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F.A.O. Christine Brown

Stakeholder Lead

Offshore Co-ordination project

Energy & Regulation

National Grid ESO

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Dear Christine

**Offshore Co-Ordination Project: Phase 1 Consultation Feedback**

Transmission Investment, as one of the leading independent operators of offshore wind transmission, welcomes this opportunity to respond to your consultation on offshore co-ordination for transmission.

Transmission Investment manages one of the largest offshore electricity transmission portfolios. Our managed portfolio of Offshore Transmission Owner (OFTO) assets includes the connections to seven GB offshore wind farms, and we will take over management of a further two offshore wind connections in 2020 – in total a portfolio of approximately 2.5GW and £2bn in capital employed. We are the largest manager of offshore wind transmission in GB, the largest offshore wind market in the world.

Transmission Investment is a strong advocate of introducing competition into the delivery of transmission as a means to introduce innovation into the sector and to reduce costs to consumers.

Transmission Investment is also leading, in partnership with the French national grid company RTE, the development of a proposed 1400MW HVDC interconnector between France and Britain via Alderney ("the FAB interconnector project"). This project was granted cap & floor regulatory treatment in 2015 and whilst it continues to experience Brexit related delays, it will commence construction as soon as the regulatory process allows.

The engagement that you continue to show throughout this process is encouraging and the level of detail provided in the consultation documentation is commended. The high-level results coming out of the work seem sensible but it would have been useful

for those being consulted if the key recommendations to be put to Ofgem had been included within the consultation documents.

We have provided feedback at each of the previous stages of this project and we do not seek to repeat all those points in this consultation but some will be reiterated where they have been further informed by the consultation documentation.

We look forward to your production of a final report and embarking on Phase 2 and some clarity on how this will interact and complement the initiatives of Ofgem and BEIS would be useful.

We hope you find our response overleaf in Annex A helpful. We would be happy to provide further input on any aspect as required.

Yours faithfully,



**James Dickson**  
Project Development Director

## ANNEX A

### 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?

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

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

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

- a) One conclusion from the report is that *"For the Integrated option the impact on the onshore network is minimised as electricity can be more readily transported via offshore cables closer to the areas of demand, than for the status quo option."* The primary reason for this is simply that the demand for further grid infrastructure is being shifted from onshore to offshore. It is not clear to what degree any additional impact offshore is being suitably taken into account.
- b) It is not clear as to whether the SQSS change is assumed in the results or not (i.e. the increase from 1.32GW to 1.8GW normal loss of power Infeed risk). The Holistic report suggests it is but the CBA report states it assumed compliance with the SQSS.

### Cost-benefit Analysis Report

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

- a) It is not clear to what degree the consequences in the differences in planned and forced outage rates have been included in the OPEX. Have cable fault repair rates and costs been included? It is also not clear how the lower availability of DC solutions has been taken into account (monetised) in terms of reduced generation being able to be injected into the system.

- b) There does not seem to be a good rationale why the parameters of RES curtailment and grid losses (and CO<sub>2</sub> saved if material) should not be monetised and included in the NPV analysis.
- c) The scope of the assessment excludes differences in offshore wind farm array cables (or additional wind farm specific distribution OSPs) and onshore wider works to accommodate the solutions being set out (Figure 2.6). However, section 2.7.3.6 (p.25) states that "*The extra costs of onshore reinforcements are incorporated and reported within KPI CAPEX in section 2.7.2.1.*" It would be useful to check on consistency and if these differences are material and may influence the conclusions.
- d) The discounted CAPEX assessment shows benefits of the Integrated option over the Counterfactual. The report (p.14) states that "*the Integrated design has more anticipatory investments in the earlier years than the Counterfactual*". This is not apparent from Figures 2-8 and 2-9 for the period 2025-2030 and it would be useful to see an undiscounted delta version. (Note Figure 2-9 is missing a year, 2028.) The reason why this is important is to assess the degree to which the selection of the societal interest rate of 3.5% influences the overall conclusion. In the event that there is a significant difference to the expected WACC of a potential investor in the offshore transmission infrastructure (including construction risk) then it would be useful to see a sensitivity showing this discount rate to ascertain if the benefit is still as convincing.
- e) It is not clear how the figure of 9.7% in 2050 (p.22) for RES curtailment is derived from Table 2-13.

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

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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?

