

International and Offshore Energy Division
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Date: 9th March 2022

To Sir/Madam,

Consultation on Phase Two Offshore Wind

Introduction

Fred Olsen Seawind (“**FOS**”) is an international offshore wind development company within the Fred Olsen group of companies.

FOS are co-developers and owners of Codling Wind Park (“**CWP**”), a proposed offshore wind farm in the Irish Sea, set in an area called the Codling Bank, approximately 13-22 kilometres off the County Wicklow coast, between Greystones and Wicklow Town.

CWP is a 50:50 joint venture between EDF Renewables and FOS, two leading developers, owners and operators of renewable energy assets, with many years of global experience in the renewable energy and offshore wind sector.



CWP has been designated as one of the Phase 1 projects and, with an expected capacity of between 900 and 1,500 megawatts (“**MW**”), it has the potential to meet up to 30% of the targeted 5GW of offshore wind by 2030. The expected output of the wind park would be enough to supply the equivalent of up to 1.2 million Irish homes – 70% of all Irish households – with low-carbon, locally-produced, low-cost electricity, and to save almost 2 million tonnes of carbon emissions every year.

Representing one of the largest energy infrastructure investments in Ireland this decade, the project will deliver substantial benefits to the regional and national economy, including more than 1,000 construction jobs and around 75 long-term, locally based jobs.

Overview of Fred Olsen Seawind’s Positions

FOS has provided detailed responses to each of the questions in the Department of Environment, Climate and Communications (“**DECC**”) consultation as an annex to this letter. FOS key positions are summarised as follows:

- FOS welcomes the consultation on the process for Phase Two offshore wind that will ensure that credible projects are able to be progressed in Ireland in support of meeting the Climate Action Target by 2030.
- FOS recognises the overarching objective of Phase 2 Offshore Wind in Ireland is to enable 5GW of affordable offshore wind capacity to be installed by 2030 to meet those targets.
- FOS see a competitive process for the award of Phase 2 MAC as the most appropriate given the overarching objective of Phase 2 and so have a preference for ‘Option B’ with recommended variations.

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- FOS see the use of a pre-qualification process for Phase 2 MAC along with the evaluation of Phase 2 MAC applications using technical and financial criteria, similar to Phase 1 MAC, as vital to a preferred competitive process such as 'Option B'.
- FOS do not see the application of additional deployment securities within MAC award under Phase 2 (Option A or B) as appropriate given the underlying reasons for such deployment securities. Sufficient deployment security will exist within the process to satisfy the underlying reason for the proposed additional deployment securities.
- FOS see the expiration mechanism of MAC prior to the enduring regime implementation or pre-2030 as a potential barrier to the meeting the overarching objective of Phase 2 and recommend it not be applied as a condition to MAC award. However, we note the departments intention in proposing such a mechanism and suggest an alternative.
- FOS would also like to stress the importance of milestone sequencing and how this should be applied to Phase 2 to de-risk the overarching objective of Phase 2 in ensuring 5GW by 2030 at an affordable price to the consumer.
- FOS see Phase 2 also as an opportunity to promote innovation as a secondary objective of Phase 2 to enable the growth of offshore wind over the longer term in Ireland to ensure sustainable growth within the sector and also de-risk Phase 2 deployment timelines.

In answering the consultation questions, FOS will expand on and explain these points. As well as providing this detailed response to this DECC consultation, FOS have also participated in the drafting and supports the response submitted by Wind Energy Ireland ("WEI") on behalf of its members.

In conclusion, we welcome the opportunity to put forward FOS position and response to the Phase 2 Consultation. Collaboration between Government and Industry has been one of the key factors to the Offshore Wind industries success in the last 20 years and its application in Ireland will continue to be promoted.

FOS recognise the further need for discussion and engagement with industry to resolve the issues covered by this consultation process which can be considered highly complex and requiring the acquisition of further information before policy positions can be formalised.

