Chambers Ireland submission to the Department of the Environment, Climate and Communications on the Offshore Wind Phase 2 Consultation

March 2022

Chambers Ireland, the voice of business throughout Ireland, is an all-island organisation with a unique geographical reach. Our 40 members are the Chambers of Commerce in the cities and towns throughout the country – active in every constituency. Each of our member Chambers is central to their local business community and all seek to promote thriving local economies that can support sustainable cities and communities.

In September 2019, our Network pledged to advocate for and support the advancement of the Sustainable Development Goals. In doing so, we use the Goals as a framework to identify policy priorities and communicate our recommendations, and we have a particular focus on five of the goals encompassing decent work and economic growth (SDG 8), sustainable cities and communities (SDG 11), advancements in gender equality (SDG 5), viable industries, innovation, and infrastructure (SDG 9) and progress in climate action (SDG 13).[1]

We use these Goals as a lens for interpreting and prioritising our policy proposals. The issue of offshore renewable energy is particularly important to our Network as is it is a critical element to our national Climate Action response. As Chambers Ireland outlined in our white paper on maximising the benefit of developing the national wind energy industry and the national grid[2], the Irish business community is deeply interested in our potential to develop an offshore renewable energy industry, and offshore wind in particular.

[1] The Chambers Ireland SDGs. Available at: https://www.chambers.ie/policy/sustainable-development-goals/chambers-ireland-sdgs/
[2] Chambers Ireland white paper on maximising the benefit of developing the national wind energy industry and the national grid. Available at: https://www.chambers.ie/wp-content/uploads/2021/01/Chambers-Ireland-white-paper-on-maximising-the-benefit-of-developing-the-national-wind-energy-industry-and-the-national-grid.pdf

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Chambers Ireland's Perspective on Offshore Renewable Energy

As the impact of Climate Change has become ever more obvious, Chambers Ireland has become more active in calling for action in this area.

Even if this was not something which we needed to do to meet our commitments to reduce our CO2 emissions, it is something that we ought to be doing as a country because of the myriad benefits:

1. Offshore wind has the capacity to transform our economy by helping us become a net exporter of energy.

2. The operations and maintenance associated with offshore windfarms have the potential to bring thousands of high-quality, highly skilled, highly paid jobs to our economically disadvantaged regions for several decades.

3. Early engagement with the challenges associated with the deep-water floating platforms will allow us to nurture a high-technology capital intensive and highly skilled industry that has growth potential over generations to come.

4. The European Green Deal is ideally timed to allow us to access cheap capital at quantity over the coming decade.

5. The abundance of energy at a zero marginal cost creates huge opportunities for the Hydrogen industry.

6. In increasingly politically turbulent times, it will offer us energy security by removing the political risk that we suffer as a result of being at the edge of Europe, and at the end of very long supply chains.

The positions have been developed by the Chambers Ireland network through our submissions on the Wind Energy Development Guidelines[3], the Commission for the Regulation of Utilities consultation on Price Review Five[4], Grid Development Policy for Offshore Wind[5], our Budget

[3] https://www.chambers.ie/wp-content/uploads/2020/02/Chambers-Irelands-submission-for-the-Public-Consultation-on-the-revised-Wind-Energy-Development-Guidelines.pdf
[4] https://www.chambers.ie/wp-content/uploads/2020/09/Chambers-Irelands-submission-for-the-Public-Consultation-on-Price-Review-5-Electricity-Networks.pdf
[5] https://www.chambers.ie/wp-content/uploads/2020/08/Chambers-Irelands-submission-for-the-Public-Consultation-to-Inform-a-Grid-Development-Policy-for-Offshore-Wind-in-Ireland.pdf

Submissions for 2022[6] and for 2021[7], our General Election 2020 Manifesto[8], our submission to the Department regarding ORESS1[9] and various events and symposia which we have co-ordinated to raise the salience of climate action.

