Email to:
Cher-Rae Fairlie & Viljami Yli-Hemminki, Offshore Coordination team, Ofgem
offshore.coordination@ofgem.gov.uk

15 July 2022

Dear Cher-Rae and Viljami,

Minded-to decision and further consultation on Pathway to 2030

About RenewableUK
RenewableUK's members are building our future energy system, powered by clean electricity. We bring them together to deliver that future faster; a future which is better for industry, billpayers, and the environment. We support over 400 member companies to ensure increasing amounts of renewable electricity are deployed across the UK and to access export markets all over the world. Our members are business leaders, technology innovators, and expert thinkers from right across industry.

RenewableUK and our members welcome the opportunity to respond to this follow-up consultation on the *Pathway to 2030* workstream. We have strongly supported the work of BEIS, National Grid ESO and Ofgem during the Offshore Transmission Network Review (OTNR), and will continue to do so as the Review progresses. RenewableUK members have consistently highlighted the need to move away from the current system for offshore transmission (which encourages point-to-point radial connections) to one that enables a more coordinated offshore network. The future deployment of offshore energy/wind generation will benefit from a more sophisticated, innovative offshore transmission network, which the regime we have today may not be able to support; we are pleased that the minded-to document sets out steps to address these issues.

General points

- Regarding Ofgem's minded-to decision to apply the 'very late competition – generator build' (*delivery model option 6*): we think that realistically, this is the only sensible option for delivering *Pathway to 2030* projects in time to meet climate targets. This option is an evolution of a tried and tested delivery model that has been used since 2009, which has successfully delivered over 10GW of offshore wind in GB while lowering the levelised cost of electricity over the same period. In addition, Ofgem should ensure that the OFTO build route stays open for coordinated projects, rather than taking this option off the table. This will allow developers to take a commercial decision based on their view of the risk and deliverability.

- We would caution that Ofgem should not underestimate the challenge of asking developers to coordinate. According to the consultation document: "*there is anecdotal evidence that… developers would be willing to coordinate (based on stakeholder engagement)".* In reality, while they may indeed be willing to coordinate there are still limited incentives for developers to do so, though the National Policy Statement will provide some 'stick'. However, any such negotiations will likely be commercially and technically complex, taking multiple months or even years to complete.

- The scale of the work programme required by Ofgem should not be underestimated either. This includes putting in place a governance framework to identify where responsibilities lie, who has the authority to make decisions, and who is accountable across the various areas of co-ordination (this includes the sharing of commercially sensitive information). We would therefore like to see a work programme setting out timescales for delivering different aspects including the governance framework as well as how Ofgem will engage with developers and other stakeholders (e.g. NGESO).

- Timing is crucial. For projects to be delivered by 2030 (via a continuous and steady pipeline needed to support and develop the local supply chain), the early design work will need to be undertaken at the latest by 2025, and construction in the second half of this decade. In developing the *Pathway to 2030* workstream, we need to be sure that the solution can be delivered by parties with the right skills and experience to command the confidence of the development community and, crucially, be delivered without creating delays. Given the volume of offshore wind and the associated offshore transmission assets required to deliver it, there is an opportunity for UK leadership in emerging technologies such as HVDC as well as offshore hydrogen electrolysis and floating offshore wind.

- We note that Ofgem's minded-to decision in this document will only apply to ScotWind and Crown Estate Leasing Round 4 (LR4) projects. The Holistic Network Design (HND) includes plans for up to 1GW of floating wind as part of the upcoming Celtic Sea leasing round. The Crown Estate recently stated that it will be tendering larger, GW-scale projects which may be developed in a phased or 'steppingstone' approach, and we would welcome greater clarity on the delivery model for the Celtic Sea in future.

We have responded to the individual consultation questions below. RenewableUK would be keen to engage further with this agenda and are happy to discuss our response in more detail.

Yours Sincerely,

Daniel de Wijze

Policy Analyst (Networks & Charging)
RenewableUK

Decision on delivery of radial assets in scope of Pathway to 2030

We agree with Ofgem's decision to maintain the existing generator build and OFTO build options where the HND recommends a radial solution. There are clear incentives in place for the developer to deliver economic and efficient offshore connections. If the HND has a preference for a radial connection, the developer-led approach will still deliver optimal offshore grid.

