West Coast Response to Phase 2 Consultation

We are submitting this response to the consultation on Phase 2 by the Department of Environment Communication and Climate. We are four developers with significant and credible offshore renewable projects off the west coast with a keen interest in securing a Phase 2 MAC.

- Simply Blue Group: 1.3GW Wester Star Floating Offshore Wind Project
- ESB: 1.4 GW Green Atlantic Floating Offshore Wind Project
- Mainstream renewables: 300 to 1.2 GW Floating Offshore Wind Project
- DP Energy: 1GW Clarus Offshore Wind Project

Each of these projects represent a significant opportunity for the west coast and we are committed to their development. All four of the above developers have commenced work to inform early stages of Environmental Impact Assessment.

We believe the West Coast can accommodate 400MW of floating wind by 2030 within the parameters outlined in the Phase 2 consultation. This will help to meet the 5GW by 2030 target.

We further advocate for Phase 2 to accommodate floating offshore wind projects that can demonstrate an alternative route to market, thereby opening opportunities for domestic use, or export, of green hydrogen or e-fuels at the turn of the decade. We are poised to deliver floating wind off the west coast for Phase 2, subject to government support for the deployment of emerging commercial technologies this decade.

We are hugely disappointed that the opportunities for the West Coast clearly do not feature in the Phase 2 consultation document, and we believe that this is a significant opportunity lost. We are also frustrated that while the consultation document clearly states that '*the selection of Phase Two projects on the basis of their geographic location….. should not be advocated in response to this consultation*' the adherence of the consultation to 'Shaping Our Electricity Future' implies a geographical preference for projects, with the majority being located on the East coast and the West coast largely excluded.

We believe that there is a sense in government that projects off the West coast are not currently viable due to sea conditions and depths and that there is a need to wait till development commences on the East coast before projects elsewhere are feasible. However, we strongly believe that this focus on the East coast will lead to challenges with achieving the 2030 target as it becomes saturated with projects and the cumulative environmental impacts become a significant issue. We advocate that the focus should be for coasts to develop in parallel without discrimination rather than in sequence and this will be vital in order to meet our 2030 targets and those set beyond.

There is concern that a significant opportunity on the West coast is being overlooked and will potentially lock out opportunities over the next decade if Phase 2 does not indicate a pathway for projects. Currently, floating offshore wind projects are more expensive to construct than fixed bottom projects given that the floating foundations themselves are sizeable (and therefore expensive) but also because there has not as yet been sufficient deployment to develop a robust supply chain with corresponding volume savings that have been seen in fixed bottom wind in recent years. Industry analysis[1] has indicated that the Levelised Cost of Energy (LCOE) for floating offshore wind is likely to reach parity with fixed bottom wind sometime in the 2030's but **only if there is a sustained**

[1] FOW-Cost-Reduction-Pathways-to-Subsidy-Free-report-.pdf (catapult.org.uk)

deployment programme between now and then which will facilitate the development of the supply chain and the innovations which will drive down the LCOE.

Given the depth of water off the west coast, Floating Offshore Wind (FLOW) will be the technology of choice for all four developers. FLOW will be a massive game changer for Ireland and in particular the west coast where it will unlock access to the majority of our offshore resource. FLOW enables Ireland to expand its offshore wind offering and supports the development of a significant domestic supply chain. FLOW will add to the benefits of traditional fixed-bottom offshore wind by making Ireland a world leader in producing and exporting renewable energy and fighting climate change. Technology improvements have enabled the rapid maturing of the floating wind market.

In fact, floating wind has quickly progressed from demonstration to early-stage commercial projects and has already demonstrated confidence in technology concepts, scale up to larger turbines. along with significant cost reductions. It can no longer be dismissed as an emerging technology with countries such as UK, France, US (California), South Korea and Norway pushing ahead with the design of leasing and tender rounds for commercial scale projects. The recent ScotWind option agreement announcements were an enormous vote of confidence in commercial scale floating wind energy technology with 11 projects totalling 15GW (over 60% of the leasing round) being awarded.

In this consultation response we are primarily focussed on Question 11, but before we set out our response, we wish to make some high-level points with regards to the opportunities that our projects will offer to the West coast if they can compete for phase 2

1. **Unlock Grid and Route to Market opportunities on the West Coast:**

We urge that DECC and Eirgrid reconsider Shaping Our Electricity Future to accommodate access to the West Coast for FLOW projects when modelling for 80% RES-E. We believe there is capacity available for at least 400MW. We also believe that there is significant opportunity for alternative route to markets on the West coast, which are already being progressed by ESB. At a domestic level, hydrogen is seen as a key enabler to decarbonise the Irish economy. In the short term, heavy vehicles such as trucks and buses will be powered by hydrogen rather than batteries and in the medium term, hydrogen is being investigated as an alternative to natural gas when it comes to heat and power. Internationally, there is a growing demand for green hydrogen and hydrogen derivatives and there has already been exploratory engagement between the West Coast supply chain and the German authorities for example. This alternative route to market would be for Industry to drive once given an opportunity to gain access to the build out of FLOW, which in addition to building an Offshore wind industry would also enable the Irish industry to take significant first steps into supporting wider decarbonisation of the Irish Economy with minimum burden or draw on resources on the Irish Government or its relevant departments.

