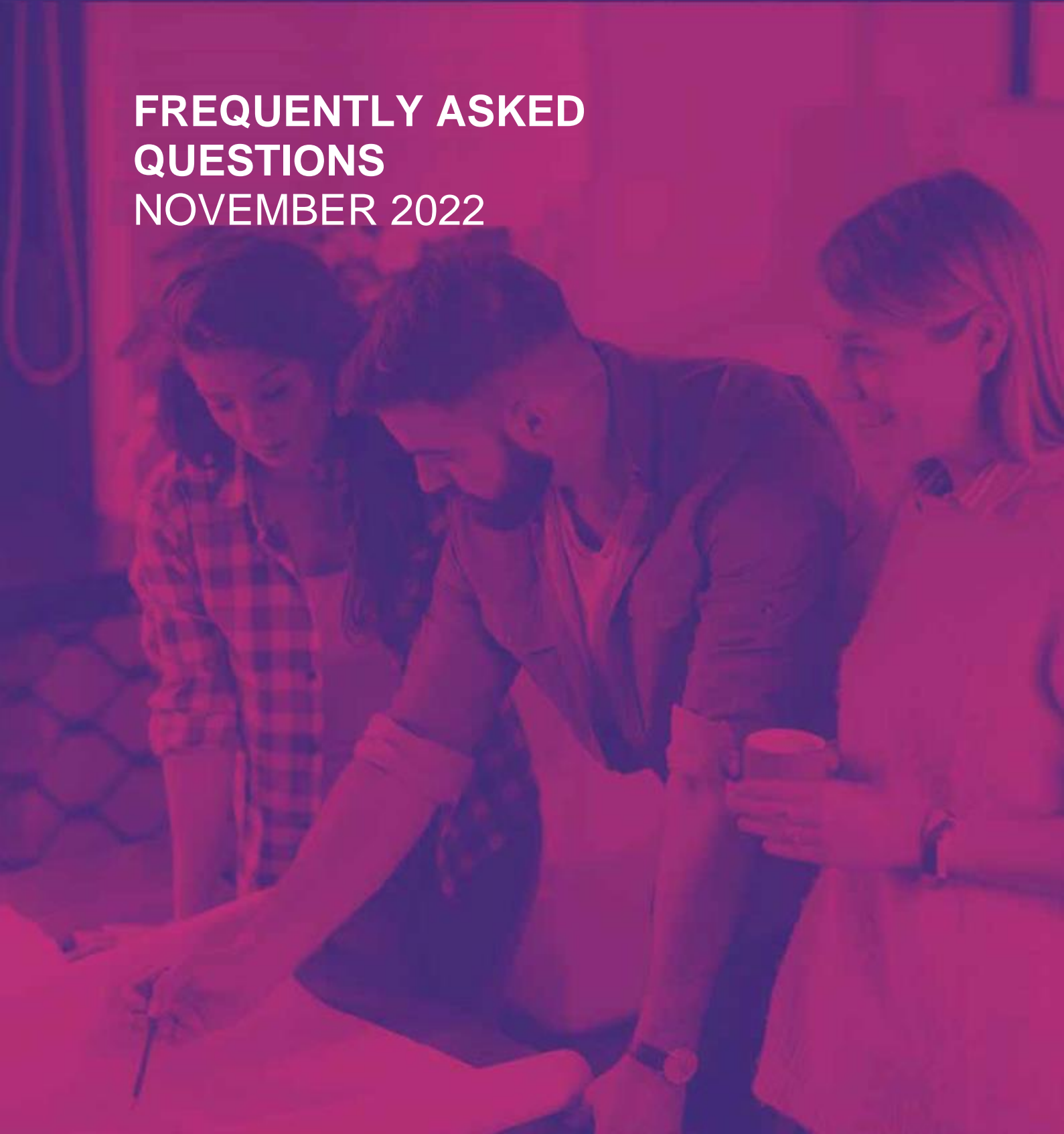




North Celtic Sea
Positive Energy for a Sustainable Future

FREQUENTLY ASKED QUESTIONS NOVEMBER 2022



INTRODUCTION

Energia is a leading developer and operator of renewable energy across the island of Ireland. We currently supply approximately 20% of the island of Ireland's total electricity requirements and approximately 25% of wind power on the island. We're the power behind schools, hospitals, public lighting, and every aspect of life that needs energy to make things happen.

