worked with the TOs to look at the option configuration off the west coast which fed into a more refined set of recommendations overall.</li> </ul>
Agreeing with BRAG scores	<ul style="list-style-type: none"> <li>Stakeholders who looked at our BRAG scores, particularly in Scotland, agreed with the appraisals and appraisal scores that had been assigned to these options.</li> </ul>	<ul style="list-style-type: none"> <li>This gave us confidence in recommending the onshore spine and other reinforcements in the plan.</li> </ul>
Environmental Regulations assessments	<ul style="list-style-type: none"> <li>Stakeholders were concerned that the HNDFUE terms of reference excludes the requirement for any assessment under Environmental Regulations, and asked who is best placed to complete specific assessments and when.</li> </ul>	<ul style="list-style-type: none"> <li>In response to this feedback, we have begun setting up a plan level assessment, following the Habitats Regulations Assessment (HRA) and Marine Conservation Zones (MCZ) assessment processes - looking to complete later in 2024.</li> </ul>
Network Design	<ul style="list-style-type: none"> <li>As a result of feedback on the initial design options, stakeholders acknowledged that the shortlisted designs incorporated improvements in environmental outcomes.</li> <li>Stakeholders recognised that there are challenges in connecting to certain sites.</li> </ul>	<ul style="list-style-type: none"> <li>Following feedback, we explored and tested greater coordination (versus radial) offshore, and the coordination of cable corridors, to improve environmental outcomes.</li> </ul>
Consideration of mitigation	<p>We were asked to consider how:</p> <ul style="list-style-type: none"> <li>High level, strategic mitigation could be incorporated in the detailed appraisals.</li> <li>Recommendations for mitigation could be included in the recommended design.</li> <li>Biodiversity net gain could be incorporated into the recommended design.</li> </ul>	<ul style="list-style-type: none"> <li>Our focus during the design was the avoidance of environmental constraints including those relating to biodiversity. We recognise the importance of biodiversity net gain; this is something that will be reviewed later in the project development process.</li> </ul>
Appraisal process	<ul style="list-style-type: none"> <li>A stakeholder suggested that environmental mitigation could</li> </ul>	<ul style="list-style-type: none"> <li>We responded informing the stakeholder that desktop studies undertaken are not presented at a</li> </ul>

Theme	Feedback	Response
	<p>impact the BRAG scores of the appraisals presented to them.</p> <ul style="list-style-type: none"> <li>• We should ensure we consider National Parks as part of the assessment.</li> <li>• Impact risk zones should be included in a comprehensive appraisal process.</li> </ul>	<p>level to understand how environmental mitigation would impact the environment. This level of design has not been undertaken.</p> <ul style="list-style-type: none"> <li>• We confirmed that we do consider National Parks as part of the appraisal with this stakeholder.</li> <li>• We have kick started processes to undertake wider assessments and continue to update stakeholders on their progress.</li> </ul>
Stakeholder engagement	<ul style="list-style-type: none"> <li>• Stakeholders asked for more time to review documentation and some refinements to how information was presented to them.</li> </ul>	<ul style="list-style-type: none"> <li>• We noted this information down in lessons learnt documents for future engagement.</li> <li>• We also improved how we packaged up data and provided this to ESG members at future engagement sessions to allow accessing information easier.</li> </ul>

