

Wind Energy Ireland
Phase 2 Consultation Response

March 2022



windenergyireland.com

1 Introduction

Wind Energy Ireland (WEI) would like to thank the Department of the Environment, Climate and Communications for the opportunity to provide a submission on the *Offshore Wind – Phase Two Consultation*.

WEI is Ireland’s largest renewable energy organisation with more than 150 members who have come together to plan, build, operate and support the development of Ireland’s onshore and offshore wind generation. We work to promote wind energy as an essential, economical, and environmentally friendly part of the country’s low-carbon energy future. As a leader in Ireland’s fight against climate change, wind energy creates jobs, invests in communities, and reduces CO₂ emissions.

In 2020 alone, according to the most recent report¹ from the Sustainable Energy Authority of Ireland, wind energy avoided 4.5 million tonnes of CO₂ and Ireland became number one in the world for the share of electricity demand with wind energy providing over 38% of the country’s electricity supply.

Wind energy is also a major contributor to Ireland’s economy. The recent *Economic Impact of Onshore Wind in Ireland*² report from KPMG showed that onshore wind energy is supporting more than five thousand jobs and is worth over €400 million annually to our economy. We know these figures will rise in the years to come and this will be accelerated by the development of offshore wind energy.

However, plans for delivering on the Programme for Government objective of 5,000 MW of offshore wind by 2030 are at risk, as outlined by WEI in our September 2021 report, *Twelve months to deliver offshore wind energy*³.

We have less than nine years to reach the target set in the Programme for Government, and while there is a strong pipeline of offshore projects coming through, we are running out of time. To ensure we can develop the projects needed to deliver on Government ambition, it is vital that Government urgently address the policy priorities identified by WEI in the report.

We welcome the progress that has been made in recent months, particularly on the passing of the Maritime Area Planning Bill, and the progress made on the Terms and Conditions of the first ORESS auction. However, if the Phase One and Phase Two projects are to successfully deliver the 5,000 MW target, it is vitally important that more progress is made across other areas, notably:

- **Resourcing:** Developing 5,000 MW of offshore wind energy by the end of 2030 will place an enormous burden on the relevant Government departments, An Bord Pleanála, NPWS, EirGrid, ESB Networks and the CRU. They must be adequately resourced to deal with the scale of the challenge ahead.

¹ https://www.seai.ie/publications/Energy-in-Ireland-2021_Final.pdf

² Economic impact of onshore wind in Ireland - <https://windenergyireland.com/images/files/economic-impact-of-onshore-wind-in-ireland.pdf>

³ <https://windenergyireland.com/images/files/final-twelve-months-to-deliver-offshore-wind-energy.pdf>

- **Offshore Grid and Connections:** An Offshore Grid Steering Committee must be set up to bring together industry, EirGrid, The Commission for Regulation of Utilities (CRU) and The Department of the Environment, Climate and Communications (DECC) to ensure the successful implementation of the new offshore grid model, to develop technical offshore grid standards and to rapidly process grid offers. Successful implementation will include regular engagement with EirGrid for projects and providing developers with comprehensive technical specifications for offshore equipment.
- **A stronger grid:** The Irish electricity grid is not currently strong enough to accommodate 5,000 MW of offshore wind energy. The reinforcements identified in EirGrid's Shaping our Electricity Future, at a very minimum, must be delivered on time to give Ireland a chance of meeting its target.
- **Irish Supply Chain:** It is now more than likely that the first new offshore wind farms will be built from ports outside of the State. Time has nearly run out. Strategic investment must be directed into an east coast port before the end of the year. A south or west coast port must soon be identified for future projects, including floating wind energy.
- **ORESS auction dates:** A firm commitment on the date for ORESS1 must be communicated as soon as possible, in addition to clarity on the timeline for ORESS2.

In addition, WEI would like to emphasise the following points that we believe are important to be taken into consideration in the context of developing the Phase Two process:

- **SEA:** We are concerned that Phase Two is considered a plan or programme under the SEA directive and would appreciate confirmation from DECC if an SEA screening has been carried out prior to, or during this consultation process. The consultation document states there is no geographic dimension, however, we note a potential risk of legal challenge given the spatial dimension articulated within the consultation, which is driven by grid availability (east and south coasts) based on one grid scenario proposed by EirGrid's 'Shaping our Electricity Future'. We would ask that DECC review the CJEU decisions and consider how Phase Two can be accommodated into the OREDPII process. The risk of delay given the current approach should be factored in by removing the cliff edge and allowances for extensions of time for delays outside of developer control.
- **State Aid:** As the cap for Offshore wind in the auction process is currently 2GW, we request a review is carried out on the funding of the ORESS and transparency provided on what is available in the pot.
- **Clarity on plans after 2030 (2035, 2040 etc.):** Fundamental to the development of Ireland's offshore wind sector is clarity on frameworks beyond the 2030 target date, something that is currently lacking. This brings additional risk into the Phase Two process, particularly given some of the proposals included in the consultation document, notably the cliff-edge for projects who fail to secure a route-to-market before 2030. Urgent clarity must be provided on the post-2030 enduring regimes as regards consenting and centralised grid planning, with visibility to the industry on longer term Offshore wind development plans.



Finally, as a general comment on this consultation process, while we welcome the opportunity to put forward industry positions and responses to the consultation document, we emphasise that further discussion and engagement with industry will be required on many of the issues covered by this consultation process. Several issues included in this consultation are highly complex, with others requiring further information before concrete industry positions can be established. We would ask that DECC take this into due consideration in their reading of the WEI response, and we would welcome further engagement with the department to discuss these points.

1.1 Preferred Option

Question 1

Which is your preferred option and why of:

a. The above options?

WEI is of the view that of the options presented by DECC in the consultation paper, **Option B would seem to be most favourable**. However, this preference is based on an assumption that the basic prerequisites that developers are seeking are provided, primarily in relation to certainty.

Option B is similar to how we expect the ORESS 1 / Phase One process to operate. The key difference is that non-Phase One projects will be able to enter and therefore a means to gain a MAC is necessary.

Option A suggests a first-come-first-served process for MAC allocation whereby all projects can submit their application, with MARA then running the process that follows. Option B suggests that this should be done through a competitive process. This process, if supported by a robust prequalification process, would help give confidence to DECC and to developers, and would help to create a level playing field in terms of timing.

That said, for developers, this level playing field of having a MAC auction window will come with a price. In such a process, projects that are prepared to bid high will win, with these high costs ultimately being picked up by the consumer. For this reason, WEI believes it is important that a **pre-qualification process is put in place to ensure that projects entering the competitive MAC process meet the fundamental criteria that DECC has identified as essential for Phase Two**, i.e., delivery of the remainder of the 5GW target by 2030. This pre-qualification process should be in line with existing established timelines and should not result in delays to timelines around the issuing of MACs to Phase Two projects.

WEI believes that the MAC auction process should be progressed as soon as possible after MARA is established to give the projects the opportunity to carry out site survey work and other development work as early as possible in advance of the ORESS 2 auction, which will be important to enable higher quality bids.

It is noted that unless supported by significant escape clauses and potentially highly structured merit orders, it will be difficult to run a meaningful auction until the planning outcomes of the Phase One projects are understood.

b. The above options, variations of same, and other possible options within the parameters outlined in this paper, particularly sections 3 and 4?

WEI believes that there are several fundamental criteria that must be fulfilled to allow for a successful Phase Two process. These criteria would provide certainty both to DECC and to industry and provide the best possible opportunity for Ireland to deliver on our 5GW target by 2030.

WEI assumes the following fundamental criteria for DECC:

- Ensure enough projects progress to ORESS 2 so that the outcome delivers the balance of generation necessary to take the total of ORESS 1 and ORESS 2 to at least 5GW by 2030.
- Run an ORESS 2 auction by the end of 2025 to ensure compliance with State Aid clearance.
- Have confidence that projects qualifying for ORESS 2 have both the financial and development capability to be complete by 2030.

Fundamental criteria for industry:

Types of projects that can enter ORESS 2:

- Phase Two projects that are successful in the pre-qualification process, thus meet the fundamental criteria above.
- Extension of Phase One projects (existing grid routes etc.)
- Phase One projects which were unsuccessful in or did not enter ORESS 1
- Phase One projects that due to grid/planning delays decided not to enter ORESS 1 and instead enter ORESS 2
- Phase One projects which were successful in ORESS 1, but subsequently exited.

Maintenance of MAC:

- WEI believes that planning consent not being granted to a project does not mean the site is not suitable, nor does it mean that a suitable planning application cannot be made. Re-applications for new MACs for such projects should be prioritised and streamlined.
- MACs will not be withdrawn following ORESS 2 if the project is unsuccessful in ORESS 2. Withdrawing the MAC at this point would discard the DEVEX and effort made by the project to that point and would push back any potential use of the site.
- WEI have assumed that the MPA designation process will not impact the MAC award process or result in loss of a MAC as potential impacts will be examined in the Environmental assessment as part of the planning process. WEI would welcome clarity on the Department's timeframe for the MPA designation process. There are opportunities for collaboration and co-existence of offshore wind farms and MPA's. Examples of existing and planning co-existence can be seen in the UK and Europe. Operational offshore wind farms provide biodiversity enhancements via artificial reefs and aggregation zones and aligns with the intent in the MPA consultation of other area-based conservation measures.

