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Date
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Contact / Extension
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Dear Neil

Consultation on changes intended to bring about greater coordination in the development of offshore energy networks

Thank you for the opportunity to share our views on the changes intended to bring about greater coordination in the development of offshore energy networks.

SP Energy Networks (SPEN) represents the transmission licensee of SP Transmission plc, as well as the distribution licensees of SP Distribution plc and SP Manweb plc. SP Transmission owns, develops and maintains the onshore electricity transmission network in the south of Scotland. We also own and operate the electricity distribution networks in the south of Scotland (SP Distribution) which serves two million customers, and Merseyside and North Wales (SP Manweb) which serves one and a half million customers. This response is on behalf of SP Transmission (SPT).

The need for wider policy and regulatory reform to support the OTNR

As an onshore Transmission Owner (TO), we fully recognise our role in facilitating the delivery of Net Zero targets. With extensive system analysis, design, development, consents, project delivery and ongoing asset management expertise, SPT has an important contribution to make to the timely development of a co-ordinated onshore and offshore electricity transmission system.

We support the work of the Offshore Transmission Network Review (OTNR) and are pleased to be part of the Central Design Group, supporting the Electricity System Operator (ESO) on the Holistic Network Design (HND) for the OTNR's Pathways to 2030 workstream. There is a clear need for a more co-ordinated, strategic approach across GB to the design and connection of future offshore wind development, with a focus on offshore connections and the associated onshore and offshore grid infrastructure required. The intent of the Central Design Group and the HND is to provide certainty and accelerate the delivery of the onshore and offshore network requirements for the 2030s in a coordinated way.

However, the development of a more co-ordinated approach to offshore infrastructure must not be at the expense of the timely delivery of the necessary onshore and offshore strategic network infrastructure. The scale of investment required, and short timescales, mean existing processes which have historically served us well, now require swift change. Our view is that wider regulatory and planning processes also need to be concurrently reviewed to align with the OTNR's work and pressing delivery timelines.

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We have outlined below those areas within current regulatory and planning processes which we consider also require reform. Further details can be found in the three TOs' joint response to this OTNR consultation, dated 8th September 2021, which has been submitted separately.

- (i) The HND must be clear and consistent with the outcomes of future Network Options Assessments (NOA) to provide certainty and confidence in development, consenting and deliverability of key strategic infrastructure. The recommended HND must therefore form the inputs to future NOA publications.
- (ii) Certainty of the network needs and investment signals is required now for TOs to ensure timely delivery of the required onshore network infrastructure. Neither the NOA or the Large Onshore Transmission Investments (LOTI) processes currently provide sufficient certainty to TOs, and other key stakeholders, at a suitably early stage, in order for schemes to progress to delivery.
- (iii) The HND should directly contribute to the formation of the network needs case to justify the need for investment to Ofgem;
- (iv) The HND should directly contribute to the formation of the needs case used to justify the need for investment to planning authorities and must be endorsed by Government National Policy Statements and National Planning Frameworks to provide direction for the consenting process.

Early Opportunities workstream

In order to ensure that the work of the Early Opportunities workstream progresses at pace, it is important that Government encourages transparency in data provision between the ESO, offshore developers and the TOs, at the earliest opportunity. This will ensure all parties have visibility of the relevant data and that they are collaboratively designing network solutions which contribute to an efficient, co-ordinated and economical system of electricity transmission. This is particularly the case for developer-led early opportunities concepts, of which six are proposed under the Early Opportunities workstream. Where a developer proposes an investment under the Early Opportunities workstream which is intended to deliver wider system benefit, the needs case for such investment, and its alignment with the development of an economic, efficient and coordinated system, should be demonstrated via the ESO's prevailing NOA process, via project specific cost benefit analysis and impact assessments.

Thought must also be given as to how the outputs of the Early Opportunities workstream interacts with the work of the Pathways to 2030 workstream. It is important that both workstreams are aligned to ensure that outputs complement each other, otherwise outputs which are misaligned could impact on timely delivery, which is particularly important within these workstreams, as they look to support delivery of the 2030 offshore wind target.

With alignment in mind, TOs must also be involved in the technical assessment of any of the Early Opportunity concepts, given the potential impacts on the design, development and operation of both onshore and offshore assets. The design and operational intent for any offshore concept is a key consideration, given the potential implications for an offshore proposal to deliver a parallel solution to a solution on the onshore system, even for a short duration, which is not in the best interests of consumers or efficient system operation. Great care is also required in the design of any new offshore concepts due to the significant range of system operating conditions, particularly as onshore assets are modernised and adapted for new connections and planned upgrades.

