

Shelmalere Offshore Wind Farm

Public Information Evening

Thursday 10th March 2022, 78pm

shelmalere@dpenergy.com



DP Energy General – Simon De Pietro, CEO of DP Energy

Given the energy crisis and climate crisis that we find ourselves, is there a need for this type of project to be fast tracked or is 2030 the quickest you could hope to complete a project like this regardless?

Yes, there is a desperate need for good renewables projects to be fast tracked to address the climate crisis /climate emergency!! And by 'good' we mean projects that are not developed at the expense of another species survival. So, it is important we undertake the necessary surveys and assessments to ensure that is the case.

That said what could we do?

- If the formal processes of dealing with projects could be accelerated, that would certainly help matters. For example, if seabed allocation could be done faster, then we could ramp up the already not inconsequential spend on surveys and those surveys that take time.
- Increase resources and staffing within the statutory bodies and consenting authorities (An Bord Pleanála etc) so that they could deal with applications promptly when they land on their desk that would certainly help.
- The other area that would also help greatly is more investment in the grid infrastructure to facilitate access for the offshore wind projects, and again resource and staffing to deal with the connection applications.

So, should we go faster? The message is undoubtedly yes. Can we? Is a very different question and given where we are and how slow mechanisms can be likely the best outcome is delivery of 5GW by 2030

In respect of the other point about the energy crisis and by extension energy security, even disregarding the criticality of biodiversity and climate change it is transparently obvious to all of us given the awful circumstances in Ukraine the need to reduce our reliance on fuel supplied from anywhere else.

Who is providing the funding for this project?

DP Energy and Iberdrola are jointly funding the development portion of the project although clearly Iberdrola are the major participant in the JV relationship and will ultimately be the party financing the construction.

How long will it take for the project to become carbon neutral, where the carbon released by the construction phase etc. is surpassed by the carbon saved by the renewable energy generation once the farm is operational.

There have been a number of carbon and energy balance studies completed based on both onshore and offshore wind turbine projects over the past years. We are not immediately aware of recent studies based on the modern turbines we are likely to be using for Shelmalere but for older and smaller machines of around 8MW both the carbon and energy payback is achieved in some 8-10 months. With larger wind turbines we would expect this to be shorter.

Do you have any links with the SSE Arklow Bank project? Do you consider this project a threat regarding competing resources etc.

The Shelmalere project has no links with the SSE Arklow Bank Project. Given the prevailing wind direction, the turbines in the Arklow Bank and Shelmalere projects are unlikely to have significant impacts on each other's wind resource and yield. That said of course in considering environmental impacts, consideration does need to be given to possible cumulative impacts.

Has the proposed SSE Arklow Windbank Project obtained a MAC yet?

This a question best put to the SSE project manager rather than DP Energy.



Engineering/Supply chain – Adam Cronin, Head of Offshore

I would like to ensure that fishing trawlers will have unfettered access to traverse the area of the windfarm if they are not fishing in the windfarm. we do not want to have to steam around the windfarm as this causes us to lose time and burn fuel unnecessarily. Can you address this concern?

We are at an early stage of the design process, and we are currently engaging with all stakeholders including fishers and the MSO. As the turbine array design progresses, we will be taking into account a wide range of constraints and concerns, which will ultimately inform the final design. This includes navigation and navigation risk assessments.

Who are the typical main contractors who have the capabilities to perform the works in question?

It is likely that a wide range of contractors and subcontractors will perform the works. Contractors may be broken down into various disciplines, such as investigations and survey contractors, original equipment manufacturers, offshore installation specialists, onshore construction specialists, operation and maintenance contractors, decommissioning contractors. Each of these disciplines will likely comprise a number of contractors.

You have multiple projects; do you engage with the supply chain as a portfolio or do individual projects engage with the supply chain in isolation?

We generally engage with the supply chain as a portfolio. However, we are open to discussions with individual potential suppliers who have an interest in a particular project or site. In the first instance, any parties interested in working with us should register their details on the relevant project website.

Is the construction period only 2 years to construct 70 turbines? Does this timeframe include manufacture period for actual turbines?