As part of our Positive Energy initiative, to date we have invested over €1 billion in the Irish energy market. We employ more than 1,000 talented people and are committed to empowering our team to support community activities and initiatives thereby creating change for social good. Our ambition is to remain a strong force for positive change within the energy industry and society in Ireland.

Energia is committed to the development and long-term operation of renewable energy projects. We are proud of our track record of responsible development and community focus.

Energia is the Sustainable Energy Partner of Waterford Chamber of Commerce and supplies green electricity to homes and businesses across the City and County. The company is a long-standing partner of Waterford based Grow it Yourself Ireland and is also the national sponsor of Seachtain na Gaeilge le Energia. In sports, Energia is the sustainable energy partner of the IRFU and sponsor of the Energia All Ireland Leagues.

Energia Group has won a wide range of awards for programmes encompassing sustainability, innovation in energy supply, customer service, sponsorships and community engagement including the Business In The Community (BITC) - Responsible Business Champion Award in 2020.

For more information about Energia please visit www.energia.ie

NORTH CELTIC SEA OFFSHORE WIND PROJECT

Ireland's Climate Action Plan aims to reduce carbon emissions by 51% and to generate 80% of electricity from renewable sources by 2030. At least 7GW of electricity will come from offshore wind, providing the clean, affordable, and reliable energy that our communities and businesses need.

North Celtic Sea is a proposed renewable energy development by Energia to be located off the southeast coast.

This offshore wind project aims to help decarbonise Ireland's energy supply, reduce emissions, provide energy security, and support the achievement of our 2030 climate action targets.

North Celtic Sea will generate clean electricity for over 500,000 homes and businesses in the southeast region and beyond.

For more information about the North Celtic Sea project please visit www.northcelticseawind.ie.

PROJECT BENEFITS

The North Celtic Sea project will deliver the following benefits:

Environmental

- ✓ Clean electricity to supply the equivalent of 500,000 homes¹
- ✓ Reduced emissions and a cleaner environment²

Economic

- ✓ A €2bn project level investment delivering €500m into the regional and national economy³
- ✓ A local operations and maintenance base employing 70-100 full-time local jobs during operation for 25 years
- ✓ Approximately 800 full-time jobs during construction
- ✓ Offshore wind energy can be a key enabler to unlock new infrastructure investment in Ireland's ports and maritime businesses

Social

- ✓ A multi-million Euro annual community benefit fund.

PUBLIC CONSULTATION

Consultation with local communities, the fishing industry and all interested stakeholders forms a key part of the design process for the North Celtic Sea project. Your feedback is important and can help to shape the design of the project. Several non-statutory consultations will be held during the design phase – i.e., prior to submission of a planning application:



The first of three public consultations for the North Celtic Sea project was held from 22nd September – 29th October 2021. This early public consultation was aimed to generate awareness of the project with local communities in coastal areas, the fishing community and other interested stakeholders and open a dialogue with them. This dialogue will continue throughout the development process and over the lifetime of the project. The feedback received from all stakeholders will help shape the development of the project from this early stage. A consultation report which was published after the initial consultation period is available to view at: www.northcelticseawind.ie/publications/

¹ Based on 600MW installed capacity

² Saving of 8 million tonnes of harmful carbon emissions over the 25 year life of the project

³ <https://windenergyireland.com/images/files/final-harnessing-our-potential-report-may-2020.pdf>

Our next public consultation will be held in early 2023 when we have updated information available on the emerging design of the project. We will invite public feedback to inform the development of the project and will prepare and publish a report after the consultation.