Maintenance of GCA

- As WEI outlined in its response to CRU's consultation on Offshore Grid Connection Assessments⁴, Phase One projects should be able to carry their GCAs to ORESS 2.
- Completing the optioneering, landowner and stakeholder engagement, land signup, environmental and engineering studies and reports for the onshore shallow connection method is a substantially time consuming and expensive set of workstreams.

⁴ <https://windenergyireland.com/images/files/weiphase1responsecrugcaconsultation20211122.pdf>



- Providing projects with different connection methods in GCAs for ORESS 2 will have a substantial impact on ability of Phase One projects to compete in ORESS 2 and to connect in time to contribute towards the 2030 RES-E targets.
- Changing or losing a GCA will mean further work and potential delay to the Auction timing

Qualifying for the Auction

Developers need confidence in their project that enables them to bid, but also confidence in their competitors. Having a **high-level pre-qualification process**, as we set out in our answer to Question 3 below, can provide this.

1.2 Deployment Security

Question 2

Option A proposes that a deployment security is required to apply for a MAC in Phase Two.

- a. How should the security be calculated and what rate should apply? If the security was to be calculated on the basis of planned capacity, what rate should apply?**

While this question is primarily aimed at Option A, the consultation suggests a deployment security may also be used with Option B. **WEI does not support the approach that a deployment security be required to apply for a MAC in Phase Two.**

Overall, the industry is concerned about having a deployment security. WEI acknowledges that DECC needs to have confidence that developers who can apply for a MAC are also capable of developing a viable project that can achieve commercial operation by 2030. However, WEI does not believe that a deployment security is the most optimal way of providing this confidence.

The purpose of having a MAC at the development stage is to establish how effective a site might be. ORESS 2 will need to have more potential projects than can be successful to ensure an effective and competitive auction. The target volume for successful projects in ORESS will not be known at the time of issuing MACs, so a greater potential capacity of MACs will need to be issued.

Of those developers who apply for MACs, some may find that they cannot develop a viable project on the site. Of those who can develop a viable site, some will not be successful in the auction. Of those successful in the auction, some may not be successful in gaining consent. Additionally, it is currently proposed that MACs will be withdrawn from all Phase One and Phase Two developers who have not secured a route-to-market prior to the transition to the post-2030 enduring regime.

All these elements of the process put huge risk on the developers. Adding the additional burden of a deployment security would seem inappropriate and disproportionate.

As a result, WEI does not believe it is appropriate at this point of the offshore wind development cycle to impose a deployment security. The provision of confidence that a project can develop a viable project by 2030 is built into the overall process and it is not appropriate or conducive to delivering 5GW by 2030 to introduce additional barriers for projects. We believe the process as proposed is likely to have an adverse impact on the willingness of developers to engage in Phase Two.

- b. Should the security be required to be in place prior to application for a MAC or post-issuing of a MAC? If post-issuing, what is a reasonable timeframe?**

WEI does not support the approach that a deployment security be required to apply for a MAC in Phase Two for the reasons outlined above.

c. Under what terms should this security be drawn down?

WEI does not support the approach that a deployment security be required to apply for a MAC in Phase Two for the reasons outlined above.

d. The security, as proposed, expires with the securing by a project of a route to market. For projects successful at ORESS 2, this is also the stage when the auction performance security is due be put in place. Would it beneficial for the deployment security to be rolled over towards the RESS performance security? How best this be managed?

WEI does not support the approach that a deployment security be required to apply for a MAC in Phase Two for the reasons outlined above.

e. What other terms should apply to this security?

WEI has no further comments on this matter.

1.3 Competitive MAC Process

Question 3

Option B proposes a competitive MAC process.

- a. **What assessment criteria should be used in this process? What should the weighting of this criteria be?**
- b. **Should a seabed levy auction be included in this assessment? What weighting should the auction result have?**
- c. **Should a deployment bond be maintained under this option? Why, or why not?**

Phase Two MAC process

As noted in the response to Question 1, the competitive MAC process, as set out in option B, appears to be most favourable, subject to amendments, and best supports the policy objective of delivering 5GW of offshore wind by 2030.

Delivering offshore wind projects by 2030 is challenging, for both Phase One and Two projects. It is arguably more challenging for Phase Two projects given that the processing of Phase Two MAC applications can only be completed following the establishment of MARA.

For context, the recent seabed allocation UK Round 4 and ScotWind leasing round, which are targeting some delivery by 2030, but are not limited to delivery by that date, allocated seabed exclusivity a total of 30 months and 18 months respectively earlier than can be expected for Phase Two MAC allocation (assumed Q3 2023). The delivery timeframe drives the requirement for the allocation of Phase Two MACs to be both a robust and efficient process with a focus on allocating those projects which have an existing level of development progression. For this reason, we believe the reference to COD by 2030 should be amended to first generation or first power (2030) in line with the Phase One MAC milestones.

We note the consideration given to “An auction for the seabed levies to be paid by MAC holder”. We would appreciate clarification, but our understanding is that it will be an auction for seabed levies or a development levy that is offered as part of the MAC process and would appreciate clarification on this point. WEI propose that a fixed development levy is utilised (i.e., each developer pays a fixed fee per km²) and that this aligns with the Phase One development levy to ensure fair competition within ORESS 2.

Pre-qualification process

Due to the level of development activity that is currently ongoing in the Irish offshore wind sector, it is expected that the competitive Phase Two MAC process will represent a step change in the number of applications received in relation to MAC Applications when compared with Phase One. This will be further compounded by the uncertainty currently surrounding the Enduring Regime resulting in each project looking to seek a MAC at the earliest possible point. A significant volume of applications has the potential to result in bottlenecks in assessing and allocating MACs arising from the resource requirements from MARA, EirGrid and other critical stakeholders.

To address this risk, WEI propose a pre-qualification process with pass/fail criteria (see below our suggested criteria), undertaken in Q4, 2022, if MARA can be established earlier than January 2023. This would qualify Phase Two MAC Applicants, that meet a number of capability criteria and can demonstrate a credible project programme to deliver by 2030, to enter the competitive Phase Two MAC process.

This ensures that the subsequent competitive process focusses on those MAC Applicants and ORE Projects with the greatest ability to deliver in line with the 2030 target. Furthermore, it manages the resource requirement from MARA, EirGrid and other critical stakeholders during this process. Given the timing to undertake this pre-qualification (in advance of the establishment of MARA) and the benefit of independent assessment, DECC may wish to consider the appointment of a third-party consultant in Q3, 2022, to undertake the deliverability assessment as part of the pre-qualification on their behalf.

WEI propose this process is structured as follows:

1. Confirm the Pre-qualification process for entry into Phase Two MAC process – Q3 2022

The supporting work to define the process and criteria would be administered by DECC with a tender undertaken for potential for independent, experienced, third-party support. It is understood that Section 80(2) (a) and (b) of the Maritime Area Planning Act allows for Phase Two criteria and the process to be set by DECC ahead of MARA enactment. It is recommended that a pre-qualification process and criteria are set in regulations to allow for MARA to be prepared on day one for the Phase Two project process.

2. Finalise and publish in regulations, the pre-qualification process and competitive Phase Two MAC criteria – Q4 2022

To ensure MARA is able to undertake a competitive MAC process directly following establishment, agree criteria by end-2022.

3. Establish MARA and run the pre-qualification and competitive MAC process – early Q1 2023

An alternative to two separate processes, is to streamline by combining the prequalification round into the main competitive MAC process. The advantage of which is one less opportunity for legal challenge than two separate processes. The submission could be structured in such a way that Part A would be the pre-qualification, and if an applicant does not make it through the pass/fail section, the other sections (see suggested criteria below) are then not read, and those applicants are excluded.