An exact construction programme has yet to be developed and many factors will inform the final construction programme duration. Turbines and many of the components will be manufactured off-site before being installed on site. We will be liaising with turbine manufacturers regarding lead in times and manufacturing time frames. The construction programme will have many tasks running in parallel and this will allow us to keep the overall construction period to a minimum.

What happens to the infrastructure after the projected 25-year lifespan?

The stated 25-year lifespan is a statistical average. The actual lifespan of all the components varies and is dependent on many factors. Over the lifetime of the project, many components will be replaced or upgraded under a pro-active, planned maintenance campaign. At the end of the wind farms life, the infrastructure will either be replaced, under a new licence/consent or decommissioned in accordance with consented decommissioning plans.

When are surveys commencing at sea?

Aerial bird & marine mammal surveys have been flown across the offshore project area, each month, since April 2021. Each survey captures digital photographs from which birds, marine mammals and other large marine species can be identified and their behaviour noted.

Some geophysical and geotechnical surveys at sea are expected to commence Q3 2022 or Q2 2023

Are DPE-Iberdrola interested in engaging with the supply chain, perhaps many months in advance of the appearance of workstream ITTs, to develop more strategic approaches to supply chain services.

Yes, DPE-Iberdrola are currently engaging with the supply chain either directly or through industry bodies. If you would like to register your interest as a supplier, please visit our website linked here: [Supply Chain Opportunities – Shelmalere Offshore Wind Farm](#)

What's a floating wind farm?

A floating wind farm is comprised of wind turbines that are fixed to a floating structure or platform, e.g., a barge. The floating platforms are tethered to the seabed and cables run along the seabed between the turbines. Shelmalere will be a *fixed bottom* wind farm, whereby the turbines are connected directly to foundations on the seabed either on a monopile or jacket type structure. You can find out more about fixed bottom turbines in our Shelmalere Offshore Wind Farm web page www.shelmalereoffshorewindfarm.com . You can find out more about floating offshore wind farms at our Inis Ealga Marine Energy Park web page www.inisealgamarineenergypark.com.

What harbours are you presently in negotiations with and is it via local authorities

We are currently discussing opportunities with a number of private ports and local authority harbours along the east and south coasts. The design of the wind farm and the operation & maintenance strategy will inform some of the port/harbour selection decisions which have yet to be made.

What height are the turbines? How does this compare to the existing turbines in Irish Sea off Arklow?

The tip height of the turbines will be determined based on engineering and environmental factors. Arklow Bank Phase 1 incorporated 3MW turbines. Since these were installed, turbine technology has advanced, and it is likely that the turbines for our Shelmalere project will be 15MW or more. The size of the turbines will depend on the technology commercially available at the time of construction. The objective being to utilise the most up to date and efficient turbines available at the time of reaching a Financial Investment Decision (FID).

Currently the largest offshore wind turbine in the market has a 15MW capacity. At this juncture, we have not decided on a size for the turbines but given the rate of progress on turbine technology advancements it is likely we will be looking for turbines in excess of a 15MW capacity which could have a height to tip height of some 300m. They will therefore be greater in height than Arklow Bank Phase 1.

Has a cable landing point been identified at Courtown?

We are investigating and assessing a range of potential landfalls in proximity to the project site along the east coast. We are currently not investigating potential landfalls in Courtown.

Can you specify at this stage, what are the shortlisted sites?

We are currently investigating a number of potential landfall sites and cable routes. All of these sites are undergoing a rigorous assessment process that includes engineering, environmental and commercial considerations. We are also undertaking ecology surveys at a number of potential sites. Due to the sensitive commercial elements for the potential sites, it is not possible to share this information at this time. As soon as we have concluded our assessments, we will make this information available.

And how far up along the coast are you going, from Arklow to where?

We are currently investigating potential landfall sites from north of Arklow town to Cahore Point.

Apologies that I missed the start. I am interested in hearing in local opportunities arising from this project. Where will the project offices and dock facilities be located, what level of staff/services do you plan to procure from the local community?