The development of our offshore renewable energy industry is one of the greatest economic opportunities for our country since we joined the European Economic Community. There is likely to be over $5 Trillion in investment in offshore renewables expected over the coming decade[10], the bulk of which will be in green hydrogen and wind energy. For the current administration a nationally critical task in the coming years will be to maximise our social and economic benefits arising from the green energy boom. If successful, such a legacy project would see Ireland become energy self-sufficient in the first instance, it will allow us to export excess energy to the wider European continental economy.

This will not only allow us to take a prominent position in nascent industries such as deep-sea offshore windfarm construction, but it will also allow us to be early movers in the skills-intensive offshore platform industry. It will give us a foothold in the export of green energy derived hydrogen/ammonia which will have the secondary benefit of reducing the carbon emissions of domestic industries such as farming through offering clean alternatives to fossil fuel derived fertilisers, while also helping other states decarbonise through the substitution of green energy alternatives for industries such as aviation, shipping, and transport, steel production etc. which require energy dense alternatives to the fossil fuels which they have a dependence on.

As our engagement with our members, as part of our consultation paper[11] for Eirgrid's Shaping our and also on the report from the workshops which Chambers Ireland carried out in conjunction with EirGrid[12] demonstrated the business community's primary concerns.

[6] https://www.chambers.ie/wp-content/uploads/2021/07/Chambers-Ireland-Pre-Budget-Submission-for-2022.pdf
[7] https://www.chambers.ie/wp-content/uploads/2020/09/Chambers-Ireland-Budget-Submission-2021-September.pdf
[8] https://www.chambers.ie/wp-content/uploads/2020/01/Chambers-Ireland_Election-Manifesto-2020.pdf
[9] https://www.chambers.ie/wp-content/uploads/2021/12/Chambers-Ireland-ORESS-1-submission.pdf
[10] Morgan Stanley Utilities Research Note 10 Nov 2020 "Energy Transition Titans: Big Oil's Big Threat Is Overblown"
[11] https://www.chambers.ie/wp-content/uploads/2021/07/EirGrid-Chambers-Ireland-Submission.pdf
[12] https://www.chambers.ie/wp-content/uploads/2021/07/EirGrid-Chambers-Ireland-Workshops-_final.pdf

Business Sector Priorities

As customers their priorities were "Security of Supply" and "Climate Risks"

As a customer, how do you prioritise the following:

	Round 1	Round 2	Round 3	Round 4
Security of Supply	45	45	45	53
Climate risks	24	24	25	30
Final cost for customers	16	16	17	-
Visual Impact	3	4	-	-
Local construction disruption	2	-	-	-
Non-Transferrable	1	2	4	8

whereas the national goals ought to be the "Efficient use of Existing Infrastructure" and the "Maximisation of Renewable Electricity Generation".

In meeting government targets how should EirGrid prioritise the following:

	Round 1	Round 2	Round 3	Round 4
Maximising renewable electricity generation	26	27	29	39
Efficient use of existing infrastructure	24	24	31	44
Reaching delivery milestones on time	21	22	27	-
Final cost for customers	14	16	-	-
Planning concerns	5	-	-	-
Non-Transferrable	1	2	4	8

Chambers Ireland agrees with the priorities of our members and believes that maximising renewable energy generation is the key to ensuring security of supply while also ameliorating climate risks. We also note that Electricity Association of Ireland[13] modelling suggests that the All-Island electricity market, could (with appropriate investment) become one of the least carbon intensive, and most affordable, energy markets in Europe, by 2030.