## Feedback on community impact

Theme	Feedback	Response
Assessment criteria	<ul style="list-style-type: none"> <li>Stakeholders queried what the BRAG score for the community appraisals of our options was measured against.</li> </ul>	<ul style="list-style-type: none"> <li>We set up a meeting to run through the community constraint criteria with a set of Government representatives and took their further feedback on how these scores have impacted our decisions. Within this presentation we explained that urban development is one of the several social / community constraints considered in the assessments. Areas of outstanding natural beauty are included in the considerations as are other local social and community infrastructure features such as heritage coasts, national trails, national parks, geoparks, registered parks and gardens.</li> </ul>
Accuracy of assessment criteria	<ul style="list-style-type: none"> <li>We were asked how accurate the appraisals of communities are.</li> </ul>	<ul style="list-style-type: none"> <li>The TOs have undertaken the onshore appraisals including the community appraisals, we have a specialist consultancy who then check and verify these appraisals for accuracy and validate them.</li> </ul>
Accuracy of assessment criteria	<ul style="list-style-type: none"> <li>We were asked how communities should interpret and respond to the information shared on cable routes near their house or other location they have an interest in.</li> </ul>	<ul style="list-style-type: none"> <li>To address this question, we provided clarity that the recommendations in the plan are indicative only. These have not been designed to any route corridors yet and only indicate which points we need to get power to and from. More detailed design work will provide further consultation opportunities consultation for residents to feedback on the development of these options. These will be undertaken by offshore wind developers and TOs in the coming months and years.</li> </ul>

## Feedback on deliverability and operability

Theme	Feedback	Response
Shortlisted designs	<ul style="list-style-type: none"> <li>Stakeholders fed back to us their design preferences following our offshore design shortlisting exercise.</li> <li>Developers shared with us their principles for seabed management and why they are important to them.</li> <li>Stakeholder commented that the information we shared on the shortlisted designs was realistic and seemed reasonable.</li> </ul>	<ul style="list-style-type: none"> <li>We assess seabed management principles under the 'Deliverability and Operability' design criteria. Using information provided to us by the developers we were able to validate the BRAG scores of these criteria.</li> <li>The HND FUE ToR instructs us to balance these considerations against the other three design criteria when undertaking the shortlisting exercise, so we would also look to minimise the number of offshore cables, for example, by coordinating designs to improve environmental and community performance of these designs.</li> </ul>
Routing assumptions	<p>Stakeholders asked us to share:</p> <ul style="list-style-type: none"> <li>Our onshore and offshore routing assumptions and associated data.</li> <li>Our assumptions for the new onshore substations and how the routes will interact with other planned TO reinforcement and HND projects.</li> </ul>	<ul style="list-style-type: none"> <li>Details of our assessments were shared with developers at key milestones, following our initial and final strategic appraisals.</li> <li>This is an example of a request we receive where we signpost on to the TOs who will develop this information as the development of the option progresses.</li> </ul>
What happens next?	<ul style="list-style-type: none"> <li>Request for clarity and further details on timelines relating to the connection contract updates and Detailed Network Design (DND).</li> <li>Would developers have flexibility on choice of strategy in scenarios where multiple developers with radial connections have offshore and onshore routes crossing and connecting to the same interface point?</li> </ul>	<ul style="list-style-type: none"> <li>We responded informing stakeholders that the DND is the next stage, when the party responsible for building each part of the holistic design and will develop more information to support stakeholders.</li> <li>We understand how important roles, responsibilities and timelines are for project planning and regularly shared updates as the project progressed.</li> </ul>
Requests for information	<ul style="list-style-type: none"> <li>We received many requests for information around the deliverability and operability of our recommended design pre-publication to aid with their project development.</li> </ul>	<p>We provided stakeholders with:</p> <ul style="list-style-type: none"> <li>Electrolysis demand (hydrogen) assumptions.</li> <li>Clarification on technology selection for designs.</li> <li>Analysis of power flows across the recommendations.</li> </ul>

# ESO

Theme	Feedback	Response
		<ul style="list-style-type: none"><li>• Provided the earliest in service dates for the onshore. recommended options as soon as these were confirmed throughout external governance.</li><li>• The data that we used from the Future Energy Scenarios which supports our analysis.</li></ul>