In addition, our Community, Fisheries and Landowner Liaison Officers, are available to provide stakeholders with dedicated points of contact to discuss the North Celtic Sea project (please see contact details at end of report).

INFORMATION CLINICS

Monthly information clinics for the North Celtic Sea project commenced in April 2022 and are held on the third Tuesday of each month at:

- Tramore, Riverstown Community Centre, 10.00hrs – 13.00hrs⁴
- Dungarvan, The Park Hotel, 16.00hrs – 19.00hrs

The in-person clinics are part of ongoing community engagement. The clinics provide the opportunity for individuals or groups to engage with a project team member in an informal setting where information can be exchanged, and questions posed and answered.

Members of the public are welcome to book an appointment to attend a local clinic. Both in-person and online appointments are available at our information clinics (please visit <https://www.northcelticseawind.ie/consultation/> for further information).

⁴ Note: The Tramore clinic is held at this time due to limited evening availability at the venue. If you are unable to attend an information clinic, our community liaison officer would be happy to arrange an appointment outside of these hours to discuss the project. Please contact info@northcelticseawind.ie

FREQUENTLY ASKED QUESTIONS

Energia thanks those who attended the recent information clinics.

In response to requests for a record of the feedback and responses provided, Energia is providing these frequently asked questions. This is a summary report of the issues raised and responses provided since the last consultation was held in 2021.

Questions	Response
<ul style="list-style-type: none"> • Project Location <ul style="list-style-type: none"> ○ Why is Energia proposing to locate this project in the North Celtic Sea? Why not look at locations off the Western coast? ○ Why can't the wind farm be located further out from shore? ○ Some stakeholders asked if the published photomontages are an accurate representation of how the wind farm will look? 	<p>The locations of offshore windfarm projects are largely determined by factors such as water depth and seabed type, as well as by the availability of suitable technology.</p> <p>Fixed foundation offshore wind turbines can be installed in water depths of up to 65 metres which is the approximate water depth at the eastern and southern parts of the North Celtic Sea survey area.</p> <p>It should be noted that the 10km-25km distance from shore refers to the survey area to investigate if a wind farm in this area would be feasible.</p> <p>In European waters, the vast majority of operational and in construction projects are fixed foundation. These projects are typically located between 10km and 60km from shore and are in average water depths of less than 40 metres. Ireland does not have available seabed areas at the water depths necessary to enable bottom-fixed projects at longer distances (i.e., 40km – 60km). Therefore, offshore wind projects are being proposed for our eastern and southern seas.</p> <p>Several fixed foundation offshore projects are being investigated for waters of the western coast. However, generally, the eastern marine environment is more favourable for fixed foundation offshore projects due to the availability of suitable seabed areas and weather conditions. This is why many of the Phase 1 and Phase 2 offshore projects are proposed to be located in the shallower waters along the eastern and southern seaboard.</p> <p>Consultation with all interested stakeholders forms a key part of the design process for the North Celtic Sea project. Energia will seek feedback on the project design via public consultations held at key stages during the development of the project.</p> <p>Early-stage photomontages - to indicate what the wind farm could potentially look like - have been taken from locations along the Co. Waterford and Co. Wexford coasts and are available to view at https://www.northcelticseawind.ie/consultation/.</p>