However, more needs to be done, and our ambition should be greater. We need to consider the rapid advancement which is occurring in technologies such as floating offshore wind, Hydrogen, and nitrogen fixing processes for Green Ammonia we need to ensure that the ORESS process is capable of adapting to this rapid pace of change. The recent ScotWind auction sees 15GW of floating wind connecting to the Scottish Grid, in addition to 25GW of fixed offshore wind, by 2033. These projects are being developed at scale, the smallest, which Norway's Mangora is planning, is a 500MW floating offshore projects off the Western Isles. The largest is has a 3GW capacity. This expansion in ambition

[13] https://www.eaireland.com/wp-content/uploads/2021/06/Our-Zero-e-Mission-Future-Report.pdf

is not limited to Scotland with the Sydkustens Vind project in Sweden growing to 2GW which includes 500MW of floating, and other jurisdictions are going to be quick to follow suit. Irleand needs to be prepared for an accelerating pace of development, these are no longer speculative technologies.

There are severe capacity constraints in our national Grid, however these limitations a) must be overcome, and b) should not be a limit the potential of renewables projects that do not need a grid connection.

Many of the technologies that are categorised as lying within the 'innovation' space are close to market, or even technologies where there is existing commercial demand. We have business members that want to introduce Hydrogen into their gas mix for their industrial CHP co-generation units by 2025. Members of our chambers want to be able to enter into Corporate Power Purchase Agreements with locally based offshore renewable energy suppliers that would not need to use high voltage transmission networks to reach clients. Businesses are looking to crack water to create Hydrogen for industrial, transport, and export purposes using offshore renewable energy.

There has been a persistent problem with the State regulatory planning regime holding back the offshore renewable energy industry in Ireland, we must ensure that this error and lack of action does not persist into the new regime. While it is extremely welcome that we now developing an offshore renewable energy planning system, significant attention will be needed if we are to avoid the creation of administrative bottlenecks that preclude or delay the development of other new technologies.

If we are to ensure that the benefits of the European Green Deal and the exploitation of our national renewable energy resources are maximised, it is vital that the regulatory regime that is put in place is adaptive and flexible enough to ensure that it does not prevent the introduction of novel technologies into the marketplace.

Questions

While all relevant feedback on the topic of Phase Two offshore deployment is welcome, the DECC requests that responses are provided to the below questions in particular.

1. Which is your preferred option and why of:

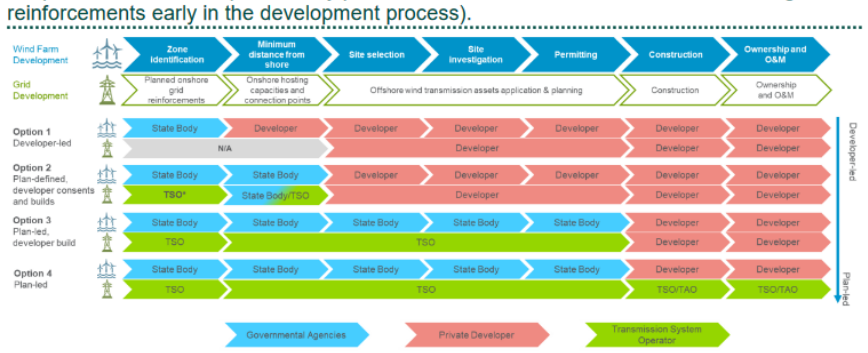
a) The above options?

Chambers Ireland has a strong preference for Option B – The Competitive MAC process.

While Options C and D have their merits, they are best placed to take advantage of what we assume will be the available capacity on the Grid post-2030 under the "Enduring Regime". If we are to map these proposed options in this consultation onto the "Grid Development Policy for Offshore Wind" decision, Options C and D are forms of the Options 3 and 4:

Option 1. Developer-led model	Option 2. Plan-defined, developer consent and build	Option 3. Plan-led, developer build	Option 4. Plan-led model
Fully developer-led grid delivery model	State defines minimum distance from shore for wind farms, as well as grid connection points and available onshore grid capacity for RESS auctions; EirGrid pro-actively plans and coordinates onshore grid reinforcements	Developers responsible for offshore wind farm transmission asset construction, ownership, operation and maintenance in plan-led model	Fully plan-led grid delivery model

Figure 3. Grid delivery model options for Ireland following the phases of a project timeline. (* In option 2 the TSO will pro-actively plan and communicate the timeline for onshore grid reinforcements early in the development process).



