

Offshore Coordination project

Consultation feedback form

Independent Researcher.

We launched our consultation on **30 September 2020** and it closes on the **28 October 2020**.

Please use this form to send in your written feedback. If you would like to feedback via this route. We are also working with stakeholders to receive verbal feedback. Please contact us if you would prefer to provide feedback verbally.

We would like to publish responses to our consultation following its closure. Please can you confirm whether you would like us to treat your response confidentially by selecting one of the options below: (delete those that do not apply)

- **Confidential - you can publish the feedback without our name but you are welcome to identify which sector we come from**

Throughout the consultation document we have asked some questions on our three reports that we would like your feedback on to shape our final documentation. These are below and do not need answering if you do not have views. If you would like to provide any other feedback, please feel free to do so.

Holistic Approach to Offshore Transmission Planning Report

Q1. Do you agree with our assessment of the key technology and system risk barriers coming from the Holistic Approach to Offshore Transmission Planning Report?

'Barriers to Net Zero 2050' should be more fully listed at a high level to define the review starting point. Technology assessment is excellent but fails to address land-based OFTO considerations such as likely cable Landing, Cable Trench and Converter Station environmental impacts, and options for mitigating these.

Q2. Do you have any proposals on how to most effectively bring the technology to market for when needed?

Planned and coordinated release of Crown Estate seabed areas sized to match efficient delivery using HVDC, together with modular implementation of the Integrated approach. 'Standard building block' approach. But this to be after selection and if necessary creation of Grid Connection points which have been optimised for economy, efficiency, coordination and environmental impact on a Whole System (onshore and offshore) basis. Very preferably with at least some quantification of environmental impact, not just reliance on 'spider diagrams'.

PATHFINDER PROJECT It would be very helpful if any emerging proposals could be made public for comment, and the best selected after consultation.

Q3. Do you have any additional evidence to inform the assessment we have made?

Evidence of high onshore impacts of the current unplanned approach is public via PINS Examination material e.g. Relevant Representations for the Norfolk Vanguard and East Anglia 1 North and East Anglia 2 projects.

Q4. Do you have any further feedback on the report?

On page 57 under 'Topology - T5' it is stated that "currently capacity is limited to 1.8 GW infrequent loss of infeed". Is that correct? 1.32GW is referred to elsewhere as the limit.

Cost-benefit Analysis Report

Q1. Do you agree with our assessment of the costs and benefits?

Only partially, since there seems to have been no 'whole system' consideration of developing the NGET onshore network to match offshore proposals. And there is no improvement to coastal community impact issues until after 2030. Also some of the assumptions about Nautilus and its use of MPLs (for example) seem very broad brush as the maximum power that this project can deliver is understood to be limited to that of the Interconnector at 1.4GW.

Q2. Do you have any other evidence to support or challenge the assessment made?

Failure to even consider quantifying environmental adverse impact is disappointing. 'Spider diagrams' are not a thorough way of representing damage to employment, onshore landscape and ecology etc. Even broad-brush quantification with a large error bound would be an improvement. It is in any case unclear as to whether NGESO fully assess the environmental impact of related OFTO infrastructure when carrying out CION assessments. Recent experience with selected projects suggests otherwise.

Q3. What do you see as the potential impact on the environment of these proposals, particularly the reduction in the number of assets and landing points?

Will the number of assets actually be much reduced? Will proposed landing points be acceptable to NGET and to communities affected? The use of HVDC Bipole will assist but the numbers of converter stations required may be substantial, and post 2030 these may be physically larger than currently planned due to use of higher voltages and currents. Cable trenching has major impact during construction. More work should be done on these topics, very preferably before preparing a final report..

Q4. Do you have any further evidence on the potential social and community impacts of these proposals? We would particularly welcome responses from local authorities on this question.

The greatest opportunity to reduce social and community impacts is likely to come from the selection, and in some areas creation, of genuinely suitable Grid Connection points. Investing in extending the onshore NGET network to brownfield coast locations may actually allow major offshore savings, so on a 'Whole System' basis may well make the approach viable. Unfortunately NGET currently appear to be somewhat unwilling to invest to help the social and community impact problems, or even to bring forward proposals for this. Even though if looked at on a 'whole system' basis there should be savings. Why is this? If the cause is regulatory it needs to be addressed.