2. **Secure jobs, infrastructure upgrades and supply chain development on the West coast:**

The long-term target in the Programme for Government is 30GW floating offshore wind. To build towards this target **there is an urgent need to kick-start the development of FLOW this decade by building a pathway for industrialisation off the South and West coasts.** We must move fast to fully capture the benefits of FLOW. 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 for FLOW.

There are some strong positive investment signals emerging from the West coast, via recent announcements to upgrade Rossaveal harbour and plans for the Shannon Foynes port to develop to meet the requirements of the industry. In addition, a report completed by BVG Associates on behalf of ESB demonstrated that the construction and assembly of a 400MW floating offshore windfarm off the west coast that uses the existing Moneypoint power station site as the construction and assembly hub could create a total gross value added (GVA) of €934m to the Irish economy with over 7,000 direct person years employment and almost 5,000 indirect person years employment. Much of this spend and the majority of the jobs would be local i.e. in the Clare, Limerick and Kerry region.

3. **Ensure Long-term Opportunities for the West Coast:**

Taking measures to support floating wind on the West coast now and into the future will help to ensure that the supply chain we urgently need can support the development of floating wind towards the end of the decade and compete with other jurisdictions. This early intervention will enable the industrialisation of a whole new sector for Ireland in the 2030s and beyond. Enabling floating projects already underway to begin operation this decade can put Ireland on the path to becoming a serious player in the floating wind industry. Ireland needs to get serious about energy security and its climate change targets and offshore wind ambitions, deployment and innovation should be supported now and as part of the Phase 2 designations. This would see a requirement for capacity to be reserved in the MAC and ORESS processes to support floating wind.

Response to Question 11

Innovation Technologies

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*[2], that floating wind projects can and should contribute to 2030 targets.

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

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

[2] https://windenergyireland.com/images/files/revolution-final-report-july-2021-revised.pdf

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 2 to support FLOW.

In addition, hydrogen and hydrogen technologies are enablers of energy system integration, contributing to improving the overall efficiency of the system and cost reductions in the energy sector and across the economy. Innovative projects of this type should be included in the Phase 2 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 2 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 2.

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 south west 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.

With regards to MAC allocations for FLOW projects, given the need to demonstrate support for this technology and plan a pathway to 2030, it is recommended that MAC allocations in Phase 2 for projects on the deeper south and west coast should be aligned within the percentages proposed should allow for sufficient number of projects to progress to a ORESS competition and therefore would suggest 300-400%.

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 on the south and west coast. 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 DECC[3] includes 2 offshore auctions with a indicative volumes 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 2 must reach commercial delivery by 2030 in advance of the enduring regime. Projects which cannot deliver by this date will have their Marine Areas Consent (MAC) rescinded. This poses a significant risk for all projects, as timelines are immensely tight and investor confidence is hugely reduced by this risk of losing MAC.

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

A further consideration to support a longer MAC development time for FLOW projects is the ability to carry out site investigations. Currently our projects are significantly disadvantaged by inability to apply for licenses to comprehensively assess sites. The current consenting regime only allows for works within 12nm and takes at least 12-18 months for a site investigation license to be awarded. Most projects planning for Phase 2 are currently in the system and will have licenses in time for survey campaigns in summer 2023.

While we welcome the indication of reduced timelines in MAPA we are concerned that there is no clear pathway to streamline the current processes. 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 survey window for 2023 will be missed and the data required to inform EIAs for FLOW projects will be delayed by 12 months. This sets an enormous competitive disadvantage for FLOW projects that must be urgently remedied.

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3 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 green hydrogen as a part of Phase 2 are required. Due to these offshore resources, Ireland could produce a significant quantity of green hydrogen, which could be used domestically and internationally. However, Ireland needs to act fast to ensure we capitalise on this opportunity.

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

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

The recent TEN-E revision emphasises the need for regional coordination for offshore wind infrastructure and 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.

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

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

Innovation is not limited to technology but must also consider innovation in grid architecture as well as market design. 30GW will not be achieved without innovation in these areas as well as transmission technology. 2030 will see the introduction of 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 interconnectors with the UK and continental Europe. These projects can be achieved in the early 2030s and would have an aligned timeline with other hybrid projects being planned in European waters.

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

Currently, Irelands planning means demonstration sites for innovative technologies must go through the same process as commercial projects. If Ireland wants to achieve 2030 and 2050 targets, innovation in both technology and energy system architecture is a necessity. Facilitating demonstrations sites this decade will ensure that innovative technologies are ready for full implementation as part of the Enduring Regime, where these technologies can assist in delivering higher targets.