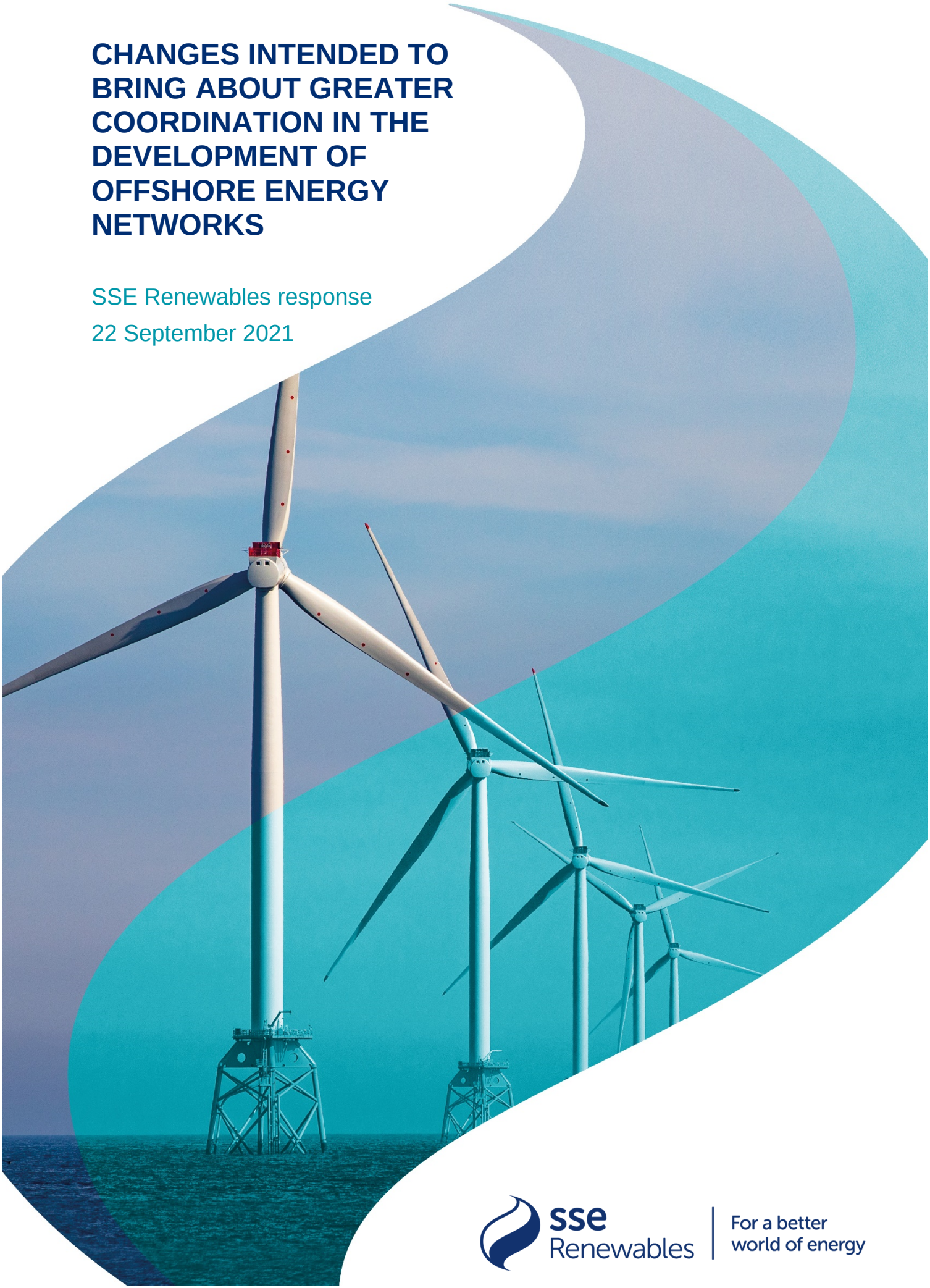
CHANGES INTENDED TO BRING ABOUT GREATER COORDINATION IN THE DEVELOPMENT OF OFFSHORE ENERGY NETWORKS

SSE Renewables response

22 September 2021



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EXECUTIVE SUMMARY

Introduction to SSE Renewables

SSE Renewables is a leading developer and operator of renewable energy across the UK and Ireland, with a portfolio of around 4GW of onshore wind, offshore wind and hydro. Part of the FTSE-listed SSE plc, our strategy is to drive the transition to a zero-carbon future through the world class development, construction and operation of renewable energy assets. We are aiming to deliver enough new renewable projects to generate 30TWh by 2030, trebling our renewable energy output from 2019 levels. This will make a significant contribution to decarbonising the power sector and achieving net zero emissions by 2050.