Competitive MAC process

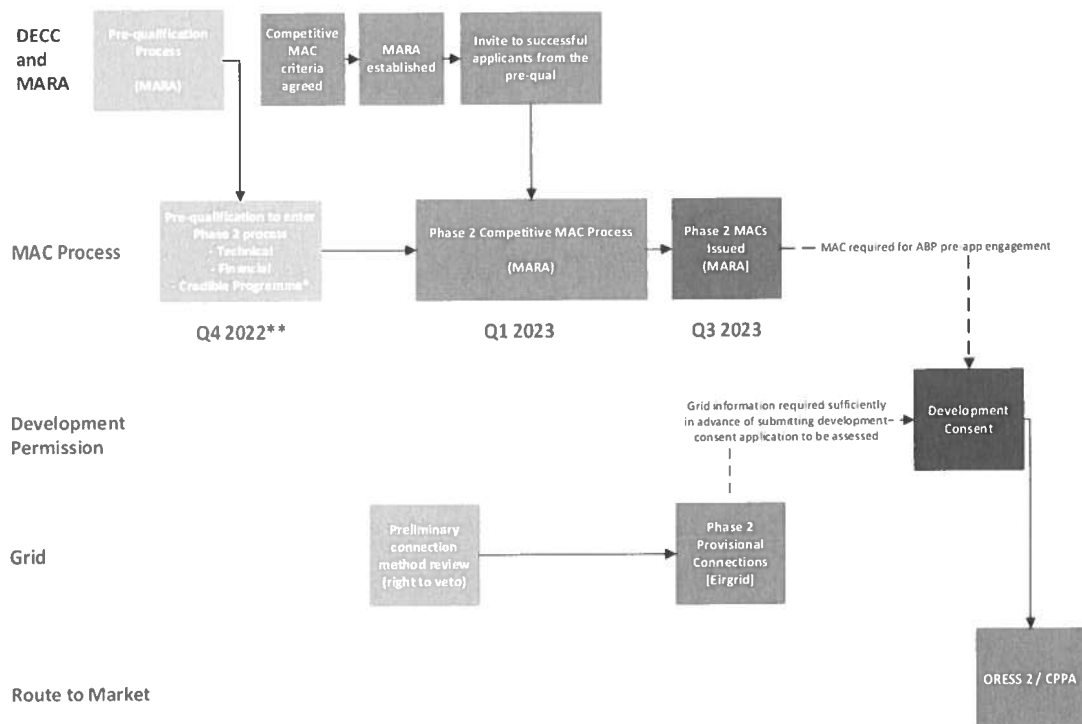
WEI recommends that the MAC process ensures the allocation of sufficient capacity to deliver on the overall 2030 target of 5,000 MW, allowing for expected levels of attrition and competition in ORESS.

In line with international experience, WEI proposes that a total score assessment is used for the Phase Two MAC process. Within this process, each qualified MAC Application competes with every other qualified MAC Application submitted as part of the competitive process. This ensures that the projects which are most progressed and have the greatest chance of delivery by 2030 are awarded. This also deals with the issue of overlapping or competing (from a marine space perspective) MAC Applications. The criteria for the competitive MAC process are set out in the section below. Given the limited time remaining for projects to deliver in advance of the 2030 target, a key focus is proposed in relation to the level of project readiness and development progression. To maintain a 2030 delivery timeline, developers will have had to progress critical path surveys and studies (environmental and technical) which have a long lead time / are required over a long period (e.g., aerial surveys for birds and marine mammals which are required over 24 months).

We also note that there will be a need for further discussions as regards how to deal with overlapping MAC areas. WEI would welcome the opportunity to engage with the department on this and find a suitable solution.

Overall sequence

To provide further context, the envisaged sequence and subsequent development pathway for Phase Two projects is presented below:



*Support from an independent third party consultant may be considered as part of the credible programme assessment
 ** In the event that MARA is established by Q4 2022

What assessment criteria should be used in this process?

The proposed assessment criteria for the i) pre-qualification process and ii) competitive MAC process are set out below:

Criteria	Pre-qualification assessment	Competitive MAC assessment
Consistency with the National Marine Planning Framework	Pass / Fail	Pass / Fail
Consistency with EirGrid's latest plans, e.g., Shaping Our Electricity Future	Pass / Fail – subject to notes below	Pass / Fail – subject to notes below
Financial and Technical capability	Pass / Fail	Pass / Fail
Preparedness / Deliverability: Preparatory works undertaken, including stakeholder engagement	Programme to show credible 2030 delivery	Programme to show credible 2030 delivery + weighted assessment of development progression
An auction for the seabed levies to be paid by MAC holders (Note: preference is that no auction is carried out)	Capped option/ Uniform levy Application fee for pre-qualification stage fee: €5,000*	Application fee €5,000* (if a combined process is chosen, €10,000* in total) Uniform development levy applied - in line with Phase One MAC development criteria

**WEI proposed a 10k application fee for the Maritime Area Consent (MAC) Assessment for Phase One Projects consultation. To align with the Phase One projects, we propose a similar fee which could be split across a prequalification phase and a competitive process phase or applied as a single fee to the combined process discussed previously*

WEI believes a number of qualifications in relation to the above criteria are important to ensure that projects are assessed in a fair manner within the competitive MAC process:

- **Consistency with EirGrid's latest plans, e.g. Shaping Our Electricity Future**

Shaping Our Electricity Future (SOEF) was applicable at a particular point in time and was reflective of a lower overall RES-E target (70%). It also presented one scenario or grid model that could support the 5GW target, although it is important to understand that whilst the regional grid limitations are understood, there are various nodes or connection methods within an interacting region that can utilise this capacity. As such, strict adherence to both the capacity and location of this capacity is not reflective of the overall system within the 2030 horizon.

At the pre-qualification stage, it is expected that high level compliance (of each project in isolation) with the SOEF from a regional perspective would be sufficient to meet the pass/fail criteria. To ensure that projects can demonstrate an ability to connect the ORE Project, it is proposed that engagement with EirGrid in advance of the competitive MAC process is facilitated with potential Phase Two MAC Applicants. This engagement would provide the opportunity for EirGrid to flag incompatibilities or potential opportunities/enhancements within their future plans and help inform developers on the formation of a preferred grid connection method, supporting their development consent activities.

- **Financial and Technical capability**

DECC has recently concluded a consultation in relation to the technical and financial assessment of Phase One MAC Applications. The key points within the WEI submission are set out below.

Technical Assessment

WEI is supportive of DECC's approach to assess the technical capability of MAC applicants to deliver large scale offshore renewable energy projects, however, we consider the technical assessment criteria set out in the consultation to be overly prescriptive and ambitious and will significantly reduce the opportunity for local, Irish entities and team members to be awarded MACs and lead development teams. We note that there are 6 developing companies, and they are varied in their make-up. Therefore, the guidance must allow for a range of types of organisations which will develop the offshore wind farms and will back the developers both financially and with expertise.

WEI also note that some information that is requested as part of the MAC application form cannot be provided at the MAC application phase of the project. For example, determining turbines in detail will not happen until the Financial Close process post consent.

Financial Assessment

WEI note the proposal for projects to demonstrate specific details of 'committed' funding of the project. At this early stage, projects will not be able to provide detail on source of funding given that the market is at least one year away from securing an ORESS contract and approx. two years away from securing planning consent, and likely a year beyond achievement of consent to reaching financial close. At this stage, therefore, we would suggest this level of detail is excessive. It is important to note that facility details such as the level of working capital facility etc. will, at this stage, be undetermined.

We do, however, understand the interest in ensuring applicants have considered where they will receive funding from. As an alternative, therefore, WEI suggests that this should just require expected sources of project funding e.g., approximately x% debt and x% equity, as well as the general questions on proposed "Type of funding arrangement" and "Details of the proposed funding arrangement".

WEI believe that the criteria, as reflected in the WEI response, reflect suitable pre-qualification assessment criteria for the Phase Two projects.

- Preparatory works undertaken, including stakeholder engagement

To assess the progression of projects in relation to their development stage, a number of additional criteria would be useful to consider:

- Commencement and completeness of critical path studies such as long lead aerial surveys which are required over a 24-month period
- Progression of other preparatory works including site investigations, site assessment, design works, boundary refinement etc.
- Demonstration of the site selection process the MAC Applicant has undertaken to identify the ORE Project
- Cumulative impact considerations
- Demonstrated understanding of technical and non-technical risks

WEI caution that the use of weighted and scored criteria can be subjective, and recommend that, in crafting the scoring criteria, thought is given to how to exclude the subjective element. WEI also recommend a streamlined, efficient process using pre-determined forms, with limitations to information provided, e.g., 10 A4 pages on preparatory works, 4 A4 pages on technical and non-technical risks, 2 A4 pages on stakeholder engagement.

- An auction for the seabed levies to be paid by MAC holders

As noted in the consultation document, due to the need for a competitive process in ORESS 1, there will be Phase One projects which are not successful in the ORESS 1 auction. As a result, Phase One projects, if unsuccessful in securing a corporate PPA, will compete in ORESS 2 auction.

To ensure a level playing field from an ORESS 2 competition perspective, it is proposed that the development levy paid in relation to a Phase Two MAC is aligned with the levies paid by the Phase One MAC holders. WEI propose this fee is set at a standard level for all projects.

What should the weighting of this criteria be?

As reflected in the previous section, the preference is to have a weighting system that is not aligned to an auction process, but rather the evaluation should place a strong focus on the level of development progression and ability to deliver of a particular MAC Applicant.

Should a seabed levy auction be included in this assessment? What weighting should the auction result have?

A UK Round 4 style auction is not recommended under Option B as the strategic level assessment work, equal playing field and certainty are not easily resolved in the Irish market. The preference for a capped development levy should be included as part of the Phase Two MAC Competitive process however, given Phase One and Phase Two projects will be competing in ORESS 2, it is important that projects are on a level playing field in relation to levies paid as part of a MAC process.