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As the delivery of onshore infrastructure is also necessary to facilitate the delivery of the required offshore infrastructure to meet 2030 offshore wind targets, we believe anticipatory investment (AI) processes must also be reviewed for both offshore and onshore infrastructure, as part of the OTNR work. This will allow for speedier investment in the design and delivery of the necessary onshore wind infrastructure, particularly through the LOTI reopener, and to a lesser extent the Medium Sized Investment (MSIP) reopener under the RIIO-ET2 framework.

Pathways to 2030 workstream

We welcome Ofgem's acknowledgement within this consultation document, that *"speed of delivery is a key factor considering the desire to facilitate the Government's objective of connecting 40GW of wind by 2030"*.¹ We are strongly of the view that new delivery models for transmission infrastructure offshore cannot be introduced within the Pathways to 2030 workstream, if they are intended to support delivery of the UK and Scottish Governments' targets to deliver 40GW and 10GW respectively of offshore wind by 2030. Given the long lead times for electricity transmission – design, development, consent, procurement and construction – action is required now, in 2021, to achieve the 2030 targets. This work cannot be subject to any additional delays which could be caused by fundamental changes to the regulatory regime, additional timescales for competitive tendering or through the use of parties inexperienced in delivering infrastructure offshore, which not only increases the risk of delay to important strategic infrastructure but the subsequent cost to GB consumers.

We are therefore strongly of the opinion that existing delivery models (models 1 and 6), with parties already experienced in the delivery of transmission infrastructure offshore in GB waters, should be used to deliver the key strategic infrastructure under the Pathways to 2030 workstream. If Ofgem does intend to introduce new delivery models in the design and delivery of transmission infrastructure offshore, it should further consult upon, design, legislate for, and introduce new delivery models offshore, under the Enduring Regime workstream, which has less pressing timescales and will not impact on the UK's ability to meet the 40GW of offshore wind target by 2030.

We have responded to those consultations questions that, as a TO, we are best placed to answer. Our detailed responses can be found in the accompanying Annex (**Annex A**).

Please do not hesitate to get in touch, in relation to any of the points raised in this response.

Yours sincerely



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¹ OTNR consultation (Ofgem) para 3.48

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SP Transmission Response: Changes intended to bring about greater coordination in the development of offshore energy networks

Early Opportunities

Q1: Are there any concepts we have not identified developers (as defined in this chapter) may wish to progress?

We consider that developers are better placed to respond to this question.

Q2: Should anticipatory investment risk be shared with consumers? If it should, what level of risk is it appropriate for consumers to bear?

As a network operator, we can see that anticipatory investment (AI) risk can be a barrier to the development of new infrastructure build. In order to deliver the necessary infrastructure required to support delivery of the UK and Scottish Governments' 2030 offshore wind targets, we do agree that AI for *"a known future project with a reasonable expectation that it will connect"*¹ should be shared with consumers and that this consumer contribution should be the minimum required to secure AI investment by developers. We fully agree with Ofgem's proposal to use cost benefit analysis and impact assessments to ensure the level of AI supported is appropriate for consumers to fund.

As the delivery of onshore infrastructure is also necessary to facilitate the delivery of the required offshore infrastructure to meet 2030 offshore wind targets, we believe that the issue of AI must also be reviewed for onshore infrastructure, allowing for speedier investment in the design and delivery of the necessary onshore wind infrastructure, particularly through the Large Onshore Transmission Infrastructure (LOTI) reopener, and to a lesser extent the Medium Sized Investment (MSIP) reopener under the RIIO-ET2 framework.

Q3: 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?

Where a developer proposes investment, which is intended to deliver wider system benefit, the needs case for such investment, and its alignment with the development of an economic, efficient and coordinated system, should be demonstrated via the ESO's prevailing Network Options Assessment (NOA) process, via project specific cost benefit analysis and impact assessments.

It is vital that onshore TO's are engaged in the technical assessment of any such proposals, given the potential impacts on the design, development and operation of both onshore and offshore assets. The design and operational intent for any offshore concept is a key consideration, given the potential implications for an offshore proposal to deliver a parallel solution to a solution on the onshore system, even for a short duration, which is not in the best interests of consumers or efficient system operation. Great care is also required in the design of any new offshore concepts due to the significant range of system operating conditions, particularly as onshore assets are modernised and adapted for new connections and planned upgrades.