Given this to be the case, FOS would ask that DECC take this into due consideration in their reading of the response, and FOS would welcome further engagement with the department to discuss the points addressed.

Should you wish to discuss this further, please contact Liam Leahy at liam.leahy@fredolsen.co.uk or myself.

Sincerely yours,
Fred. Olsen Seawind Ltd.



Fred Olsen Seawind's Response to Consultation Questions

Question 1: Which is your preferred option and why of:

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

From the consultation paper, it is clear that the primary overarching objective of Phase 2 is to ensure Ireland meets the Climate Action Target of having 5GW of offshore wind installed by 2030 at an affordable cost to the consumer. Fred Olsen Seawind would agree with this primary objective and to enable it, our preference, from the options presented by DECC in the consultation paper, is for a process similar to Option B but with variations, justified below. We believe such variations will allow the primary objective to be met but also allow for secondary objectives to be achieved such as stimulating further investment in the Irish Offshore Wind sector, growing a significant local supply chain and thinking beyond Phase 2 timeframes to prepare for the exponential growth of the offshore wind sector in Ireland to fully decarbonise the Irish electricity system in line with a net zero reality.

A competitive process such as 'Option B' is preferred as it gives the most certainty of pre-2030 deployment to both the Irish Government and Industry by only allowing progression of projects that have a genuine chance of meeting a pre-2030 deliverability target that is proven through a formal evaluation process.

In seeking to recommend a competitive option similar to 'Option B', Fred Olsen Seawind would also suggest the following with the below justifications:

Additional Deployment Securities

While the intended use of additional deployment securities is outlined in Option A, the consultation suggests they may also be used within Option B. The consultation paper states that the purpose of these specific deployment securities is to ensure MAC application by projects with the best pre-2030 deliverability prospects under Phase 2. Fred Olsen Seawind do not see the use of specific deployment securities as a necessary mechanism to ensure this beyond what the Phase 2 process will already include as elements of deployment security. Thus, we see specific deployment securities as additional and not required for the following justification.

It's quite clear that the delivery timelines for Phase 2 projects will need them to already have incurred a significant level of development spend to hold a genuine pre-2030 deliverability which is significant investment already at risk in aiming to achieve the overarching objective of Phase 2. Thus, this can be considered deployment security already built into Phase 2.

Furthermore, deployment security can already be considered to be built into the overall Phase 2 process through:

1. the application of suitably scaled pre-generation seabed levies under MAC award similar to the proposal under Phase 1 which Fred Olsen Seawind would agree with,
2. strict evaluation criteria upon MAC award under a competitive process such as 'Option B' that would include technical and financial aspects similar to Phase 1 MAC evaluation criteria with further detail provided in response to Question 3, and;

3. the expected criteria and conditions of an ORESS2 award which will contractually obligate a project to deploy within an agreed timeframe.

Coupled this with the reality that every project holding MAC will have delivery objectives of meeting Commercial Operation as soon as possible, sufficient deployment security can already be considered to be built into the overall Phase 2 process and additional specific deployment securities are not required in seeking to meet the overarching objective of Phase 2.

Furthermore, the development risk (the risk a project is exposed to during the development stage in looking to progress towards a financial investment decision) in Ireland that sits outside of a projects control that can impact upon deployment timelines should also be considered when seeking to apply additional deployment securities. Current development timelines in Ireland are untested while both access to the grid and planning timelines are dependent on factors that a project has limited control over, while supply chain risk from both local and international threats come with a significant degree of uncertainty. In applying additional specific deployment securities, this will be prohibitive to offshore wind development.

This is significant given the overarching policy objective of Phase 2 as a level of oversubscription to Phase 2 is likely to be required by projects that can prove genuine pre-2030 deliverability given the development risk in Ireland and suspected levels of project & project capacity attrition within the market. Phase 2 will need to account for this and thus any unnecessary mechanisms, such as additional specific deployment securities, that have the potential to hinder applications for MAC under Phase 2 which meets its criteria, should be avoided.