Summary of response

We welcome the opportunity to respond to this consultation. SSE Renewables fully support the objective of the Offshore Transmission Network Review (OTNR) to deliver future connections for offshore wind with increased integration while ensuring an appropriate balance between environmental, social and economic costs. We consider that a more integrated approach to offshore grid development will provide an effective foundation to meet the government target of 40GW of offshore wind capacity by 2030.

However, whilst we recognise that this consultation is the first one in a series of consultations looking to develop a detailed framework underpinning the OTNR objective, and the consultation document does broadly outline the overall direction of travel, it is frustrating that the proposals do not contain sufficient detail to remove uncertainty that offshore wind developers currently face under both the Early Opportunities and Pathway to 2030 workstreams.

Early Opportunities workstream – Governance

All offshore wind projects under development, which SSE Renewables fully owns or has a JV partnership in, and which have opted in to participate in the Early Opportunities workstream, have highlighted a lack of clarity in relation to the governance process underpinning this workstream. Whilst these projects have been in ongoing and regular discussions with Ofgem, BEIS and NGESO since the start of 2021, significant uncertainty still remains around different aspects of the pathfinder proposals with Ofgem's OTNR consultation providing little clarity to remove this uncertainty. In particular, while the projects recognise that Ofgem, BEIS and NGESO have been willing and open to bilateral engagement, none of the projects has received a formal feedback from these parties providing a consolidated view on the status of a particular proposal, next steps and actions on different parties to progress these proposals forward. In addition, timings of any crucial decisions that either projects or Ofgem, BEIS and/or NGESO are required to make for these proposals to progress, have remained unclear.

Early Opportunities workstream – Devex recovery

All affected projects within SSE Renewables are keen to work collaboratively with BEIS, Ofgem and NGESO and are willing to adapt some of the major projects to deliver the benefits of increased coordination.

However, there seems to be little recognition that these projects continue to incur development expenditure associated with their pathfinder proposals with little certainty provided to these projects at this stage that these proposals can and will be successfully implemented in practice.

All projects seek assurances from Ofgem, through a formal update in the existing Offshore Transmission Cost Assessment guidance, that devex associated with projects' involvement in the Early Opportunities workstream will be recovered through the final sale of transmission assets irrespective of whether and in which form any of the pathfinder proposals will be taken forward.

Similarly, consultation proposals do not provide any indication on how efficiency of the transmission design, and associated capex, will be assessed by Ofgem under the existing offshore transmission cost assessment process in a scenario where a particular project does not progress, for any reason, under the Early Opportunities workstream and does not get pulled into Pathway to 2030 but gets built under the radial point-to-point connection approach. Given that there are a significant number of factors outside of developers' control that might lead to this scenario, we seek assurance from Ofgem that capex will not be disallowed on the basis of a lack of coordination.

Early Opportunities workstream – TNUoS charging issues and CfD implications

Crucially, at this point, there remains significant uncertainty in relation to the Anticipatory Investment cost recovery, in particular with regards to how the 'user commitment' arrangement referred to in the consultation would work in practice, as well as the scope and details of the work NGESO is currently doing to determine the relevant allocation methodology and associated CUSC modifications. Furthermore, while the consultation suggests (Point 2.75) that no additional non-AI charging CUSC modifications will be required to facilitate pathfinder concepts, with no transparency around the work being done by NGESO in relation to AI-related charging, developers have currently little comfort that all relevant charging issues will be addressed solely as a result of NGESO's work.

Separately, in the instances where projects are being challenged by Ofgem and BEIS with regards to a lack of integration of their transmission infrastructure with other offshore wind developers, there seems to be little recognition that any cooperation and integration between different developers under the Early Opportunities workstream is likely to impact developers' competitive advantage in the CfD process.

We also note that the consultation document suggests that relevant changes to facilitate the pathfinder projects will take effect by June 2022. However, given that the CUSC modification process is industry-led, we are looking for further clarity from Ofgem on the steps it intends to take to ensure that this deadline is met. This in particular relates to Ofgem's power to grant urgency to relevant modifications but we also seek assurance that sufficient Ofgem and NGESO resource will be committed to this process once it commences.

