

National Grid response to Ofgem's consultation on changes intended to bring about greater coordination in the development of offshore energy networks

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National Grid sits at the heart of Britain's energy system, connecting millions of people and businesses to the energy they use every day. We are fully committed to enabling the delivery of the Government's 40GW of offshore wind target by 2030 and welcome the opportunity to respond to Ofgem's consultation on the changes intended to bring about greater coordination of infrastructure in the development of offshore energy networks.

The delivery of the Government's offshore wind target not only requires significant offshore network infrastructure solutions, but also the timely development of a significant amount of onshore electricity network. While the existing processes have historically served us well, these now require swift change.

Executive Summary

- We are pleased that the BEIS and Ofgem Offshore Transmission Network Review (OTNR) is in place and aiming to address these challenges. It will be important however for this review to move at pace.
- We support and agree to the need for a holistic design - as it will result in a more coordinated, economic, and efficient network. We are hopeful that the Holistic Network Design (HND) will serve as an important roadmap.
- We are strongly of the view that the recommended schemes from NOA6¹ (published in January 2021) should be used as the baseline¹ for the HND if we are to achieve the Government's 2030 ambition. These schemes, many of which are already under development and required to deliver at pace, provide the onshore capacity required for a wide range of offshore wind scenarios. Consequently, the NOA6 investment decisions should be considered low regret options. Consideration should be given to the extent and impact of delay if NOA6 is not to be used as the baseline, as it is highly likely to result in a significant delivery delay.
- The HND should be used to inform the needs case for onshore infrastructure requirements. Agreed and early clarity on the network need across regulatory mechanisms should accelerate the securing of pre-construction funding, which must be in place to ensure planning and consenting certainty can be achieved by 2025, and Ofgem's LOTI process for construction funding for the recommended investments. Planning and regulation need to be aligned, both in process and decision making, to provide confidence and certainty of joint outcomes.
- We continue to support the introduction of competitive delivery of onshore transmission networks where benefits for consumers can be realised. However, the timeline for introduction of early competition needs to be considered. Applying competition to the projects required for 2030 would put at risk the delivery timelines associated with this already challenging planning and construction challenge.
- There are significant benefits that arise from having certainty in electricity network connections, such as providing the opportunity for efficient and effective resource planning. Within the consents process alone having greater certainty of connections allows us to achieve the various milestones, from the appointment of design consultants, non-statutory engagement, and statutory consultation all within a timely manner.
- We welcome Ofgem's desire to address opportunities for greater coordination however the timing is key. Consideration should be given to any unintended consequences of the 'Early Opportunities' workstream being developed post the publication of the HND.
- We welcome that the Early Opportunities workstream will consider the need for Anticipatory Investment (AI), however developers will require clarification at the project outset, as it will likely influence the location and design of the project development. It will also be important to clarify, if AI is proposed, who will provide the need case evidence - required for consenting, DCO examination and CPO of Land Rights.

This response represents the views of National Grid Electricity Transmission (NGET) only. As NGET we own the electricity transmission network in England and Wales. We are responsible for ensuring electricity is transported safely and efficiently from where it is produced; reaching homes and businesses safely, reliably and efficiently. We facilitate the connection of supply and demand customers to the transmission system. We are investing to adapt and develop our transmission network to connect new sources of low carbon and green energy to homes and businesses.

National Grid Ventures (NGV) are not represented in this submission and they will respond separately.

¹ NOA6 - <https://www.nationalgrideso.com/document/185881/download>

Early Opportunities

Question 1: Are there any concepts we have not identified developers (as defined in this chapter) may wish to progress?

We do not have any additional concepts beyond those already described. It is important to note however that there are electricity network infrastructure projects already in flight, which will be required to deliver at pace if we are to achieve the Government's 2030 ambition. The opportunity for greater coordination on these projects may be limited as routing and siting decisions are already underway, in advance of the HND being finalised. If the HND were to recommend a change to these infrastructure solutions it is highly likely to result in a significant delivery delay. We would strongly advise the need to align the methodology used for the development of the HND to that utilised by the Transmission Owners (TO) in the development of their existing in flight infrastructure projects. Any significant change will require early collaboration with the TO's to ensure the proposals remain viable.

Question 2: Should anticipatory investment risk be shared with consumers? If it should, what level of risk is it appropriate for consumers to bear?

Where there is a clear opportunity and case to deliver anticipatory investment, supported by a robust cost benefit analysis that considers both the environmental and societal effects, we acknowledge and agree that there will be an inevitable need to share the risk with consumers. A single developer carrying all the risk for a future party would likely be a suboptimal investment decision on their own project and present a significant barrier to delivery, at time when progress needs to be made quickly. A developer should cover the risk up to what would be required for their project, without coordination, with the balance being underwritten by consumers. We believe it is in the best interest of consumers to underwrite small risk associated with anticipatory investment to avoid the consequences of not decarbonising the economy.