Q5. Where do you see value for further work to build on and test these findings? Either from the proposed list or beyond?

Need to draft a road map for implementation using a practical coordinated/modular approach and see what timescales costs and benefits look like, taking need and financial implications of anticipatory investment into account.

Offshore Connections Review Report

Q1. Do you think that if the areas we are highlighting were improved, that the ability to coordinate projects would be significantly increased?

Replacing Generator Build OFTO with an alternative more coordinated approach should be a high priority. A regional approach to Crown Estate releases and CIONs would

make sense but the market led approach seems to make it hard to plan efficiently. A solution has to be found to investment in the required infrastructure and clearer leadership and guidance may be needed to achieve this.

Q2. Do you think we have missed anything in our offshore connections review that would add value and increase coordination?

Highlighting the need for Ofgem to change its approach to OFTO infrastructure. The current model doesn't work other than via Generator Build which does not encourage coordination.

Do you have any other feedback, if so please add below. Many thanks for taking the time to provide written feedback. When we publish our final documentation, we will let you know what we have done with the feedback and how it has shaped our work.

Overview feedback

The project team are to be congratulated on the quantity and quality of the work they have done so far but there appear to be significant issues that need addressing and more work should be done before a report is published.

1. It would be helpful if the project were to specifically identify and provide a schedule of the 'barriers' that the review is intended to 'overcome', and whether or not these are the responsibility of others (e.g. Ofgem). For example:

- *Onshore cable trench impact*
- *Onshore substation impact*
- *Lack of coordination between successive projects*
- *Problems with 'Generator build OFTO' approach*
- *Lack of consultation with regard to Grid Connections*
- *Lack of transparency of and community confidence in CION process*
- *Failure to quantify environmental impact in any way. Perhaps an an opportunity for NGESO to lead the way here.*
- *Fragmented land allocation for large substations is very damaging and irreversible - terrible. If the same area of land were required for dwellings or industrial estates it would be subject to careful Local Authority Planning. A land use plan is needed on a regional basis to match the expected need.*
- *Lack of visible planning for delivering Net Zero 2050.*

These barriers should be referred to in the documentation. At present it is not possible to score the success of the project in addressing these barriers, and things could have been missed.

2. The BEIS Review ToRs have broad scope but the Ofgem brief to NGESO seems to have been very narrowly interpreted so as to exclude synergies with the National Grid onshore network that might be highly effective in removing 'barriers'. For example there may well be enhancements to the onshore network costing £xM that could release perhaps 2 x £xM in offshore savings and would therefore be highly supportable. Without a 'Whole System' approach with onshore and offshore infrastructure options considered together such opportunities will not be found. A fresh look at potential new Grid Connection sites on this basis would be constructive.

3. The Ofgem definition of 'Offshore Infrastructure' includes all land-based infrastructure which is an OFTO responsibility, such as cable landings, cable routes and substations (other than NGET substations). This review does not seem to have

considered these and it appears to be a significant oversight. Many issues could be considered including:

- *Required onshore infrastructure for a 'Coordinated' solution. What is it?*
- *Cable trenching requirements - what standards to meet increased power ratings?*
- *What are the parameters for this infrastructure? If multi-gigawatt higher-voltage HVDC converter stations are to be of massive dimensions this will be a further issue.*
- *Can technology improvements be expected which will mitigate these concerns?*
- *Consideration of planning and designing for multiple projects over a period - landing sites, cable trenches, substation sites, all planned and provided by early phase projects. Think Motorway analogy.*

4. The project documentation is a hard read and more explanation of the key choices available would help if the consultation is to yield constructive feedback from a wide target audience. This should bridge the gap between the deep technical and the 'Janet and John' material and should certainly explain the onshore implications of the Integrated strategy.

5. Risk and Issues. If well informed decisions are to be made about the available options a Risks and Issues log needs to be established and documented in a clearly understandable way. A Risk Register using a RAG approach is recommended and should be an appendix to the final report.