Questions	Response
	<p>The photomontages were produced by expert landscape and visual specialists.</p> <p>These early photomontages adopt a maximum impact scenario and will be updated, refined, and displayed during the subsequent consultation phases.</p> <p>A detailed Seascape, Landscape and Visual Impact Assessment (SLVIA) will be carried out as part of the environmental assessment.</p>
<ul style="list-style-type: none"> • Distance from Shore <ul style="list-style-type: none"> ○ Has the EU has imposed a 22km minimum distance legal restriction for offshore windfarms? ○ Can you provide examples of offshore projects in European waters at similar distances from shore? 	<p>No minimum distance to shore restriction is prescribed in European Union law. A few countries have put in place distance-to-shore restrictions at national level, but it is important to understand that the seabed in these Countries is much shallower and that most of these countries have already developed farms at closer distances.</p> <p>As of the end of 2020, there were 7,800 MW of offshore wind capacity installed in Europe from 65 offshore wind farms located closer than 22 km from the coastline. Some examples of projects within European waters at similar distances from shore include Rampion, Burbo Bank, Thanet (UK), Westermeerwind (Netherlands), and Vesterhav Nord/Syd (Denmark).</p>
<ul style="list-style-type: none"> • Environmental Impacts <ul style="list-style-type: none"> ○ What is the impact on marine life? ○ What is the effect on birds? ○ What are the effects on dolphins, whales, and fish? ○ What impact will this project have on the UNESCO GeoPark heritage site? 	<p>A comprehensive environmental survey programme is underway. An Environmental Impact Assessment Report (EIAR) will form part of the planning application. The project team is currently undertaking bird and marine mammal surveys, fisheries surveys, archaeological, geophysical, and geotechnical surveys, navigation, and grid assessments within the study areas. Bird surveys are ongoing since 2019. The EIAR will also include chapters on geology and hydrogeology. Consultation on the environmental scoping and assessment forms a key part of the project development process and all stakeholders will have an opportunity to comment on the studies and assessments. An EIAR scoping report will be published in the coming months. All potential significant risks of impacts are assessed as part of this process.</p>
<ul style="list-style-type: none"> • Noise <ul style="list-style-type: none"> ○ What noise impacts arise from the operation of the wind turbines? 	<p>The experience in other jurisdictions is that operational noise from offshore wind farms does not cause a nuisance onshore.</p> <p>Noise generated by the construction and operation of the windfarm and the potential effects this may have on the receiving environment will be modelled and assessed as part of the Environmental Impact Assessment Report (EIAR). The project will be required to comply with environmental legislation in this area.</p>

Questions	Response
<ul style="list-style-type: none"> • Surveys <ul style="list-style-type: none"> ○ Questions were raised regarding who are carrying out surveys – are they independent? 	<p>The North Celtic Sea project is being developed by Energia with engineering design by Ramboll, TLI and specialist environmental assessments by RPS and a range of qualified subconsultants. It is the responsibility of the developer to commission technical and environmental studies. The independent statutory planning authority commissions its own review of the reports at planning stage.</p>
<ul style="list-style-type: none"> • Alternative technologies <ul style="list-style-type: none"> ○ Can floating technology not be used for the North Celtic Sea project? 	<p>Floating technology is at an early pre-commercial stage with a number of demonstration scale projects being advanced around the world. Almost all offshore wind globally to date uses fixed foundation technology. This technology is proven. Due to the nascent nature of the technology associated with floating offshore wind, the technology cannot deliver at the scale that is required to meet our 2030 targets. It is unlikely to be deployable at commercial scale until beyond the 2030 timeline.</p> <p>Over the longer term, both fixed-foundation and floating offshore wind energy will be required if Ireland is to become carbon neutral by 2050. Tidal energy technology is not available at the scale required to meet our climate action targets.</p>
<ul style="list-style-type: none"> • Fishing <ul style="list-style-type: none"> ○ What engagement has taken place with the fishing community? ○ What impacts will the project have for fishing/aquaculture sites? Will there be exclusion zones? ○ Will compensation be provided for impacts on the fishing industry? ○ Will employment opportunities be made available to local fishermen/boat captains within the lifespan of the project i.e., shuttles to and from site? 	<p>Energia is fully committed to a co-existence approach and to co-operation with the fishing community throughout all stages of the North Celtic Sea project.</p> <p>Our Fisheries Liaison team is working closely with the fishing community and maritime interest stakeholders. This includes engagement with fishers, aquaculture, seafood processors and representative bodies. This engagement has been extensive over the past 24 months, including industry surveys, briefing sessions, pier visits, production and dissemination of FAQ documents, site investigation fact sheets and maritime notices. All information gathered from the fishing community has helped Energia plan and successfully complete the site investigation surveys without significant disturbance to the fishing industry. The data collected will also be used to help in the design of the wind farm itself.</p> <p>A Fisheries Management and Mitigation Strategy will be prepared as part of the discharge of conditions of planning permission (if granted). This strategy will be developed and agreed with local fishing interests and will identify reasonable measures mitigate any potential impacts.</p> <p>The experience in the UK where offshore sector supports circa 5,000 direct jobs has been that co-existence between offshore wind projects and existing fishing activities leads to employment opportunities. Between 70-100 full-time jobs will be</p>