Q4: What options are available to developers in demonstrating a reasonable expectation they intend to connect to the system?

We consider that developers are better placed to respond to this question.

¹ OTNR Consultation (Ofgem) para 2.36

Q5: To what extent do you agree with our proposals to remove barriers to the Early Opportunity concepts? Please explain your answer.

Until the details of these barriers and the proposed solutions are known, it is not possible to give a definitive answer to this question, particularly as work is still ongoing to identify barriers which may exist in the Codes and Standards areas. Should the solutions to overcome barriers lead to a reduction in, or lessening of, technical requirements or a lowering of the security of supply standards, then we would disagree with the proposals to remove barriers.

Q6: Do you believe a Significant Code Review is required to give effect to a potential decision to 'share' AI risk between consumers and developers?

As the energy regulator, we would expect Ofgem to give a clear and unambiguous decision as to how AI risk is to be shared, and from this decision, the necessary code modification processes will follow. Given that any change in this area involves commercial interests, we would expect Ofgem to be involved to ensure that consumer interests are also represented throughout the code modification process.

Q7: Do you agree with Ofgem's proposed approach to deliver the objectives of Early Opportunities workstream?

In order to ensure that the work of the Early Opportunities workstream progresses at pace, it is important that Government encourages transparency in data provision between the ESO, offshore developers and the TOs, at the earliest opportunity. This will ensure that all parties have visibility of the relevant data and that they are collaboratively designing network solutions which contribute to an efficient, co-ordinated and economical system of electricity transmission. This is particularly the case for developer-led Early Opportunities concepts, of which six are proposed under the Early Opportunities workstream.

It is crucial that TOs, as well as the ESO, are engaged in the evaluation of offshore developers' plans for the design of any potential offshore transmission infrastructure solution(s) and the envisaged strategic landing point(s) for connecting to the onshore transmission system, and that this is aligned with the High-level Network Design (HND) work, which is currently being undertaken.

Thought must also be given as to how the outputs of the Early Opportunities workstream interacts with the work of the Pathways to 2030 workstream. It is important that both workstreams are aligned to ensure that the outputs complement each other, otherwise outputs which are misaligned could impact on timely delivery, which is particularly important within these workstreams, as they look to support delivery of the 2030 offshore wind target.

With alignment in mind, TOs must therefore also be involved in the technical assessment of any of the Early Opportunity concepts, given the potential impacts on the design, development and operation of both onshore and offshore assets. The design and operational intent for any offshore concept is a key consideration, given the potential implications for an offshore proposal to deliver a parallel solution to a solution on the onshore system, even for a short duration, which is not in the best interests of consumers or efficient system operation. Great care is also required in the design of any new offshore concepts due to the significant range of system operating conditions, particularly as onshore assets are modernised and adapted for new connections and planned upgrades.

Pathway to 2030

Q8: 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.

The design and operational intent for any offshore transmission infrastructure or strategic landing point(s) will have potential implications for the onshore transmission system. Therefore, great care and coordination must be encouraged across all relevant parties – the ESO, relevant TO(s) and offshore developers – at the earliest opportunity, in the design of offshore transmission infrastructure due to the significant range of system operating conditions onshore. We therefore strongly agree that a holistic network design will result in a more coordinated, economic and efficient network. With existing licence obligations to deliver such a network, it is right that the ESO and TOs lead on this holistic design, through the preparation of the High-level Network Design (HND), having regard to environmental and other impacts, which is in line with our existing licence obligations.

Q9: Do you agree with the planned work for a detailed network design offshore?

We note and agree with the proposals that the Detailed Network Design (DND) should be developed by the TOs. We consider that the TOs are best placed and most experienced to undertake the DND, given the detailed design work that we already undertake for development of onshore network infrastructure. However, further consideration must be given to the interface between the DND offshore work and the detailed network design required for assets in offshore waters. We would welcome further clarification on the delineation of these two activities and the roles and responsibilities expected of the TOs, and those parties undertaking the detailed network design of assets in offshore waters. Early clarification on these roles and responsibilities would be welcome now so as not to cause delay, confusion or duplication of effort between the relevant parties, at a later date, as the detailed design work is undertaken.

Q10: Who do you believe is best placed to undertake the detailed design for assets that are in offshore waters?