There will be significant opportunities for local businesses to be involved in helping us to develop and operate the Shelmalere offshore wind farm. We are currently assessing potential locations for our construction and operation & maintenance facilities. It is a key ambition of DP Energy to work with and support local businesses wherever possible. As part of this process, we are developing a Supply Chain Management Plan and we are already in discussions with many local and regional suppliers. If you would like to register your interest as a supplier, please visit our website linked [here](#).

How does the efficiency of offshore wind turbines compare to those located onshore? Is the wind more consistent at sea?

Generally speaking, offshore wind turbines are more efficient than onshore wind turbines. Wind speeds at sea are higher and are more consistent than on land and there are no topographic/landscape features to interfere with the wind flow. Offshore wind turbines will typically be larger than onshore wind farms which contributes to improved efficiencies.

Do you have CPO powers to acquire land for onshore infrastructure or is it just down to making commercial deals with existing landowners?

To allow us to bring the power cables ashore and onward to the electricity grid, we need to transit our cables through a combination of privately owned land and public roads. DP Energy have engaged with a number of landowners and it is our intention to liaise and negotiate with the landowners to agree commercial terms.

What provision is in place for "end of life" for windfarms, what will happen once they reach their final use are they dismantled and removed?

Offshore wind farms have a lifespan of circa 25 to 30 years. The actual lifespan of all the components varies and is dependent on many factors. Over the lifetime of the project, many components will be replaced or upgraded under a pro-active, planned maintenance campaign. At the end of the wind farms life, the infrastructure will either be replaced, under a new licence/consent or decommissioned in accordance with consented decommissioning plans.



Environment and Consenting – Edwina White, Environment and Consenting Manager at DP Energy

Can you provide an overview of offshore surveys undertaken/to be undertaken please to date? We would be interested, in particular, in learning about f-lidar wind resource measurements.

Thanks.

Offshore Ecology Surveys:

Aerial bird & marine mammal surveys have been flown across the offshore project area, each month, since April 2021. Each survey captures digital photographs from which birds, marine mammals and other large marine species can be identified and their behaviour noted.

These monthly surveys will continue to be carried out by survey aircraft each month, right up to & including March 2023. This will give us 2 years of information that we will then use to estimate the abundance and distribution of different species across the project area and to understand the sensitivity of those species to our proposed development.

This offshore understanding of species abundance, distribution & behaviour, as well as of the habitats present, is critical to informing the design of the project, including the layout of the turbine array. The findings of these surveys will inform constraint mapping, which in turn will inform the sensitive and iterative design of the project. The 2yr dataset will also allow for appraisal of the potential impacts of our proposed development, on its receiving environment. And for the identification of suitable mitigation measures to address such potential impacts.

LiDAR:

We are planning to utilise a number of technologies as part of our resource and metocean measurement campaign, including floating LiDAR. We may also use airborne LiDAR for topographic surveying at the project landfalls and cable routes.

Floating LiDAR will be deployed at sea for a period of 12/18 months. The LiDAR equipment will be attached to a floating buoy which will be tethered to the seabed. The LiDAR equipment will record wind speeds at a number of levels in the air column. These wind measurements will be used in the design process to optimise the turbine design.

The Irish offshore region contains numerous lease area applications many of which seem to butt up against one another; have you had to pay particular attention within the project of in-combination and cumulative effects?

Yes, there are a considerable number of applications for Foreshore Licences with the Foreshore Unit for consideration. Cumulative and in-combination effects have been considered in the environmental appraisals submitted in support of the application for the Foreshore Licence for Shelmalere Offshore Wind Farm, including measures proposed to mitigate against potential cumulative impacts associated with our proposed site investigations and those of other developers in the area.

Alongside those mitigation measures proposed as part of the application for the Foreshore Licence, it is anticipated that Foreshore Licences granted by the Foreshore Unit will also set out specific conditions to mitigate against potential cumulative impacts.

In light of the recent Government decision not to proceed with the Enniscorthy Flood Relief Scheme due to environmental concerns - What is the risk that this project will not go ahead due to environmental concerns or issues?

This is a risk. Ultimately, An Bord Pleanála will make the decision as to whether to grant Development Consent for Shelmalere Offshore Wind Farm.