WEI recommends all Phase One and Phase Two projects pay a set development levy fee aligned with the feedback provided as part of the WEI response in relation to the Maritime Area Consent (MAC) Assessment for Phase One Projects consultation.

In this feedback, WEI noted that we consider the Department's proposed Development Levy of €20,000/km²/annum to be high in an emerging market and an evolving system. The resulting risks that we can see evolving are:

- Confidence regarding timelines is low - if a per annum amount is set and the system takes longer than anticipated to establish then costs overall will increase. There may also be issues with regards to litigation for these costs, especially where delays are due to inefficiencies in the system
- Competition for supply chain is high - other neighbouring markets have already commenced projects to meet their 2030 targets, Ireland will be in competition with these markets for access to turbines, towers, nacelles, ports, construction sites etc. Again, this will drive timelines to extend and so, overall costs.
- These costs will ultimately end up back with the consumer - if they are set too high per annum at the outset it will be difficult to pare them back when delays in the system or the supply chain emerge.

To mitigate the increased risks in the Irish offshore wind market, it is recommended that DECC include a cap on the period for which the Development Levy is paid. The pathway for the delivery of offshore projects in Ireland through the consenting and grid system is in its infancy. As such, there may be cases where a project, for reasons outside the control of the developing entity, is significantly delayed i.e., the period to receive planning or a judicial review. Capping the period for which the Development Levy is paid will provide greater financial certainty to the developing entity at the outset of the development phase and to the business case as the project enters a competitive auction process.

Should a deployment bond be maintained under this option? Why, or why not?

No, a deployment bond should not be maintained under this option. The purpose of the deployment bond as set out within the consultation document is to discourage speculative bidding for projects which do not ultimately have a credible programme for 2030 delivery.

WEI recommend that the 2030 deliverability assessment undertaken as part of the pre-qualification process, which may be assessed by independent third parties, is the preferable manner to deal with the risk of non-delivery by 2030.

Consideration in using such measures should recognise the many elements outside of a developer's control (i.e., grid and consent timeframes) and there are reasons a project may not be taken forward (site investigation results impacting design and cost). As most of the risk sits with the developer, the rationale to discourage hoarding is not as logical as a similar security for decommissioning and the intended use of the security. It is unclear how the Department would use a deployment security to support meeting 2030 targets.

1.4 Phase One retention of MACs

Question 4

All of the above options assume that Phase One projects retain their MACs for Phase Two.

a. Is this the correct approach? Why?

WEI believes that the retention of MACs for Phase One projects is essential to ensure any project which did not clear within the ORESS1 auction can continue with the development consent process which will be in process (or possibly already granted) via ABP.

The competitive design of ORESS1 and the fact that only a small number of projects will be ready to submit bids, means that at least 1 of the Phase One projects will not be awarded an ORESS tariff. Failure to secure a winning bid within ORESS1 would not necessarily mean that a Phase One project is less competitive than a Phase Two project, but simply because it had to be excluded from ORESS1 to enable competition. Additionally, WEI notes that DECC has consistently confirmed (both within industry workshops and publicly) that projects unsuccessful in ORESS1 would be eligible to bid into at least one subsequent auction.

Phase One projects are well progressed having been under development for over 15 years. These projects are the most likely to be delivered in time to meet 2030 targets. Requiring these projects to reapply for a MAC would undermine investor confidence, increase the pressure on scarce MARA resources and decrease the attractiveness of the Irish offshore market.

Phase One projects are essential to reaching the 2030 targets set by the Government. If Phase One projects lose their MAC for Phase Two, this will jeopardise the achievement of the 5GW target.

b. Would requiring Phase One projects that are unsuccessful in securing a route to market, within a specified timeframe, to re-apply for MACs result in a better outcome for the sector, the State and consumers? Why?

As noted in the response to question (a) above, WEI does not agree that requiring Phase One projects that are unsuccessful in securing a route to market within an, as yet, an unspecified timeframe to reapply for a MAC would provide a better outcome for any of the stakeholders mentioned above. This is because it would unnecessarily increase developer costs, which serve only to increase bid prices, without providing any additional benefit. Additionally, it would increase the demand for resources within MARA, something that would put additional pressure on the already tight timescales for any Phase Two projects to meet COD before 2030.

c. If Option D was selected would this require unsuccessful Phase One projects to relinquish their MAC before ORESS 2? If so, should these projects be given any preference such as a right of first refusal if they match a winning bidder's terms for their MAC area?



As WEI does not support the proposals for either Option C or D, we do not wish to comment in terms of potential secondary order affects. As noted above, we believe Phase One and Phase Two MACs should be issued on the understanding that the developer would target development to support the 2030 targets.

1.5 Cliff-edge before enduring regime

Question 5

To incentivise swift deployment, discourage speculative hoarding of the marine space, discourage MAC applications by projects incapable of delivering by 2030, and facilitate the coherent transition to a plan-led Enduring Regime, it is proposed that all MACs awarded in Phase One and Phase Two will expire prior to the Enduring Regime, should the holders of these consents be unsuccessful in securing a route to market.

- a. **Is this the correct approach? Why?**
- b. **Would this approach incentivise deployment and/or discourage hoarding of the maritime space?**
- c. **Would this approach discourage MAC applications in Phase Two from projects with poor pre-2030 deliverability?**

This approach is not supported in the industry and is a subject of considerable concern. A significant challenge is that there is insufficient information on the planned approach for the enduring regime to make an informed decision on it. The idea of a MAC being awarded without sufficient clarity on the validity of its term and the potential risk of it being rescinded when another regime comes into play (without understanding the timing of this) is hugely concerning; it will undermine confidence in the projects, risk opportunities of projects to reach financial close and increase debt rate. As it stands for Phase Two, project timescales are extremely tight. Assuming MACs are awarded 2023, Phase Two projects will be expected to be completed and delivered within 7 years. Some of these projects will be the biggest energy infrastructure projects ever commissioned in the Irish State and are being developed in an untested and evolving policy landscape. In other jurisdictions, the timelines from award of consent to commencement date is minimum 7 years, but more realistically averages are 10-11 years.

The proposal of a possible 'cut off' for MACs when the enduring regime establishes is a huge disincentive for investors as the timelines are largely unknown and are difficult to factor into project plans and costs. It is likely that it will drive away many realistic project and investment opportunities for Ireland.

Thus, including a MAC expiration pre-2030 and prior to the enduring regime will become a barrier to the overarching Phase Two objective of enabling 5GW of offshore wind at the most affordable price and for this reason, Industry recommends that such a measure is not applied within Phase Two.

We do recognise the intention of the Department in suggesting such a measure and to meet this intention and allow for a bankable environment for projects reaching FID between 2026 – 2027, WEI would recommend that MACs be valid for a period of sufficiency before expiration which also accounts for the market risk. A suggestion here would be to provide a long stop delivery date within the MAC award of a period of 10 years from the effective date of the MAC or a predetermined date post-2030 that sufficiently addresses the market risk.

d. Would this approach incentivise deployment and/or discourage hoarding of the maritime space?

No - As above the proposed approach will cause significant uncertainty in the market, drive up risk, increase costs and potentially result in Ireland missing 2030 targets. The industry recognises that the government does not wish projects to hoard space. Therefore, we recommend an alternative option may be to provide a defined period for the development stage of the MAC.

A defined period will provide certainty to the market while incentivising delivery. It will also give the government certainty on the fact that MACs for projects that do not develop within the defined period can be recouped. A similar approach is being taken in ScotWind and Round 4 in the UK- where the bidder is granted an option to develop for 10 years.

While 10 years is an optimum development period, we are conscious that the target timeline is 2030 and therefore suggest that opportunities to incentivise delivery of projects by 2030, should be considered via altering the development levy cost - whereby a base cost will be set up to 2030 and this may increase thereafter. Delays because of the system which may push projects post 2030 would need to be considered and annual levies paused as appropriate.

Most offshore wind farm projects are financed using a non-recourse 'project finance' model, this funding structure is key to accessing the most competitive lending rates, which will have a direct relationship to the PSO levy applied to consumers. Recent experience in the UK shows that funders are not willing to accept a potential 'cliff edge' in any of the fundamental contracts or licenses needed to construct an offshore wind farm. Delivering a project by 2030 will be challenging and subject to numerous risks that cannot be mitigated effectively by developers.

It is not clear from the consultation document what milestone would need to be reached by 2030 to continue to hold a MAC. If there is a risk that a project could lose a MAC for not reaching a Commercial Operations Date milestone within a relatively short time (3-4yrs) post success in an auction and post grant of development consent, this will hinder a projects ability to reach financial close, when capital expenditure must be committed.

While we recognise the need to have an incentive for delivery by 2030 there needs to be a mechanism for the extension of MAC milestone dates where projects have been delayed due to circumstances outside of their control. This type of remedy has been used in the UK contracts for difference scheme to enable project delay risk to be mitigated.