We consider that the party best placed to undertake the detailed design for assets in offshore waters is the party responsible for delivering the asset(s). However, it is important that there is coordination between offshore developers, the ESO and TOs on the offshore developers' plans for the design of any potential offshore transmission infrastructure solution(s) and the envisaged landing point(s) which will connect to the onshore transmission system as the design and operational intent for any transmission infrastructure offshore will have potential implications for the design and operation of the onshore transmission system.

When referring to “*assets that are in offshore waters*” to avoid confusion between OFTOs and transmission infrastructure offshore, which fall under different licenced frameworks, we would suggest this term needs to be further defined to ensure there is no confusion as to the type of offshore assets being referred to.

Q11: 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.

The existing developer-led model has the strong advantage that offshore developers have a proven track record in developing and delivering transmission infrastructure offshore. Offshore developers are already familiar with current processes and understand the roles and responsibilities of the various parties involved. Therefore, design and development activity can start immediately, which will facilitate timely delivery of the important offshore infrastructure, necessary to meet the 2030 offshore wind targets.

The existing developer-led model also has the advantage of TOs knowing at the earliest opportunity, who the offshore developers are that they should be engaging with, as they undertake the detailed network design of the onshore requirements necessary to facilitate the necessary offshore connection(s).

We are therefore strongly of the opinion that existing delivery models, with parties already experienced in the delivery of transmission infrastructure offshore in GB waters, should be used to deliver the key strategic infrastructure under the Pathways to 2030 workstream. If Ofgem does intend to introduce new delivery models in the design and delivery of transmission infrastructure offshore, it should further consult upon, design, legislate for, and introduce new delivery models offshore under the Enduring Regime workstream, which has less pressing timescales and will not impact on the UK's ability to meet the 40GW of offshore wind target by 2030.

Q12: 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.

We welcome Ofgem's acknowledgement within this consultation document, that "*speed of delivery is a key factor considering the desire to facilitate the Government's objective of connecting 40GW of wind by 2030*".² We are strongly of the view that new delivery models for transmission infrastructure offshore, cannot be introduced within the Pathways to 2030 workstream, if they are intended to support delivery of the UK and Scottish Governments' targets to deliver 40GW and 10GW respectively of offshore wind by 2030. Given the long lead times for electricity transmission – design, development, consent, procurement and construction – action is required now, in 2021, to achieve the 2030 targets. This work cannot be subject to any additional delays which could be caused by fundamental changes to the regulatory regime, additional timescales for competitive tendering or through the use of parties inexperienced in delivering infrastructure offshore, which not only increases the risk of delay to important strategic infrastructure but the subsequent cost to GB consumers.

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With this pressing and ambitious 2030 target in mind, we offer comments on each of the proposed models for delivering transmission infrastructure offshore.

Model 1

The clear advantage to model 1 is that TOs already have a strong track record in developing and delivering transmission infrastructure offshore. Particularly for these offshore wind projects delivering to the tight timescale of 2030, offshore wind developers are already familiar with current processes and understand the roles and responsibilities of the various parties involved in delivering under model 1. Therefore, activity can start immediately, which should not delay the delivery of the important offshore infrastructure, necessary to meet 2030 target. However, it must be recognised that the TOs are not currently set up or resourced to undertake detailed design or pre-construction activity for offshore assets. Therefore, additional time will be required to undertake the necessary structural changes for TOs to put in place the necessary expertise to undertake this type of work.

² OTNR consultation (Ofgem) para 3.48

Importantly, as Ofgem recognise³ a comprehensive review would be required to understand what legislative changes may be required to ensure TOs can perform this role. A review and amendment of TOs licences and funding arrangements would also be required which we agree would involve significant work.

Model 2

In relation to the proposals for model 2, we believe that ideally the ultimate owner of the asset, in this case the appointed OFTO, should be responsible for undertaking the detailed design and securing the necessary planning permissions and landowner and marine consents, in a similar way to what is suggested in model 5. The ultimate owner of the asset must also be a licensed entity and bound by the same licence obligations to maintain an efficient, co-ordinated and economical system of electricity transmission, as existing parties currently are.

We do agree with Ofgem's assessment that the transferring of assets from the TO's regulated asset base in the RIIO framework is likely to be complex. Given that model 2 is very similar to model 6, where this delivery model already exists, we consider model 6 to be a much speedier and less complex delivery model, when compared to model 2, where regulatory practices have yet to be established. The time taken to create a new regulatory framework for the transferring of such assets will be complex and is likely to delay the delivery of this key strategic infrastructure.

