

Sea Stacks Offshore Wind project webinar Q&A

The following questions were submitted during the Sea Stacks Offshore Wind project webinar hosted by ESB on 21st July 2022. If you have further questions at any stage please email the project mailbox at info@seastacksoffshorewind.ie

1. Where do I go to provide my feedback on this project?

To engage on the project at any stage, the first port of call should be the project webpage. This will contain any appropriate updates as well as direction on how to submit queries or comments to the project email address. If you wish to set up a call with anyone from the project team, or request a face-to-face meeting, again the best place is to do that via the 'contact us' section of the webpage. The project mailbox is reviewed regularly.

Outside of direct interface with ESB on the project, everyone will have an opportunity to make submissions on the project via the Government's own public consultation process. Information on any such consultation will be available under 'Latest News' on our project website.

2. What does CCGT Abbreviation stand for?

CCGT is a Combined Cycle Gas Turbine. A CCGT uses a combination of gas and steam turbines to efficiently produce electricity. ESB intends to be the leader in energy storage and hydrogen for the entire value chain including renewable electricity production, hydrogen production, energy storage, export and retailing of a zero-carbon fuel.

3. Will I be able to see the windfarm from the coast?

Visual impacts are one of the key considerations in designing and locating an Offshore Wind Farm (OWF). The layouts of any OWF will need to take into consideration views from along its most proximate coast. It may be possible to see the OWF from the coast from certain points, and the aim for us in ESB is to try to minimise as best as possible any visual impact that may occur. The design process and siting of any OWF needs to take into consideration all the other environmental aspects, such as marine habitats, ornithology, fisheries, shipping and navigation, etc. All of these will feed into how we identify the best location and one which has least impact.

We will be appointing specialist and highly experienced landscape, seascape and visual specialists as part of the environmental impacts assessment stage of the project. They will be undertaking desktop studies and fieldwork to examine potential views from key receptor or sensitive locations. Their findings will inform project design and the early-stage findings will be shared during a public consultation process.

As part of the planning application and Environmental Impact Assessment Report (EIAR), the final design will be illustrated in photomontages so that people can see what the project will look like from various viewpoints. The potential for cumulative impacts with other offshore projects will be examined as part of the EIAR.

The key engineering and technical aspects that will influence the final layout design include:

- Wind resource and managing internal / external wake impacts;

- Size of commercially available Wind Turbine Generators (WTGs) in the latter part of the 2020s;
- Presence of site geohazards (e.g. paleochannels, unexploded ordnates (UXO), existing seabed cables, shipwrecks, challenging ground conditions, etc.); and
- Proximity to other projects in the vicinity presently in development.

Consideration of these aspects in combination with the environmental factors noted above will ultimately inform the layout.

4. When are the geotechnical surveys scheduled for?

Geotechnical surveys will take place after completion of the geophysical surveys and discharge of the imposed conditions under the Foreshore Licence, such as archaeological reviews and engagement with the National Monuments Service.

5. Will the future windfarm impact on birds and how will you ensure that no impacts occur?

Ornithology is a key aspect to be consider in any wind farm design. The Irish Sea and the east Irish coastline hosts a variety of breeding, wintering and migrating seabirds and coastal bird species. Accordingly, there is potential for impacts during different stages of the project, such as:

- Direct temporary habitat loss / disturbance due to construction.
- Operational Disturbance, displacement and Collision Risk
- Collision Risk during operation

We are currently gathering as much baseline information as possible. Since November 2020 we have been carrying out monthly aerial bird & marine mammal surveys across the offshore project area. This will give us information that we will use to estimate the abundance and distribution of different species and to understand the sensitivity of those species. This understanding is critical in informing the design of the project, including the layout of the turbine array. It allows for appraisal of the potential impacts, and for the identification of suitable mitigation measures to address such potential impacts.

Ornithological assessment for offshore wind farms is a developing field with new and up-to-date information and evidence bases entering the public domain on a regular basis. New information will be considered as and when available and applicable.

The process will also consider potential connectivity of OWF with important areas for birds including Special Protection Areas.

We will be liaising with the relevant consultees such as the National Parks & Wildlife Service (NPWS) and BirdWatch Ireland to discuss findings from the surveys and any additional data requirement, as well as to discuss and agree the approach for EIAR and Appropriate Assessment (AA) process.

6. Is Dublin Port the preferred port to be used for this project, or will there be space to hold the various material components?

The preferred construction port has not been defined at this stage and a port screening study, specific to the potential requirements of Sea Stacks during the construction phase, is ongoing. Port engagement is now ongoing to discuss project specifics, timelines, port capacity and potential port redevelopment plans to facilitate offshore renewables projects.

7. Why is the project taking so long? David mentioned the project has a 25-year scope - why not longer?

Offshore wind farms are typically designed for a 25-year operational lifetime. It is an objective of the operations and maintenance programme to maximise and extend the operational life of the project where possible subject to satisfying safety, economic and planning consent related aspects.

Relating to the project taking so long, ESB is looking to construct the project in the late 2020s to be operational by 2030. Offshore wind projects, due to their scale and complexity, take approximately 10 years to get from concept project to fully operational.