Overall, our preference is to allow for more flexibility within the system so that projects can be delivered at an appropriate rate and in line with the considerable grid infrastructure that will be required to support them. In particular, we want to ensure that projects which have secured development permission and a clear route to market, but which may have experienced delays out of their control, due to for instance access to grid or judicial review, should have options to extend their MAC development period and be permitted to proceed into the early 2030s.

This type of approach will give both developers and the government much more certainty and will present greater opportunity for Ireland to reach 2030 targets.

e. Would this approach discourage MAC applications in Phase Two from projects with poor pre-2030 deliverability?

No as above – given the lack of information currently on the planned timelines and pathway to the enduring regime the proposed approach is considered premature.

There is a need to get a much better understanding on the planned process for the enduring regime and the plan to identifying Designated Marine Area Plans (DMAPs) for Offshore Renewables. In particular: how potential areas will be selected; the timelines of the process; and how the enduring regime might overlap with Phase Two. It is assumed that there will be a future consultation on OREDP2 and the enduring regime which will inform on these issues. As part of this it would be useful to understand whether projects might be able to engage in the process to influence area selection for DMAPs. Given that many of projects will possess significant data and information relevant to their sites it might be useful to consider how this might be used to complement and augment national datasets and help identify the most viable sites to meet Irelands hugely ambitious targets post 2030.

Furthermore, Industry would recommend implementing the enduring regime as soon as possible and well in advance of 2030 to incentivise offshore wind development and investment in Ireland, account for development risk and likely project/capacity attrition and provide for a sustainable build out of offshore wind to scale up the sector to support meeting a net zero electricity system in Ireland. In relation to MAC validity for Phase Two during the development stage, Industry would also recommend DECC consider excluding any existing Phase Two MACs from a DMAP to be solicited for the purpose of awarding further offshore wind capacity when first implementing the enduring regime if a Phase Two site sits within a DMAP area.

This to not delay the enduring regime implementation well in advance of 2030, allow for the period of sufficiency for Phase Two MAC validity before expiration due to non-delivery and give the market a more certain installation rate for offshore wind which will stimulate supply chain growth by providing necessary certainty over the long term. If Phase Two projects do not deliver within a MAC period of sufficiency before expiration, MACs should then be terminated and included in the next available enduring regime tender. Industry see the implementation of the Enduring Regime well in advance of 2030 as a critical point to ensure a consistent and a more certain development pipeline that will support meeting net zero targets and significantly grow the offshore wind industry and its supply chain in Ireland to maximise its potential in line with the current programme for government.

1.6 Provisional Grid Offers

Question 6

What are your views on providing provisional grid offers to projects in the case where all projects receiving such an offer will not be able to obtain a full grid offer?

Provisional Grid Offers are essential for Phase Two projects that aim to access the grid and seek to reach COD by the end of 2030. In this transition phase, projects are required to demonstrate alignment with EirGrid's 'Shaping our Electricity Roadmap'. Developers of projects in this phase will be making decisions on their grid connection in advance of the plan-led, enduring regime. Building on knowledge of Ireland's transmission system, local constraints and stakeholder engagement, developers may propose a preferred grid connection and will be keen to align with EirGrid.

Formalising the connection method via a Provisional Grid Offer (or GCA) is welcomed, noting that developers will be advancing Development Consent applications, environmental surveys and ORESS bid prices based on their understanding of their grid connection. To support the development consent timelines, it is vitally important that developers understand their proposed grid connection scope at least 30 months in advance of programmed development consent date (6-months EIA scoping / 12-months ecology surveys / 12-months ABP decision). This aligns with the GCA process for Phase One (offer execution only when a route to market and development consent is secured)

Provisional Grid Offers may result in scope overlap as EirGrid will be unable to identify winners so early in the process. In effect, these offers could be mutually exclusive, in that the connection method would be utilised by the project that is successful in securing development permission and a route to market by a given date.

To ensure that finite resources are not overwhelmed in the processing of Provisional Grid Offers, it is important to prioritise those projects with the greatest chance of reaching COD by 2030. Key to this approach is the prequalification process as recommended in our response to Q3.

Including the requirement for development consent within the ORESS 2 eligibility criteria is preferential for the following reasons:

- Provides the best opportunity to achieve 2030 targets
- Considerably reduces developer risk in ORESS 2 auction which will result in lower bid prices and best value for the consumer
- Increased likelihood of available grid capacity being utilised - In the case where a developer is successful in ORESS auction but fails to secure development permission, OW will not be connected to that grid node within the 2030 timeframe. "Reserve Projects" are not a reasonable solution to this, as detailed in the response to Question 8 provides greater certainty to all stakeholders and will help ensure that valuable grid capacity is utilised.

In support of the transition to a plan-led model, WEI members considered the approach where EirGrid plans and develops the onshore transmission connection points. There are significant concerns with this approach, mainly relating to:

- The fact that there are multiple solutions that can support the 5GW target, appointing specific grid locations too early is unlikely to be an optimal solution and could also favour some projects more than others, thus impacting the competitive process.
- The time required to develop the optimal solution and the impact this will have on Phase Two.

However, in the transition phase, as there are many projects competing for grid access there is likely to be a role for EirGrid to manage 'overlapping project scope'. **Where there are multiple projects competing for access to the same Transmission Station (clear overlap of project scope), EirGrid may seek to identify a sub-group, collating views on preferred grid connection options. Where there is clear overlap, EirGrid, in consultation with the subgroup members, could take the lead on the development permission associated with overlapping scope. Ultimately this may then be used by the successful project(s) within a grid region.**

a. How can and should the award of full grid offers be tied to the auction results?

Policy needs to support the development of offshore projects and reduce risk accordingly. This will enhance developer and supply chain confidence, ultimately resulting in lower energy costs and reduced project attrition.

As per the approach identified by DECC, an appropriate gateway to the execution of grid offers should include evidence that a route to market has been achieved and that the project has secured development consent.

An appropriate validity period of a provisional grid offer needs to acknowledge that some projects will fail to secure a route to market in ORESS2. Automatic termination or short validity periods is a disproportionate response, given the investment by developers in a project at this point.

Noting the regional distribution of grid capacity, it is recommended that the ORESS2 auction facilitates competition for this valuable capacity, i.e., that ORESS2 includes a regional element and identifies 'winners' within a grid area, facilitating execution of a full grid offer.

b. Should allowance be made for projects that do not effectively compete in the auction but share a preliminary connection offer with projects that do to remain eligible for a CPPA route to market?

WEI does not support this approach.

In support of the 5GW target by 2030, the recommended sequence is as follows:

- MAC award
- Development Permission
- Success in securing a route to market

Recognising that as per EirGrid's SOEF Roadmap, there is finite capacity within regions, it is recommended that ORESS2 facilitates competition on a regional basis. This will support the full utilisation of available grid capacity as winners are regionally distributed, aligning with EirGrid's SOEF Roadmap.

If a project(s) has achieved the above milestones it should be facilitated to the execution of a full grid offer. Keeping the door open for projects to secure an alternative CPPA route to market fails to recognise the grid limitations, adding no value as the available grid capacity has been awarded. The Provisional Grid Offer validity period needs to provide an appropriate period to investigate an alternative route to market (bypassing grid constraints).

1.7 Auctioning Capacity at particular Grid Nodes

Question 7

What are your views on auctioning capacity at particular grid nodes or regions in ORESS 2?

- a. **How should this operate? Should successful projects be required to submit ORESS 2 offers that clear both the overall auction and the auction for a given grid node or region?**
- b. **Should any nodes or regions be reserved for non-ORESS routes to market?**

As per our response to question 6a, WEI recommends that the ORESS2 auction facilitates competition for valuable capacity, i.e., that ORESS2 includes a regional element and identifies 'winners' within a grid area, facilitating execution of a full grid offer. **WEI does not support the option to run a separate grid capacity auction.**

Competition for valuable capacity is appropriate and should be facilitated as a general principle within Phase Two.

Given the requirement to align with EirGrid's SOEF Roadmap, all offshore projects not in Phase One (that seek to utilise grid in support of their route to market) will compete for any capacity remaining after the facilitation of Phase One. This presents a broad field of projects seeking to engage via the Phase Two process.

As per the response to question 6, it is important to develop appropriate pre-qualification criterion, with the focus on project delivery by 2030. This ensures that valuable capacity is allocated with confidence, as those projects competing via the process have demonstrated an ability to deliver.

The ORESS2 auction results may then be used to identify winners amongst projects competing for limited capacity within various grid regions.

- a. **How should this operate? Should successful projects be required to submit ORESS 2 offers that clear both the overall auction and the auction for a given grid node or region?**

It is recommended that competition between projects targeting the same grid node or region is addressed via the ORESS 2 auction, where development permission is an eligibility criterion. This will increase the likelihood that available capacity will be utilised (see also response to Question 6).

Any alternative ORESS auction which excludes development permission, results in a complicated process which seeks to either appointment primary and reserve projects in a given region, or results in a race to achieve development permission. These options are sub-optimal and greatly put at risk Ireland's ability to achieve 2030 targets.