Account for Delivery Timelines

First and foremost, the Phase 2 process needs to challenge the 'genuine deliverability' of a project to meet a pre-2030 target and the best approach to do this, is to evaluate the project sponsors and the projects through an evaluation process similar to Phase 1 and in line with the preference for an 'Option B' within the Phase 2 Consultation.

From a delivery timelines point of view, Fred Olsen Seawind agree that an approach similar to the Phase 1 evaluation of technical capability should be used for assessing a projects delivery timeline. This to demonstrates how the offshore wind project will achieve first generation in advance of the 2030 target. Phase 1 Offshore Wind may require the MAC Applicant to provide an outline of delivery timelines that show milestones relating to:

1. Submission of Planning Application
2. Receipt of Development Permission
3. Final Investment Decision
4. Main Contractor Agreements
5. First Generation

We would also recommend evaluation of a projects critical path for delivery of an offshore wind farm to meet a pre-2030 target. For a project to achieve this, it would have already needed to commence both Ornithological and Marine Mammal site surveys in 2021 for projects that are likely to require 3 years construction or in 2022 for projects that are likely to require 2 years construction. Either way, delivery timelines require this work to commence prior to Phase 2 MAC application (Q1 2023) and thus, such thresholds can be used as evaluation criteria to assess a project's critical path to validate its chance of a 'genuine deliverability' pre-2030.

MAC expiration pre-2030 or prior to enduring regime

While Fred Olsen Seawind recognise the timelines for the enduring regime have not been stated, the below points should be considered by the department in light of delivering Phase 2 pre-2030 and prior to the implementation of the enduring regime.

The acquisition of MAC with a sufficient validity period before expiration due to non-delivery is seen as pivotal to ensuring the progression of projects with 'genuine deliverability' for a pre-2030 COD. The certainty that is afforded by a MAC acquisition will be a pre-condition of the significant financing required to construct the offshore wind farms.

To meet pre-2030 deliverability conditions set down by a MAC award, a Financial Investment Decision (FID) will be required post acquisition of development permission, grid connection agreement and a route to market (E.g. ORESS2) by 2026/2027.

Currently, development timelines under the new regulatory framework for offshore wind in Ireland are untested, with planning and grid access likely to pose a significant challenge to deployment timelines. Supply chain constraints during the development and procurement stages also have the potential to impact project delivery and this is now being felt across the global offshore wind market. This makes meeting an FID in 2026/2027 less certain. Adding in potential delays during the construction and installation process from supply chain risk and grid connection timelines, means a pre-2030 deliverability target comes with a significant level of development risk outside of a developer's control.

Thus, a MAC award with a condition of expiration prior to 2030, or the implementation of an enduring regime, due to the undeliverability of a project within this timeframe will be at worst, considered unacceptable to the financing of the project. This would mean any project with such a condition within their MAC will be unable to finance their project and reach FID. At best, it will be considered a risk to the bankability of a project and decrease the attractiveness of the investment which will impact many areas of the financing and create a riskier investment which will lead to less attractive financing terms that will have a knock-on effect of increasing offshore wind costs in Ireland.

Thus, including a MAC expiration pre-2030 and prior to enduring regime will become a barrier to the overarching Phase 2 objective of enabling 5GW of offshore wind at the most affordable price and for this reason, Fred Olsen Seawind recommends that such a measure is not applied within Phase 2.

We do recognise the intention of the department in suggesting such as measure and to meet this intention and allow for a bankable environment for projects reaching FID between 2026 – 2027, Fred Olsen Seawind would recommend that a MAC is valid for a period of sufficiency, during the development stage, before expiration which also accounts for the development 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 for a project to reach COD or a predetermined date post 2030 that sufficiently addresses the development risk. We would still suggest as per Phase 1 MAC Consultation, that the MAC is valid to cover the operational phase of the project but a long stop date to reach COD is included as a condition of Phase 2 MAC award to satisfy the requirements of the department when seeking to implement MAC expiration prior to an enduring regime.

