Blue Gem Wind

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 Blue Gem Wind and our plans to develop Erebus, a floating offshore wind energy project in the Celtic Sea.

As Erebus 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.

Frequently Asked Questions

Q: Who are Blue Gem Wind?
A: Simply Blue Energy is an ambitious, values-driven Irish company at the forefront of the global blue economy and is backed by Kansai Electric Power Co., Inc.'s ("KEPCO"), one of Japan's leading integrated energy providers. Under the brand Blue Gem Wind, Simply Blue Energy is developing the Erebus 100 MW floating offshore wind project in the Celtic Sea. You can find out more here www.bluegemwind.com

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 foundations. 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 typically 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: 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.

Q: Where is Erebus?

A: Erebus is a consented 100-megawatt Test and Demonstration project, located c.35km off the coast of Pembrokeshire.

Q: How big is the site?

A: We are planning to use 32km^2 or less. This is approximately 0.02% of the Celtic Sea area and 0.14% of the Welsh Marine Planning Area.

Q: How did you choose the site?

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 Erebus site.

Q: What technology are you using?

A: The floating 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 7 turbines, with each turbine up to a nominal rated capacity of 15 MW. The maximum height of the turbine blade tip from the sea surface could be up to 270 metres.

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 35km from shore. Visual impact studies have already been undertaken to confirm the unobtrusive nature of this site.

Q: Where will you connect to the grid?

A: We are planning to connect into the National Grid Substation at Pembroke. To achieve this, we will need to bring the cables from the coast to the Pembroke substation and construct a project specific substation within 2 miles of Pembroke substation. 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 transmission cable that started with 15 sites in an area spanning from Freshwater East in the South to Little Haven in the North. After detailed consideration, engagement and assessment, the selected landfall location for the offshore transmission cable is West Angle Bay.

Q: Will this be disruptive?

A: We are working to minimise any potential disturbance for onshore communities. As the windfarm location is 35km off the coast we expect minimal visual impact compared to traditional fixed foundation offshore 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 has engaged extensively 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 specifies and describes the anticipated effects of the project, was completed at the end of 2021 and submitted to the decision-making authorities in support of applications for a marine licence under the Marine and Coastal Access Act 2009 and Section 36 Consent under the Electricity Act 1989. This can be found on our website. https://www.bluegemwind.com/planning

Q: When will Erebus be completed?

A: Erebus is Wales’ first floating offshore wind project and is set for construction by the end of the decade.

Q: How many homes will you power?
A: Once constructed, Erebus will provide enough green electricity to power up to 93,000 homes per year and will save 151,000 tonnes of carbon emissions per year.

Q: How do I keep up to date?
A: By visiting our website for the latest news and project updates. You call also get in touch here https://www.bluegemwind.com/contact-us/

Q: What are the benefits to the local community?
A: During the construction phase, Erebus alone will support c. 700 direct jobs and a further c. 800 indirect jobs, with an estimated GVA of c.£500m across the project lifecycle. According to estimates from the Offshore Renewable Energy Catapult, when the first gigawatt of capacity is built out in the Celtic Sea this number increases to c.3,000 direct jobs and successful construction of Erebus is key to unlocking this opportunity

Our project will produce positive impacts over a 25-year period and a will benefit future generations.

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/

If you have any further questions or would like to reach out and discuss the Erebus project, please contact us here https://www.bluegemwind.com/contact-us/

You can also follow us on social media for the latest news and updates (LinkedIn).

Thank you.