

## Offshore Coordination project Consultation feedback form

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?

Overall, the idea of a holistic approach to the planning and connection of offshore wind (and all the required infrastructure to enable a net zero approach) is welcomed. We understand that there are a number of assumptions that have been made to enable this approach to be considered and we agree that these were necessary to enable a first view of the benefits that it may achieve. However, it is important to not lose track of the details that can mean that the benefits may not be actually realisable in full or even in part.

- A change to the SQSS rules would allow larger connections offshore but would also have an impact on the operation and balancing services required by the system operator and so the additional costs of these need to be taken into account. In our previous consultations with NGET and NGESO we have asked about whether changes to SQSS would be considered and were told that they were not currently on the cards. It would make a difference even to the costs of radially connected projects so we would ask that you ensure that any assumptions made on the co-ordinated approach are also replicated in the project approach to ensure a suitable comparison.
- Only one of the FES scenarios has been considered for this review and so as we have a very market led approach to the development of energy infrastructure in the UK, it is just as likely that other scenarios are more dominant. We agree that a least-worst regret analysis considering different FES scenarios and build-out timelines would be beneficial.
- Hydrogen was not considered in the evaluations and it is our understanding that it may be a substantial energy vector for Offshore Wind in the medium term, particularly where there is existing offshore infrastructure. If half of the offshore wind were to avoid connection to the Electricity Transmission Infrastructure and instead were to connect to the Gas Infrastructure, would this not have a significant impact on the coordinated approach?

- Standardisation is mentioned in the report as a way to reduce costs but this needs to ensure that it is balanced against the lost opportunity for innovation. Standardising early on a HVDC voltage may mean that developments towards higher voltages with lower losses or reduced overall costs may not be possible. There are expected to still be significant technology developments that can support costs reductions in Offshore Wind in the next 30 years, building on the work in the last 15 years, so this needs to be considered carefully.
- Coordination between TCE, NGESO, Ofgem and BEIS would be critical to the realisation of a co-ordinated approach to the connection of Offshore Wind. The current competitive approach to leasing may not bring about projects that are of an optimum size for coordinated connection and there is little opportunity to.

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

Our understanding is that HVDC converters are not tolerant of vibration, even in the installation phase and so we would ask that National Grid check how would they fare with the installation on a floating platform? Is this something that needs to be addressed for projects in Scotland and deeper water? This was not addressed in the report and research and development aimed at this aspect may be very beneficial to UK and International projects.

Can you confirm what assumptions you have made on the cost of Large Bipole HVDC converter platforms? Currently all offshore converters have been up to 900MW and there are new projects planned with 1200MW or 1320MW but would very large Bipole converters be accommodated on a single platform or across a number of platforms and have you taken into account the additional costs for this? Is there a physical limit to the size of the platforms that can be assumed? We note that you have a recommendation to improve the maturity of technology offshore HVDC converters > 1000MW but it does not seem to address the platform requirements.

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

Q4 Do you have any further feedback on the report?

## Cost-benefit Analysis Report

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

We welcome that factors like electrical losses and availability (fewer connections may lead to lower availability in the event of a large HVDC cable failure) have been considered within the analysis. Also, in the holistic approach report they refer to further work on a least worst regret analysis and the impact of different FES and build-out scenarios. We agree that this work will be important to understand whether the cost benefits identified are robust.

It would also be very helpful to understand where the cost benefits occur – is it in the wider network or in the offshore links to the projects? How would this impact on the developer compared to the overall customer?

There is also some concern that a move from a developer build scenario for the Offshore works would lead to more risk on costs, consenting and timelines. It is important for the analysis to take into account the reasons that all of the offshore projects to date have gone down the developer build route and the potential impact it will have on overall project costs if additional risks are borne by the developers – potentially negating any cost savings.

A minor point, but in the counterfactual, there are often a number of offshore substation platforms, that can be located closer to the wind turbines, potentially reducing array costs and losses. With the integrated approach, has the increase in array costs been taken into account? Or the need for satellite HVAC platforms to enable interconnection? They may seem small but could have an impact on some of the cost benefits realised in your analysis.

The biggest cost benefits seem to be in the Eastern Regions and East Scotland:

- As your work aims to consider an integrated approach only for projects that do not currently have a grid connection offer, how will existing projects in these areas be integrated into the whole? Will it now make it very difficult for projects in these areas to consider a radial approach even if it the only available route to market for them, with the integrated approach dependant on regulatory changes and technological developments.
- If the projects in Scotland choose to follow a Hydrogen production and transmission model, how will this impact on the benefits you have identified?
- If some areas do not show a cost benefit following the integrated approach then will a radial approach be recommended?

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

The apportionment of the connection costs is of great interest and may mean that projects become financially unviable, impacting on the opportunity to meet Offshore Wind and Net Zero targets.

For example, the connection options considered in North Wales for the integrated approach indicate a significant risk to early projects with the need to connect to Pembroke rather than to closer onshore nodes. Although the overall connection cost for all projects in this area may be reduced slightly, the early projects would be unviable unless there was an identified way to share the costs.

## 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?

The reduction in landing points and onshore routes seems to be a significant benefit, more tangible in fact than the cost benefits. How reliant is this benefit on technological advancements in HVDC technology and if the anticipated cost reductions in HVDC technology are not realised will it have an overall cost impact on the delivery of the projects?

## 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.

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

# 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?

Yes, a coordinated approach with the seabed leasing rounds and a review of the CION process would be appreciated. It is important to bear in mind that anything that increases risk for developers on cost or timelines will have an adverse effect on overall system costs. As the CION can be seen as a way to amend connection offers, reducing certainty and stopping developers from having foresight then any adjustments will need to be undertaken very carefully.

It says in the report that “The mechanism for how these changes could be implemented is currently being explored, with any proposed changes to the CION only taking place with full consultation with industry and other interested stakeholders” however, we have already seen some changes being made to the CION process without consultation and this is of some concern.

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

As the current seabed leasing rounds are being undertaken with very little input from the ESO and TOs, an integrated approach has been difficult to achieve. A report to show the connection options open to each area and anticipated onshore reinforcements, timescales and costs would have been very helpful to de-risk the bidding and create a level playing field. It would need to consider a range of project capacities.

It has not been mentioned in this report the methodology for calculating TNUoS for integrated projects. We have assumed that it would follow the Transport model for wider TNUoS rather than current model used for Local TNUoS for Offshore Connections. This adds more risk as the expansion factors for HVDC in the transport model are very high and the volatility of onshore TNUoS zones is already of significant concern, particularly to developers connecting in the North.

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.

The potential reduction in transmission costs that may be achievable for the GB consumer seem to be very beneficial but a clearer view on how these costs may be split and allocated across the industry players will be very important. The drive for innovation from the competitive market approach that GB currently follows will also be something that will need to be considered carefully in this coordinated approach – how do you coordinate and still enable multiple players to compete?