Furthermore, Fred Olsen Seawind 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 2 during the development stage, Fred Olsen Seawind would also recommend DECC consider excluding any existing Phase 2 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 2 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 2 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 2 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. Fred Olsen Seawind 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.

Importance of Milestone sequencing

Another point would be that the sequencing of milestones under Phase 2 Option B is more in line with more developed offshore wind markets that have a similar development model to Ireland in that a MAC gives exclusivity of a project site to a developer and that in turn puts impetus on the developer to progress development activities to acquire development permission and a route to market under ORESS2 or alternative. This in turn leverages the projects ability to raise financing and run the major procurement process to allow the project to reach a positive Financial Investment Decision.

The importance of this sequencing on determining bid prices under a competitive auction such as ORESS2 cannot be understated. Ultimately, the environmental impact process will influence project design that both the application for development permission and ORESS2 will feed off. The closer the ORESS2 auction is to the award of development permission, the more confidence a project will have in its ORESS2 bid prices and thus more competitive. This is due to a firmer design allowing for a better understanding of project costs that feed into a projects financial model. This sequencing also allows for the latest offshore wind technology to be considered in the overall project design that is taken through the environmental impact assessment process and will allow for a certain level of procurement flexibility that will also influence an ORESS2 bid price. This increases competition and supports producing offshore wind at an affordable price to the consumer in Ireland.

Question 2: Option A proposes that a deployment security is required for to apply for a MAC in Phase 2.

- 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?***
- 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?***
- c) Under what terms should this security be drawn down?***
- 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 be beneficial for the deployment security to be rolled over towards the RESS performance security? How best this be managed?***
- e) What other terms should apply to this security?***

Fred Olsen Seawind do not recommend the use of additional specific deployment securities as outlined in our response to Question 1.

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?*

Fred Olsen Seawind believe such a competitive MAC process is preferred over the other options presented in the consultation paper as outlined in our response to Question 1.

While there also should be competition for the MAC, Fred Olsen Seawind feel this competition should not be in the form of a seabed levy auction but rather a competitive evaluation process that selects a sufficient number of sites that have the best chance of delivery within the Phase 2 timeline.

As a first step to such an evaluation process, there should be a pre-qualification to ensure that only projects which meet some pass/fail criteria are allowed to move to the main MAC competition. The outcome of the MAC competition must be that the best projects are selected. This should consider at least the following within its evaluation criteria:

- Alignment with EirGrid's Shaping Our Electricity Future (SOEF)
- Ability to meet MAC criteria for financial assessment
- Ability to meet MAC criteria for technical assessment including:
 - The extent of development work carried out already which de-risk delivery timelines,
 - Ability to present a credible delivery schedule to meet the timescales of Phase 2 accounting for key milestones as set on in response to Question 1 under the section 'Account for Delivery Timelines',
 - 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,
 - Stakeholder Engagement Framework and evidence of stakeholder engagement.

Fred Olsen Seawind would also like to stress the importance of understanding a projects development programme to ensure this is considered within the evaluation process to validate an application's pre-2030 deliverability chances. A projects critical path for an offshore wind farm to meet pre-2030 deliverability will have to have commenced well in advance of a MAC award under Phase 2 and thus evaluating a projects critical path becomes a high weighted factor in meeting Phase 2 objectives on which MAC award should be given. Particularly, it should be pointed out, this places particular importance on critical path studies such as long lead aerial surveys for marine ornithology and marine mammals which are required over a 24-month

period. Subsequently, of less importance and thus less weight, are any work relating to intrusive site investigations for which a foreshore license is applied for. While such development activities can decrease development risk due to data acquisition and accelerate development sub timelines with respect the activities under engineering, design and environmental impact assessment, they also remain outside the critical path for a project to deliver pre-2030 and thus can be considered of lesser weight in any evaluation process that assesses a projects pre-2030 deliverability chances.

