

Phase Two Consultation
International and Offshore Wind Division
Department of the Environment, Climate and Communications
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Emerald Floating Wind - Response to the Public consultation on the Offshore Wind Phase Two Consultation

The Emerald Joint Venture partnership welcomes the opportunity to engage with the Department of the Environment, Climate and Communications (DECC) and provide feedback on the Public Consultation for Phase Two.


The Emerald project proposes a circa 1.3GW floating wind farm off the south coast of Ireland in the Celtic Sea, developed by Simply Blue Group and Shell New Energies in a Joint Venture partnership. Emerald will utilise the site of the **decommissioned Kinsale gas platforms** in order to produce clean energy for Ireland

The JV is committed to listening to the voice of coastal communities, welcomes engagement with local businesses and will work with the supply chain. Floating offshore wind (FLOW) is a unique opportunity for Ireland, due to an abundance of wind energy and available water depths. It can add to the benefits of traditional fixed-bottom wind by helping to make Ireland a world leader in producing renewable energy and fighting climate change. This will allow us to not just power ourselves, but also to export clean energy to Europe to meet EU wide targets. It will ensure that Ireland can build a more energy secure future that is resilient to market shocks which are increasingly driven by reduced access to oil and gas. Floating offshore wind is ready – and able – to deliver, not just in the years to come, but today, as evidenced in other jurisdictions, most notably in Scotland. **FLOW needs to be considered in the context of decisions being taken in the coming months, that will set the scene for offshore wind in Ireland and in the pathway to and beyond 2030.**

We welcome the opportunity to respond to this consultation and are happy to share our expertise and experience. We believe that our comments are practical and will help shape a pragmatic way forward for Phase Two. Before we respond to the questions, we first wish to make some high-level recommendations.

1. Allow projects a realistic time to develop

The consultation document and the follow-up workshop have stressed that viable projects for Phase Two must reach commercial delivery by 2030. Projects which cannot deliver by this date will have MACs rescinded. **There is considerable concern across the industry, which we share,** with this proposed way forward. Project timescales are extremely tight. If Phase Two MACs are not awarded until late 2023 Phase Two projects will be expected to be completed and delivered within 6/7 years. According to Wind Europe, average timelines from award of consent to commencement date is minimum 7 years in a mature market, with a well-established supply chain - but more realistically 10-11 years in most others.

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Our preference is for a defined period within the MAC for development so that projects can opt for a **phased approach** and can **commit a certain percentage of deployment by 2030**. Phasing of projects is important to take account of uncertainties in supply chains and delays in the planning system. Furthermore **the 2030 'cut off' for MACs is a huge disincentive** and will be a significant turn-off for investors.

It is recommended that a development phase or milestone of **at least 10 years** be consider for MACs. The time allocated to this should be based on lessons learned in other jurisdictions and that options to incentivise delivery of phases on the project by 2030 be considered as the best way forward to provide certainty to the market, incentivise delivery, reduce the risk of splitting projects and ensure the 2030 target is met.

2. Provide clear criteria for projects to compete in Phase Two

There are a number of significant challenges that need to be overcome in the next decade in order to deliver 2030 targets. Including but not limited to the set up of key agencies such as MARA, management of limited grid capacity and significant competition between projects. An immediate challenge for Phase Two projects is the fact that the processing of MAC applications needs to await the set-up of MARA. Phase Two will also include a step change in the number of projects applying (to MARA). However, the risk of delays can be mitigated by developing appropriate interim measures.

In support of the Phase Two policy objective to deliver the 5GW offshore wind by 2030, the following is recommended:

Development of a pre-qualification phase by Q3 of 2022:

- o Identify projects that can demonstrate ability to deliver by 2030 (Delivery timelines)
- o Facilitate projects to progress through Development Permission process
- o Promote pre-qualification of Floating Offshore Wind projects in Phase Two, by confirming a pot for FLOW in ORESS 2.