Although an unlikely scenario, should no winner be identified via the auction in a particular region, additional time may be given to facilitate developers seeking an alternative route to market (e.g., grid connected CPPA or off-grid solution) or indeed to consider competing in a future auction. In this approach, projects that are successful in ORESS 2 have then achieved both development consent and a route to market. At this point, the TSO can then, with confidence, allocate grid capacity via the issuance of a Grid Offer.

WEI highlight that 2030 is only eight years away, and the projects that will support Ireland's 5GW offshore target are already in the preliminary development stage. Beyond 2030, as outlined in the DECC Framework Offshore Grid Framework, deployment of offshore wind will be 'plan-led'. This leaves a relatively short period of time for the transitional phase (Phase Two), meaning that Phase Two projects will also be predominately 'developer-led'. **As per the response to question 6 however, there may be a need in some circumstances for the TSO to take the lead on development permission at existing nodes as determined through a Provisional Grid Offer process and the identification of sub-groups.**

To maintain delivery in a post 2030 enduring regime, WEI believe that EirGrid must start to develop a longer-term solution, identifying nodes/regions that are consistent with their longer-term grid development strategy.

b. Should any nodes or regions be reserved for non-ORESS routes to market?

WEI do not believe this would be a suitable approach for Phase Two. There is a risk that any available capacity reserved for a specific non-ORESS route to market may not ultimately be utilised. Where there is competition to access the grid, this needs to be a competitive process.

Non-ORESS routes to market which exclude exporting onto the grid should however be considered. Any process that includes the reservation of capacity at specific nodes for a particular route to market also introduces significant complexities, and as such is not recommended.

1.8 Reserve Projects

Question 8

In order to utilise grid capacity realisable by 2030 in totality, most options require the award of greater capacity in ORESS 2 than is realisable by 2030, and establishing reserve projects on grid orders of merit, possibly grid region.

- a. What are your views on grid orders of merit? How best could reserve lists be established in a robust manner that does not give rise to legitimate expectations by reserve projects?
- b. How should grid orders of merit be established? Is using ORESS 2 bidding order, possibly by grid node/region, an appropriate methodology?
- c. What obligations should be placed on reserve projects and what, if any, compensation should be provided?
- d. How should reserve projects be serviced so that they can readily progress if required?
- e. How should reserve projects be held to the terms of their ORESS 2 offer?

WEI believes that this an overly complex solution, driven by the uncertainty created through appointing winners too early.

As per our response to Question 3, a more optimal sequence which would mitigate the risk of attrition after ORESS 2 (thus avoiding the need for reserve projects) is to include development permission in the ORESS 2 entry criterion.

The idea of a reserve project may seem like an appropriate attrition mitigation, however in practice, **does not support the policy objective of securing delivery by 2030**. Some of the issues that a reserve project may encounter include:

- Changes to financial assumptions and a need to renegotiate ORESS bids
- Route to construction – supply chain slots no longer available
- Resource drain – Project teams not available immediately

WEI highlight that the transition to a plan-led approach and the suggestion that any Phase One or Phase Two project that has not secured a route-to-market by 2030 would lose their MAC, increases the level of risk on the developer. This risk would be even greater for a reserve project. In the options presented, there is no incentive for the developer of a reserve project to continue to invest or maintain project programmes in the hope that a higher merit project falls away. In fact, it is unclear how long it might take for a preferred project to relinquish their capacity, or under what scenarios this would be acceptable.

As per the response to question 7a, perhaps the concept of a 'reserve project' could become more palatable to developers if there was a better understanding of the longer-term grid strategy and associated capacity opportunities.

Projects which are unsuccessful in ORESS, should be facilitated the opportunity to adopt an innovative/alternative route to market, such as private wire CPPA's for green hydrogen production.

1.9 Mutually Exclusive Offers / Multiple Bidders

Question 9

Option D outlines an auction with mutually exclusive offers and multiple bidders specifying the same MAC area and/or connection point allowing multiple bidders to specify the same MAC area and/or grid node/region and using ORESS 2 results to allocate the MAC area and/or grid node/region capacity.

- a. What are your views on the feasibility of this option? What are your views on the feasibility of solving the auction using an optimisation approach?**

Overall, WEI believes that the process outlined in Option D would constitute a very complex approach to the auction. There should be some consideration made about whether such an auction process would be necessary or efficient. If an appropriate and robust qualification process was in place, then it might be clear that a limited number of projects could viably bid – meaning they could bid and expect to be commissioned by 2030. Offering multiple bids without such qualification would likely encourage speculative bidding

1.10 Hybrid Connections

Question 10

Hybrid grid connections are defined in this paper as single grid connections which facilitate the connection of both an existing or proposed thermal generation plant and a proposed offshore wind project.

- a. **Do you support the facilitation of such connections, as defined? Why?**
- b. **Are you aware of any other jurisdictions where such connections are permitted? Describe how hybrid connections are treated from a technical and regulatory perspective in these jurisdictions.**
- c. **Are there potentially unintended consequences associated with permitting hybrid grid connections, such as potential impact on grid system services provided by the associated thermal plant or potential impacts on the reliability of the thermal plant?**
- d. **How should proposed projects with hybrid connections be treated so as not to distort competition or afford undue competitive advantage to the incumbent owners and operators of the associated thermal generators?**
- e. **Do you support the facilitation of such connections if the definition was adjusted to, e.g. an existing or proposed onshore battery, solar or other generator?**

WEI is supportive of the development and progression of hybrid connection policy which we believe can provide benefits for the connection of offshore wind generation as well as onshore renewables. The purpose of Phase Two is to achieve Ireland's target of delivering 5GW of offshore wind by 2030, hybrid connection policy must be considered in this context. For hybrid connections to be considered as part of Phase Two, the changes to policy, regulation, grid code and market rules need to be implementable to facilitate projects in this timeline.

WEI highlights that it is vitally important that the implementation of the required policies to facilitate hybrid projects must not be done in a way that causes a delay to the overall Phase Two process.

WEI has proactively worked with EirGrid and the other System Operators in Ireland and Northern Ireland to break down the barriers to progress hybrid connections. These connections should be supported as they provide a range of benefits such as:

- more efficient use of grid infrastructure
- Allows renewable generation to utilise existing connections which would expedite their connection to the grid rather than having to wait on timely grid reinforcements
- Reduction in carbon emissions by allowing the accelerated increased penetration of renewable generation
- Greater sustainability by avoiding the building of new assets to provide the same service

We do not believe there is a requirement to have a separate definition for hybrid grid connection between a thermal generation plant and a proposed offshore wind project. There has been much work

previously carried out in both Ireland and other international markets to explore the concept of hybrid units, hybrid sites and hybrid connections, and this work does not differentiate between the technologies that form a hybrid grid connection when determining the applicable policy. Hybrid connections of all types of generation should be treated in the same manner. WEI recommends the following definition should be adopted for a hybrid grid connection.

A hybrid grid connection should be defined as two or more generation units under the same connection agreement, with a combined installed capacity greater than the connection agreement MEC, dynamically sharing the MEC at the point of connection to the grid.

The facilitation of hybrid connections has been a clear policy objective for some time that has been included in the Climate Action Plan in both 2019 and 2021. A range of measures to be taken to facilitate these connections are set out in Annex 125. The lead for these measures is shared between CRU and EirGrid in the Annex and a timeline for addressing all the measure was set out to be completed by the start of 2023. However, to date progress has been slow. It important that progress is now accelerated to allow the benefits of hybrid connections to be realised and allow these connections to help in delivering the 2030 targets.

Market and regulatory changes required

Action is required to enable all hybrids, including offshore hybrids and to ensure that all regulatory hurdles are removed to allow these projects to progress. Regulatory changes take time to implement. It's critical that these hurdles are prioritised and addressed over the coming 12 months to ensure that hybrid connections can be utilised and play their role in helping the delivery of the 2030 targets.

The primary regulatory hurdles that must be given immediate attention to enable these connections are:

- Allow dynamic sharing of MEC between units behind a single connection point
- Multiple legal entities behind a connection point
- The cap on over installation at connection of 120%

Currently, the **dynamic sharing of MEC** between different units is not allowed and limits the type of hybrids that can be utilised today. Only when units can dynamically share the connection can the full value of a hybrid connection be attained. Another barrier is the inability for **multiple legal entities** to connect behind the same connection. Contractual arrangements are currently between the TSO and one grid connection counterparty. The **over installation clause** from current grid code should also be removed for these types of projects to allow the entity/entities to build assets to maximise the utilisation of the MEC.

These barriers should be addressed by CRU, ESBN and EirGrid as soon as possible to unlock greater value from existing grid connections.