Pathway to 2030 workstream – Delivery models

SSE Renewables agree that a holistic system design will result in a more coordinated and integrated offshore network development with this approach accounting for possible future requirements, a range of connection options and dates for the projects in pipeline, consequential effects on onshore system development, possible technology solutions and impacts on local communities and environment.

We consider that an optimal delivery model for the integrated grid by 2030 should be based on existing competencies and capabilities and lead to a streamlined and timely delivery of generation connections by 2030. It is also our view that a number of interfaces in the process should be minimised to ensure a smooth delivery.

While we agree that a developer-led approach to developing point-to-point connections should be retained in the instances where there is a clear benefit to do so, it is our view that offshore wind developers are not well placed to take on the delivery of the integrated offshore transmission infrastructure on behalf of other, potentially multiple, developers. There are currently no incentives for commercial developers to take on significant commercial risks and costs associated with the delivery of an integrated offshore grid. In addition, it is our view that offshore infrastructure developed and built by a third party should be completed *in advance* of the connection dates or appropriate processes should be put in place to ensure generators are compensated for any delays to their connections.

Pathway to 2030 workstream – Locational TNUoS

In addition, we consider that increased coordination and integration should lead to synergies associated with sharing of the network assets and thus, theoretically, should result in a lower overall cost of the network compared to the cumulative cost of radial point-to-point connections. In practice, while we welcome an objective of the holistic network design to minimise the whole system cost to the consumer while also meeting network planning and operational standards, we are concerned that the issue of locational TNUoS has not been explicitly acknowledged as part of the initial Pathway to 2030 proposals set out in the consultation.

Given that a holistic offshore network design is solely focused on achieving an optimum engineering solution, it seems perverse to continue to expose offshore generators to the locational TNUoS signal when these generators do not have any discretion over the choice of their connection under the holistic network design approach. Given the underlying locational TNUoS methodology, it is impossible for the projects to forecast their locational TNUoS charges over the project lifetime which results in CfD bids being based on significant assumptions and undermines predictability and stability of the revenue stream that CfD contracts are designed to provide.

Similarly to the view of SSE Energy Businesses[1] expressed in the response to Ofgem's minded-to-decision on the Access and Forward-looking Charges Significant Code Review, we consider that measures that would deliver significant improvement versus the status quo would be to flatten the TNUoS tariff gradient and provide certainty on future charges at the point of a developer's decision to invest. This would reduce the relative cost of northern TNUoS charges in a long-term bankable way whilst allowing developers to price TNUoS charges into their CfD bid prices, reducing risk premiums and cost of capital. A shorter-term measure that would not fundamentally resolve the issue but would improve awareness of cost and risk in the offshore wind industry would be through a requirement for NGESO to publish longer term TNUoS forecasts covering at least 10 years and preferably 25 years.

While we recognise that a different team at Ofgem is leading on the wider charging reform, we would welcome an acknowledgement of the locational TNUoS issue by Ofgem in its minded-to decision on this consultation due in December-January and clarity on the steps being taken by Ofgem to address locational TNUoS issues in the context of a centralised offshore grid development.

Pathway to 2030 workstream – ScotWind

[1] SSE's Energy Businesses comprise of the generation assets developed, owned and operated by SSE Renewables and SSE Thermal; Business Energy, SSE's non-domestic energy supply business; and the distributed energy solutions provided by SSE Enterprise.

Finally, it is evident that the offshore wind target of 11GW by 2030 for Scotland will provide a significant contribution to the overall target of 40GW by 2030 for GB. Therefore, it will be paramount to ensure that NGESO's modelling to develop the Holistic Network Design takes account of the full range of Scottish offshore industry activity.

We welcome an inclusion of the Marine Scotland Sectoral Plan, which articulates the spatial framework to inform the Crown Estate Scotland leasing process, as one of the inputs in the modelling exercise underpinning the development of the Holistic Network Design. We also welcome an inclusion of Concept 6 under the Early Opportunities workstream, which involves the connection of a demand customer to an offshore transmission system, as an example of a transmission infrastructure design that could allow for the electrification of oil and gas platforms and would allow for coordination across energy sectors.