Minded-to decision on non-radial assets in scope of Pathway to 2030

1. Do you agree with the findings of the draft impact assessment published alongside this document?

1.1 We think that the 'very late competition – generator build' (*delivery model option 6*) is realistically the only sensible option for delivering *Pathway to 2030* projects in time to meet climate targets. A third party delivery model or TO build carries too high a risk of delays. Developers are experienced at designing and building offshore transmission infrastructure, and have a natural incentive to complete detailed network design, pre-construction and construction as quickly as possible. In other words, the need to secure a route to market means that there is a strong incentive already in place.

1.2 The challenge to this comes with the addition of coordination and shared transmission assets; developers are expected to work together despite being constrained by a system that is encouraging competition, for example via CfD auctions. We address some of the specific issues this causes in later questions. We hope that the HND will help in this regard, as developers will have advance knowledge of the projects nearby, as well as how they are expected to connect to the Main Interconnected Transmission System (MITS).

1.3 We note that Ofgem currently accepts two pathways when delivering radially connected sites – generator build and OFTO build. As the OFTO build model does not require additional regulatory change we believe that this option should also be open to coordinated grid delivery. When considering the additional commercial risks associated with coordinated solutions, third party delivery through the OFTO build model could provide another solution to enable coordination and would allow developers to select the most appropriate route forward for the delivery of their grid connection.

1.4 Under a coordinated grid scenario, the risk reward profile for developers significantly changes compared to a radial solution. Under a coordinated solution, the developer(s) may be responsible for consenting, designing and delivering the grid connections for projects that are direct competitors. Ofgem should consider the interaction between this minded-to position and competition law to ensure compliance (competitors may need to collaborate on a number of aspects, including schedule, technology type and other commercial elements). Overall, we believe that Ofgem has a greater role to play in laying out the commercial frameworks required to enable developer-led coordination, including outlining guidance on how cooperation agreements could be structured, and how delivery and operational risks that are outside of the control of one of the developers could be mitigated. We would encourage Ofgem to outline a selection of high level suggested cooperation models that could adopted by developers to deliver coordinated grid. These could include a lead project approach or an offshore grid delivery joint venture.

1.5 The cashflow impact associated with building a grid connection for another project could be significant (millions or even billions of pounds). Although the majority of the capital will be recovered via the tender process, there is still a timing consideration. We also note that the lead developer could face the cost disallowance risk for assets it is building for a third party, and this approach could disincentivise coordination.

1.6 Looking at the assumptions made in the draft impact assessment, RenewableUK members agree that the estimated cost of delays, from carbon costs and annual fees to the Crown Estate, outweighs the potential savings from earlier competition. We note that procurement may be a challenge – for instance, HVDC procurement can take more than five years.

1.7 Overall, we believe that it is correct to exclude non-leased offshore wind projects from the *Pathway to 2030* regime. We believe that new leasing rounds, for example Celtic Sea and INTOG, should form the basis of the *Enduring Regime*. This will allow BEIS, Ofgem and the

Crown Estate/CE Scotland to consider the grid process up front, increasing certainty for developers in the long term. If this approach were to be adopted we note the importance of providing clarity on the grid regime before leasing rounds are run, so developers can factor this into their bids.

2. Where you disagree with the draft IA, does this raise any issues with our minded-to decisions?

2.1 We have concerns regarding the construction timescales assumed within the draft IA. Sections 5.18 and 5.23 indicate that the delivery window for the coordinated assets is assumed to be between 3-5 years, but we believe that this timescale is optimistic given current market conditions, as well as the fact that many of these projects will be first-of-a-kind. In particular, it would be challenging to achieve those timelines for some of the more complex designs being proposed by the HND (e.g. multi-terminal HVDC systems, non-radial assets etc.).

2.2 The draft IA has not considered the different risk profiles for transmission assets; for example, the difference between connecting offshore wind generation only, or providing wider system benefits (such as boundary relief). Transmission assets providing wider system benefits could be integral to the operability and security of the GB transmission system. NGESO and TOs will need to play a greater role in designing these solutions to ensure that they are sized to accommodate boundary flows across transmission constraints. Therefore, we believe that the delivery of these solutions might better sit with the TOs, aligned with the delivery of bootstraps as highlighted in the NOA. If these solutions were delivered under the developer led OFTO regime, the risk/reward profile of providing wider system security could impact on the financing rates of the assets.

