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Dear Jon,

**Ofgem -Offshore transmission - [Consultation](#) on potential measures to support efficient network coordination<sup>1</sup>:**

**RenewableUK consultation response**

RenewableUK is the trade and professional body for the UK wind and marine renewables industries. Formed in 1978, and with over 660 corporate members, RenewableUK is the leading renewable energy trade association in the UK, representing the large majority of the UK's wind, wave, and tidal energy companies. Our members include supply chain companies both manufacturing and services; renewables developers & generators; and energy companies with renewables' portfolios. The association's response aims to represent wind, wave and tidal industries, aided by the expertise and knowledge of our members.

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1

<http://www.ofgem.gov.uk/Networks/offtrans/pdc/cdr/2012/Documents1/Coordination%20Consultation%2020120301.pdf>

## **Summary**

RenewableUK welcome the proposals by Ofgem to introduce Anticipatory Investment (AI) to the offshore networks and wants to support the development of a workable process which delivers real savings for electricity customers. We urge Ofgem to make a start and to resolve issues as we progress, “doing” will be the best way of discovering the challenges and therefore of solving them quickly.

The key issues are:

1. AI must be able to operate and flourish under generator build which has delivered all OFTO owned transmission to date.
2. There must be no adverse impacts on renewable projects through AI implementation.
3. AI has an important role in the offshore wind cost reduction target.
4. TNUoS charging under coordinated networks and AI must become clear and certain.
5. Securities and Liabilities (CMP192) must facilitate AI and not disadvantage offshore generators compared to onshore generators.
6. Changes are needed to NGET’s connection offer process for AI.
7. NGET’s role as NETSO needs review to deliver AI.
8. Ofgem must be more positive about the benefits of AI and work with industry to manage the risks and deliver the undoubted consumer benefits of AI.
9. We have comments to improve the proposed 2 stage AI assessment process.
10. AI must accommodate real commercial contracting and procurement processes.
11. AI should be flexible to accommodate many options, players and parties.

## **Structure**

The rest of our response is split into 3 sections:

- a) Headline
- b) Key issues
- c) Responses to Questions
- d) Next Steps

## **A. Headline**

We welcome the proposals by Ofgem to introduce Anticipatory Investment (AI) to the offshore networks and are keen to support the process to produce a workable process which delivers real savings for electricity customers. Anticipatory Investment by definition is investment which is not fully secured by connection applications (e.g. generators, and interconnectors). Nor is AI charged back to offshore generators. We are looking for Ofgem to start the process and approve the first pre-construction AI immediately. Delays are holding up industry and costing consumer's money. We urge Ofgem to make a start and to resolve issues as we progress, "doing" will be the best way of discovering the challenges and therefore of solving them quickly.

## **B. Key issues**

### **1. AI under generator build**

All offshore transmission generation connection assets to date have been developed under generator build. Anticipatory investment (AI) is there to reduce costs to customers. If customers are to benefit from AI, it is vital that generator build can operate with AI.

As noted above, we are strongly supportive of the concept of Anticipatory Investment, both in order to lower overall costs for stakeholders and to expedite the delivery of offshore renewable resources. The current proposals explore the themes that have been under consideration for some time in greater detail. Whilst they provide some useful additional clarity, they do not go far enough in providing sufficient comfort that an attractive low risk framework will emerge to facilitate Anticipatory Investment under a generator build scenario. As such we are unable to foresee conditions under the current proposals where Anticipatory Investment would be an attractive option for a generator to pursue under generator build.

We have previously noted a theme which runs through Ofgem's approach to generator activities offshore – one of general suspicion. It is worth restating why there is a need for offshore transmission. The UK requires renewable offshore generation and has put in place a policy framework to facilitate and incentivise it. Offshore transmission should be considered in the light of this objective as an enabler and service provider to offshore generation, rather than the primary deliverable itself.

As such we consider it unhelpful to speculate on the need for additional or stronger "incentives" on offshore generators where AI may relate to more than one offshore generator, and may provide wider benefits for the network. Generators incentives are inherently aligned with the desirable objectives of cost effectiveness, quality and timeliness. Generators require a cost effective, reliable and efficient transmission network and shortfalls against these

requirements directly impact on the value of a generator's business. We consider that sufficient incentives already exist; any additional requirements would not be translated into "incentives" but directly into increased risks.