## Feedback on costs

Theme	Feedback	Response
Cost estimating	<ul style="list-style-type: none"> <li>We sought feedback from stakeholders on our cost estimates which fed into the economic assessment tools. This ensures that they are representative of the market conditions in which those responsible for the DND within HNDFUE will progress their projects.</li> </ul>	<ul style="list-style-type: none"> <li>As a result of the feedback from stakeholders we applied an overall uplift to all unit costs (taking account of materials and labour), and asset-specific uplifts to reflect the costs of each asset type. We also removed items of equipment that would not be likely to be used in practice.</li> <li>We updated the cost assumptions as part of our final strategic options appraisal.</li> <li>We made some slight updates to the HNDFUE unit costs, providing increased granularity, and incorporating feedback from HVDC suppliers based on recent real-world projects.</li> <li>We also removed elements of market and constraint costs that are consistent across all designs, with constraint costs being presented as a delta with respect to the design with the lowest overall costs.</li> </ul>
Cost	<ul style="list-style-type: none"> <li>We discuss the cost reasonableness which is a cost review of the options that TOs provide us for review. Much of this discussion is System Operator Functions Information confidential but we review the discussions and actions feedback from these meetings and review data to ensure quality assurance has taken place.</li> </ul>	<ul style="list-style-type: none"> <li>As part of our Beyond 2030 methodology we carry out a cost reasonableness exercise following the submission of options by TOs. This forms part of our quality assurance process where review where the costs of options are outside different thresholds, based on our estimated costs and reconciliation against the existing network, the TOs are asked to provide justification. This has allowed us to add a level of robustness to our process by verifying costs before the options are assessed.</li> </ul>

# ESO

Theme	Feedback	Response
Onshore vs Offshore power transfers	<ul style="list-style-type: none"><li>Stakeholders queried whether we properly assessed a fully onshore option requiring two overhead circuits from North Scotland to Southern England. This was perceived to be a lower cost alternative to what we have proposed.</li></ul>	<ul style="list-style-type: none"><li>We had an option in the shortlisted offshore design that required large overhead spines much longer than the one currently proposed. As well as clearly not performing well regarding environmental and community impacts, these would have significant other delivery challenges and would not necessarily be any more cost effective.</li></ul>

## 5. Incorporating stakeholder feedback into our engagement process

In Section 2 we explain the steps that we took to improve our stakeholder engagement approach following lessons learned from the Holistic Network Design (HND) exercise. Throughout the project we have sought further feedback on how well we are working with our stakeholders and whether our engagement is meeting our stakeholder needs. This includes feedback via individual discussions with stakeholders, informal and formal feedback from our webinars and workshops and ESO wide surveys.

### What have we learned from our stakeholders?

From this feedback we learned what our stakeholders value from our engagement, which we used to develop our engagement as the project progressed.

Looking at the different types of engagement, we learned:

Theme	Feedback	Response
Face to face discussions	Stakeholders tended to prefer face to face discussions and felt that bilateral conversations were generally more productive.	Building on this, it was very useful to understand what our stakeholders valued and areas for improvement relating to our in-person workshops.
Webinars	The Question and Answer function is really important in the webinars and stakeholders expect a range of ways to be able to ask us questions.	
In-person workshops	Stakeholder found these helpful to meet in person and build relationships. Format has evolved based on feedback to bring a mix of senior staff and subject matter experts to get the right mix of technical expertise and decision makers.	
Key areas of importance for developers	<p>Would like more interaction with the design process with development programmes.</p> <p>Costs, developer commercial objectives and business cases.</p> <p>They would like more certainty on revised grid connection offers.</p> <p>Regular information on the progress of the design, in an accessible format.</p>	<p>In response to this feedback, and other insights shared with us, we have made five commitments to improve stakeholder engagement, which are summarised in the following section.</p> <p>Last year, we made five commitments following publication of the HND. We would like to take this opportunity to provide an update on these and to share with you our updated commitments, as we strive to</p>



Theme	Feedback	Response
		improve our stakeholder engagement.
Development of designs and gathering feedback	<p>Stakeholders are keen to develop design collaboratively.</p> <p>Stakeholders need enough time to provide the feedback that's required.</p> <p>We need to understand ways we can be flexible with our confidentiality agreements to allow local stakeholders to provide more informed feedback on the options appraisals.</p> <p>Request for feedback to be structured, using a combination of Microsoft form (or equivalent) for gathering feedback, then developer discuss face to face.</p>	<p>We are keen to improve our ways of engaging with stakeholders.</p> <p>We will seek to build more time into the programme for stakeholders to review documents. This is happening with other projects already.</p> <p>We appreciate and would invite feedback from within the stakeholder organisations and we are discussing how we approach this for future engagement.</p>

## Our commitments to improve our engagement

Last year, we made five commitments following publication of the HND. We would like to take this opportunity to provide an update on these and to share with you our updated commitments, as we strive to improve our stakeholder engagement.