Pathway to 2030 – gateway assessment process

3. Do you agree with the proposed introduction of a new Tender Entry Condition in the Tender Regulations requiring the confirmation of the offshore transmission system as 'economic, efficient and coordinated'?

3.1 We approve of introducing a new Tender Entry Condition. Ensuring that offshore transmissions assets are approved ahead of OFTO transfer process will provide much-needed certainty for developers and investors. Regarding the phrase "economic, efficient and coordinated", it is important Ofgem's interpretation of this is clear. A coordinated grid will still include some radial connections; Ofgem should acknowledge that sometimes a radial link is the best solution, for instance as recently specified in the Holistic Network Design (HND).

4. Do you agree with the introduction of the proposed gateway stage assessment process?

4.1 Yes, we agree with the introduction of a gateway stage assessment process, in order to provide developers with more certainty about the assets they intend to develop. Assessment and approval by Ofgem should consider reduction in the size and scale of infrastructure, environmental and societal impacts, risk on the expectation of all connectees delivering, and the ultimate exposure of the consumer. We agree with the decision not to undertake a cost assessment at this stage.

4.2 Only projects with an agreement for lease (AfL) should be considered eligible for the gateway process, in line with Ofgem's view that the *Pathway to 2030* regime only covers ScotWind, Crown Estate LR4 and one LR 3 project. We agree that projects should be in scope of the HND, and note that early developer engagement in the HND process would help to ensure that the HND outcomes are deliverable, and therefore more aligned to the later gateway assessment. In the case of offshore wind projects using a MPI as their link to shore, Ofgem should make accommodations, despite MPIs not being subject to an AfL. This is because MPIs can bring similar coordination benefits to coordinated offshore wind.

5. Do you think the information sought as part of the gateway assessment process is appropriate and proportionate? Is anything missing?

5.1 As part of the gateway assessment process, Ofgem has a proposal to ask developers for a "detailed description of proposed infrastructure". At early stages in development (i.e. before the DCO envelope is finalised), providing this information may prove challenging as it is subject to change. Details of design can and do change due to a variety of factors, such as environmental, investment available, or local community demands. Ofgem must allow for this within the assessment process.

5.2 The assessment process also asks for a description of the interactions between all users and prospective users. Detailed information on interaction between users might need to more defined and could outline how cooperation intends to work, including where and which parties will take the lead on specific processes and their internal disputes resolution processes. However, if developers are using anticipatory investment to build transmission assets that allow later users to connect, they may not know all the details for future projects. Again, this should be allowed for as part of the assessment process.

5.3 We note that at this stage a timeline will be indicative and reliant on a number of processes, including planning and internal progression of the site, which could be aligned to wider portfolio and financing requirements. At this early stage it might not be possible to provide the detailed assumptions around the anticipatory investment split by project, so this should be provided at a high level. We also believe it will prove challenging for two competitors to agree on how the overall grid spend should be allocated to each project, and believe that Ofgem may need to play a role in guiding this allocation in some cases. An *ex ante* cost assessment (prior to CfD) might be required for coordinated assets, this would ensure that the first projects understands the level of cost disallowance before bidding for a CfD contract. If a project is facing cost disallowance for delivering anticipatory investment, this would likely cause a barrier to investment.

6. Do you have any views on the timing of the gateway assessment process?

6.1 The timing of the gateway assessment process should be early on in the development of an offshore wind project. Ofgem's suggestion of ideally no less than 12 months before the developer's intended date for issuing its final statutory planning consultation seems sensible. This is early enough in the development process for allow for changing of decisions related to design, procurement etc. However, for the first projects going through the assessment process, the 12 month time limit needs to be flexible, otherwise it will push out project timelines. This is because the framework is unlikely to be in place in time for these projects to submit information 12 months in advance of applying for planning consent.

6.2 In the minded-to document, Ofgem states that it will conclude the assessment *"as soon as reasonably practicable"*. This is too vague; if the aim is to reduce uncertainty for developers

during the planning process, a clearer idea of timings will be required. The gateway assessment process will add some time to the windfarm development process, therefore Ofgem should provide a clear indication on the length of the sign off process and aim to run the whole assessment in the most efficient way possible. We agree that the robustness of the application will aid in this process.