8. Will the project lead to a reduction in my electricity bill?

Wind power puts downward pressure on electricity prices as it is the cheapest form of new electricity generation. Offshore wind has a higher capacity factor than onshore wind (meaning the offshore turbines will operate more regularly) due to the higher wind speeds offshore – accordingly, the offshore turbines will be more productive. It is also a predictable source of power as accurate weather forecasting allows the System Operator to manage the output. In recent years we have seen the cost of production from offshore wind fall dramatically right across Europe, especially so with our nearest neighbour in the UK. This has been driven by new technology, economies of scale and efficient supply chains. We have the opportunity to directly benefit from those cost reductions here in Ireland. The current spike in electricity prices is driven by factors largely beyond our control because we are so dependent on gas imports. The more of our own renewable energy that we produce from projects like Sea Stacks, the more protected Irish consumers will be from very high prices for imported fossil fuels.

9. Will the farm create a sailing - traffic exclusion zone?

It is not possible to comment on this definitively at this stage as the final array layout is not yet determined.

As part of the Environmental Impact Assessment (EIA) process for the project, a detailed Navigational Risk Assessment and stakeholder consultation will be undertaken which will inform the layout of the development.

It is ESB's intention to minimise impacts on sailing / marine traffic wherever possible.

10. When will Supplier's information be gathered by ESB? Will there be a Supplier Portal?

To date suppliers have been issuing correspondence and information on their business direct to the project email address, info@seastacksoffshorewind.ie. We have no immediate plan to add a supplier portal to our project website, but this is something we will definitely give consideration to.

11. In the Early Stage Development, for which topics will ESB consider external consulting services?

ESB is presently using and will continue to utilise external consulting services for a wide range of specialist support, including but not limited to:

- Marine environmental aspects;

- Offshore engineering design; and
- Survey preparation activities.

Interested suppliers should reach out to ESB via info@seasstacksoffshorewind.ie

12. Is there any opportunity for Hydrogen Generation and Storage at Poolbeg in times of excess wind?

Poolbeg has the potential to contribute to future hydrogen developments and is being actively considered for this along with a number of ESB sites. ESB intends to be the leader in energy storage and hydrogen for the entire value chain including renewable electricity production, hydrogen production, energy storage, export and retailing of a zero-carbon fuel.

13. Who is the preferred or most likely manufacturer of the Wind Turbines?

The preferred manufacturer of the wind turbines is not known at this early stage while project specific design is ongoing. Supply chain engagement will occur in advance of a formal tender process.

14. Will commercial fishing be allowed in the area once the turbines are installed or will it be a constant exclusion zone?

It is not possible to comment on this definitively at this stage as the final array layout is not yet determined. However, ESB is very committed to ensuring coexistence with the commercial fishing industry and minimal disruption wherever possible. It is expected that separation distances between turbines will be approximately 1500m, and accordingly we feel that most types of commercial fishing will be able to continue. However, activities such as seining and gill netting, depending on the size of the nets used, may be impacted. No exclusion zones are proposed apart from around the wind turbine towers from a safety/collision risk perspective.

ESB will comply with all Health and Safety requirements as well as any associated planning conditions should the project be consented.

15. Aside from digital photo surveys being carried out, what other data points are being included in the environmental assessments?

As part of the EIA process baseline surveys and studies will be undertaken to cover the full range of relevant environmental topics. The extent and type of survey /study will be dependent on topic requirements. As part of the EIA scoping exercise a report detailing these will be issued for public consultation in due course.

16. Is one year enough time to measure wave and tidal characteristics of the site? Are infrequent substantial weather events deemed accounted from a risk/probability point of view?

ESB is in the process of undertaking desktop modelling of Sea Stacks metocean conditions using publicly available data and these will be validated using long-term metocean measurement instruments currently operating in the Irish Sea (such as the M2 buoy). This will inform the site specific survey campaign in terms of monitoring equipment specifications and duration of deployment. Pending the variability of the publicly available data and the

findings of the Sea Stacks project specific metocean surveys, additional durations extending beyond 1 year may need to be considered pending feedback from project designers and/or certification bodies. As part of these metocean models extreme conditions will be modelled such as 1 in 50 year and 1 in 100 year current speeds and wave heights.

17. Is there any noise pollution related to the turbines?

Over the lifetime of an offshore wind farm a number of offshore underwater noise sources have the potential to occur such as during the construction phase from the installation of foundations or during the operation phase from the operation of the turbines. There is also the potential for offshore airborne noise such as from increased vessel activity and onshore noise such as construction of onshore infrastructure. These potential impacts will be assessed in a comprehensive EIAR, which will be prepared by experienced noise specialists in consultation with a wider range of stakeholders. The assessment of noise will inform the subsequent assessment of potential effects on marine mammals, fish and human health and will be undertaken using modelling software that enables the prediction of noise levels. Where appropriate, mitigation measures will be proposed.

18. Wind is great but not guaranteed daily, but wave/tidal is – why not follow that?

ESB has studied wave and tidal energy extensively over many years. In the case of tidal, we decided not to actively pursue projects as the resource in Ireland is comparatively low. In the case of wave energy, ESB spent years developing the Westwave project off the coast of County Clare. Unfortunately, that project did not proceed as technological progress was slower than expected. In comparison, offshore wind electricity generation offers a more technologically mature and scalable solution. However, ESB remains actively interested in wave energy and sees it as potentially a very good ‘partner’ technology to offshore wind.

Note – wave energy resources are much stronger on the west coast of Ireland in comparison to the east coast. Therefore, ESB’s wave energy interest has focused on the west coast thusfar.

19. What is a TSO standard?

The TSO is the Transmission System Operator, EirGrid. In May 2021, DECC published it's Policy Statement on the Framework for Ireland’s Offshore Electricity Transmission System. This declared that EirGrid will become the asset owner of all high voltage offshore assets irrespective of who develops them. Hence, EirGrid is currently developing functional specifications and standards for its offshore infrastructure which ESB will be required to comply with.