We also consider the speculation regarding "perverse incentives" on generators undertaking AI where development occurs on a phased basis to be unhelpful – the primary incentive for a generator is to generate, as soon as possible.

We agree that there may be a beneficial role for local TOs undertaking pre-construction works for these assets.

With regard to coordination between the development of offshore transmission infrastructure between different offshore generation projects, (including intra-zonal or inter-zonal), there continues to be massive uncertainty around how security and transmission charging requirements for generators will actually work in practice for coordinated offshore networks. It is insufficient to note that normal industry process may take the matter forward. Given the urgency of the timescales involved an urgent acceleration is required in order to provide the necessary clarity for all stakeholders and most importantly, those generators who will be subject to any final charging/security regime.

We note the observations and examples regarding investment focused on coordinating the connection of offshore generation, to support more efficient connections for different offshore windfarm phases, sites or zones. However, these represent issues that the industry has long since identified and whilst it is welcome that Ofgem now consider them to be of relevance, there is little in the Consultation which takes the position forwards towards a practical, workable outcome.

We remain concerned with both the pace of development of reforms and whether they will be able to deliver the required framework for effective Anticipatory Investment in a timetable commensurate with the UK's offshore renewable energy ambitions. We note that there is to be a continuing incremental and dispersed approach to the issue, with work on CMP192, National Grid's position/discussion paper on charging for integrated onshore-offshore transmission assets "under consideration" and follow on work from Project TransmiT all having a material bearing on the issues under consideration, over an extended timeframe with little in the way of an "overall coordination project plan" for resolution.

"Additional industry-led discussions and a further code modification process will be required to clarify the future charging arrangements and principles for coordinated offshore networks." does not provide the required confidence for offshore generators that Anticipatory Investment is being taken forward with the correct ultimate objectives at the heart of the process.

## **2. No adverse impacts on renewable projects**

We have clearly understood from discussions with Ofgem and DECC that

- New arrangements for further coordination will not disadvantage any project (in terms of cost, risks or programme etc) compared to their position had they proceeded under a point-to-point approach;
- Existing or impending investment decisions and plans will not be undermined by any new coordination arrangements;

These vital points were also made in our Position Paper on Offshore Network Coordination<sup>2</sup>.

## **3. Offshore wind cost reduction target**

Offshore coordination has the potential to reduce the costs of an important component of the wind farm, and can contribute to cost reduction and the Government's ambition for levelised costs to reach £100/MWh for projects making an investment decision in 2020. AI is a vital part of process to achieve these cost reductions.

Although coordination can reduce costs of offshore generation Ofgem must continue to bear in mind that Windfarm investments are much bigger than associated transmission investments. So if risks were to be continually shifted from transmission to generation, small savings in costs of finance of transmission can trigger bigger increases in cost of capital for the generation – eroding and even reversing the potential savings to the consumer.

## **4. Charging for assets - TNUoS**

We have major concerns on charging which are addressed in question 13 below.

## **5. Securities and Liabilities (CMP192)**

CMP 192 has gone some way towards providing for offshore integrated offers, but there needs to be some further clarity on allocation of liabilities for offshore reinforcements that are essentially main system boundary reinforcements. We understand that a founding principle of CMP 192 is that strategic overbuild is not charged to local users, i.e. users are only liable for their own capacity and not for any part investment for future, strategic or wider purposes. These strategic transmission developments must be funded by the wider customer base until they can be charged to specific generators on a capacity basis, which is analogous with onshore reinforcements such as Beaulieu- Denny. If there were to be any attempt to charge these strategic transmission assets to local generators it would no longer be Anticipatory Investment and strategic developments would stop as generator could not fund them in this way. (And in effect the process becomes analogous to “deep” connection charging).

Most developers are unable to accept final sums liabilities over and above those that it would otherwise face under the developer/generation build regime. Onshore connections are

currently connected to nearest substation and wider reinforcement is managed through connect and manage. These principals in relation to securities and charging should equally be applied under the offshore regime.

We are extremely concerned that in Table 2 that it appears that Ofgem wants generators to be liable for user commitment for AI assets. In our view this is not therefore AI and is not workable.