As noted in stakeholder feedback published in September, there seems to be a desire in the technical workstream to use the number of cable landfalls / onshore cables as a proxy for environmental impact. There are a number of issues that arise from this proxy which have not been addressed in the reports issued for consultation.

As acknowledged throughout the report, an integrated network should result in fewer offshore cable corridors and landfalls. However, the issue of offshore cable corridors overlapping with offshore Special Areas of Conservation designated for protected Habitats (Habitat SACs), particularly the extensive designations in the Southern North Sea, has been a significant issue for recent offshore wind project Examinations. There is no recognition in the report that the latest advice from the Statutory Nature Conservation Bodies (SNCBs), notably Natural England, is that no cable protection can be placed on cables in Habitat SACs in an unfavourable

condition. Furthermore, should evidence be presented that there are no alternative solutions under the Habitats Regulations Assessment process, there is no agreed form of mitigation or compensation under Article 6(4) of the Habitats Directive. It is likely that an integrated offshore network could consist of fewer corridors, but with larger corridor footprints. This is likely to raise more issues for the SNCBs in terms of magnitude of environmental impact given the extensive network of Habitat SACs in the Southern North Sea.

There remains uncertainty regarding the specific nature and location of the network upgrades required to the onshore transmission system to enable integrated offshore networks. Local objections to onshore works associated with radial connections for recent Round 3 projects have considered the alternative of an offshore ring main as more acceptable from a disruption and environmental impact perspective. However, if the solution for an integrated offshore network results in the need for new overhead lines across extensive parts of the east coast, then more consideration needs to be given to the environmental and planning risk as the same objectors to radial connections are likely to express stronger opinions about overhead lines replacing underground cables for radial connections.

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.

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

- a) This work has drawn upon the methodologies set out in similar studies conducted elsewhere in Europe (e.g. PROMOTioN). Whilst the results are dependent on the geographical characteristics of the study area (i.e. GB v EU) it would be useful to see a comparison of the high-level findings from similar studies to compare, contrast and test the key findings.

## 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?

- a) The concept of aligning / potentially combining the connection offers with seabed leasing rounds has merit. (It is not explicit but we assume these would be post-CION equivalent offers.) However, it should not be assumed that the generation developers who are awarded the seabed lease, will also be the developers of the transmission infrastructure. This is yet to be considered by Ofgem and BEIS and is outside the remit of this NGESO study. Note that a similar comment is made regarding the inclusion of a "Shadow TO" role for 'offshore developers' within the STC. It should be explicit that 'offshore developers' are those developing the offshore

transmission, not the offshore generation in the event these are not the same party. We would argue that there are significant conflicts of interest particularly vis-à-vis other potential connecting parties such as onshore generators and interconnectors where a specific subset of connecting parties (i.e. offshore generation developers) have a role in planning the system.

- b) Where seabed leasing bids are dependent on some assessment of the economic feasibility of a wind farm project (i.e. like The Crown Estate Round 4), then one could expect greater certainty from the proposed alignment to lead to better valuations due to the reduced risk. It should be considered how this benefit should be treated. Is it reasonable for the seabed leasing entity to benefit from higher bids due to coordination (with associated anticipatory investment being paid for by the UK consumer)?
- c) It would be useful to better understand how the interests of multiple parties would be safeguarded in the coordinated CION concept. (e.g. apportionment of the costs of the connection & CION process; decisions that may benefit the overall solution to the detriment of a single connected party in terms of costs/timelines/connection location.)
- d) It is not clear how the coordinated CION would interact with connection applications from other types of application (e.g. onshore generation, interconnection) and we would welcome further assessment of this.

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

- a) A key issue of the connections process is the degree to which the NGENSO counterparty has legal certainty over the timescales and costs associated with the connection. The recommendations are to review the CION process for the Short Term Opportunities but this review should also include the application, offer, acceptance process too. The review does not seem to have adequately identified the shortcomings in the existing process and these should also be assessed as barriers to the potentially more complex arrangements required for coordination. A non-exhaustive list of aspects to be considered are:
  - i. lack of legal certainty of application fee outturn cost due to CION costs being allocated to this and no clarity on the timeframe or complexity of this process;
  - ii. lack of legal certainty of connection point or timescales to connect for offers or contracted positions pre-CION;
  - iii. lack of legal certainty (or visibility) of security requirements as they are estimates only and subject to amendment every six months, particularly for the wider works tariff which is announced annually a few weeks before the next six-monthly security level is due.