



Blue Gem Wind (BGW) adopts an ethos of active engagement with all our project stakeholders. We fully support the ideal of coexistence for multiple users of the marine space and wish to engage with and work collaboratively with stakeholders to address queries and/or concerns as they arise.

Following engagement with stakeholders to date, we have compiled a list of Frequently Asked Questions (FAQs) to cover the most common queries that have been raised about BGW and our plans to develop a floating offshore wind energy project in the Celtic Sea.

As the project continues and our plans evolve, we commit to continually engaging with all stakeholders and this list of FAQs will therefore be updated as new questions emerge. It is also our intention to develop more specific lists of targeted FAQs in due course, relevant to specific stakeholder groupings.

Frequently Asked Questions

Q: Who are Blue Gem Wind?

A: Simply Blue Energy, a pioneering Celtic Sea energy developer, and TotalEnergies, one of the world's largest energy companies, have established a partnership to develop floating wind projects in waters of the Celtic Sea. The joint venture, Blue Gem Wind was announced in March 2020.

<https://www.bluegemwind.com/about-us/>

Q: What is floating offshore wind?

A: Floating wind is the use of offshore wind turbines that are mounted on a floating structures that allow the turbine to generate power in water-depths not feasible for fixed bottom turbines. For us, floating offshore wind combines two technologies that have been proven throughout the world, oil and gas semi-submersible platform technology and wind turbines.

Q: Do we need floating wind?

A: It is looking extremely likely that floating wind will be essential to meet the UK's net-zero emission targets and is needed to deliver on ambitions set by the [Committee on Climate Change](#).

Q: What are the benefits?

A: Almost 80% of the world's wind resource is in water deeper than 60 metres. Floating wind is further offshore meaning less visual impact and reduced conflicts with other marine users. It is where windspeeds are faster and more consistent meaning higher capacity factors. It could also provide energy security for the UK and balance power generation across the UK as weather patterns in the Celtic Sea differ from the North Sea. The Offshore Renewable Energy Catapult estimates that the first gigawatt (GW) of floating wind in the Celtic Sea could potentially deliver over 3,000 jobs and £682m in supply chain opportunities for Wales and Cornwall by 2030. Longer term it could contribute 17,000 UK jobs generating £33.6 billion for the UK economy by 2050.



Q: Why the Celtic Sea?

A: Reports suggest that there is up to 250 GW of wind resource in the Celtic Sea with perhaps 50GW realisable. That is a significant low carbon resource that has previously been unattainable because of the water-depth. Reports suggest that the Celtic Sea has different weather patterns to the North Sea suggesting there will be system benefits to the UK grid. The UK's peak demand for electricity is approx. 60GW

Q: What are your plans?

A: Our vision is to create a new low carbon offshore energy sector in the Celtic Sea that contributes to climate change targets, provides high skilled jobs, supply chain diversification and energy security. We would like to see the same positive impacts with floating wind on the West coast that fixed offshore wind is delivering for the East coast. We see this being delivered in stepping stone projects, starting with Erebus.

Q: What does a stepping stone approach mean?

A: The strategic benefit of floating wind in the Celtic Sea is clear and we believe it will be at commercial scale in the 2030s. The key challenge is how local and national businesses can maximise the benefit from its development. Blue Gem Wind propose to use a stepping-stone approach to development that involves starting with a smaller demonstration project (Erebus) and then potentially moving up to larger scale development, Valorous (300MW). Blue Gem Wind believes strongly in working with local stakeholders and a stepping-stone approach allows the local supply chain to develop and offer the support services necessary for larger commercial scale developments in the 2030's. This maximises the value to the local economy.

Q: Where is Erebus?

A: Approximately 45 kms South West of Pembrokeshire. <https://www.bluegemwind.com/our-projects/erebus/>

Q: How big is the site?

A: We are planning to use 32km² or less. This is approx 0.02% of the Celtic Sea area and 0.14% of the Welsh Marine Planning Area.

Q: Where is Valorous?

A: Approximately 50 kms South West of Pembrokeshire. <https://www.bluegemwind.com/our-projects/valorous/>

Q: How big is the site?

A: We are planning to use approx 155km² or less. This is approx 0.05% of the Celtic Sea area and 0.4% of the Welsh Marine Planning Area.



Q: How did you choose the sites?

A: When identifying sites suitable for Floating Wind, we had to consider a number of factors. These included technical factors (e.g. wind speed, wave conditions, seabed type, distance to port, grid connection), environmental factors (e.g. designated conservation areas, seabird assemblages, visual impacts) and social factors (e.g. fishers, shipping lanes, subsea cables, recreational activities). Over 30 different factors were considered in selecting the preferred site.

Q: What technology are you using?

A: The platform will be [Principle Power's Windfloat®](#), one of the most advanced floating technologies in the world whilst the wind turbine will be chosen from established global turbine suppliers. For Erebus we are planning on using between 6 to 10 turbines, with each turbine up to a maximum nominal rated capacity of 18 MW. The maximum height of the turbine blade tip from the sea surface could be up to 270 metres. For Valorous, the number of turbines could be between 18 and 31.

Q: Will I see Erebus from the shore?