#### **6. NGET's connection offer process**

We are concerned that NGET may make a coordinated offer which requires AI but subsequently Ofgem does not approve the AI. In this case the generator is left with no effective connection offer and potentially a massively delayed project. In our view any offer from NGET that requires AI must be approved by Ofgem before it is made. NGET should also offer the Generator the option of a project specific or integrated offer so that the choice lies with the generator.

Generators/developers have raised concerns that the NETSO can unilaterally change the interface point or point of connection and/or design configurations of the connection scheme which creates serious consenting and development risks and delays particular where such assets are likely to adopt a radial approach. If there are significant benefits to the NETSO in making such changes, generators should be compensated for delays and abortive costs. Taking account of the true costs to generators of such changes we expect that they will not prove cost effective for GB customers to fund.

#### **7. NGET's Role.**

Clarifying the NETSO's role is an important aspect to understanding the complete process for the development of a coordinated on and offshore transmission network. This will help to facilitate delivery of the potential benefits identified in the Offshore Transmission Coordination Project.

We think it is important to clarify the vision of how the optimised network both on and offshore will be designed constructed and maintained. Without this it is not clear whether the NETSO requires additional powers to develop an efficient network. As a further complication, National Grid is the GB NETSO is also the onshore TO in England and Wales and has unregulated businesses in offshore transmission.

There is potential confusion emerging between the roles and responsibilities of the incumbent TOs, the onshore funding arrangements, how these relate to the development of competition in transmission onshore and the role of the NETSO, developers and OFTOs for offshore

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<sup>2</sup> [http://www.bwea.com/pdf/120112PP\\_OffshoreNetworkCoordination.pdf](http://www.bwea.com/pdf/120112PP_OffshoreNetworkCoordination.pdf)

transmission. We note Ofgem's letter of 23 April and the additional clarity this brings to competition for the delivery of onshore transmission. Clarifying the extent of the NETSO role in facilitating the development of a coordinated network would be a welcome development. We understand Ofgem's recently launched ITPR project may consider this.

#### **8. Neutral vs. encouraging**

Whilst we welcome the policy developments presented in the consultation, as these are an evolution of the existing arrangements it is not clear that they go far enough to unlock all the potential benefits identified in the Offshore Transmission Coordination Project. The proposals presented need to be examined against whether they can deliver an overall effective process which investors understand, have confidence in and can proceed against. Ofgem's ITRP may be the vehicle against which a complete process can be developed and enshrined and Ofgem's proposals should ensure they are compatible with any longer term developments.

#### **9. Two stage AI process pre construction and construction**

The straw man process outlined in section 3 describes a 2 stage assessment (paras 3.41 - 3.51) where Ofgem would give its view on whether it is economic and efficient to undertake pre-construction and later construction works on a coordinated design.

Given the potential for a time period of two or more years between these two decision points we understand this 2 stage approach but recognise that there are other factors at play which may require this model to be flexed and varied. We also strongly agree that an aim of the process should be that it does not extend the timescale for delivery of offshore assets.

A basic 2 stage process creates the jeopardy that the second decision will reverse the findings of the first and a developer will be left having consented an option that Ofgem does not now agree should be built. This would result in significant delay, even if costs are allowed, and might result in an inability to gain planning consent for the alternative that could thwart the project.

In order to minimise the risk of refusal at the second stage, the decision should only be allowed to differ from the first stage in extreme circumstances where some fundamental change to the context makes the initial case wholly inappropriate.

We therefore suggest that Ofgem's initial evaluation is sufficiently deep to base a judgement of the scheme as a whole, not just the value of development works. Furthermore it should limit the terms under which an alternative decision could be made later.

In our view the first assessment should take place before the developer receives the connection offer. (But as demonstrated in this response first assessment could also be necessary at other times).

Some connections will be quite clear cut, but others may have many alternative options and the 3 month connection offer and acceptance process is unlikely to be sufficient to have considered all the main options and reached a detailed conclusion with sufficient evidence for the planning process or to demonstrate to Ofgem that the chosen option is the most economic and efficient. In such a case we would like Ofgem to recognise that it may be economic and efficient to pursue more than one alternative for a time, before fixing on the preferred solution and to allow the abortive costs of doing so. National Grid and the CUSC should also be able to have alternative options running in parallel for a limited time.