Finally, similarly to other projects under the Pathway to 2030 workstream, the holistic network design approach and the changes required in the Connection and Infrastructure Options Note (CION) process create uncertainty and risk to ScotWind project timelines. To this end, we are looking for an update from NGESO, similar to the Offshore Coordination Phase 1 Final Report[2] published in December 2020, on how Phase 2 of NGESO's work is progressing. In particular, in relation to workstream 4 under Phase 2 of NGESO's work, we are seeking further details on how the review of the CION process is ongoing to implement improvements that drive and encourage coordination.

Separately, given a significant pipeline of wind generation projects coming online by 2030, further consideration should be given to the necessary supply chain developments to accommodate this growth in a strategic way and the UK leadership position in emerging technologies such as HVDC.

Our detailed views in response to the consultation questions are outlined further in the document.

[2] download (nationalgrideso.com)

ANSWERS TO CONSULTATION QUESTIONS

Early Opportunities workstream questions

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

We consider that bilateral engagement between Ofgem and developers since the publication of the BEIS/Ofgem Open Letter on offshore coordination in August 2020 should have resulted in an exhaustive list of concepts.

However, we note that the concepts outlined in the consultation provide a simplified picture and, therefore, in some instances it might be the case that these concepts could capture a wider range of proposals not limited to a short narrative provided by Ofgem around these concepts.

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

Yes, it is appropriate for some level of anticipatory investment to be shared with consumers. It is our view that the split should be proportional to the consumer benefits and should be supported by the outcome of the Cost-Benefit Analysis by NGESO and any additional evidence and analysis provided by a specific project.

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 for investment should be jointly assessed by a developer and NGESO. In particular, where there is a need for specific analysis to be provided by NGESO, similar to the NOA, this should be done within the reasonable timescales appropriate for each project, for example, within 1-2 months from the point the need for this analysis was recognised by all parties in the process. This will allow a developer to progress with its proposal having certainty that the benefits of the project are adequately recognised by relevant parties. Furthermore, additional analysis can be provided by the project, with an involvement of independent consultants if required.

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

Connection offers/agreements from NGESO can be used to demonstrate the current connection plan. Project certainty can also be confirmed by sharing the evidence of secured seabed lease and demonstrating the consents progress. Separately, for some projects their intent to connect could be demonstrated by robust evidence not specific to the above which could be agreed on a case by case basis.

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

We consider that Ofgem's consultation outlines a high-level view on the barriers that need to be addressed, however does not provide sufficient detail to remove significant uncertainty associated with the development of the projects under this workstream.

<u>Lack of clarity on interactions between workstreams</u>

We acknowledge that there is merit in allocating projects at different stages of development into separate workstreams. However, in some cases, in particular for more advanced projects with

connection dates in early 2030s, larger consumer benefits of coordination could be captured where these projects have an opportunity to switch from the Early Opportunities to Pathway 2030 workstream with an earlier connection date guaranteed to a project as a result. While the consultation document suggests that it is possible to switch from one workstream to another (Point 3.3), no clarity or detail is provided on the steps needed to be taken by the projects to pursue a change in the workstream. More importantly, the consultation does not recognise that in certain instances larger benefits of offshore coordination can be delivered where some projects, where there is merit to do so, continue to maintain optionality and progress under both workstreams until such point when clarity and certainty on connection dates under Pathway to 2030 is provided.

We acknowledge that some clarity on interactions between workstreams has been gained through bilateral engagement with Ofgem and NGESO on a project-by-project basis. However, a lack of formal and clear outline of the process underpinning both the Early Opportunities and Pathway to 2030 workstreams hinders the projects' understanding of any optionality that can be maintained and key dates by which decisions are required to be made.

Charging issues

While we welcome a high-level outline of how charging issues are expected to be addressed under the Early Opportunities workstream, the consultation does not provide a sufficient level of detail to remove uncertainty for pathfinder proposals.

While a broad description of the approach to anticipatory investment cost allocation has been provided, no specific details and processes underpinning the "user commitment" arrangement in the context of the offshore grid development have been included in the consultation. Details on this arrangement are paramount for the projects that consider, or are being encouraged, to take on the additional risk of developing the shared transmission infrastructure on behalf of other projects in less advanced stages of development.

Separately, we note that the consultation document (Point 2.75 and Table 1) suggests that no additional developer-led modifications would be required to facilitate specific concepts within this workstream. While this statement might provide some comfort to some projects that CUSC modification proposals being developed by NGESO would be sufficient in resolving any charging uncertainty, without any involvement in or transparency around the development of these proposals, most developers are left at risk of identifying unresolved charging issues only after NGESO formally submits these proposals through the industry-led CUSC process at some point in 2022. We request further clarity on the scope of NGESO-led proposals as soon as practicable.