Questions	Response
	<p>located at a local operations and maintenance facility for the 25-year operation of the North Celtic Sea wind farm and many of these will be marine based roles which would have direct suitability to experienced fishermen and seafarers. Approximately 800 full time equivalent development and construction jobs will be provided. Those interested in supply chain opportunities are welcome to register at https://www.northcelticseawind.ie/supply-chain/</p>
<ul style="list-style-type: none"> • Navigation Impacts <ul style="list-style-type: none"> ○ Will there be restrictions on maritime navigation during construction or operation? ○ Will there be any impact on air traffic navigation including to/from Waterford Airport? 	<p>For safety reasons, an exclusion zone for vessels will apply around the wind farm site while the construction process is ongoing. The exclusion zone will be no larger than is necessary to ensure safety and will be directed by the Marine Survey Office. This is typical practice in other countries where offshore wind farms have been built.</p> <p>During the operational life of the project, exclusion zones would only be necessary during significant maintenance operations and would be localised to the area around the turbine/substation.</p> <p>There will be 1km-2km distance between each turbine so fishing and leisure craft will continue to be able to navigate through the wind farm.</p> <p>Consultation with all key stakeholders including maritime and aviation stakeholders will be undertaken as part of the project development process. The Irish Aviation Authority is a statutory stakeholder under the relevant planning legislation.</p>
<ul style="list-style-type: none"> • Community Benefit <ul style="list-style-type: none"> ○ What is the amount and duration of the community benefit scheme? 	<p>The North Celtic Sea project will bring many positive environmental, economic and social benefits.</p> <p>A community benefit fund will be established for the benefit of the communities closest to the projects. Guidance on how this will work will be set out in the Government's Offshore Renewable Electricity Support Scheme (ORESS). Under ORESS, a typical 600-800MW wind farm will provide a multi-million euro community benefit fund annually for local projects. This funding will provide significant financial support for local projects.</p> <p>Energia will work with local communities, the fishing community, and other stakeholders to identify suitable projects which can be supported through the funds, ensuring that local communities benefit in an optimal way. Governance will include community input on decision-making as per the terms of the draft scheme.</p>
<ul style="list-style-type: none"> • Energy Supply <ul style="list-style-type: none"> ○ Questions were raised about whether the electricity generated will be exported? 	<p>All electricity generated by the North Celtic Sea project will be supplied to the Irish electricity grid.</p>