Generally we would expect the case for AI for a coordinated design to be clear and strong. If the alternatives of uncoordinated (no AI) or coordinated (with AI) solutions are very finely balanced, it would be better to err on the side of whichever can be delivered at lower risk or sooner, rather than spend significant time or effort to assess both to an apparently higher level of accuracy. The input assumptions on out turn cost etc. will inevitably have a limited accuracy. Ofgem can help by recognising the need to go with a decision based on the best available information at that time rather than delay waiting for further assessment. I.e. encourage the developer, NETSO and Ofgem to agree on an option and stick to it.

In Ofgem's dealings with its traditional regulated companies there is a level of mutual understanding of the need for Ofgem to reserve its final position on some costs until it has made a post investment analysis and also the likely way Ofgem will make the analyses with hindsight. The two parties have a long term relationship with the ability to balance decisions over time. The equivocal language and qualifications in many Ofgem letters to these companies would be very difficult to bank with the lenders to a one off entity (SPV) set up to develop a single piece of transmission infrastructure. We therefore urge Ofgem to consider the bankability or risk premium attached to its ex-ante assessments and the relative value for customers of achieving a lower cost of finance in exchange for Ofgem losing a little future flexibility or erring slightly in favour of allowing development costs.

## **10. Contracting and procurement**

Potential measures to support efficient network co-ordination carry the risk that increased project complexity has the unintended consequence of increasing the cost of contracting and procurement. Wherever independent approval processes introduce additional uncertainties to the project scope, ownership or schedule, such externalities will tend to be priced into tender prices and could cancel out the savings achieved by network co-ordination or other cost saving measures.



Offshore network infrastructure comprises mainly long-lead items, a fact reflected in the forms of contract and procurement strategies employed in the industry. For example, to secure capacity for offshore substation platform fabrication, advance orders may be placed conditional upon consent being granted in the future. Similarly, project requirements for quantities of submarine cable may be aggregated to yield the benefits of bulk purchase.

In response to these, amongst other drivers, many leading utilities and developers have moved their contractual relationships toward alliance frameworks and other types of long-term risk-sharing partnership with the supply chain. The early engagement that such forms of collaboration facilitates involves supply chain partners in pre-construction as well as construction phase activities and tends to result in improved safety, efficiency and sustainability at project and program level, particularly where long-lead items need to be procured. The commercial practices developed for onshore electricity and gas network infrastructure programmes over recent years may well indicate how large-scale integrated offshore programmes could be implemented more cost effectively in the future, given supportive market signals.

The commercial reality dictates that contracting and procurement techniques will always adapt to establish the risk allocation appropriate to the economic conditions of the day. However, for the reasons described above, we would caution against over-complicating the processes aimed at supporting efficient network co-ordination and we would support measures which encourage continuity of project participants throughout the project lifecycle.

Specifically Ofgem should recognise that pre-construction and construction activities will normally overlap and not be sequential as shown in Figure 1 of the consultation.

## **11. Parties**

We would like to see a more extensive and inclusive consideration of parties in the process. We consider that there could be a role in future for Interconnector Owners and Developers as well as other European TSOs or ENTSO-E. We think that onshore TOs (as well as OFTOs and generators) should be able to build assets under AI where appropriate. Consortia or combinations of players under an SPV should also be able to apply for AI approval to undertake both pre-construction and construction work.

## C. Consultation Questions

### CHAPTER: Two

**Question 1: What are your views on whether: a) the connection process (including the relevant industry framework) supports the design of an efficient and coordinated network? b) the NETSO needs further powers to develop an efficient network? c) there are any barriers to the NETSO taking on an enhanced role in network development?**

a) Yes for simple generation projects.

No for interconnector, onshore reinforcements and inter-zonal projects

b) See Key issues Section 7 on NGET role above.

c) The term “network development” should distinguish between the following activities:

- Network planning
- Pre-construction
- Construction
- Ownership
- Assets operation maintenance and repair
- System operation

Some of these activities fall into the NETSO role, some do not.

