

## Offshore Coordination project

### Consultation feedback form

- **Non-confidential – you can publish the full response**

### 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?**

Broadly, yes. However, we would also like to emphasise the need for the corresponding coordination of onshore network development in the coordination and development of the offshore network. The development of offshore grid infrastructure assets also requires onshore planning, and this must be considered and incorporated into the ESO's proposals. As the ESO is aware, different offshore and onshore planning regimes are operational across the UK and it will be important that all of these regimes are reflected in the ESO's ongoing work.

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

We believe that building on the existing knowledge and capability in infrastructure delivery that already exists (e.g. within the TOs) is key to ensuring technology is market-ready, when appropriate. Technology development and market readiness is an area where the onshore (and offshore) TOs are strongly placed to work with the ESO and the ESO should utilise this existing expertise and experience.

Furthermore, we believe there is an opportunity to create a financial framework that appropriately incentivises investment and manages risk for asset developers, for example, through a regulated rate of return as exists for onshore networks.

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

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

Please find further comments below:

- We note that the conceptual Integrated offshore designs assume that all of the transmission system reinforcements recommended to proceed in the 2020 Network Options Assessment (NOA) are built, up to and including 2028. As a result, these schemes do not appear in the designs. We understand the proposed Torness to Hawthorn Pit HVDC Link (E2DC) is therefore included in the base case of both the 'status quo' and alternative/ Integrated approaches. We support this approach and would emphasise that the development of a more coordinated/ Integrated approach to offshore infrastructure must not risk delays to vital reinforcement of the onshore system which is already in development.
- The main consultation document and supporting detailed reports indicate in several places that the current approach to offshore connection planning and design involves onshore and offshore network designs being considered separately. We would note however that existing processes, and in particular the Connection and Infrastructure Optioneering Note (CION) process, do consider the effect on the onshore system as part of the offshore connection design process. It is also important to note that a coordinated approach is being taken in relation to

the development of the Torness to Hawthorn Pit HVDC Link (E2DC) and associated offshore generation connections in the area.

- The detail report (Section 7.2.2) states *"The new power capacity between the years 2025-2030 in the counterfactual design is connected via HVDC to Cockerzie (Q6) and Torness (S6). In the Integrated design, all the wind capacity is connected to Blyth (Q4) via HVDC."* We do not recognise this counterfactual approach to accommodate the 2.3GW assumed to connect in this timeframe in the 2020 Leading the Way Future Energy Scenario<sup>1</sup>. Based on the outcome of the CION process, and in line with the contracted position, we anticipate this capacity will be delivered via HVAC connections. It may be appropriate to review what if any impact this may have on the CBA, so as to avoid any risk of adverse outcomes, including delays to the timely connection of offshore wind. We would also welcome further detail on the indication of Blyth as a preferred landing point in the north of England in the conceptual Integrated offshore design.
- The benefits of an Integrated solution are likely to be dependent on the specific projects brought forward, their location, capacity and timing. We agree that the benefits of an Integrated approach in the period 2030-2050 should be further explored in detail. We also agree that it may not be in the interests of existing and future consumers to vary projects already in the development process, some of which have held connection agreements for several years.
- The detailed report indicates that with Integrated design, the combined power transfer across all considered boundaries is reduced. The basis of this reduction should be made clear however. It is assumed that the relevant boundaries have not been extended offshore to reflect the additional infrastructure proposed (e.g. In Table 7.2). It is also noteworthy that the counterfactual approach is also likely to involve offshore HVDC systems.

## Cost-benefit Analysis Report

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

We agree that an Integrated approach to offshore network design could result in a lower overall level of capital expenditure, although any savings may not be as significant as indicated. It is not clear to what extent the CBA seeks to recognise the risk associated with each alternative, in particular the risks associated with HVDC subsea cable systems of higher voltage and/or capacity, and HVDC circuit breakers, as proposed in the conceptual Integrated design.

The report notes that the Integrated approach may bring additional benefits in the form of reduced impact of network faults. The impacts on security of supply, network operability and resilience of a relatively small number of high capacity subsea HVDC systems requires careful consideration, noting the potentially significant impact of the unavailability of any single network element, or the simultaneous unavailability of multiple network elements. We also note that the detailed CBA report states that HVDC faults are usually of shorter duration than HVAC faults. We would welcome further detail on this and, in particular, its applicability to offshore HVDC cable systems of the Integrated nature proposed, where asset repair times can be dependent on weather conditions and vessel availability.

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<sup>1</sup> <https://www.nationalgrideso.com/document/174541/download>

While a material reduction in the volume of assets required onshore to facilitate offshore connections may result from an Integrated approach, a smaller volume of landing points may lead to larger onshore infrastructure developments (e.g. larger footprints/ building heights etc), therefore increasing localised impacts.

The consultation document notes that analysis indicates total annual losses are not a relevant factor. We note however the indicated increase in losses by 2050 of 2.1% in the status quo rising to 2.7% with the Integrated approach. We also understand that this assessment does not include offshore transmission losses, which should be considered in order to provide confidence in the conclusions.

The CBA report makes reference on page 26 to consequential costs for additional MW behind a transmission boundary, but not the effect of those additional MW upon the interconnection allowance calculation within the SQSS. We would query whether the associated conclusion reflects the extension of systems boundaries offshore in the conceptual Integrated solution, and whether this is intended to apply solely to security considerations (noting reference to interconnection allowance) or economic considerations as well.

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

**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?**

**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.**

We believe there is a need for the ESO to manage engagement with stakeholders who may see the electricity industry as a single entity and may not appreciate the multitude of different parties who are seeking their input and consent. For example, we believe that these activities should be done in a way that does not undermine what is being done by onshore TOs for critical strategic network development.

**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?**

We believe that there is an increased possibility of better coordination, however we have some doubts that we would like to highlight for addressing in the ESO's ongoing work in this area:

- Greater numbers of parties will undoubtedly make coordination (especially when each party has different commercial drivers) more difficult. There will need to be strong oversight from a party (or parties) to ensure such coordination continues to operate effectively and deliver timely network infrastructure.
- The Connection and Infrastructure Optioneering Note process (CION) is already the responsibility of the ESO and currently sits outside any formal governance

arrangements. We therefore believe that any improvements to this process, should already have been acted upon by the ESO, for example greater engagement with offshore developer(s).

- The ESO's proposals don't seem to adequately address the timescales for developing a connection offer. Whilst noting reference is made to the 90-day turnaround period, there is no consideration of the work required by onshore TOs to input into this (or the CION process). Additional coordination and proposals to give developers a 'shadow TO' role would suggest that the 90-day window will need to be extended, or that this process would commence only following acceptance of a connection offer. We also question whether extending the STC to provide for the 'shadow TO' role requires the developer(s) to be licensed, and whether this approach will in fact lead to coordination of the nature intended, particularly in circumstances where there may be multiple offshore developers with differing requirements over time. If not, are there other methods to ensure that developers adhere to the rules and obligations set out in STC?

Furthermore, we don't believe it lies within the ESO's responsibilities to be able to 'pick and choose' which parts of the CION process are codified and would welcome the opportunity to engage with the ESO as part of its review. We would also like to highlight that developers' changing plans and uncertainties related to projects also are key factors which impact timescales, not just the activities of the TOs.

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

The ESO has identified the opportunity to package or coordinate connection application offers with other processes, such as seabed leasing rounds. The ESO indicates this to be an opportunity in the medium to long term. We would note however the significant level of prevailing offshore activity in Scotland at this time, driven by the ScotWind leasing process. We would therefore query whether there is merit in further exploring this area in shorter timescales.

**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.**