Source: Navigant

Consultation to Inform a Grid Development Policy for Offshore Wind in Ireland, DECC 2020[14]

The decision of that process was that we should be operating under the Developer led model out to 2025, the "Plan led" models beyond 2030 under the "Enduring Regime" (Options 3 and 4) and Option 2 during the interstitial period.

Chambers Irelands view is that given the disruption associated with the pandemic, and the delay in introducing the Maritime Area Planning regime (along with the associated legislation for MARA) that we should be extending the period where Option 1 (the developer led option) is applied. Option 1 of the Offshore Grid decision loosely maps to the ORESS1 option. If we were to follow the path towards Option C (Early ORESS 2) or Option D (Early Enhanced ORESS 2) we would be undoing the decisions that had been

[14] https://assets.gov.ie/75917/4774a90c-c99e-432e-b27e-15761a37adec.pdf

made under the Grid Development Policy, and we would be bringing forward the implementation of the Plan led approach.

Effectively, we would be transferring all the decision making associated with offshore wind development to the TSO in the first instance. Only within the areas that they prescribe would developers be able to consider developments. These developments would then have to assess these TSO selected areas to see where MARA's DMAPs would permit development to occur. Within those areas, developers would then have to narrow the potential windfarm sites to those areas where it is possible to construct the projects, within the allowed timeframe.

This ordering of priorities would strongly limit the quantity of electricity that can be derived from offshore renewable energy sources. And would preclude any project that may not need to have a connection to the Transmission network from seeking planning permission as a Grid Connection would be a prerequisite. Furthermore, different elements of the industry contest where there is availability for increased capacity on the network. This is particularly apparent in the discussions around Hybrid connections where thermal derived energy is displaced by renewably sourced energy which would not lead to greater demands being placed on the High-Voltage Grid. But prioritising Grid before generation capacity could prevent such large hybrid projects from commencing.

Chambers Ireland is concerned that should Options C or D be selected; Ireland will be unlikely to be able to meet its 5GW targets for offshore wind in 2030.

Of Option A (Deployment Security) and Option B (Competitive MAC Process) our preference would be for Option B, less because of the benefits of Option B and more because Option A has greater issues with it.

By requiring that applicant projects have deployment securities (which are subject to the considerable administrative/legal risks associated with the new planning regime) there is a risk that the test for such projects is the capital the developers have available to them, rather than the intrinsic qualities of the individual project, it's viability, or the capacity of the sponsors to bring the project to commercial operation within the allowed period.

This test is a financing test, not a test which is founded upon the likelihood of the project being delivered. It also does not exclude the possibility of well-funded organisations using capital to strategically capture rights to develop in particular areas, it merely makes it expensive. The success of this strategy relies on the Department having an accurate capacity to model the long-term value of the rights to develop in a particular space. Should the Department miscalculate, there could be opportunities for funds to profit from arbitrage (in the case where the short run costs of the deployment security not be sufficient to outweigh the long-run benefits that might accrue from using a more mature technology at a later point) or by postponing development until there is more certainty regarding the types of projects tend to succeed in passing through An Bord Pleanala, at which point the value of the rights to develop will have increased. Finally, in the context that rights to develop lapse in the wake of the projects not achieving COD by 2030, they will still likely be the projects that have the best chance at succeeding in subsequent rounds of ORESS as they will have more information about their sites, and the decision-making processes than naïve entrants to the auctions. So, in if there is a mispricing of the Deployment Security, there is no other credible threat for a operator that games the auction.

Alternatively, should the deployment security be too high, and given the considerable risks associated with developing in areas which are as yet largely under investigated, and where environmental impact has to be assessed, and where the planning system has yet to be tested, then many projects will go unexplored because only those where the potential developers have both access to capital, and a significant appetite for risk, will be able to begin the process.