Onshore TOs may see OFTOs as a threat and therefore may be incentivised to propose solutions that reduce the role of scope of OFTOs. However, onshore TOs should not be prevented or deterred from developing appropriate reinforcement and connection solutions which involve assets offshore, whether that is to connect islands, offshore generators or make onshore reinforcements.

We note that the majority of delivery experience for offshore transmission sits with the generator and supply chain community rather than in the TOs.

**Question 2: Do you agree with the proposed objectives for a reformed network planning document? Would other changes be useful?**

Yes we agree the SYS and ODIS should be brought together although no information should be lost in the process. In our view scenario based planning is more appropriate than the current SYS approach. However, a new network planning document should make a clear delineation between contracted capacity (as previously set out in the SYS) and the network scenarios (as previously set out in the ODIS document). There is a risk that information may be taken out of context if it is not presented in the appropriate manner. Consultation should be undertaken with stakeholders on both generation and network reinforcement scenarios to legitimise the options under consideration. This consultation must be carried out sufficiently

far in advance of the final report to allow stakeholder to submit robust responses. . Sources of inputs into the cost assumptions for these scenarios should be presented to ensure the appropriate level of transparency, as differentials in costs assumptions can lead to fundamentally different conclusions. The new document should have a 10 year rolling timescale, should incorporate lessons and process from the ENSG 2020 vision and should link to ENSTO-E TYNDP. We want to see harmonics addressed to identify locations with harmonics issues especially where these affect the connection of HVDC converters. Harmonics are not even mentioned in the SYS. The NETSO needs to provide a more active live status of projects e.g. like TEC register updated monthly. We note that the Transmission Works Register is moving in this direction and should be coordinated with the SYS and ODIS changes.

### **CHAPTER: Three**

#### **Question 3: Do you agree with our initial proposal for a definition of AI and that the types of AI set out are those that need to be captured in an approach to AI?**

The definition is not clear to members and has been interpreted in different ways therefore it needs clarification, particularly in respect of phase, site, zone, project etc. The definitions referred to in the consultation are most confusing.

The definition (3.8) appears to anticipate that projects within a phase will be sanctioned at the same time or have same owners. This will not generally be true. The definition as it stands therefore effectively hinders AI to oversize assets where there is a time gap between the sanctioning process of the first project and the next project utilising the same “oversized” transmission asset. Whilst we do not disagree with the types of AI set out (3.7), we do not believe the types should be used as a guideline for how AI should be securitised. The list defining the pre-construction works (3.9) should not be closed in case other options materialised. As a minimum Ofgem should give itself some discretionary powers by adding “Any other cost Ofgem deems to be efficiently and economical incurred” to the list.

We would like greater flexibility in relation to the definition of Anticipatory Investment. We believe that assets that offer both project specific and wider system benefits should be eligible for AI as well as assets associated with a particular project phase. It is important that the definition is as wide as possible in order to capture as many coordination benefits as possible.

AI in relation to a particular project phase has the potential to lower costs because the mobilisation and demobilisation of construction assets is reduced and lower costs could be obtained for civil works associated with more than one phase. This type of AI under a generator build approach would encourage developers to take on extra project spend for which it may otherwise struggle to get board approval. Where Ofgem has determined that this

is the most economic and efficient solution, this will ultimately result in lower costs for all system users and customers. We also believe that this is a particularly important consideration in relation to the consenting process. In order to minimise the environmental impact, it is likely that it will be necessary to carry out a certain amount of civil works in relation to later phases as part of phase one in any case.

The types of AI should therefore consider incremental and important aspects of AI which could include measures such as:

- Consenting a larger cable capacity than required for a single project.
- Acquiring land for a potentially large HVDC converter station.
- Consenting for taller structures at substation site to allow for future assets.
- Providing a spare switch bay on an offshore platform to provide for future interconnection.
- Routing cables to allow for future cables
- Direct drilling an additional bore for future cable(s) at an onshore landing point.
- Extending seabed surveys to provide data for future cables or foundations.
- Providing a larger capacity cable than required for the project.
- Etc, etc,

**Question 4: Do you agree with our initial proposed objectives and regulatory design principles for an approach to AI? Are there some which you see as more important than others?**

The most important are:

- Incentives for timely work (if not generator build);
- Flexibility to account for project specific variables;
- Certainly on the definition of efficient costs and absolute certainty on the recovery of costs for AI.