Fred Olsen Seawind believe that with respect to pre-generation seabed levies or development levies, the preference for a capped development levy should be included as part of a Phase Two MAC competitive process similar to what is recommended to be applied to Phase 2. This also ensure that in the event a Phase 1 projects enters ORESS2, it does so on the same terms as project awarded a MAC under Phase 2.

As outlined in our response to Question 1, Fred Olsen Seawind recommend that no additional deployment securities (or bond) is applied to Phase 2.

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?**
- 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?**
- 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?**

Fred Olsen Seawind agree that this is the correct approach to ensure a consistent and more certain development pipeline of offshore wind projects in Ireland. Phase One projects should retain their MAC if unsuccessful in ORESS1 and would like to compete in ORESS2 or secure an alternative route to market within the specified timeframe for Phase 2. Both Phase 1 & 2 will deliver climate action targets and through ORESS will also deliver affordability for the consumer. Thus, the conditions on which Phase 1 and 2 projects should proceed is with increasing degrees of certainty but with conditions that ensure climate action targets and customer affordability are achieved. MAC award and retention of site exclusivity gives this degree of confidence to further invest in a project's development. ORESS strike price and competition will ensure consumer affordability while criteria for MAC award and subsequent conditions of award will ensure delivery of projects pre-2030.

In response to Question 1, Fred Olsen recommends the department consider the use of a condition of MAC award that gives a project a period of sufficiency, during the development stage, that accounts for the development risk before MAC expiration due to the projects non-delivery in its ability to secure a route to market within a specific timeframe. This period of sufficiency during the development stage for a MAC at award is preferred over a situation that results in a Phase 1 projects ability to reapply for a MAC where they do not obtain a route to market and reach a positive FID.

Fred Olsen Seawind do not recommend any Option where ORESS2 comes before MAC award as ultimately milestone sequencing as described in response to Question 1 underpins the overarching objective of achieving Climate Action Targets at an affordable price to the consumer. Option D should not be considered at all for two fatal reasons, 1) to continue a consistent investment in the Irish offshore wind market, Phase 1 & 2 projects require site exclusivity before seeking development permission and before applying for

ORESS1/2. Site exclusivity that is awarded by MAC thus needs to come first in the sequencing. This will allow investor confidence to enable significant investment to be spent in the development phase on projects to progress development permission and to prepare for ORESS with specific site information that feeds into both workstreams. Secondly, an ORESS award before a MAC that is needed to progress development consent, will not see the benefits of a technology innovation and cost reduction that risk consumer affordability. The need to award ORESS towards a latter end of the development stage is key to this.

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?**

In response to Question 1, Fred Olsen Seawind has outlined why such an expiration mechanism within the condition of MAC award has the potential to significantly impact deployment timelines in contradiction to the overarching objective of Phase 2. For the reasoning provided in response to question 1, Fred Olsen Seawind recommend that such an expiration mechanism is not applied to Phase 2 and an alternative approach as suggested is recommended given the underlining objective of proposing such an expiration mechanism.

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?

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

Fred Olsen Seawind supports the proposal for issuing provisional grid offers prior to ORESS auctions, in order to allow bidders to factor in grid costs into their bid formulation. At the same or interacting grid connection points, these offers will need to be mutually exclusive and compiled based on EirGrid's Shaping Our Electricity Future (SOEF) Roadmap capacities being awarded (a similar approach that was taken to The Crown Estate Round 4 in England & Wales). Ideally Eirgrid would engage with developers on a bilateral basis to provide as much information as possible on costs, reinforcements, timelines, interface and compatibility requirements with contestable build and any other relevant information.