### Update on previous commitments

Theme	Feedback
Providing greater visibility of our project activities and opportunities for engagement	We provided this visibility during all of our engagement events, and also as part of our communication.
Developing a deeper knowledge of our stakeholders' business.	Through our engagement we have sought to understand early on the potential impact of our activities, and what type of communication is most valuable.
Provide greater visibility of how the elements of the Offshore Coordination project fit together.	In October 2022, we provided visibility of the Offshore Transmission Network Review (OTNR) governance structure, how and where they sit within the OTNR, and how they relate to other work being undertaken by us. Since then we have provided regular updates on how the HND FUE relates to wider network planning and the <i>Beyond 2030</i> Report.

Theme	Feedback
Responding to queries in a timely manner	As shown throughout this annex, we have provided regular updates to our stakeholders and where there have been changes to timelines, we have shared the reasons for these. This remains a commitment for us moving forward.
Being clear and transparent	We have providing context on how decisions were made and the roles and responsibilities of those involved.

## Our updated, new and current commitments

There are three areas which we identified and have been working on to improve how we engage with our stakeholders:

Theme	Feedback
Providing stakeholders with information on what we have done with their feedback in a timely manner	We started to do this for feedback received on the HNDFUE. We will build on this for future projects. For example, in mid May we shared a detailed summary of feedback on the HNDFUE short list of designs and Initial Options Appraisal Summary Tables (OASTs).
Ensuring we deliver what has been promised when we said we would.	As shown throughout this annex, we have provided regular updates to our stakeholders and where there have been changes to timelines, we have endeavoured to share these changes as soon as appropriate and provided the reasoning behind them. For example, in mid-May we shared a summary of our key milestones and our intended engagement.
Ensuring there are no surprises and responding to queries in a timely manner.	Whilst we made progress over the last year on responding to queries in a timely manner, we will continue to focus on this seek to keep stakeholders informed so that there are no surprises, through our discussions both formal and less formal.

## 6. What happens next?

Together with our stakeholders we understand substantial work needs to continue at pace to deliver the recommended outputs. We will drive progress where this is within our remit.

We are currently developing holistic network designs for developers who have recently been awarded leases for Innovation and Targeted Oil and Gas (INTOG) projects. We are also working with stakeholders involved in scoping offshore wind projects in the Celtic Sea, applying lessons learnt and feedback from stakeholders from the Holistic Network Design Follow Up Exercise (HNDFUE).

The information provided in the *Beyond 2030* report will inform the next stage of detailed network design, which develops the next level of detail for the required network assets. It is at this stage of the process that route corridors and technology choices will be selected, and statutory consultation is carried out.

The connection contract update programme will then commence. Developers impacted will be informed and we will continually engage with them as they enter an Agreement to Vary, which is the legal document signed to make a change to a developer's contracted position with us and TOs.

The *Beyond 2030* report is a transitional plan and will be following on by the full Centralised Strategic Network Plan (CSNP) which will be published in 2026. This will outline the next tranche of network development recommendations to facilitate a future energy system beyond the 2030s. We will be taking all the information we have gained from engaging with our stakeholders through a cyclical lesson learnt process and apply this to our engagement and wider work in developing the CSNP.

To stay up to date with these developments please contact [box.offshorecoord@nationalgrideso.com](mailto:box.offshorecoord@nationalgrideso.com) to be added to our Offshore Coordination distribution list. You can also contact us via this email address if you have any questions, queries, or further feedback.