An efficient prequalification stage, probing key project criteria will quickly identify those projects that can deliver by 2030. It is expected that Phase Two will need to deliver 3GW of offshore wind by the end of this decade.

To support the prequalification process and the development of appropriate programmes or **'delivery timeframes'**, it is recommended that guidance is provided to developers, specifically on activities outside of their control, so that the assessment is based on similar programme assumptions. For example, a fixed assumption of 12 months for An Bord Plenala to process a development permission application.

3. Create a specific ORESS2 pot for FLOW

Phase Two projects will be critical to achieving the 5 GW offshore wind and 80% renewable electricity target for 2030 and we believe that our project will be ready to deliver within this phase. We welcome the signal of a separate pot in ORESS 2 for FLOW via the innovation category. However, we believe that FLOW should not be considered as an innovative technology which requires further research, but as one that is ready to contribute commercially pre-2030 **given the industrial maturity it is now achieving in other jurisdictions** We urge the government to make a policy commitment to FLOW and to **indicate a pot of at least 1GW in ORESS 2 for FLOW** projects. We believe that this can be accommodated in the available grid capacity for both the South and West Coast.

In addition, **we recommend that only projects with development permission should be eligible to compete in ORESS**. While we appreciate that there are resourcing issues within the system, these can be addressed in the intervening years and should not limit feasible projects from receiving development permissions within a realistic time frame. The urgency to underpin our planning system to accommodate these projects is becoming more real in the face of current global crisis with respect to energy security and autonomy. We also acknowledge that the position of requiring development permission for ORESS, may cause delays to the timing of the auction as a threshold number of projects is required. However, this should be offset against the fact that only projects with the highest chance of succeeding will be eligible for ORESS and will be allocated appropriate grid.

4. Ensure Site Investigation licenses for FLOW projects can be awarded in Q1 2023

The ability to carry out site investigations is an immediate need to be addressed by MARA if FLOW projects are to compete as part of Phase Two. Currently our projects are significantly disadvantaged by an inability to apply for licenses to comprehensively assess sites. The current consenting regime only allows for works within 12 nm and takes 9-12 months for a site investigation license to be awarded, recently reduced from 12-18months.

Further efforts to reduce timelines and ensure efficiencies are urgently required in 2022 so that investigative licenses can be awarded by MARA before Q2 of 2023. If this is not possible- the summer survey window for 2023 will be missed and the data required to inform EIAs for FLOW projects will be delayed by 12 months This anomaly sets a competitive barrier to FLOW projects to compete in Phase Two, it also reduces the likelihood of DECC reaching 2030 targets. Ensuring the FLOW have the ability to compete in Phase Two will diversify the solution to the 5GW target in terms of technology and geography

While we acknowledge that MAPA states that that *“MARA shall, to the extent that is practicable to do so, determine a licence application not later than 30 days after the day on which the MARA is satisfied that the applicant has complied with all the requirements”*, **we urge the department to consider the recent industry recommendations for the MAPA secondary legislation.** This will provide a clear pathway to streamline the

current processes and an opportunity to apply lessons learnt from other jurisdictions. . Furthermore, having an efficient licensing system will also ensure a clear pathway to achieve our ambition of 30 GW of offshore wind in the future.

6. Develop an Industrial Strategy to support infrastructure and supply chain

The long-term ambition in the Programme for Government is for 5GW by 2030 and 30GW floating offshore wind in the following decades. To build towards this target **there is an urgent need to agree an ‘Industrial strategy’** which will plan the development of the Irish supply chain to support FLOW and build a pathway for delivery on the South and West coast to establish a strong indigenous industry to support the offshore sector. 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 base. The window to becoming an early mover and retaining foreign direct investment (FDI) is closing quickly as other jurisdictions ramp up their plans for FLOW.

Responses to the Questions:

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?