Developers would very much welcome an open and regular dialogue with Eirgrid in support of cost effective and timely grid connections. Until recently, Phase 1 projects have found it difficult to secure engagement with Eirgrid although this is now improving and will reduce development risk. Fred Olsen Seawind recommend a process where there is open engagement and developers can collaborate with EirGrid for example to support wayleaving and planning activities.

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

Conversion to a full grid offer should be straightforward in principle, although there may be interactivity between grid offers which will need to be resolved (addressed in later questions). Fred Olsen Seawind agree with success in ORESS as a precondition for an offer of a full GCA. Planning permission as an additional precondition for full GCA would allow a more orderly process for resolving grid competition for grid access – however EirGrid would need to further clarify and progress reinforcements identified in their strategy to maintain 2030 timelines, and Eirgrid would need to be willing to engage with developers throughout the planning process.

- 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?***

CPPA grid connecting projects (not to be confused with private wire projects) will have the same downstream impact on available grid capacity as ORESS projects. So, if ORESS is to be aligned with Eirgrid's SOEF Roadmap, the question is really should a CPPA allowance be carved out of the ORESS-award target amounts? Fred Olsen Seawind think that the CPPA market is modest in the offshore wind context and that ORESS should aim to award the maximum amount of available grid capacity.

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?***

If ORESS award doesn't align with EirGrid's SOEF Roadmap, then there will need to be a process resolving competing claims on scarce grid access. Or, there will need to be a process for allocating grid capacity before the ORESS auction – in which case the auction will not be as competitive. It is worth noting that Scotwind winners are currently grappling with very similar problems following an unexpectedly large seabed lease award but where grid capacity for 2030 is constrained. There are pros and cons to either approach but our strong preference is for grid capacity to be awarded on the basis of project readiness as this would underpin Phase 2 overarching objective and prevent a scenario where a project without planning permission won an ORESS contract, from which a grid connection flowed, whilst a project with planning permission failed to secure either.

- 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?***

This is interactive with the qualification criteria for ORESS2, for a GCA and for a MAC. Fred Olsen Seawind do not favour auctioning of grid capacity but there will need to be a good process for allocation of grid capacity which, like our proposals for MAC award, favour project readiness.

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

Fred Olsen Seawind believe not – ORESS is the proven route to market and can deliver the scale required for offshore targets. Of course, any routes to market which do not require grid capacity should be able to proceed and this is something Fred Olsen Seawind would support, as per our response to Question 11, to facilitate the scale up of the offshore wind sector in Ireland by allowing different business models to be proved through Phase 2.

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?*

Fred Olsen Seawind recommend that project attrition and project capacity attrition be accounted for in the award of Phase 2 MAC and thus allow a level of oversubscription in site exclusivity to allow development to progress for a capacity of projects well over what is required outside Phase 1 to meet 2030 Climate Action Targets. This will also create further competition within ORESS2 while also pushing the development of alternative business models for offshore wind in Ireland such as e-fuels and private wire projects through CPPAs. Alternative CPPA routes to market could also provide a small pipeline of reserve projects and if they are smaller scale, there is more chance of them being able to utilise grid capacity released by project attrition or by EirGrid allowing small additional amounts in certain areas. All within the timeframe of Phase 2 and its conditions of MAC expiration.

Otherwise, it's very hard to see how a project could remain in reserve but simultaneously be ready to mobilise at short notice. At the very least, EirGrid would need to start work on planning post 2030 reinforcements, and MACs would need to remain valid post 2030 as suggested – in order to retain site exclusivity and provide reserve projects with a reason to maintain and resource their development work.

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.

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?

Option D represents an overly complicating process that is not preferred and does not offer the best approach to fulfilling the overarching objective of Phase 2. For reasons outlined in response to Question 1, Fred Olsen Seawind recommend a competitive process similar to 'Option B' with the detailed proposed suggestions.