We also note that the consultation document suggests that relevant changes will take effect by June 2022, however, given that the CUSC modification process is industry-led, we are looking for further clarity from Ofgem on the steps it intends to take to ensure that this deadline is met. This in particular relates to Ofgem's power to grant urgency to relevant modifications but we also seek assurance that sufficient Ofgem and NGESO resource will be committed to this process once it commences.

Other costs

- *Devex*

Consultation proposals do not highlight how devex related to pathfinder proposals will be considered in the existing offshore transmission cost assessment process in the scenarios where a particular pathfinder proposal does not, for any reason, go ahead or where a developer opts out of the Early Ops workstream and is pulled into Pathway to 2030. Similarly, no clarity on devex

recovery is provided to projects which continue to consider multiple options under the Early Opportunities workstream due to additional analysis required from other partiers, such as NGESO, to progress or eliminate any of these options.

- *Capex*

Similarly, consultation proposals do not provide any indication on how efficiency of the transmission design will be assessed by Ofgem under the existing offshore transmission cost assessment process in the scenario where a particular project has not progressed, for any reason, under the Early Ops workstream, has not been pulled into Pathway to 2030 but gets built on the radial point-to-point connection basis. Given that there is a significant number of factors outside of developer's control that might lead to this scenario, we seek assurances from Ofgem that capex will not be disallowed on the basis of a lack of coordination.

Clarity on the above points would be highly welcomed by developers as soon as practicable.

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?

Given the time pressure associated with the projects under the Early Opportunities workstream, we consider that an SCR would be impractical. We support Ofgem's proposals for NGESO to lead on the CBA required to determine an appropriate AI cost allocation methodology for each of the concepts and develop and raise relevant CUSC modifications to implement this methodology within existing charging arrangements. However, similarly to the comments made earlier, we would welcome further details, as early as practicable, on the scope of these modifications to ensure that each project has sufficient time to assess these proposals and consider wider charging issues that might need to be addressed by each project.

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

We consider that Ofgem's approach of allocating pathfinder projects into concepts and directing NGESO to lead the development of charging changes required to facilitate these early coordination projects by mid-early 2020s is appropriate. We also consider that the relevant changes which Ofgem intends to put in place through updating relevant offshore transmission tender guidance documents, in particular in respect of devex and capex recovery, will further provide the required certainty to facilitate early coordination.

However, we consider that this workstream risks to not deliver anticipated benefits of early coordination if the process underpinning it does not pick up pace both in terms of providing regulatory certainty required by the projects but also in relation to the support these projects receive from all parties, including NGESO and TOs, to progress forward. A specific improvement to the process could involve assigning a project manager at NGESO and, where appropriate a TO, to help projects navigate through the decision-making process underpinning the early workstreams of the OTNR led by Ofgem and NGESO.

Pathway to 2030 workstream questions

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 agree that a holistic system design will result in a more coordinated and integrated offshore network development as it would take into account possible future requirements, a range of connection options and dates for the projects in pipeline, effects on onshore system, possible technology solutions as well as impacts on local communities and environment.

We also consider that coordination should lead to synergies associated with sharing the network assets and thus, theoretically, should result in a lower overall cost of the network compared to the cumulative cost of radial point-to-point connections. In practice, while we welcome an objective of the holistic network design to minimise the whole system cost to the consumer while also meeting network planning and operational standards, we are concerned that the issue of locational TNUoS has not been explicitly considered as part of the initial Pathway to 2030 proposals set out in the consultation.

In particular, we are concerned about a lack of acknowledgment that a central top-down approach to offshore network development gives no consideration to locational TNUoS which, as it currently stands, is designed to incentivise efficient incremental network development and reinforcements and to influence generators' decisions to connect at a particular geographical point onshore. Given that a holistic offshore network design is solely focused on achieving an optimum engineering solution and does not provide any discretion to generators about the choice of location on the system, it is evident that the essence and the need for locational TNUoS in the context of offshore wind development must be reconsidered.

While we support a targeted SCR to develop and implement charging changes to facilitate Pathway to 2030, we recognise that it will be challenging to implement relevant locational TNUoS reforms in time to facilitate offshore wind connections by 2030. However, we are looking for an acknowledgement from Ofgem in its minded-to-decision due to be published in December 2021-January 2022 of the locational TNUoS issue in the context of the offshore network development.