**Question 5: What are your views on use of the connection application process as the platform for identifying AI opportunities? Could there be a need for AI to be identified outside of the formal connection offer process?**

Before National Grid make a connection offer based solely on AI it should have approval from Ofgem. Otherwise a generator may accept an offer based on AI which Ofgem do not subsequently approve, leaving the generation project in limbo with no connection and potentially massive delays.

In addition if AI is based solely on connection application process it cannot take account of anything that is not in that process. This is clearly too limiting for all imminent investment

decisions. As per our Position Paper - any party should be able to bring forward Anticipatory Investment proposals at any stage. Although the majority would be expected to be associated with current connection applications – it is possible that some may not. E.g. an interconnector creating a tee in point on a multi-terminal HVDC link for future generation projects.

AI could be identified later on in a project, e.g. in “Project A” under generator build a consent is obtained for a connection cable route which could be built with or without spare capacity. An adjacent “project B” has planned an independent connection but is suffering planning/permitting delays and problems. Project A then constructs its connection with spare capacity which is then utilised by project B.

**Question 6: Do you envisage that changes to industry codes and licences are necessary to enable the connection offer process to identify AI?**

The three month period for NGET to make an offer may be too short to identify and specify AI in the offer; however NGET can already apply for an extension to this period. The 3 month period for the offer to be accepted is often too short for generators, to assess and accept an offer with AI.

The process whereby the NETSO makes a coordinated offer which will need AI to complete it but that AI is not approved by Ofgem needs to be taken into account.

**Question 7: Are there barriers to cooperation in connection offers being agreed where a development involves more than one generator? What actions do you consider are warranted to address these?**

It is not acceptable for one generator to be dependent on another for connection, unless they choose to be so.

**Question 8: Are there other parties that should be able to identify opportunities for AI?**

As well as the NETSO, onshore TOs, OFTOs, and developers/generators other parties should include able to identify opportunities include developers of interconnectors and other European System Operators / Transmission System Operators and potentially joint bodies of the above with wider stakeholders such as the ENSG and ENSTSO-E.

**Question 9: What changes may be needed to ensure that assets that provide wider network benefits are designed, constructed and operated to provide a longer asset lifetime?**

Ofgem must be able to specify how it will assess “efficient” expenditure, both in up front capex and in ongoing O&M, so that developers and designers can assess if the extra costs to provide extra life will be accepted.

**Question 10: What are your views on whether a longer revenue stream for assets that have wider network benefits could create better value for consumers?**

If the option for longer revenue periods is considered, it should balance the benefits of reducing the NPV vs. the potential extra risks of failures and costs of repair and maintenance for extended life.

**Question 11: What are your views on the best way to deal with possible interaction between assets with differing lengths of tender revenue streams?**

This situation is no different to the current situation where assets with the same lengths of revenue streams which interact but are built at different times so that all assets in a coordinated network will not have the same end of OFTO revenue period.

**Question 12: Do you agree with these high-level user commitment and charging principles for AI?**

We do not agree with the assessment or proposals in Table 2. AI and coordination will bring cost savings and benefits to consumers e.g. through lower costs for offshore renewables and cheaper interconnectors. In our understanding AI means that consumers will bear the AI risks in order to reap the benefits. Industry will be charged with managing and reducing those risks to deliver the savings to the consumer.

See also Key Issues Section 5 Securities and Liabilities above.

**Question 13: What areas of the transmission charging regime may need to change to facilitate AI in the offshore transmission network?**

Under the current TNUOS charging regime users of offshore assets are charged an offshore local charge which is the dominant part of their charge. This charge is based on a security factor of 1 (or thereabouts). If any of the offshore assets serving a project become interconnected these assets would no longer be treated as local assets. The interconnected

assets would create a new TNUoS charging zone to which a security factor of ~1.8 would apply and the charges would virtually double.

The process and timing creation of new charging zones and changes to existing zones is not clear given the new price control review period (under RII0-T1) and extension the previous review (TPCR4).