Our opinion is that **option B** is the most suitable process suggested in the consultation as it will provide:

1. Clarity on the criteria for projects
2. Reduced risk for project development
3. A level playing field for all projects to compete

However, we envisage that there may be **a challenge with option B with regards to the timeline to establish the criteria and run the competition.** We believe that realistically this will take at least a year- which means that MACs will not be awarded until late 2023/early 2024. This may have knock-on effects on timelines for other processes - e.g., ORESS 2. **In order to alleviate this risk, we recommend that criteria and scoring mechanisms for this option be published in Q3 2022 in advance of MARA being established.**

With regards to the other options, we believe that **option A is not viable** as there will inevitably be competition for overlapping sites and this will be a challenge to manage in a ‘free for all’ system. In addition, we don’t believe the suggested ‘Security Bond’ will be sufficient to reduce entrants into Phase Two and compete for MACs. We believe

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the bonds will simply drive-up costs for consumers as developers add the costs for them into ORESS bids. The requirement for security bonds in Phase Two will also cause an unfair advantage for Phase One projects- some of which will inevitably compete against Phase Two projects in ORESS 2, and this may challenge anti-competition rules within State Aid.

Option C and D are not viable for our projects as the information required to inform ORESS will need to be gathered from surveys that in most cases are not viable due to backlog in current licensing system. In addition, these options squeeze the timelines between ORESS 1 and 2 and will not provide adequate time to understand the real fallout from ORESS 1 and what is the realistic requirement for ORESS 2.

2. Option A proposes that a deployment security is required for 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?

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 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?

As outlined in response to 1. above, **the proposal of a security bond on top of a development levy is not supported** for the following reasons:

- It will not reduce competition in Phase Two- all projects will have access to the finance to ‘pay in’ for the short term
- It will drive up the cost of delivery of all projects and ultimately it will be the consumer that pays for the cost of securing and administering these bonds.
- It will give Phase One an additional competitive edge for deployment which is in contradiction to the intentions of the ORESS competition and the State Aid rules which underpin it

Our preference is that the DECC focus on the ‘Development Levy’ and how this might be set for Phase Two, bearing in mind that a level playing field with Phase One should be maintained.

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?

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A competitive MAC process as set out in option B would be our preference, as it will provide certainty to both the system and project developers on which projects are most likely to succeed to meet 2030 targets. The criteria set out in the MAC 1 process should be considered as a starting point. However, it should be borne in mind that Phase Two projects are less likely to have certainty on items such as grid connection options, wind turbine details or cable route co-ordinates.

The following criteria should be considered at a minimum:

- Technical ability of project developers to deliver- including experience in other jurisdictions
- Planned approach of project/ timelines and costs
- Progress of project to date- Consenting/Grid/Stakeholder engagement
- Supply chain assessment and plans for local development
- Local support for project- including testimonials
- Opportunities for the project to deliver alternative route to market and meet targets beyond 5 GW




We recognise that criteria such as supply chain impact are challenging due to competition requirements in State Aid rules. However, we believe that this element will be important to qualify support and development potential of the projects. It is important to signal the opportunity within the sector and its ability to create and maintain high value jobs within regions and coastal communities as well as the potential to support jobs and companies indirectly. This will become an increasingly important factor as projects move away from the East coast to the South and West coasts where coastal communities are much more dependent on traditional sectors such as fishing, tourism and farming. The direct and indirect job opportunities offered by the offshore renewable sector will be much more valuable to maintaining coastal communities on these coasts and may become vital in the face of reduced opportunities in other sectors (e.g., fishing)). Weighting of criteria should be considered in particular technical ability and projects to deliver.

b. 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.

In line with WEI, we recommend that 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 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:

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- 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 the Department (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.

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

No – as outlined above a deployment bond will be an additional and unnecessary cost that will simply drive-up project costs and will not necessarily deliver on desired outcome for the DECC (i.e., to reduce applicants into the process).

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?

We are conscious of the need to ensure a strong pipeline of projects to meet 2030 and that Phase One projects will be leading this charge. However, it is important that projects eligible for Phase One are not given undue advantage which might diminish opportunities for Phase Two projects.