Model 3

As per model 2, ideally the ultimate owner of the asset should be responsible for undertaking the detailed design and securing the necessary planning permissions and landowner and marine consents. The ultimate owner of the asset must also be a licensed entity and bound by the same licence obligations to maintain an efficient, co-ordinated and economical system of electricity transmission, as existing parties currently are. See further comments in the paragraph below on model 3.

Models 3, 4 and 5

Models 3, 4 and 5 all have similar characteristics in that they introduce competitive tendering at various parts of the project development, prior to commissioning, and also envisage newly appointed OFTOs constructing the new asset. Given that to date it is only existing TOs, offshore developers and interconnector developers who have successfully designed and delivered transmission infrastructure offshore, there is a risk that models 3, 4 and 5 could introduce new and inexperienced 3rd parties to the design and/or delivery of offshore transmission infrastructure which would bring additional risks to the delivery of the 2030 offshore wind target.

The additional timescales required for running any competitive tendering processes for appointing OFTOs is also likely to increase the risk of potential delivery delays, particularly given the tight timescales to 2030, when compared to existing industry frameworks. Models 4 and 5 propose models of early competition, which looking to the ESO's Early Competition Plan, envisages a timeline of 2.5-3 years⁴ to appoint a party to undertake the design and construction of the asset. Time is already pressing to deliver the necessary onshore and offshore infrastructure to meet the 2030 offshore wind target. Any delays to the design and construction of these assets by 2.5-3 years will undoubtedly impact on the ability to meet the target by 2030.

For models 3, 4 and 5, SPT's understanding is that a change in primary legislation is required, due to the introduction of new competitive processes. We also understand that changes are required to procurement rules to allow for these competitive tender processes to be catered for. We would

³ OTNR consultation (Ofgem) paras 3.49 and 3.72

⁴ Early Competition Plan (ESO) p 62, <https://www.nationalgrideso.com/document/191251/download>

welcome further details from Ofgem as to what changes are required and the timescales involved in making such changes.

If Ofgem does intend to introduce new delivery models in the design and delivery of transmission infrastructure offshore, it should further consult upon, design, legislate for, and introduce new delivery models offshore under the Enduring Regime workstream, which has less pressing timescales and will not impact on the UK's ability to meet the 40GW of offshore wind target by 2030.

Model 4

Under model 4, it is suggested that the ESO or the TO could take on the detailed design of the asset in question. The consultation rightly acknowledges that to date the TOs have experience in detailed design and that this is an area of competence that the ESO would have to develop, to take on this work. It seems a duplication of effort and skilled resource, which is already in short supply in this industry, for the ESO to upskill itself to undertake detailed design. Such a proposal is not in consumers or offshore wind developers' best interests as this will add unnecessary cost and delay to the delivery of this important strategic infrastructure.

In addition, it is surprising that Ofgem would propose and consult upon such a model, when it is not yet understood whether there is market appetite amongst the OFTO community to seek planning consent on a detailed design undertaken by another party. As per our comments above, ideally the ultimate owner of the asset should be responsible for undertaking the detailed design and securing the necessary planning permissions and landowner and marine consents.

Model 5

We note the point at para 3.61 that *"Removing the current distinctions between the onshore and offshore transmission regime could potentially even lead to just a single regime across onshore/offshore with a common model of competition further down the line and could e.g. be considered under the Enduring Regime workstream⁵".* If this is indeed being considered we would expect such proposals to be fully explored in an appropriately focused consultation engagement exercise on the future of network planning and not solely under the auspices of the OTNR's Enduring Regime workstream, which we understand will be consulted upon later in the year.

Model 6

The clear advantage to model 6 is that developers have a strong track record in developing and delivering transmission infrastructure offshore. Offshore developers are already familiar with current processes and understand the roles and responsibilities of the various parties involved in delivering under model 6. Therefore, design and development activity can start immediately, which should not delay the delivery of the important offshore infrastructure, necessary to meet the 2030 offshore wind target.

Q13: Please describe any feasible delivery options that we have not set out in this document.

We have no further delivery options to propose. As per our response to the above-mentioned question, we are of the view that existing delivery processes, with players experienced in the development of assets in GB waters, should be maintained under the two workstreams, in order to deliver the necessary infrastructure required offshore by 2030.

⁵ OTNR consultation (Ofgem) para 3.61