Therefore, of the four options, Chambers Ireland supports, Option B, the Competitive MAC process, which has to its benefit, regulatory flexibility, it can require developers to conduct minimum levels of site investigation such that the projects will have to be able to withstand technical scrutiny, and an assessment of the organisational capacity of the proposed developer to ensure that it is a credible proposal.

The risks associated with that approach can be mitigated by adequately resourcing MARA such that it has the capacity to deal with these projects.

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

Our view is that neither Option C (Early ORESS 2) nor D (Early Enhanced ORESS 2) are likely to be successful strategies for delivering the levels of Offshore Renewable Energy that we need to see landed by 2030.

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?

There are significant risks for the department in selecting such a price, undervalue it and the entire scheme could be captured by financiers rather than developers. Overvalue it, and there are likely to be few organisations with the capacity to consider the scheme, leading to less competition, and so worsen value for the consumer. It would be better if the Department did not choose Option A.

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?

Post-issuance. It would be better to require such a security after planning permission has been granted for the project, and it no longer subject to judicial review. It is only when the administrative/legal risks of the projects have been reduced that businesses will be able to find reasonable financing options for their developments.

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

The proposals within Option A are contingent upon MARA being able to make a "reasonable satisfaction" decision, and that this decision will be unchallenged, or unsuccessfully challenged.

Given that Phase 2 Grid offers will be available in 2025 at the earliest, and that this is subject to the developers having successfully navigated the planning process to completion it seems unlikely that MARA will be able to revoke a MAC and make it available to another developer in time for the new project to be delivered under ORESS 2, and by 2030.

Even in the short window where this may be possible, that MARA decision will be subject to legal challenge and that will ensure that no development will be possible on the site until at least ORESS 3.

The proposal is not practical if the priority of the Offshore Wind Phase 2 project is to ensure that there is a offshore wind fleet, which is at a 5GW minimum capacity, by 2030.

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?

Chambers Ireland does not have a view on this.

e) What other terms should apply to this security?

Chambers Ireland does not have a view on this.

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?

The purpose of this project should be to ensure that a minimum of 5GW of Offshore Renewable Energy is delivered to the All-Island electricity market by 2030.

This may require adapting the ministerial regulations in response to developments within the market. If companies (other than Equinor) also choose to exit the market, it may be necessary for the Department to adapt their proposals to make sure that the Phase 2 period is de-risked sufficiently to ensure that there is an industry appetite for development here.

If there are technological developments that permit additional in excess of 5GW to be usable in the Irish context then it may be useful to facilitate this.

The focus needs to remain on ensuring that the renewable energy potential of our offshore area is maximised.

This means that deliverability of projects must be paramount. This will require an analysis of the technological feasibility of given projects, the capacity of the team behind the project to deliver it, and the ability to finance it. The financing is likely to be the easier problem. Unfortunately, our late start in this industry means that few Irish

operators have the institutional ability to deliver offshore energy projects at the pace which we need if we are to hit our 2030 targets.

Therefore, the Department needs to be flexible in their approach and facilitate developers that are encountering unexpected and novel hurdles during this process.

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

The seabed levy has the same issues as the deployment security. The principal risks in Ireland are not the financial or technological risks but the legal and administrative risks. As we are dealing with a new planning regime, and as the planning regime is under reform, and as these new laws are as yet untested this means that the pricing of projects in Irish waters is likely to carry a considerable risk premium (in excess of developments in other countries). It is likely that many businesses in this field will not be able to accurately price this risk, and neither will the Department until long after the legislative regime is tested through the courts.

There is considerable risk that in attempting to limit the number of 'speculative' proposals, the department will narrow the field of competition such that it will ensure that customers will ultimately be paying not only the increased risk premium, but there will also be an excess on that due to the uncompetitive marketplace which has been created.

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

No. Because the risk is that there will be too few projects moving through each step of the development phases to ensure that we will be able to meet out 2030 targets. If we are reliant on a small number of large projects to meet our goals, then any problem (planning or otherwise) which delays any one of these projects, will lead to us missing our national goals on climate emissions and renewable energy supply.