We believe that attrition of Phase One projects is inevitable and that it is likely that the East coast will quickly become constrained due to -a combination of environmental impacts and public acceptance and competing space demand from other stakeholders, fishers, recreation, MPAs etc.

We believe that there is a real need to offer opportunities for deployments off the South and West Coasts in Phase Two and this opportunity should not be limited by focus on Phase One.

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Nevertheless, in order to reach 2030 targets in a reducing timeframe, build capacity in the sector and confidence in the Irish system, Phase One projects should be permitted to retain MACs and be eligible for ORESS 2. However, they should: demonstrate sufficient efforts to compete for ORESS 1 and should have development permission.

Again, the requirement for **a level playing field between Phase One and 2 for MAC applications** will be essential if Phase One projects can enter ORESS 2. This means that development levies and security bonds, should they be required, will need to remain consistent across the 2 phases.

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?

We do not support Option D as a proposed solution as outlined in response to Q1.

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?

This approach is not supported by our project 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; to meet this and allow for a bankable environment for projects reaching FID between 2026 – 2027, we 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.**

b. 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. We recognise 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.

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 2030's.

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.

c. 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 sees 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.

6. What are your view 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 2 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’ and future iterations of the 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 1 (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 taxpayer
- 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, Offshore Wind 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 2.

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 'over lapping 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.

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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?

We do not support this approach. In support of the 5GW target by 2030, the recommended sequence is as follows:

- MAC award,
- Development Permission, and.
- 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).

6. What are your view 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 2 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’ and future iterations of the 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 1 (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 taxpayer
- 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, Offshore Wind 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 2.

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 ‘over lapping 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

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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.

b. 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?

We do not support this approach. In support of the 5GW target by 2030, the recommended sequence is as follows:

- MAC award,
- Development Permission, and.
- 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).

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?

We believe that this an overly complex solution, driven by the uncertainty created through appointing winners too early. A more optimal sequence which would mitigate the risk of attrition after ORESS2 (thus avoiding the need for reserve projects) is to include development permission in the ORESS2 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.

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?

We do not support Option D as a proposed solution as outlined in response to Q1. The proposal suggests a very complex approach to the auction. The timelines to bid for ORESS at such an early stage in the process would force projects to commit to prices with limited knowledge. 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.

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 propose 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?

We are very supportive of the development and progression of hybrid connection policy which we believe will support the achievement of Ireland’s climate targets. Hybrid connections will be critical to achieve in excess of 80% of RES-E.

We understand the main purpose of ‘Phase 2’ is to achieve Irelands target of delivering 5GW of offshore wind by 2030 and we believe hybrid connection policy must be considered in this context. **For hybrid connections to be considered as part of Phase 2, the changes to policy, regulation, grid code and market rules need to be implementable to facilitate projects in this timeline.**

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

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- 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
- Better social acceptance of the overall transition of the power system by reducing the requirement for new grid infrastructure development

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.

We strongly agree with the Wind Energy Ireland (WEI) recommendation that 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. We understand there are a number of additional regulatory challenges that need to be overcome to facilitate hybrid connections. We would welcome engagement with the relevant bodies to enable such projects.

Enabling innovation and steps to a net zero energy system

Taking into consideration our recommendation that hybrid grid connections should not be limited, **there is an opportunity to develop strategic energy hubs that could enable better energy system integration.** These could include energy storage and electrolysis for hydrogen production for example. This would allow energy production, energy storage and transport refuelling to be co located at the one site and better enable Ireland transition to a net zero energy system.

An example of hybrid grid connection in Ireland could potentially be an electrolyser could act as a captive offtake for offshore wind, producing green hydrogen for use in industrial heat, power and transport. The offshore wind farm / electrolyser configuration could also be connected to the national electricity grid, due to the fast ramp up / ramp down rate of electrolysers offshore wind electricity could be diverted from the electrolyser to the grid during times of high demand. Through the electrolyser providing grid services and the green hydrogen being used for power generation on low wind days this hybrid connection could increase the amount of renewable electricity on the system, whilst simultaneously increasing the amount of renewable heat and transport on the system.