A: The site selected has been deliberately chosen to minimise visual impact. The nearest turbines proposed will be approximately 45km from shore. A number of photomontages have been taken from relevant locations around Pembrokeshire you can find them here <https://www.bluegemwind.com/planning/>. Valorous is approximately 50km from shore.

Q: Why do you need the Met Mast?

A: A Met Mast will essentially communicate and validate data from the Erebus project site. This will tell us wind speeds and provide other important information that will help us design the wind farm to be as efficient as possible. Once the data has been collected (over a 15 month period) the mast will be removed and will not be required again throughout the 25-year project.

Q: Where will you connect to the grid?

A: We are aiming to connect into the National Grid Substation at RWE Pembroke Power Station. To achieve this, we will need to bring the cables from the coast to the Power Station and construct a substation within 2 miles of Pembroke Power Station. Any visual impact will be minimised with plans to bury the cables from the shoreline to the substation.

Q: Where will you bring the cables onshore?

A: We have looked at several potential landing sites for the offshore cable that started with 15 sites in an area spanning from Freshwater East in the South to Little Haven in the North. Starting in August 2020 we will begin offshore surveys to collect more data on the feasibility of potential cable routes to shore. We are exploring feasible options from Freshwater West to Angle Bay.

Q: Will this be disruptive?

A: We are working to minimise any potential disturbance for onshore communities. As the windfarm location is 45km off the coast we expect minimal visual impact compared to traditional fixed



foundation off-shore and onshore wind farms. Bringing the cable from the site will require specialised cable laying ships that can bury cable at speeds up to 4 km per day. At the shore we can use well known cable burying techniques and any minor disruption will be temporary as the cable is buried.

Q: What about environmental impacts on seabirds and other marine life?

A: The effects of climate change are recognised as the biggest threat to marine ecosystems worldwide. Renewable technologies are key to combatting climate change, and floating wind in the Celtic Sea can be a part of the solution for a cleaner and safer future.

That said, any activity in the marine environment has the potential to impact on seabirds and other marine life. As floating offshore wind is similar to fixed offshore wind, there is over 20 years of experience to draw upon. However, some advantages of floating technologies over fixed is described by the Royal Society for Protection of Birds (RSPB): “Floating wind can exploit areas distant from breeding seabird colonies and important shallow foraging areas. Lower infrastructure impacts on the seabed and less noisy construction time is also anticipated for deploying floating structures, which could reduce the associated impacts on marine wildlife, including birds and mammals.”

We take steps to minimise impacts on wildlife and habitats at every stage of the project. This includes following international best practice and undertaking research, environmental surveys, assessment, monitoring and modelling as part of the project design. The project team continue to engage in pre-application discussions with Natural Resources Wales, JNCC and other relevant authorities / organisations in order to inform the scope and detail of the project related Environmental Impact Assessment (EIA). An Environmental Statement (ES), which will specify and describe the anticipated effects of the project, is due to be completed at the end of 2021. This ES will be submitted to the decision-making authorities and published on our website. <https://www.bluegemwind.com/planning>

Q: When will Erebus be completed?

A: We are planning commissioning in 2026/27

Q: How many homes will you power?

A: Erebus will provide enough green energy for 89,488 homes per year.
<https://www.renewableuk.com/page/UKWEExplained>

Q: When will Valorous be completed?

A: We are planning commissioning in 2028/29

Q: How many homes will you power?

A: Valorous will provide enough green energy for 279,652 homes per year.
<https://www.renewableuk.com/page/UKWEExplained>



Q: How do I keep up to date?

A: By visiting the website, signing up for our community newsletter, visiting our planning page.

<https://www.bluegemwind.com/>

Q: What are the benefits to the local community?

A: Many of the current energy related jobs in the local economy are based within the oil and gas sector. With the legally binding UK commitment to net-zero by 2050 and the Welsh Government declaring a Climate Emergency, the future of energy and the local economy may look very different in years to come. Developing floating wind in the Celtic Sea will help create new jobs, attract inward investment, and provide new opportunities for supply chain companies.

Our project will produce positive impacts over a 25-year period and will benefit future generations. Although a test and demonstration scale floating wind farm we will be discussing what a community benefit fund could look over the lifetime of the project.

Q: How are you involving the local community?

A: Although the project is not due to begin construction and generation until 2026/27 we are committed to early stakeholder engagement. We have contacted local community, town and county councils to offer a project overview and presentation before planning related consultations due in November 2020.

COVID19 has made this difficult and we are looking at using technology to create a virtual consultation room and are exploring options to use animations to explain the project in more detail. Naturally, we would prefer to carry out stakeholder engagement in person and will do that as soon as we can. Our website contains information on the project and a contact us section where you can sign up for our planned newsletters. The project office is located in Pembroke Dock and we would be happy to discuss any early questions you may have.

Q Who are you working with?

A: To date we have been in contact and working with the Welsh Government, Marine Energy Wales, Pembrokeshire County Council, Swansea Bay City Deal, Port of Milford Haven, Pembrokeshire College, local fishers, Natural Resources Wales, The Crown Estate.

Q I'm interested in knowing more about planning and consenting, how can I do that?

A: Visit our planning specific web page <https://www.bluegemwind.com/planning/>