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

a) Is this the correct approach? Why?

Yes. It is likely that throughout this process there will be considerable attrition at each stage of the process. Many projects will not be able to progress at the pace which is needed if they are to be delivered by 2030, much of this will be a result of planning decision delays. Creating extra hurdles that exclude participants throughout this process will only encourage those participating to remove themselves from the process and that will in turn discourage other entrants.

Much of the thought behind the Phase 2 consultation is predicated on there being too many groups interested in developing in our waters, however there is likely to be a large fall off throughout this process. This is because those firms that have experience of Irish planning will have little experience of the practicalities of offshore project delivery, while those that do have offshore

experience will struggle with planning. Furthermore, for external firms, most will likely find it easier to develop projects in other jurisdictions where the planning system is more certain, and the waters less challenging to operate in. This will reduce the demand for external experienced firms to compete in the Irish market.

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?

No. As stated previously, the implicit assumption underlying such a process is that there is something innately problematic about the project that was delayed. However, it is likely to be the case that if there is such a project the cause of that delay is likely to be a consequence of judicial review, or some similar such process, rather than an issue with the project itself. A decision to place a time frame on the MAC will facilitate those that strategically use the legal system to obstruct developments as they will simply have to delay until a particular date at which time the project is effectively guillotined.

Considerable thought should be put to ensuring that if third party action, or inaction, is the cause of a delay in the delivery of a project, then that project should have the timelines associated with its COD revised in accordance with such delays.

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?

Again, Option D should not be selected. And no, if it was selected, the developers should not be forced to relinquish their MAC. This would likely lead to less competition during ORESS 2 than we would otherwise desire.

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?

No. It is unlikely that we will see our 5GW target for Offshore Renewable Energy by 2030 met. It is very likely that there will be many projects that will have been delayed as a result of legal and planning challenges that our courts are unable to hear within a reasonable timeframe. These risks are going to ensure less than ideal competition at each stage of the process and should a perception develop that Ireland effectively punishes the firms that engage in good faith, but suffer delays as a result of interacting with our untested legal regime, then we will find that fewer firms will be willing to participate in future ORESS auctions.

Furthermore, it is not a credible threat if we are behind targets as there will be considerable political and economic pressure to ensure that what can go ahead will go ahead. Scrapping projects that can be delivered in the two beyond 2030 and recommencing a process that may take seven years from initiation to COD is unwise, and so incredible.

b) Would this approach incentivise deployment and/or discourage hoarding of the maritime space?

On balance it is more likely to discourage entrance to the Irish offshore market than it is to discourage speculation.

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

Yes, and would also discourage other projects that had not participated within ORESS 2 from engaging.

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?

Chambers Ireland does not have a view on provisional grid offers

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

Chambers Ireland does not have a view on grid nodes or regions in ORESS 2.

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.

Chambers Ireland does not have a view on grid orders of merit.

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.

As with our general opinion regarding Option D, Chambers Ireland's view is that this process would be better suited for a more mature system where there is planning certainty and significantly increased Grid capacity operating under the Enduring Regime.

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?

Yes, Chambers Ireland is deeply concerned that current plans will not afford us the capacity to integrate sufficient Offshore Renewable Energy to ensure that we meet our 2030 emissions targets.

Our view, and the view of our members, is that we should be attempting to maximise the onboarding of renewable energy as we are likely to fall far short of our aims if we attempt to over-optimise our development plan.

Resilience requires redundancy in supplies, and it requires diversity of supplies, and independence in supplies. The supply of renewable energy capacity to our electricity network is no different, an over-optimised approach will not only ensure that a single instance of failure will undermine the attainment of our renewable supply targets.

Given the location of our thermal plants, they are typically well suited for landing offshore renewable energy. They are already on industrial coastal sites and much of the needed infrastructure has already been built.