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?**

Hybrid grid connections are, as far as Fred Olsen Seawind understand, simply a connection to a substation which is also serving a conventional thermal plant. This is essentially, a connection into a substation over which the existing generation facility is claiming exclusive access. It is difficult to see the advantage of the concept of multiple projects connecting into one substation as this is already routine and open to the market as per electricity regulations and for very good reasons.

Thus, Fred Olsen Seawind hold concern over the idea of hybrid connections and how they could be considered within Phase 2. Further detail is required to understand if such connections will represent real additionality over the existing SGW which may be feasible or not. Eirgrid's strategy suggests that the available capacity at the potential hybrid locations has already been included in the SGW available for grid capacity, as the fossil plants are expected to close in the period to 2030, in which case they will not offer additionality.

While there are examples of co-location of generation assets in the UK, these are not of hybrid arrangements as suggested in the consultation. Elsewhere it is usually expected that the connection capacity is equal to the total generation capacity behind the meter, such that both generators could generate simultaneously, rather than shared.

So, our main points Fred Olsen Seawind would like to put forward for the department's consideration include:

- The claim of exclusive access is questionable, given third party access rules to network assets,
- If the notion of a "hybrid" connection is given some kind of special treatment, then this simply erodes the available grid capacity for everyone else in an opaque, anti-competitive manner,
- Notwithstanding that anyone should be able to connect into thermal power station substations if this is the optimal onshore connection solution (either through connecting into a spare bay or extending the substation):
 - They may not offer the optimal solution,
 - The connection point for offshore wind farms is, in any event, at the offshore substation, and;
 - Any small savings achieved by connecting behind the meter of the thermal station are likely to be negligible all other things considered.
- In the event of a hybrid connection being utilised under ORESS, there will need to be clear demarcation between the electricity generated by the ORESS supported project and existing project to ensure that only renewable electricity receives support,
- In the instance of an offshore windfarm is proposed, the connection between the offshore generator and the onshore connection point will be owned and operated by the TSO. In the hybrid solution, this would then reconnect to the generator's behind the meter infrastructure before then being connected

to the electricity network. This is not currently catered for in the grid regulations and such time will be required to update regulations and grid codes.

- In an instance where hybrid projects allow an offshore wind farm to connect to a conventional fossil fuel power plant, questions need to be answered in how state aid provided for under ORESS2 could be seen to prolong the life of a fossil fuel generation facility. The Guidelines on State aid for climate, environmental protection and energy (CEEAG) have been recently updated with the provision “The Commission will therefore also verify that the aid measure does not stimulate or prolong the consumption of fossil-based fuels and energy” most relevant to this scenario. It is reasonable to say that the connection of a subsidised renewable energy generator onto an existing fossil fuel grid connection does could support the continued operation of the existing fossil fuel generator.
- For any potential cost reductions involved in progressing an offshore wind project that can connect via a hybrid connection, it would be expected that the TUoS will be shared. This could create a distortion in an ORESS auction as a bidding project would not have the same level of costs to consider in formulating the bid and as of such this would give hybrid projects a distinct unfair advantage in such a competitive process.

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?*
- 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?*
- c) *Should these types of projects also be required to deliver by 2030?*
- 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?*

One of the key success factors in delivering a global competitive offshore wind sector has been the role of innovation, both in terms of technology development and methodology evolution, which led to the cost reduction and scale up of the industry over the last 20 years. Ireland was one of the first movers in demonstrating this technology and once again it must apply innovation to enable the policy objectives of building offshore wind at scale and at an affordable price before exponentially growing the industry to maximise the opportunity it presents to Ireland economically and to Europe in terms of both energy security and sustainability.

Ireland is committed to providing 80% of electricity from renewable energy by 2030. The role of innovation across the Irish energy sector will be key to this and no more so than for offshore wind deployment in Ireland. It is with this that Fred Olsen Seawind would promote putting innovation at the heart of Phase 2 both in terms of ensuring 5GW of offshore wind by 2030 and facilitating the exponential growth of the sector for the decades to come.