6.3 RenewableUK members would also like to understand the steps that will be followed if the design of the offshore transmission is rejected by Ofgem for not being economic, efficient or coordinated enough. What is the follow-up process, and will developers be able to appeal and the timescales associated with this? Where coordination does not impact on the planning envelope there might be scope for a later assessment process, we would expect that developers would require a clear outcome from Ofgem to allow them to finalise their design freeze (required to enable the procurement process) as this feeds into pricing, engineering assessment and CfD bids.

7. Is there any other information which you believe should be included in the confirmation to developers?

7.1 Overall we agree, at a high level, that the confirmation information and process outlined by Ofgem provides the appropriate level of comfort for developers to progress with their transmission design. However, we would welcome the opportunity to comment on the detailed wording included in the approval letter. We welcome Ofgem's indication that the cost assessment guidance will be updated to account for coordinated transmission and look forward to responding to any consultation on this in due course, particularly as the 2022 cost assessment update was not subject to industry consultation.

7.2 In addition to a significant cashflow impact, the project undertaking coordinated transmission development and construction could face a large cost disallowance risk for infrastructure related to the second project. Additional clarity around the treatment of cost disallowance related to anticipatory investment could reduce one of the risks associated with coordinated transmission delivery.

7.3 Overall, we question whether the *ex post* cost disallowance process provides best value to the electricity bill payer, as developers have to factor in a conservative cost disallowance risk premium into their CfD bids as opposed to the actual cost of transmission delivery which could be determined pre-CfD on an *ex ante* basis and factored into the CfD bid. Ofgem may wish to consider an *ex ante* process (prior to CfD bids) in the future which is more aligned to onshore transmission delivery models.

7.4 There should be a high-level decision on which aspects will be considered for the benefit of the project only, and which aspects will be anticipatory investment for other projects or wider network benefits. There also needs to be the potential for ongoing discussion with Ofgem on this, such that decisions are not left until the OFTO cost assessment process, a point too late on for developers to change anything. Where developers fail the assessment, there needs to be clear, specific reasons provided to enable them to amend plans efficiently such that they become acceptable.

Very late competition model tender policy

8. Do you think changes are required to the current process to facilitate a very late competition model for non-radial assets?

8.1 As the network evolves to include non-radial offshore transmission assets, the role of OFTOs will shift, to include providing National Electricity Transmission System (NETS) services and boundary relief, rather than simply facilitating a one-way flow of electricity to shore. Unlike the OFTOs of today, the risks that come with these assets breaking down are more widely spread, affecting not just a single offshore wind farm, but the wider network as well. With this in mind, changes are required around fair allocation of risk and asset health for transmission assets.

8.2 Developers may not wish to take on wider offshore transmission infrastructure works that are identified in the HND, given that there is a lack of incentive for them to do so. The main incentive to undertake generator-build at present is in ensuring delivery of the offshore transmission assets for the developer's own project(s) and controlling spend and risk therein. Adding in extra parties and duties adds risk that is outside of the developer's control. For example, we would like to understand what would happen if a developer undertaking offshore transmission works (for projects connecting later) is required to change their generation project plans, or have to terminate the project.

8.3 All economic and efficient investment in non-radial assets by the first generator to connect to coordinated transmission assets needs to be paid for by the first OFTO. This is particularly important where the economic and efficient development and construction of non-radial assets requires Anticipatory Investment (AI). It would be inefficient to make the first generator bear the risk that subsequent projects using the transmission are delayed or are never delivered. In order to enable AI in a timely manner and with a low cost of capital, Ofgem and the regulatory system need to provide the first generator with confidence that it will be fully reimbursed. In the same vein, the second project should not bear that risk that delivery of a system outside of its control is delayed, and this project needs to be protected from programme or quality issues.

8.4 Prior to bidding in for a CfD, developers need sufficient certainty on their grid costs. This means that the TNUoS framework for a coordinated grid needs to be clear, investable and fair. This includes the offshore long circuit costs and the wider costs of TNUoS. Currently, it is not clear how TNUoS costs will be allocated between parties; where the HND is for the benefit of consumers and not the project we think they should be considered as wider network benefits and should be charged as such. Additionally, consistency with the onshore framework also needs to be considered. We understand that Ofgem and ESO are already considering the required changes in this area, through the work of the TNUoS Task Force.

8.5 The very late competition model requires developers to do detailed network design (DND), but in a more coordinated system, they will need support from ESO and the relevant TO, to ensure that the transmission asset do not just meet the generators requirement, but the wider system as well. This may have been outside the developers' skills and resourcing to date.

