

Dear Welsh Affairs Committee

The Celtic Sea Alliance.

In September 2019 a Memorandum of Understanding was signed by three initial partners, Marine Energy Wales (MEW), Cornwall and Isles of Scilly Local Enterprise Partnership (CIOS LEP), and the Marine Renewable Industry Association (MRIA) of Ireland to form the Celtic Sea Alliance (CSA) to promote the Celtic Sea as a floating offshore wind (FLOW) development zone. A launch event took place at the Ocean Energy Europe Conference in Dublin, attended by Lesley Griffiths MS, Minister for environment, Energy and Rural Affairs in Wales.

There are significant and varied offshore resources in the Celtic Sea i.e. an area in the southern Irish Sea and South West Approaches bordered in a roughly triangular shape by the south and west coast of Wales, the south east coast of Ireland, and the north west coast of Cornwall. The CSA recognises that the area provides the region with significant short, mid and long-term opportunities for development of floating offshore wind generation, and as such seeks to create maximum economic benefit with a strategic, collaborative approach.

The CSA has expanded to include key organisations with common interests in the development of the Celtic Sea. Project developers are represented by Simply Blue Energy and its JV with Total, Blue Gem Wind, RWE, and DP Energy; innovation and further industry insight comes from the Offshore Renewable Energy Catapult (OREC), and the Irish Wind Energy Association has joined. MEW provide secretariat services.¹

The CSA meets monthly with its primary objectives being:

- To promote the Celtic Sea (UK and Irish waters) as an area providing a strong opportunity for FLOW.*
- To promote the CSA as a vehicle for collaboration and opportunity at political business and community level.*
- To ensure that the Supply Chain around the Celtic Sea are aware of the opportunities presented.*
- To Identify common issues and barriers in key areas such as port infrastructure, grid investment and funding.*
- To share best practice and support joint initiatives in the areas of community engagement, socio-economic and environmental impacts.*
- To foster closer ties with wider stakeholders, demonstrating a cohesive approach across the three regions*
- To work together to attract inward investment and develop international markets, and specifically trade between Ireland and the UK.*

¹ Please note: MEW is providing a separate response to this Call for Evidence on behalf of its own wider member organisations.

The Celtic Sea

In a study commissioned by Simply Blue Energy in 2019, Bristol based consultancy ITP Energised carried out a resource assessment of the Celtic Sea.² Using GIS mapping to identify constraints, consenting issues and suitable environmental conditions, ten potential development areas were identified with a possible maximum capacity of some 150 to 250 GW. Further assumptions for potential grid and technical constraints suggested that realisable capacity is likely to be in the region of 15 to 50 GW.³

This scale is considerable, and may be compared for example with the Prime Minister's declaration to develop 40 GW of offshore wind by 2030 in the UK, including 1 GW of FLOW. The analysis serves to highlight that the Celtic Sea is a development area with great potential; it can be a major contributor to realising the 2030 goal. Furthermore, looking into the 2030s when renewable energy electricity demand continues to rise to deliver Net Zero targets, and when large scale integrated energy systems including hydrogen and energy storage are deliverable, FLOW in the Celtic Sea should provide a core element of that energy transition.

The CSA will seek to ensure these broader reach opportunities can be realised in the longer term, to participate in and contribute to high level thinking, and to follow initiatives underway and planned in its boundary regions.

The Response

The CSA have reviewed the questions posed in the Call for Evidence by the Welsh Affairs Committee and are pleased to submit responses below. We are responding in the context of our specific interests in the Celtic Sea, recognising their potential contribution to the continuing development of renewable energy not only in Wales, but also the boundary regions of south west England and Ireland.

Q4. What opportunities are there for renewable generators in Wales of greater interconnection with other electricity markets?

The potential scale of development in the Celtic Sea for Floating Offshore Wind opens significant opportunity for interconnection to wider electricity markets. The scope readily opens the possibility of interconnection between Wales, Ireland and the south west of England, the geographical boundaries of the Celtic Sea area of interest. If an integrated approach to an electricity transmission system can be developed, bi-directional energy flows

² Assessment of the floating offshore wind potential in the Irish and UK waters of the Celtic Sea, Simply Blue Energy 2019

³ The Celtic Sea capacities suggested at this stage are from desk studies only and have not been assessed or endorsed by The Crown Estate.

can be envisaged between these three boundary regions. Such a system connected to wider (to an extent existing) networks would naturally aid security of supply, improve resilience to intermittency and allow more flexible capability for network operators.