Other regulatory changes that will likely need to be implemented to facilitate hybrid connection are:

- *Grid Code*

Further Grid Code changes may be required. Some areas that need to be considered are the communication challenges of energy/capacity available and scheduling of the energy within the power system constraints. The submission of COD and TOD by the units may also need to change depending on the setup of the hybrid connection agreement.
- *DS3*

There are a number of challenges that will need to be addressed such as communication challenges of services available and scheduling of the services. There may also be potential changes to the tendering and qualification of services, and finally, the settlement of the services between the hybrid assets. These areas will also need to be addressed for the hybrid projects that are currently allowed for under the RESS2 T&Cs.
- *Trading and Settlement Code*

As the units under a hybrid connection are envisaged to be two standalone assets dynamically sharing the MEC, the impact on the T&SC may be limited. Some items to consider could be the registration of the assets as well as the settlement that is required. In instances where hybrid connection assets have participated in the CRM (acknowledging that a RESS asset cannot win a CRM contract) the settlement of difference and non-performance charges may also need to be reviewed.
- *SEMOpX Rules*

Similar to the T&SC, as these are individual assets it isn't envisaged that there should be any changes to the SEMOpX rules due to hybrids. However, REMIT does need to be reflected upon how the hybrid assets will participate in the ex-ante markets.
- *Capacity Market Code*

The CMC already allows for combining/aggregating units so the same methodology could be applied to the hybrid connections. The treatment of the de-rating methodology, qualification, volumes available to be submitted into the auction, and demand curve adjustments would need to be considered for a hybrid connection.
- *Offshore Infrastructure Ownership*

It is proposed that offshore transmission infrastructure is owned by the system operator. It needs to be clarified how this would be handled for hybrid connections. There needs to be a level playing field between hybrid generators and other offshore generators.
- *State Aid*

It needs to be clarified if thermal hybrid plant can avail of ORESS support under the state aid rules.

- *Firm Access Policy*
Clarity will be needed on how firm access policy is implemented for the new hybrid generator and how it might affect the firm access of other generators.
- *Use of System Charges*
TUoS (import and export charging) for a single connection agreement with two connection points will need to be considered.

International examples

WEI is not aware of other jurisdictions that have facilitated the connection of both an existing or proposed thermal generation plant and a proposed offshore wind project. This is perhaps unsurprising as the Irish system has been at the forefront of developing solutions to integrating higher levels of renewable penetration given that it's a relatively small electricity system with limited interconnection. Hybrid connections are simply the next step in allowing better integration of renewable generation on the system.

Hybrid grid connections as set out in the definition provided at the start of this section, co-located renewable energy sources and/or battery storage sharing a single grid connection, are operational and under development in several jurisdictions such as GB, Netherlands, USA, India & Australia.

Examples include the following, though noting these examples of hybrid sites are all with the same operator:

Project	Details	Further information
Parc Cynog Solar and Wind Farm, Wales	In 2016 Vattenfall added 4.94MW of Solar PV capacity to its existing 3.6MW wind farm at Parc Cynog (operational since 2001). The solar and wind elements are connected to the distribution system via the same substation and grid connection and their output is managed by Vattenfall via a hybrid power plant control system.	Parc Cynog solar farm (dnv.com) Updated: Vattenfall praises good performance of co-located wind and solar energy park Solar Power Portal Microsoft Word - HPPW Crete 2019 WE last version.docx (hybridpowersystems.org)
Haringvliet Energy Park, The Netherlands	Construction of Vattenfall's hybrid energy park was completed in 2021 and commissioning is due to be completed in early 2022. The hybrid plant consists of 21MW of wind, 41MW of solar and 12MW of battery storage. The plant features a Hybrid Power Plant Controller (HyPPC) which coordinates the	Hybrid power plants: two is better than one en:former (en-former.com) https://youtu.be/Jiuzw-5NUAQ

	different sub-plants, managing technical and market/economic objectives while monitoring and securing the grid connection's technical limitations and grid code compliance.	
Port Augusta Renewable Energy Park, South Australia	The Port Augusta Renewable Energy Park (PAREP) is a 317MW hybrid renewable energy project located in Port Augusta city, Australia. The site consists of 210MW of wind generation capacity and 107MW of solar PV and upon commissioning will be the largest wind-solar hybrid project in Australia. A new 275kV substation and export cable will connect the project into the South Australian transmission network. The project is being developed by Iberdrola and DP Energy, and is expected to enter commercial operation in April 2022.	Homepage • Port Augusta Renewable Energy Park (parep.com.au) Port Augusta project - Iberdrola RXHK :: Port Augusta Renewable Energy Project STATCOMs Contract Award *this piece contains some useful references to the control system and compliance with local grid code.

In September 2021 National Grid ESO in GB published its [Guidance Notes for Co-Location of Different Technologies](#), wherein it describes how the grid code compliance process applies to various configurations of co-location installations of different technologies for the assistance of prospective customers planning to connect their projects directly to the National Electricity Transmission System. The guidance notes describe two distinct categories of co-located sites: supplementary (components are not independently controlled) and independently operated (the operation of different technology units is independent from each other).

Impact on System Services and Reliability

Further analysis is required to determine the potential impacts on System Services and Reliability. From a technical perspective, connecting offshore wind projects to the system via a thermal power station should have no additional impacts on the system beyond what would occur if an offshore wind farm was connected to a similar location using a standalone connection. In other words, the technical implications are driven by locational issues rather than use of hybrid/non hybrid methodologies. The offshore connection at the thermal plant should have no implications for the reliability of the thermal plant in its own right.

It is difficult to envisage the nature of the system services provision by 2030 given the predicted fundamental change in the overall system. The services required in 2030 and who will be in the market to provide them is still to be decided and heavily dependent on the SEMC's System Services Future Arrangements.

WEI would welcome further specific engagement on this point to determine the potential impacts on the services set to be required in 2030.

1.11 Innovation Technologies

Question 11

Should any special allowances for innovation technologies be included in the Phase Two process?

a. What technologies should be provided with special allowances and why?

Innovation is critical if Ireland is to meet 80% of electricity sourced from renewables by 2030. The Irish Government has set out a target of at least 30GW of floating offshore wind energy in our deeper waters beyond this to help achieve net-zero by 2050.

Critical to scaling up this ambitious target and industrialisation of floating offshore wind in the 2030s is the development of a supply chain through the deployment of early-commercial scale projects this decade. Wind Energy Ireland has previously set out our position in *Revolution - A vision for Irish floating wind energy*⁵, that floating wind projects can and should contribute to 2030 targets.

FLOW is accelerating rapidly with cost reductions anticipated to follow a similar trajectory to other renewable technologies as deployment increases. There are several large-scale demonstration projects deployed across Europe and forecasts from Wind Europe and The Carbon Trust anticipate between 7 and 13GW respectively being deployed globally by 2030.

The Crown Estate particularly has been successful in working closely with industry and a wide range of stakeholders in promoting innovation with plans to unlock 4GW of floating wind in the Celtic Sea including early-commercial scale projects of ~300MW and full-commercial scale projects of up to 1GW with a phased approach to leasing design to support supply chain and infrastructure developments. The recent outcome of the ScotWind seabed auction rounds, with 60% of successful projects utilising floating technology, has given a huge vote of confidence for this technology to deliver our future energy requirements.

This kind of ground-breaking offshore policy innovation puts Scotland at the forefront of the global floating wind market and will allow for the industrialisation of the sector in Scotland commencing this decade. Ireland will lose a significant opportunity if strong signals are not made in Phase Two to support FLOW.

In addition, hydrogen and hydrogen technologies are enablers of energy system integration, contributing to improving the overall efficiency of the system and cost reductions in the energy sector and across the economy. Innovative projects of this type should be included in the Phase Two process.

⁵ <https://windenergyireland.com/images/files/revolution-final-report-july-2021-revised.pdf>

b. What allowances should be made? At what stage(s) of the Phase Two process? Should capacity be reserved in the MAC and ORESS processes for any of these technologies?

Innovation and deployment should be supported now and as part of the Phase Two designations. They have been the main drivers for cost reductions in more mature offshore wind jurisdictions. This would see a requirement for a pot in ORESS to be reserved to support floating offshore wind.

We welcome the signal of a separate pot in ORESS 2 for FLOW via the innovation category and believe that if Ireland wishes to compete for FLOW and build a sustainable and secure energy society post 2030, then a significant signal of support for FLOW needs to be made in Phase Two, as is happening in other jurisdictions. For example, in the UK the Department of Business, Energy and Industrial Strategy included a ringfenced significant budget in the CfD AR4 auction specifically for floating offshore wind.

Grid Capacity

As a first step SOEF outputs should be reconsidered to fully align with the Climate Action Plan targets, and the ambition set out in the Programme for Government. WEI believe that the reconsideration of SOEF should not result in a delay to the Phase Two process.

WEI is currently working on a study aimed at bridging the gap between the 70% RES-E target modelled by EirGrid in SOEF, the revised 80% Government RES-E as included in the 2021 Climate Action Plan, and the achievement of carbon budgets for the electricity sector from 2021 – 2030. We look forward to sharing the results of this work with the Department when it is concluded and engaging with the Department and with EirGrid with a view to collaboratively identifying a pathway to achieving our onshore and offshore renewable electricity targets. We understand the revision process is already underway within EirGrid and we would ask for it to be prioritised to ensure Ireland is in a position to connect as many Phase Two projects as possible by 2030.