Policy considerations for implementing non-radial offshore transmission

9. Do you think changes are required to the current package of OFTO obligations and incentives due to the introduction of non-radial offshore transmission assets?

9.1 The current OFTO incentives and obligations were designed for radial HVAC connected transmission networks, and will need to be changed as more non-radial assets are added to the system (changing technologies and levels of redundancy within the network). A revised package of incentives and obligations needs to be developed that fits the technological

features of coordinated offshore transmission, improving access to the network and routes to market for offshore wind farms. Where there is more than one connection to shore, each project should have responsibility for at least one of those connections to retain some control over their ability to export.

9.2 We are pleased that Ofgem has acknowledged the need for the current OFTO regime to change in order to support the work of the OTNR. The OWIC paper *Transmission Review Short-term Solutions*[1] highlights a number of the changes that are required, with a particular focus on fair allocation of risk and assets health for transmission assets.

9.3 A powerful availability incentive is required to deliver economic levels of maintenance, expenditure, and sustained high levels of availability. We want to highlight that the current availability target of 98% mentioned in section 6.5 of the consultation document is a reasonable goal. This is given the state of art systems plus operational experience of submarine cable systems (where most of the predicted non-availability occurs). A high target may require whole redundant systems, which would increase system costs. Any changes should reflect up-to-date evidence as more HVDC systems are installed and operated.

9.4 As coordination becomes more commonplace, the offshore grid will start to become more similar in structure of the onshore grid. With this in mind, wind farms should be compensated for lost revenue during outage periods, as per firm onshore connections. If multiple wind farms are connecting to an offshore transmission link at different times, will the wind farm that is first to connect receive compensation for pausing output while the second windfarm is connected in?

10. Do you think changes are required to other aspects of the OFTO regime, eg asset life or duration of the revenue stream?

10.1 New build offshore wind farms are expected to have lifetimes of over 30 years, a figure backed up by the assumptions made in the BEIS generation cost report[2]. As such, the length of the Tender Revenue Stream (TRS) needs to be extended to at least 30 years to match this. We also note that Ofgem have launched a separate consultation[3] (22 June 2022) on the end of TRS, and we will be responding to this in due course. The work from these two consultations should be aligned wherever possible.

10.2 An existing issue for developers which will be exacerbated by the introduction of non-radial assets is the Generator Commissioning Clause (GCC). This clause requires the divestment of transmission assets from developer to OFTO within the 18 months after issuance of the completion notice. The 18 month deadline creates strong pressure to divest transmission assets as quickly as possible, a risk for that is not mirrored by the potential bidder. This uneven balance of risk between generator and OFTO creates commercial leverage for the OFTO, and forces generators to accept unfavourable terms. As coordinated projects are introduced, which feature larger and more complex transactions, the GCC timeline will become even more unfair. We recommend that Ofgem consider supporting the development of a standardised interface agreement as a starting point for customisation and

[1] Available at https://www.owic.org.uk/publications

[2] Page 11, available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/911817/electricity-generation-cost-report-2020.pdf

[3] Available at: https://www.ofgem.gov.uk/publications/offshore-transmission-owner-end-tender-revenue-stream-consultation-concerning-policy-development

negotiation.

10.3 At a minimum, the GCC should be extended to 24 months. However, RenewableUK members believe that Ofgem should gain the power to alter the GCC as required, rather than forcing developers to apply to the Secretary of State for an exemption. This change should be included in the Energy Security Bill, currently before Parliament. An alternative solution would be to amend primary legislation to state that the GCC does not apply during the time the generator is participating in a tender process run by Ofgem.

10.4 OFTOs currently control the offshore platforms, the only practical location to site a helicopter landing deck within a wind farm. While OFTOs tend not to use helicopters, preferring to maintain their assets using marine vessels, from an emergency perspective, a helideck provides a safe place should a helicopter (i.e. logistic support or Search and Rescue) require an immediate landing following a technical malfunction. It also provides a location for a helicopter to land to conserve fuel during an offshore emergency, negating the requirement to return to shore to refuel and delaying casualty recovery. With this in mind, the safety function role of offshore platforms could be taken into account.

10.5 Other changes to the OFTO regime include issues around who pays for decommissioning at the end of the asset lifetime, particularly if multiple wind farms are connected to the same offshore transmission infrastructure.