In addition the treatment of the relatively simple HVDC bootstrap has not been resolved in nearly two years through project TransmiT. The treatment of more complex HVDC e.g. with multi-terminals and with AC and DC connections to an offshore hub

The charging treatment of a local offshore asset that oversized for future benefits, and therefore is not initially fully utilised, is not clear.

Consider a scenario with adjacent offshore windfarms which sit either side of an offshore national boundary. The GB windfarm connects to a GB coordinated interconnected offshore hub and pays high levels of TNUoS; however the non-GB windfarm tees into an Interconnector and arrives on mainland GB with no TNUoS charges.

All these examples indicate that a major review of offshore TNUoS charging for and interconnected European system needs to be undertaken,

In the meantime generators need a guarantee that their charges will not increase as a result of their connection becoming more interconnected or coordinated - which is outside their control.

**Question 14: Is there a need for greater, earlier clarity on how including AI within the scope of works might be treated under our assessment of costs?**

There is already great uncertainty in Ofgem's assessment of efficient expenditure and costs under generator build and the current OFTO regime. RenewableUK has sought greater certainty in this area. Moving to AI will greatly increase that uncertainty and Ofgem needs to provide greater clarity.

**Question 15: What are your views on the potential form of these Ofgem assessment stages? Should it be optional for generators to go through the gateways where they would be undertaking the subsequent works?**

In general we recognise that there is a consenting/ development phase and a construction phase, however these phases are not necessarily sequential and often overlap. The process

proposed needs to deal with this overlap, where construction activity starts before consenting is finished. These overlapping activities can include for example: contractor input to project detailed design; and financial commitments to the supply chain to secure production slots and meet delivery targets.

**Question 16: Do you agree with the proposed high-level criteria for use by Ofgem if considering whether AI would be economic and efficient?**

Whether development is AI or project specific, generators under generator-build or OFTOs under OFTO-build are carrying out the development of new transmission assets. In order to be equivalent with onshore TOs, Ofgem should agree in advance acceptable levels of expenditure and both these parties should be able to receive payments for their activities over the course of the process

**Question 17: What are your views on the appropriate timing of the possible Ofgem assessment stages?**

In our view the first assessment should happen at before offer and acceptance. The second stage should be triggered by the developer/generator or OFTO who intends to build the asset, at a time to allow them to make commitments to the supply chain. This is likely to be during the consenting process but may even be before consent submission in some cases.

Ofgem should note that for some projects requiring long lead time items such as HVDC technology, the pre-construction and construction (including procurement) phases will overlap. The assessment process needs to be flexible enough to allow generators to proceed to place orders with suppliers in order to deliver the wind farm project in a timely manner.

It will probably be helpful to have ongoing dialogue or formal regular reviews of projects by Ofgem, especially before the second stage to develop certainty and reduce the risk of delays.

**Question 18: What information should in your view be provided as part of any published guidance that supports AI approval?**

It would be helpful if the economic and efficient test by Ofgem aligns with or is complimentary to the needs case and consideration of alternatives that is part of the planning consent process.

The decision is between AI for a coordinated design and no AI for a non coordinated design, as in this model the work is secured by generators anyway. This is an either-or decision, not a quantitative one. The criteria therefore only need to be sufficient to identify if there is a clear



case for AI. If the case is marginal the decision can default to no AI. This should allow relatively limited detail and a short decision time

Ofgem should publish a Cost Benefit Analysis model which parties can use to test if their project will meet AI criteria.

The information may need to evolve over time and with experience as more AI projects are conceived and brought forward.

**Question 19: Should there be additional requirements to share information with Ofgem to help streamline Ofgem's assessment of AI for project? What information should be included?**

It should be in the parties' interests to share with Ofgem the best available relevant information to support the case for AI. It is probably better not to specify a list of information that is or is not to be considered as each case may be different.

With some coordination (e.g. inter-zonal), the assessment process may rely on information that is confidential and belongs to one party only – Ofgem needs to ensure that the process enables timely decision making without compromising commercial confidentiality.

**Question 20: What are your views of the different options for who should undertake pre-construction works for assets that are driven by wider network benefits?**

Pre-construction should be open to any party to undertake including the generator.

**Question 21: Could OFTOs potentially have a role in undertaking pre-construction works for assets significantly driven by wider network benefits? How might this work?**

OFTO undertaking pre construction would be part of an OFTO build process. RenewableUK have responded to Ofgem's recent consultation (ref 178-11) which addressed many of the relevant issues in detail.