Questions	Response
<ul style="list-style-type: none"> • Planning Process <ul style="list-style-type: none"> ○ What planning process is envisaged for the North Celtic Sea Project? ○ What is the consultation process and when can people have a say and make a submission? 	<p>A planning application for the North Celtic Sea project would be made under the new Maritime Area Planning legislation. The new legislation will provide a single planning process for the onshore and offshore infrastructure.</p> <p>A Maritime Area Consent (MAC) will be applied for once the Maritime Area Regulatory Authority (MARA) is established and accepting applications in 2023. This is an authorisation from the State to enable a developer to apply to construct a wind farm on the seabed.</p> <p>A planning application for development consent to An Bord Pleanála will be made thereafter. The application will be accompanied by an Environmental Impact Assessment Report (EIAR) and will consider the feedback received during the consultation process.</p> <p>Once the application is submitted, there will be another opportunity for the public to make observations on the proposed development directly to An Bord Pleanála during a statutory public consultation.</p>
<ul style="list-style-type: none"> • Project Lifespan <ul style="list-style-type: none"> ○ What is the project lifespan and what happens at the end of the project? 	<p>The usual operational life of an offshore wind farm is 25 - 30 years. After this time the wind farm can be either decommissioned or repowered. Repowering involves the replacement of the turbines with more modern ones and would be subject to a new planning application.</p>
<ul style="list-style-type: none"> • Carbon Emissions <ul style="list-style-type: none"> ○ What is the carbon payback period of an offshore wind farm? 	<p>Offshore wind energy projects displace fossil fuel generation. Significant amounts of carbon will be offset as a result of offshore wind energy projects.</p> <p>North Celtic Sea will make a positive contribution to decarbonising our energy supply and reducing emissions.</p> <p>The Climate Exchange body in the UK has published research suggesting that the estimates for the carbon payback of offshore wind ranges from 5 months to 1 year.⁵</p> <p>It is estimated that 1,000MW of offshore wind saves up to 900,000 tonnes of carbon each year.</p>
<ul style="list-style-type: none"> • Onshore Infrastructure <ul style="list-style-type: none"> ○ What onshore infrastructure is required? ○ Where will the cables come ashore? ○ Will access to the landfall/beaches be restricted when cables/onshore infrastructure is being constructed? 	<p>Landfall sites are currently being identified and assessed to determine the optimum location to bring the power ashore.</p> <p>From there, the electric power is transferred to the electricity grid via underground cables and an onshore substation.</p>

⁵ R Camilla Thomson, Gareth P Harrison, University of Edinburgh, 2015 https://www.climatexchange.org.uk/media/1459/life_cycle_wind_-_executive_summary_.pdf

Questions	Response
<ul style="list-style-type: none"> ○ Will new pylon infrastructure form part of this project? ○ Where will the operations and maintenance facility be located or when will this be known? 	<p>All health and safety requirements for construction sites will apply. Thereafter, once the underground cables are operational, there will be no further restrictions.</p> <p>It has not yet been determined if a new substation will be required or where it would be located. We are considering a number of potential grid connection points and will be working closely with EirGrid to determine the optimal solution.</p> <p>Overhead pylons are not proposed as part of this project.</p> <p>EirGrid has indicated the ownership of the onshore infrastructure will transfer to the grid operator following operation.</p> <p>Location options for the Operation and Maintenance base will be investigated as part of the next phase of project development. Further information will be published when available.</p>
<ul style="list-style-type: none"> ● Environmental Impacts <ul style="list-style-type: none"> ○ Will shadow flicker from turbines affect onshore properties? 	<p>Shadow flicker is not usually an issue which is associated with offshore renewable energy projects due to the significant distance from the wind farm area to the coast. However, the environmental assessments will assess all potential environmental impacts and mitigation measures will be proposed where necessary.</p>
<ul style="list-style-type: none"> ● Tourism <ul style="list-style-type: none"> ○ Waterford has increased tourism numbers over recent years. How will an offshore renewable energy project affect tourism? 	<p>The future sustainability of our tourism industry depends on the extent to which we protect the credibility of Ireland's clean, green image. Renewable energy projects will reinforce our sustainability credentials, help to decarbonise our environment and demonstrate our efforts to address the climate crisis. The experience in the UK has shown that opportunities also exist for eco-tourism development, for example by offering vessel tours to visit offshore wind farms and visitor centres. For example, the Rampion Offshore Wind Farm off the Sussex coast in the UK includes an onshore visitor centre experience and tours of the offshore wind farm by private charter.</p>
<ul style="list-style-type: none"> ● Ownership Models <ul style="list-style-type: none"> ○ Denmark and Scotland have introduced state/community ownership models. Why is Ireland not considering a community ownership model? 	<p>In the main, a developer-funded model has been the experience internationally within the offshore sector to date (due to the significant levels of capital investment required). There is a category within the RESS scheme for community-owned onshore renewables projects.</p>
<ul style="list-style-type: none"> ● Human Health <ul style="list-style-type: none"> ○ Is it possible that Wind Turbine Syndrome – cited as an ear problem people get from living close to turbines – could result from this project? 	<p>An Environmental Impact Assessment Report (EIAR) will form part of the planning application. Noise generated by the construction and operation of the windfarm and the potential effects this may have on the receiving environment will be modelled and assessed as part of the Environmental Impact Assessment Report (EIAR). The project will be</p>