Question 3: For concepts that intended to provide a wider system benefit, e.g. by mitigating an onshore constraint, how should the need for investment be demonstrated by the developer?

The need case for a specific scheme cannot be developed in isolation. The starting point should be that the wider system benefit needs to be demonstrated, with a robust cost benefit analysis performed by the ESO and set against their Future Energy Scenarios (FES). To ensure an optimum outcome, options need to be developed collaboratively across all TOs and developers and importantly will need to assess the impact on other reinforcements which are in development, not just the individual connection, to ensure the most appropriate infrastructure solution is delivered.

Question 4: What options are available to developers in demonstrating a reasonable expectation they intend to connect to the system?

There are benefits that arise from having certainty in electricity network connections, such as providing the opportunity for efficient and effective resource planning. With certainty, developers can plan around key milestones of projects such as Final Investment Decisions (FID), consents and commencement of construction. Within the consents process alone having greater certainty of connections allows us to achieve the various milestones, from the appointment of design consultants, non-statutory engagement, and statutory consultation all within a timely manner. Previously, getting planning consents was used by ESO in the CfD process as a proxy for certainty, demonstrating that developers were intent on connecting projects. It is important to note, if something other than financial underwriting is to be used to demonstrate certainty for investment and delivery then this will need to be pre-agreed and underwritten by consumers.

Question 5: To what extent do you agree with our proposals to remove barriers to the Early Opportunity concepts? Please explain your answer.

We broadly agree with the concepts and endorse the wider consideration for whole-system solutions. Having a range of models that suit different project structures and investments appetites is likely to increase the chances of delivery, as it creates flexibility. We do however have a concern. Modifications to risks (User Commitment) and charging arrangements have been subject to significant industry debate and often legal challenge in the past. While we value and appreciate the pressing need to resolve these issues we would advise, to achieve the 2030 target, that there is a focus on the simplest concepts to take forward. This will avoid the creation of a significant time delay and uncertainty for developers and network providers.

Question 6: Do you believe a Significant Code Review is required to give effect to a potential decision to 'share' AI risk between consumers and developers?

We would welcome Ofgem seeking to ensure all code modifications which are required be expedited and for the ESO to deliver code changes within the required timeframe.

Question 7: Do you agree with Ofgem's proposed approach to deliver the objectives of Early Opportunities workstream?

We welcome Ofgem's desire to address opportunities for greater coordination however the timing is key. Consideration should be given to any unintended consequences of the 'Early Opportunities' workstream being developed post the publication of the HND or associated public consultation by the TOs. There is a need for the HND to provide certainty to achieve challenging 2030 target, pathfinder conclusions which later call in to question the conclusions of the HND process will likely lead to significant challenge and delay, and this impact must be considered.

We welcome that the Early Opportunities workstream will consider the need for Anticipatory Investment (AI), however developers will require clarification and certainty on AI before making a FID, as this is too late in the process. Developers will require clarification at the project outset, as it will likely influence the location and design of the project development. It will also be important to clarify, if AI is proposed, who will provide the need case evidence, be the expert witness, and in what form will it that take – all of which is required for consenting, DCO examination and CPO of Land Rights.

Pathway to 2030

Question 8: We consider that a holistic design will result in a more coordinated, economic and efficient network. Do you agree? Please give reasons for your answer.

We do agree to the need for a holistic design - as it will result in a more coordinated, economic and efficient network. We are hopeful that the HND will serve as an important roadmap.

Under the current framework, the initial recommendation for network infrastructure is determined through the NOA, performed by the ESO, on an annual basis. In an uncertain world, the annual NOA recommendations are helpful in ensuring overall (financing and constraint) costs are minimised. The Government's 40GW by 2030 target reduces this uncertainty and provides the opportunity for a more co-ordinated development approach, which is expected to be more economic and efficient.

We are strongly of the view that the recommended schemes from NOA6 should be used as the baseline' for the HND if we are to achieve the Government's 2030 ambition. These schemes, many of which are already under development and required to deliver at pace, provide the onshore capacity required for a wide range of offshore wind scenarios. Consequently, the NOA6 investment decisions should be considered low regret options. Consideration should be given to the extent and impact of delay if NOA6 is not to be used as the baseline, as it is highly likely to result in a significant delivery delay.

Subsequent NOAs should also not reconsider the onshore works recommended in the HND and should either include or refer to the HND as NOA's recommendation on these onshore schemes, allowing TOs to continue to press ahead with the development of these important schemes.