In a wider geographical context, interconnection opportunities could also be considered to the south and east – to France, and to the north along the west coast of Wales to couple into expanding developments in fixed offshore wind projects off the north coast. At a macro level, studies have indicated that weather systems on the west and east sides of the UK mainland are generally asynchronous meaning that a consolidated offshore renewable energy system on the west coast can very much complement the continuing fast-paced growth in the North Sea, and again enhance overall UK electricity system stability. The Celtic Sea and Wales should form a major part of such a system.

Many ideas are coming forward and streams of work are in progress to assess and develop this potential. The Celtic Sea Alliance in its work seeks to share and understand these opportunities and promote a coherent approach. Examples of work, studies and analysis that are known to be current include:

- Welsh Government's study of the grid network in Wales, including assessment of interconnections. There is an existing proposal, the 500MW Greenlink project between County Wexford in south east Ireland and Pembrokeshire, which is due for construction and commissioning in 2023 subject to planning approvals being granted. It should be noted that planning for this specific interconnector began before the emerging potential of electricity generation in the Celtic Sea was realised.
- Similarly, an interconnector project, the Celtic Interconnector, is underway between Ireland and France, a 700MW connection, which is proposed for construction and connection in the period 2022 to 2026.
- National Grid ESO'S Future Energy Scenarios (FES) analysis (FES 2020 Report; growth of offshore wind generation is required for the 2050 Net Zero carbon goal. Celtic Sea has not yet featured but CSA partners are engaging with the Future Energy Scenarios team and are confident that the Sea will be included in the next version.
- Floating Offshore Wind Centre of Excellence; managed by the Offshore Renewable Energy Catapult (OREC). In a portfolio of collaborative project work across industry, an energy systems study is in hand to assess the broader benefits of large-scale FLOW and its role in Net Zero. The Welsh waters of the Celtic Sea featured strongly in a recent report.
- The North Seas Energy Cooperation Agreement: an EU collaborative project between Belgium, Germany, Denmark, France, Ireland, Luxembourg, Netherlands, Norway and Sweden to facilitate the integration of large-scale offshore wind in the European energy markets as well as a more coordinated offshore grid development. Following the UK's departure from the EU, the UK lost its membership. However, following the agreement with the EU in December 2020 the Parties committed to promote energy efficiency and renewable energy, and reaffirmed targets. A specific forum for offshore renewable energy was set up for technical discussions and the Parties committed to sharing best practice and facilitate the development of specific offshore projects. Cooperation in this area is vital if the considerable potential of offshore wind power is to be maximised through, for example, projects that combine

largescale windfarms with physical interconnection of countries. This may be a vehicle to bring the Celtic Sea into consideration for grid market interconnection, at this stage through the Irish participation in the project.

- BEIS led Offshore Transmission Network Review; initiated in 2020, the Review seeks to address the challenges set with UK Government target of 40GW of installed offshore wind capacity by 2030, including 1GW of FLOW. It is important that the Celtic Sea gains a profile in the analysis, and that interconnection aspects are considered.

Q8. What opportunities are there for renewable energy to aid Wales post-COVID-19 economic recovery?

The CSA firmly believes that development of the FLOW opportunity in the Celtic Sea presents great scope for economic growth in all three boundary regions with 450MW now being developed in UK waters and 300 MW in Irish Waters of the Celtic Sea. Development costs result in £30-70m per project and a lot of this business goes to local firms.

The potential scale of development (50 GW estimated) offers the chance for supply chain development in fabrication, construction, assembly, and launch of large-scale offshore wind turbines. From a UK and Welsh perspective, industrial benefits can be significant with diversification in the existing industrial base. Supply chain growth is envisaged where 60% UK content (as mandated in the UK Offshore Wind Sector Deal) can be surpassed. This is a new industry in the region where job retention and creation, upskilling and training are great opportunities. ⁴

Further wholesale benefits may be realised when taking into account bigger system factors. The growth in interest in hydrogen generation as a contributor to the transformation of energy supply is important. An integrated approach in terms of electricity generation, hydrogen generation and energy storage should be advocated. Work continues in the South Wales Industrial Cluster with this in mind.

In the CSA, we would urge that because the scale of opportunity is so clear, successful development is mutually beneficial to the bordering regions on Wales, Ireland and south west England. The CSA is giving thought to developing the business case for the creation of a Celtic Sea Economic Zone in support of floating wind. Post-Brexit, this may be a win/win solution to boost the economies in the region and would be a positive announcement for COP26.

Signed on behalf of the Celtic Sea Alliance Partners.

Martin Murphy, Chair Marine Energy Wales.

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⁴ OREC Supply Chain Report. Benefits of Floating Offshore Wind to Wales and the South West. For Welsh Government and CIOS LEP, January 2020.