Questions	Response
<ul style="list-style-type: none"> ○ It was stated that the impact of turbines on mental health should be considered. 	<p>required to comply with environmental legislation in this area.</p> <p>Due to the significant distance between the offshore array area and the shoreline (10km), it is not the lived experience in other jurisdictions that operational noise from offshore wind farms causes a nuisance onshore.</p>
<ul style="list-style-type: none"> • Property Valuation Impact <ul style="list-style-type: none"> ○ It has been claimed that house prices could drop by 10-15% as a result of offshore wind energy projects (especially those with sea views). 	<p>Research conducted in Denmark in 2018 found no significant effect of having an offshore wind farm in view from a property itself or from the nearest beach (Jenson et al. 2018).</p>
<ul style="list-style-type: none"> • Renewable Energy Policy <ul style="list-style-type: none"> ○ How does this project align with the Waterford County Development Plan 2022 to 2028? 	<p>The national policy ambition is to deliver 5GW of offshore wind by 2030 and this has recently been increased to 7GW.</p> <p>The Waterford County Development Plan 2022-2028 states: "It is the policy of Waterford City and County Council to promote and facilitate a culture of adopting energy efficiency/renewable energy technologies and energy conservation and seek to reduce dependency on fossil fuels thereby enhancing the environmental, social and economic benefits to Waterford City and County.</p> <p>The Council supports the national policy shift to low carbon energy solutions for a greener future, as well as the need to enhance electrical generation and distribution infrastructure to ensure that current and future energy demands are met."</p> <p>Chapter 6: Utilities Infrastructure, Energy & Communication (UTL 13 Renewable Energy) includes the objective of WCC "facilitating and encouraging, where appropriate, proposals for renewable energy generation, transmission and distribution and ancillary support infrastructure facilities including the necessary infrastructure required for the development of offshore renewable energy developments."</p> <p>Engagement with the Local Authority is an ongoing process through the design stage and the LA is a statutory consultee at the planning stage. The LA will also have key functions in the construction and operation stages.</p>
<ul style="list-style-type: none"> • Renewable Energy Options <ul style="list-style-type: none"> ○ It was suggested that two or three large solar developments would be more cost effective and could meet the energy generation needs of the local area. 	<p>It is noted that solar developments from a significant component of the recent Renewable Electricity Support Scheme auctions (i.e. RESS 1 and RESS 2) and will be a key part of our energy generation infrastructure going forward. However, solar alone cannot realise our climate action targets and offshore renewables are proven to deliver at scale.</p>

Questions	Response
<ul style="list-style-type: none"> • Electricity Distribution <ul style="list-style-type: none"> ○ How much electricity will actually go to homes vs datacentres? 	<p>All electricity generated by the North Celtic Sea project will be supplied to the Irish electricity grid. EirGrid has published a policy statement in relation to datacentres which prioritises domestic supply in the event of demand bottlenecks. Due to increased generation, this issue is likely to become less significant over the longer term if we are able to realise our renewable energy ambitions.</p>
<ul style="list-style-type: none"> • Other Energia offshore developments <ul style="list-style-type: none"> ○ It was asked if both Waterford and Wexford offshore projects would go ahead if planning consent is achieved? 	<p>Yes, if both the North Celtic Sea and South Irish Sea projects are feasible, receive state and development consents and are successful securing grid connections and a route to market, then they will progress to construction. These projects will make significant contributions to meeting our 2030 climate action targets.</p>



Our liaison officers would love to hear from you and are available to provide information and answer your questions:



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