**Question 22: Do your views of the attractiveness and feasibility of an early OFTO build option differ for assets that are driven by wider network benefits?**

An early OFTO build would be supported by some generators in some circumstances. The key risk and challenges are confidence that the assets will be built on time for the generator and that the OFTO has certainty of recovering expenditure if the project is delayed, changed or abandoned.

To overcome these problems, we recommend that the first OFTO build should seek and identify a project which will not put a generator at risk of delay. For example such projects could include an interconnection between two adjacent windfarms with radial connections which would provide some partial redundancy and if the onshore connection points were different – the interconnection would provide some “bootstrap” capability to benefit the onshore networks.

**Question 23: Are there changes that can be made to improve the incentives on offshore generators in undertaking pre-construction and construction works for assets that are driven by wider network benefits?**

The best incentive would be for generators to be indemnified for the costs of undertaking these works and for the costs to be funded as well, and that the extra risks of developing wider networks to be appropriately rewarded.

See also Key issues “AI under generator build” above.

**Question 24: What would be the impact on the attractiveness of Generator build option for assets that have wider network benefits if additional delivery incentives are incorporated? Should the OFTO build option be the main focus for this type of asset?**

There should be no presumption for generator build, OFTO build or TO build all options should be considered.

See also Key issues “AI under generator build” above.

**Question 25: What are your views on how any distinction between “offshore generator focused” and “wider network benefit” assets should be made?**

This is an artificial and unhelpful distinction. Today’s radial windfarm connection can become tomorrow’s wider network due to interconnection with adjacent generation projects or extension as an interconnector.

**Question 26: What role could commercial contractual arrangements have in ensuring that pre-construction assets are passed to the relevant party and the first developer can recover their costs?**

Developer should always be able to recover their costs through the OFTO process and this is especially important with AI.

**Question 27: What changes may be needed to support the process? What would be the impact of requiring an OFTO to hold assets for future generators?**

An OFTO should always hold an asset for current and future uses which cannot be specified in advance. If the OFTO asset becomes interconnected (e.g. to a bootstrap or interconnector) its utilisation should increase, if not there is no benefit in coordination.

**Question 28: Will commercial arrangements and industry codes and licences provide sufficient access rights for shared assets? If not what changes may be needed to support the process?**

As interconnected offshore networks progress more challenges will emerge and need addressing. Offshore generators should have the same level of access and certainty as onshore generators.

**Question 29: Are there any other issues with shared assets that need to be considered?**

We wish to raise some additional key points that don't appear to be addressed in the consultation (these are repeated in Question 29).

- Developing some AI proposals may involve combining confidential information from a number of parties including parties who are in informal early discussions with NGET. We are not clear about how this confidential data is managed to develop the AI case and how this is communicated to the applicants involved.
- There is a danger that Ofgem's thinking is dominated by Round 3 projects where adjacent generators have common owners. This is not always the case for example in Scotland, and especially with wave and tidal projects and would probably not be in the case with interconnectors. Ofgem states that coordinated offers have been made but have any coordinated offers been accepted? If not please would Ofgem state what the delays are in accepting.
- Assets could be built by TO, OFTO, Generator/Developer, ENTSO-E member or Interconnector/Developer or by any combination of these players and maybe other parties such as equipment suppliers/ contractors or financial investors.
- The design life of many offshore windfarms is expected to be 25 years and we can expect some repowering or extension of that in the future (as we see today in the nuclear industry). The OFTO licence period is 20 years with much uncertainty regarding the regulatory process for retendering or extending licences and this creates uncertainty for the long term viability of our industry. We want to see this uncertainty resolved as it will contribute to offshore cost reduction.

## D. Next Steps

We look forward to the feedback on our response and welcome further engagement with OFGEM to develop a workable AI process for the benefit of consumers and to assist in meeting government targets for renewables and decarbonised electricity and energy.

Yours sincerely,

Guy Nicholson; Head of Grid for RenewableUK,

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Annex 1 -Ofgem's feedback questionnaire<sup>3</sup>

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<sup>3</sup> We regret that we have not completed the questionnaire in this consultation response