WEI notes that SOEF indicates that there is only capacity available for 5GW of offshore connections and, crucially, indicates limited availability off the south coast and none off the southwest coast. WEI has concerns that limiting to 5GW of capacity for offshore provides no scope for attrition should, for example, some of the identified upgrades be delayed, or projects don't go ahead at a given region.

Given the nature of the highly constrained electricity grid, any consideration in relation to reserving capacity within an ORESS process (see section below) must be considered from both a fiscal support and grid access perspective.

EirGrid must make more grid capacity available to facilitate broader offshore delivery by 2030. Due to the requirement to utilise grid capacity realisable by 2030 in totality (as set out in Questions 6 and 8), regional competitions within the ORESS 2 auction should initially award grid capacity on a technology agnostic basis. A technology-neutral competition for ORESS 2 should be run first up to 5GW of capacity, and a further ORESS 2 category to cater for a pot of 1 GW reserved for floating offshore wind.

WEI note that there is clearly significant potential to develop FLOW in Ireland, particularly off the South and West Coast, where OREDP indicates a potential of 19 GW.

Ensuring sufficient MAC allocation

To realise the long-term potential of FLOW for Ireland, it is important that Phase Two facilitates these projects to progress in advance of 2030, via provision of MACs and opportunities to negotiate a suitable pot. It should be noted that some of the floating wind projects are being progressed with a view to delivering initial steps into the grid as part of Phase Two, with longer term plans for an alternative route to market. Therefore, as outlined in our response to Q3 above, and given the need to demonstrate support for FLOW and plan a pathway to 2030 and beyond, it is important to ensure the allocation of sufficient MACs to meet the overall 2030 target allowing for development attrition and required competition levels during an ORESS 2 process. **Significantly more projects, including FLOW projects, need to be awarded MACs than will be eligible for ORESS 2.**

ORESS 2

As stated in *Revolution - A vision for Irish floating wind energy*, Wind Energy Ireland believes a floating wind pot is needed in the offshore renewable electricity support scheme auction planned for 2025 to support early commercial scale floating wind energy projects.

Acknowledging that at this point it is premature to specify the nature, timing, extent, and operation of it. WEI believes a 1 GW pot, as described in the 'Grid Capacity' section above, would give the needed signal to the market.

Ultimately, agreement on the pot can only be done once there is a clearer understanding of the status of Phase Two for all projects and following greater certainty on the capacity of the electricity grid on Ireland's coast by EirGrid (e.g., through an updated *Shaping Our Electricity Future Strategy*). In addition, the design of such a pot should also be informed by greater clarity on the cost competitiveness of FLOW projects to compete in the Irish market.

Non-grid solutions

Green Hydrogen potential

In addition, to maximise the amount of Ireland's offshore wind that can be capitalised on, Phase Two could include separate allocations for electricity generated specifically to produce green hydrogen. The recent option agreements for floating offshore wind for ScotWind have shown, despite a similarly constrained transmission system, a willingness to facilitate the production of hydrogen as an alternative route to market. Similarly, when it comes to allowances for innovation, projects to supply electrolysis should be given special consideration. A lot is currently happening to progress renewable electricity in Ireland, but we need to enable decarbonisation of sectors that can't be fully electrified.

Furthermore, projects should be incentivised if they are utilising offshore wind without connecting to the grid, as it maximises use of the resource. This could be motivated by enabling private ownership of the electrical infrastructure. There is potential for these innovative projects to be developed in several suitable locations throughout Ireland without the need to align with SOEF.

A pathway for these projects to secure a MAC, which will allow them to secure an innovative route to market, needs to be provided. It is also recommended that innovative projects of this type (that don't require a firm grid connection), should be provided with additional time beyond 2030 to achieve COD. Such a project could help to provide dispatchable green power generation to the transmission system, though the replacement of fossil-gas fired generation with green hydrogen, while also supporting the decarbonisation of other sectors such as agriculture, heavy industry, and transportation. Such an innovative project would also have a significant opportunity to export e-fuels to the EU. The non-firm grid connection would be at the point of onshore green power generation.

Private wire connections will also be required in these instances. In Ireland, there are regulatory and legal barriers preventing the use of private wire generation, though it should be noted that the Clean Energy Package contains provisions to mandate Member States to allow for such arrangements. Also, in line with the RED II, direct connection from a renewable energy generator to a green hydrogen/green fuel production plant will be required to meet Renewable Fuels of Non-Biological Origin (RFNBO) emission reduction criteria.

c. Should these types of projects also be required to deliver by 2030?

The consultation document and the follow up DECC workshop have stressed that viable projects for Phase Two must reach commercial delivery by 2030 in advance of the enduring regime. Projects which cannot deliver by this date will have their Marine Areas Consent (MAC) rescinded. This poses a significant risk for all projects, as timelines are immensely tight and investor confidence is hugely reduced by this risk of losing MAC.

Some of these projects will be the biggest energy infrastructure projects ever commissioned in the State and they are being developed in an untested and evolving policy landscape. FLOW projects will require a phased construction approach to accommodate the need to build supporting supply chain companies and infrastructure (in particular port and storage facilities) in tandem with the projects.

As for green hydrogen, the European Green Deal identifies it as key to a clean and circular economy. Furthermore, the European Union (EU) hydrogen strategy launched in 2020, includes phases to promote a fast and targeted development of production capacities for green hydrogen. By 2024, the production of green hydrogen should increase to one million tons per year. By 2030, the production of green hydrogen should increase to ten million tons per year. From the period between 2030 and 2050, green hydrogen is to be produced on a systemically relevant scale.

Therefore, successful implementation requires a sufficient degree of initiative at national level and considering Ireland's high potential due to its abundant natural resource, special allowances for green hydrogen as a part of Phase Two are required. Due to these offshore resources, Ireland could produce a significant quantity of green hydrogen, which could be used domestically and internationally. However, Ireland needs to act fast to ensure we capitalise on this opportunity.

d. What level of offshore wind capacity could be deployed before and after 2030 that does not depend on the Irish grid for offtake? i.e. generation that is instead utilised for non-grid offtakes such as green fuel generation or export by cable to another jurisdiction?

Projects planned for export to other jurisdictions need to be on the agenda for post-2030. It is imperative, therefore, that these projects are considered now so that specifics are appropriately considered for the Enduring Regime.

The recent TEN-E revision emphasises the need for regional coordination for offshore wind infrastructure and Ireland's presidency of the North Seas Energy Coordination (NSEC) gives Ireland an opportunity to lead thinking on how to achieve Europe's Offshore Wind ambitions whilst delivering upon our own target of 30GW.

Beyond electricity there are opportunities to support innovation for other routes to market such as hydrogen and other electrofuels. The 'route to market' for floating offshore wind at scale will occur across a wider geographical and energy system context compared to other forms of wind energy in Ireland and will depend upon electrofuels for energy-dense applications as routes to market. As detailed above, consideration and work on this alternative route to market needs to be facilitated in the short term to ensure we are successful as industry scales up post 2030.

To build towards Ireland's long-term target of 30GW there is an urgent need to agree an 'Industrial strategy' which will plan the development of the Irish supply chain to support it. The plan should take account of the need for port development as well as innovative transmission and storage technologies, such as high-voltage, direct-current interconnection, and green hydrogen on an all-island basis. It is important that Ireland establishes a strong indigenous industry to support the offshore sector. The window to becoming an early mover and retaining FDI is closing quickly as other jurisdictions ramp up their plans.

Innovation is not limited to technology but must also consider innovation in grid architecture as well as market design. 30GW will not be achieved without innovation in these areas as well as transmission technology. 2030 will see the introduction of EirGrid's Enduring Regime, but planning for the Enduring Regime, and Ireland's opportunity for export must occur well before 2030.

Grid infrastructure takes considerable time from planning to operation, and appropriate planning is required if Ireland wishes to achieve its targets. This planning requires input from neighbouring grids in future planning. Early steps can occur in Irish waters with consideration of hybrid interconnectors with the UK and Mainland Europe. These projects can be achieved in the early 2030s and would have an aligned timeline with other hybrid projects being planned in European waters. Early steps can occur in Irish waters with consideration of hybrid interconnectors with the UK and continental Europe. These projects can be achieved in the early 2030s and would have an aligned timeline with other hybrid projects being planned in European waters.

Innovation in grid technologies will be vital in achieving the most efficient and effective energy system. Innovation in DC technologies such as HVDC connections, superconductors, and DC arrays. The latter two will require demonstration to progress towards commercialisation.

Currently, Ireland's planning means demonstration sites for innovative technologies must go through the same process as commercial projects. If Ireland wants to achieve 2030 and 2050 targets, innovation in



both technology and energy system architecture is a necessity. Facilitating demonstration sites this decade will ensure that innovative technologies are ready for full implementation as part of the Enduring Regime, where these technologies can assist in delivering higher targets.