In order to support TOs in progressing schemes through consenting processes, development of the HND must include a sufficiently robust assessment of the onshore works (e.g., environmental impact) to enable endorsement in line with the proposed cost benefit analysis outlined in the terms of reference of the OTNR. This could then within the enable alignment and endorsement with National Policy Statements (NPS) and National Planning Framework (NPF). Timely regulatory endorsement and funding certainty on planning scope (e.g. before planning consultations commence, or through a Net Zero re-opener) will ensure certainty over consenting and prevents adversely impacting the deliverability of schemes in line with the Government's 40GW offshore wind targets.

The HND should be used to inform the needs case for onshore infrastructure requirements. Agreed and early clarity on the network need across regulatory mechanisms should accelerate the securing of pre-construction funding, which must be in place to ensure planning and consenting certainty can be achieved by 2025, and Ofgem's LOTI process for construction funding for the recommended investments. Planning and regulation need to be aligned, both in process and decision making, to provide confidence and certainty of joint outcomes. This should consider the holistic requirements for interacting regional project clusters, taking account of cumulative impact and agreed principles for design mitigations and planning scope.

It is important that the relationship between Ofgem's LOTI process and the necessary planning processes (e.g., the Development Consent Order (DCO) process) is aligned and cross-reference the outputs of the HND at the Initial Needs Case Stage.

We continue to support the introduction of competitive delivery of onshore transmission networks where benefits for consumers can be realised. However, the timeline for introduction of early competition also needs to be considered. Many of the onshore network reinforcements required to support this 2030 target could qualify for early competition in the current scope defined in the recent 'Early Competition' consultation. Applying competition to these projects would put at risk the delivery timelines associated with this already challenging planning and construction challenge – these projects typically take circa 10 years to be delivered. We believe that competition should not be applied to network projects required to support the government's imminent target of 40GW of offshore wind by 2030 to enable the target to be met most efficiently for consumers.

Question 9: Do you agree with the planned work for a detailed network design offshore?

National Grid broadly agrees to the work for a detailed network design offshore. It is important to note however that the offshore design cannot be looked at independently without considering the onshore infrastructure requirements or the needs and plans of other North Sea bordering nations. The offshore DND will need to consider and include details on how it will connect to the onshore electricity networks, therefore there is a need for the two to be developed in collaboration. It will also be important to clearly define the phases of the work. Pre-construction (e.g. consenting) covers stakeholder engagement, land acquisition and design. It is difficult to separate the design from the consenting process, therefore we believe that a single party should be assigned for this work.

Question 10: Who do you believe is best placed to undertake the detailed design for assets that are in offshore waters?

A principles-led approach is needed to identify who would be best placed to undertake the detailed design. The DND must be undertaken by parties with extensive experience in delivering offshore infrastructure, and in collaboration with TOs to ensure co-ordination of interface point work. There are a range of parties with the expertise, including incumbent TOs, developers of offshore works to date, and interconnector owners. Over the past few years both offshore developers and interconnector developers have delivered many successful and sometimes innovative designs from concept through to operation. In achieving this we recognise the support provided by Government and Ofgem.

Question 11: Do you agree that the existing developer led model should be retained and applied where the HND indicates a radial solution should be used? Please explain your answer.

National Grid agrees on retaining the existing developer model in this circumstance. It is important to recognise the need for certainty of an onshore network solution by 2030. Appropriate considerations need to be made on timing, where on the coast is the landing point, how the network could be future proofed for 2050 and other social & environmental impacts. Where possible, wider connections and future opportunities to cluster should be considered to maximise efficiencies.

Question 12: Please provide your views on each of the delivery options we have described in this document. In providing your views, please comment on the issues we have raised. Please also give your views on the implementation issues we have raised.

National Grid supports competition to help drive down costs through innovative solutions and by maximising efficiencies. It is critical to recognize the importance of a suitable delivery model as soon as possible. We are clear that a lack of clarity over the delivery model for the project is a cause of substantial supply chain uncertainty, in a market with significant capacity constraint issues given the volume of HVDC projects in development globally. This puts the delivery date of the project at risk. We therefore continue to urge that a decision is made on delivery model as early as possible.

At a high level, the proposed delivery models are very similar to the onshore delivery models such as Competitive Proximity Model (CPM), Special Purpose Vehicle (SPV) and Competitively Appointed Transmission Owner (CATO) as they use the same concept of early and late competition. In the choice of model, a balance between time and certainty needs to be identified. We would like to reiterate that it is difficult to separate design from pre-construction, therefore, to maximise efficiencies, both activities should be assigned to a single owner.