An added benefit of Hybrid projects is that they will facilitate the deepwater floating offshore wind projects that are likely to be available by 2030 but are currently under-considered in this consultation.

Given that the pace of development in this technology (along with advances in large and small wave energy generation projects) there will be several technological options available to us that are likely to be commercial by 2030 before the ORESS2 process is complete.

Adding these to existing hybrid connections will allow them to be deployed at a more rapid pace as the maritime planning permissions will not need to be accompanied by the landside planning permissions that delay so many projects.

Furthermore, hybrid projects will also allow this without requiring considerable additional infrastructure to be built, and they automatically hedge the risk associated with windless days as they are intrinsically complemented by thermal plants.

The co-location of gas-fired thermal plants with offshore connections will be useful for the development of the offshore renewable energy sector (as they will provide a faster path to COD, given the reduced planning risks that area feature of the existing electricity transmission infrastructure) and they can also act as catalysts to the growing Hydrogen industry.

Should these Hybrid sites be locations where electrolysis occurs (to capture power which the transmission network is unable to transport, or during those periods where renewable electricity supply is in excess of demand) then the location of the sites for hybrid will not only be useful in terms of exporting the unused Hydrogen via shipping, or their supplies can also be included into the fuel-mix of the thermal plants helping to reduce our dependence on fossil methane.

Ultimately, we need to facilitate an enormous expansion of our renewable energy capacity if we are to ensure that we can remove both the carbon risks associated with fossil fuels, and (as importantly) the geopolitical risks.

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.

No, but given the constraints in the Irish market, specifically the long delays that are involved in the development of infrastructure in general, and electricity transmission infrastructure in particular, then this is an option that will facilitate the delivery of offshore energy to the Grid while mitigating planning risk.

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?

No.

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?

They can compete within ORESS 1 and ORESS 2 as would any other project, the important element is that they deliver on projects in time.

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?

Yes. Diversity in supply will be key to ensure that we have security of supply. Combining Wind/Wave/Solar/Battery/Hydrogen technologies – in addition to renewable biomass and biomethane options – will be core to delivering renewable energy to our electricity network while also ensuring security of supply. The key (given our enormous offshore wind energy capacity) will be not targeting our own domestic energy needs – as was the focus of "Shaping our Electricity Future" but in positioning Ireland as an energy exporter. This will require us to manage our volatile renewable energy supply by capturing and

storing our excess energy which is often the subject of curtailment (arising from the limitations of the national transmission network).

Ideally, we will be co-locating all grid connections with electrolysers, batteries and solar to ensure that we can minimise both the infrastructure that we need to develop and also the wasted energy that we are currently unable to use.

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?

Wave energy projects. Hydrogen electrolysis projects. Hydrogen cell electricity projects. Green ammonia projects. Offshore closed loop Hydrogen gas generation/storage/export projects. Onshored Hydrogen electrolysis twinned to port capacity that allows for the storage and shipping of green fuels.

Given the commitment that ScotWind has shown towards Floating Offshore Wind during its most recent auctions, we argue that this should not be considered an 'innovation technology' and that it should be considered in the context of the general ORESS1 and ORESS2 auctions.

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?

Capacity should be afforded such projects as is practical. Which is why Chambers Ireland's preference is for Option B as this will facilitate the minister's judgment being applied to the regulatory regime that facilitates these technologies. We have concerns that the other options may privilege Grid connections to such a degree that they will preclude the development of projects which may not need connections to the transmission network.

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

Yes, though they should not be included in the 5GW target for Offshore Energy.

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?

This is irrelevant to the ORESS system, should be facilitating the maximum potential amount of renewable energy capture. If we are producing more energy than we need, there is a ready market for energy, renewable energy has an even higher demand, and that market will only grow. Even if it doesn't have a domestic route to market, such energy production will be facilitating decarbonisation in other states. There are no Grid constraints to be considered in the context of Green Fuels.