Fred Olsen see the opportunity to innovate within Phase 2 Offshore Wind in Ireland by two approaches, namely:

- 1) the ability of offshore wind projects and their sponsors to innovate and mitigate the risk of project deliverability by 2030 similar to Phase 1 innovation needs, and;
- 2) the facilitation by the Phase 2 process to accelerate the deployment of offshore wind technologies in advance of 2030 that will allow for the exponential scale up of the offshore wind sector post 2030.

In terms of mitigating the risk of project delivery pre-2030, Fred Olsen Seawind would agree with the approach suggested in the consultation on Phase 1 MAC, that applicants will provide a description of novel and innovative measures that they could apply to a projects design or development that could lead to reduced risk to pre-2030 deliverability, reduction in programme delivery timeline or addresses specific challenges of delivering ORE projects in Ireland. We also believe that such measures could be used as non-scoring evaluation criteria within a competitive process for Phase 2 MAC award as suggested.

Such technology, that could be considered within MAC award, could be the use of interconnector projects to de-risk grid connection risk or the use of alternative supply chain technology that mitigates supply chain risk.

Secondly, the need to facilitate emerging technologies that will allow Ireland to maximise the potential for offshore wind within the Phase 2 process is also recommended and emphasis on the importance of doing this within the timing of Phase 2 is stressed.

While Fred Olsen Seawind recognise that there are constraints in how much offshore wind can be connected to the Irish national grid by 2030, Fred Olsen Seawind still recognise that through the Phase 2 process, emerging technologies can still be facilitated. It will be of particular importance to floating wind given wider ambitions for the technology in Ireland.

The demonstration of floating wind at scale in Ireland pre-2030 will be an important step in preparing for exponential growth of floating offshore wind in Ireland post 2030. For this reason, Fred Olsen Seawind promote floating winds inclusion within the Phase 2 process whilst also recommending the enduring regime is brought in as soon as possible in Ireland and well in advance of 2030. For this inclusion, Fred Olsen suggest that such projects would still be required to meet the obligations of Phase 2 MAC award in delivering within a period of sufficiency before MAC expiration to contribute towards to overarching Phase 2 objective. While questions on the commercialisation of floating wind technology have yet to be answered, it can be expected that research around the technology's commercialisation will mean it can contribute towards the overarching objection of Phase 2 within its timeframe. However, it will be at a developer's risk to apply for a MAC that is based on floating wind technology knowing the Phase 2 MAC obligations. The balance here that will need to be achieved, is how the technologies commercialisation can be facilitated within Phase 2 noting the technologies potential beyond Phase 2.

It is for this reason; that Fred Olsen Seawind do see merit in providing a separate technology pot for floating wind within ORESS2 but only in a scenario that prioritises meeting the overarching objective of Phase 2. Such a scenario will first need to award capacity up to 5GW for the lowest cost projects that will connect to the national grid to satisfy achieving the overarching objective of Phase 2. Secondly, where grid capacity maybe available beyond the first 5GW and state aid budget still available to support further projects beyond 5GW, another process within ORESS could be run to support floating wind specific projects under an innovation heading to demonstrate floating wind at scale in Ireland pre-2030 and under Phase 2. This process can be seen as separate to awarding floating wind projects a MAC under Phase 2 and who intend to secure alternative business models as such project will still need to meet the conditions of their MAC and deliver within the obligated timeframe.

With this approach, Fred Olsen Seawind believe that floating wind at scale could be accommodated pre-2030. This will allow grid connected floating wind to become a reality in Ireland but the role of non-grid

connected floating wind should also be facilitated within the Phase 2 projects and we suggest where MAC technical and financial criteria can be met within a recommended competitive process, such projects development should be facilitated through MAC award knowing they will still be required to deliver in line with MAC conditions & timelines but outside the formal grid connection process and ORESS2. This would allow such projects to develop business models that are off-grid and seek an alternative route to market centred around hydrogen generation or other electric fuels.