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*¹, 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

¹ <https://windenergyireland.com/images/files/revolution-final-report-july-2021-revised.pdf>

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 green fuel production 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.

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 capacity to be reserved in the MAC and ORESS processes 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 a first step SOEF outputs should be reconsidered so that FLOW opportunities off the South and West coast can be realised. SOEF states 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. 5GW of connection provides no scope for attrition should, for example, some of the identified east coast upgrades be delayed or unsuccessful in obtaining development consent. There is scope for additional grid connection off the south and west coasts that would provide headroom for additional capacity to be utilised by floating offshore wind.

It is widely accepted that the west coast offers significant opportunities for FLOW to connect to the grid by 2030. The SOEF model should be re-examined to explore this. In addition, hybrid grid connection opportunities off the south and west coast need to be considered- as again industry identifies significant opportunities for FLOW here that may free up some of the competition around these grid nodes with fixed bottom projects.

Given the need to demonstrate support for this technology and plan a pathway to 2030, it is recommended that enough FLOW projects are allocated MACs in Phase Two to enable sufficient competition to meet ORESS requirements.

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With regards to ORESS, there is recognition that FLOW cannot compete on a ‘level playing field’ basis with fixed wind and, therefore we recommend **a pot which ring-fences budget for at least 3 projects of circa 300-400MW each**. This will allow for sufficient competition within a FLOW RESS auction. This pot should be facilitated through the overall State aid budget as Ireland has justified preferential treatment for offshore wind in RESS on the basis of the longer-term potential of these technologies for the country

The indicative schedule of auctions published by DECC² includes 2 offshore auctions with an indicative volume between 22,500 and 35,000 GWh. This translates into a capacity (based on an EirGrid assumption of 45% capacity factors) of between 5.7 and 8.8GW. This means that, from an auction perspective, there is potential to auction more than the 5GW, in order to ensure that the %GW is reached.

Therefore, **we would recommend a pot of at least 1GW for FLOW in ORESS2** which has the following advantages:

- a. It is in line with both the 2021 CAP and the DECC auction schedule
- b. Provides scope for 2 separate auction pots which, together, have a greater chance of delivering the minimum 5 GW
- c. Diversifies the solution to the 5GW target in terms of technology and geography
- d. Kick starts the floating wind supply chain and provides significant GVA and jobs to help offset the additional cost associated with supporting floating wind
- e. Ensures sufficient competition between floating projects to maximise potential auction benefits while at the same time facilitating at least two projects of an appropriate scale.

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. **We believe that such limitations cannot be enforced for innovative technologies.**

Some of the FLOW 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. They 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.

² <https://www.gov.ie/en/publication/8b63a-renewable-electricity-support-scheme-schedule-of-future-auctions/>

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 FLOW and green hydrogen as a part of Phase Two are required. Due to the scale of our offshore resources, Ireland could produce a significant quantity of green hydrogen, which could be used domestically and internationally to decarbonise heat and transport sectors. 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?

There are significant opportunities to support innovation for other routes to market such as hydrogen and other electrofuels production. **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.**

Europe will have an enormous demand for hydrogen and electrofuels in the early 2030’s and Ireland has a unique opportunity to harness the vast wind resource in our deeper waters to produce these green fuels for use in power generation and particularly transportation such as aviation and shipping. Considering the 10-year MAC which is recommended in this response, **we believe there could be in excess of 1.5GW of off-grid offshore wind generation, solely for the production of green fuels.** This presents both a huge economic opportunity for Ireland, but also will greatly contribute to the decarbonisation of the wider energy system.

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 EirGrids Enduring Regime, but planning for the Enduring Regime, and Irelands 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 HVDC 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.

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 Irelands

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.