Separately, while we are supportive of the targeted SCR to facilitate this workstream, we are looking for imminent clarity on the scope and the timelines for the SCR to provide comfort to the projects under these workstream that relevant changes can be put in place in a timely manner. We welcome Ofgem's indication that changes could be implemented by September 2022 however would like to see further details around the delivery timeline to have certainty that this date is realistic.

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

We welcome a creation of the Central Design Group (CDG) and the details on the terms of reference for this group set out in Appendix 1 of the consultation. While we understand that the party responsible for Detailed Network Design (DND) offshore is yet to be determined, we note that the document does not provide much guidance or direction on the planned work to underpin the DND offshore.

We agree with Ofgem's statement that the DNDs for both offshore and associated onshore assets should built on the initial requirements set out in the Holistic Network Design (HND) by NGESO and that both designs should seek to address key environmental and other issues identified in the HND and mitigate these as applicable.

Given that Ofgem has already determined a TO to be the best party to develop the DND onshore, we agree that TOs should adhere to existing RIIO-T2 principles when developing the design for onshore assets with an ultimate view to construct these assets and recover respective costs through the existing RIIO framework. In terms of the DND offshore, our view is that similar standards and requirements currently applicable to onshore transmission network development should be extended to offshore network design.

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

We consider that parties with existing experience and capabilities of developing the detailed design of network assets should be responsible for the DND offshore. It is also our view that coordination of design development onshore and offshore will be paramount to ensure that the overall design is adequately developed.

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.

We agree that the existing developer-led approach should be retained for the projects where options assessed through the Cost-Benefit Analysis as part of the Holistic Network Design confirm that an integrated solution is more *expensive* compared to an uncoordinated point-to-point solution for a particular site.

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.

We consider that an optimal delivery model should be based on existing competencies and capabilities and lead to a streamlined and timely delivery of generation connections by 2030. It is also our view that a number of interfaces in the process should be minimised to ensure smooth delivery. We also consider that offshore infrastructure required to connect the projects should be completed in advance of the connection dates, for example, a year before, or appropriate processes should be put in place to ensure generators are compensated in case of any delays to their connections.

<u>Delivery Model 6 (Status Quo)</u>

While we agree that a developer-led approach to developing point-to-point connections should be retained in the instances where there is a clear benefit to do so, we do not believe that offshore wind developers are well placed to take on the delivery of integrated offshore transmission infrastructure on behalf of potentially multiple developers. There are currently no incentives for commercial developers to take on significant commercial risks and costs associated with the delivery of the integrated offshore grid by 2030. With TNUoS costs continuing to be a major constituent of the CfD bids, any cooperation and coordination between developers in respect of the integrated offshore grid infrastructure (not led by the third party) risks in these developers losing their competitive advantage in the CfD process. Separately, but in line with the above and the comments we have made in relation to locational TNUoS earlier, it seems perverse to continue to expose offshore generators to the locational TNUoS signal when these generators do not have any discretion over the choice of their connection under the HND approach. Given the underlying locational TNUoS methodology, it is impossible for the projects to forecast their locational TNUoS charges over the lifetime of the project which results in CfD bids being based on significant

assumptions and undermines predictability and stability of the revenue stream that CfD contracts have been designed to provide.

Other Delivery Models

We consider that existing Offshore Transmission Owners (OFTOs) do not have the necessary capabilities and structures to take on a larger role in delivery of the offshore grid by 2030. Therefore, it is questionable whether Models 3, 4 and 5 can be successfully taken forward despite possible benefits of early competition outlined in the consultation document.

We consider that Models 1 and 2, with a TO playing a significant role in delivery of the offshore grid, should be considered in further detail, in particular in relation to the regulatory changes required to facilitate either of these models. From a developer perspective, Model 2 introduces an additional step of handing over completed assets from a TO to an OFTO which, depending on the tender timelines and issues, could risk delaying respective connection dates. In addition, we do not see any significant benefits of the OFTO operating the network except for efficiencies around operation and maintenance costs which could be marginal compared to the value of the lost generation output if a connection date was delayed due to the tender process issues.

Question 13: Please describe any feasible delivery options that we have not set out in this document.

We have not identified any additional feasible delivery options that could be considered under Pathway to 2030 workstream.