The team began to mitigate against this risk early through the completion of a thorough feasibility study to arrive at the footprint that we are currently investigating. This included consideration of a lot of the high-level environmental constraints presented at the public information evening. As part of the early feasibility studies for example, we have avoided a lot of European designated sites, and where possible have kept distance from any sites that are designated as a Special Protection Area (SPA) and/or Special Area of Conservation (SAC).

We will continue to work to reduce the risk of this project failing on environment grounds by ensuring that the Environment Team and the Engineering Team work very closely together so that the environmental constraints as they are identified are fed to the Engineering Team who then take these into consideration as they design the project. Similarly, as the design of the project begins to emerge, the Environment Team will make sure there is a detailed environmental appraisal of each design iteration. This process goes back and forth over the full development phase. In short, there is always a risk that the project will fail on environmental grounds, but we are doing our utmost to ensure that we are developing a sensitive project that is designed to work well with its receiving environment.

What is the timeline you have allowed in your programme for An Bord Pleanála Approval? Do they have the necessary in-house experts to assess these types of applications?

The application that we submit to An Bord Pleanála will most likely be considered under the Strategic Infrastructure Development (SID) process. The wind industry body, Wind Energy Ireland (WEI), recently carried out an analysis of how long it is currently taking An Bord Pleanála to make a full determination on an application under that SID process.

The answer was 15 and a half months. We are being a little more conservative in our programme by assuming a determination period of between 15 and 18 months, but we hope that increased resourcing of bodies such as An Bord Pleanála will mean that more ambitious timelines can be realised. In short, we are assuming 15-18 months but very much hope that the consenting authority will be resourced such that it can achieve more ambitious turnaround timeline, whilst still ensuring that the right process and consultation takes place.

Do you think the current political situation /energy crisis may speed up the consenting process? It's clear we are far behind where we need to be in terms of energy independence.

On the 8th of March 2022, the EU announced plans to reduce reliance on fossil fuels from the East in response to the current political situation. The plans, outlined in the EU's [press release](#), describe the need to diversify gas supplies and accelerate the roll-out of renewables. This announcement from the EU suggests that member states may review their planning processes and where possible, identify specific areas for renewables, and how they may be accelerated.

Have MACs been a requirement for prior projects?

A government announcement made 21st March confirmed Minister Eamon Ryan's invitation for MAC applications from a first batch of offshore wind projects. Applications will be accepted from this batch of offshore wind projects from 25th April 2022.

These will be the first MACs to be processed by the Irish government. Shelmalere Offshore Wind Farm is not included in this first batch. Further information on the MAC process here on the Department of Environment, Climate and Communications' website: <https://www.gov.ie/en/publication/fab8f-maritime-area-consent-mac/>

The government has committed to adding Basking Shark to list of protected species, have you considered this species in your research for this project?

It was great news when the announcement was made recently that basking shark would be added to the list of protected species in The Wildlife Act. Yes, our aerial surveys do currently record any observations of basking shark and will continue to record this species each month up to March 2023. Basking shark are also recorded by our land-based ecologists when they are observed during any of our ongoing cable landfall ecology surveys. This recording of basking shark will also continue right up to and including March 2023.

Why has Ireland not developed more offshore wind projects before now besides Arklow Bank and why do we not have a consenting process in place?

In an Irish context, there has traditionally been a lot of focus on onshore wind as we have fantastic onshore wind resource. The delay in offshore wind development in Ireland has coincided with a significant evolution in turbine design from machines with a capacity of 2 MW to machines with a capacity of 15-16 MW and up to 18 MW by the mid-2020's, and potentially upwards of 20 MW by 2030.

This means that projects are now capable of producing a lot more power compared to those developed 10 years ago. The earlier enactment of the Maritime Area Planning Act 2021 would have been beneficial however, the government has performed well in delivering the Maritime Area Planning Act 2021, in December 2021. The Maritime Area Planning Act 2021 will next need to be supported by secondary legislation, currently under development by government.

Sorry if I missed it, but can we know the EIAR consultant, if appointed?

The EIAR Team for Shelmalere Offshore Wind Farm comprises Fehily Timoney & Company, a Cork-based consultancy, partnered with MarineSpace & Intertek. The full release is available [here](#).



Community & Stakeholder Engagement – Yvonne Cronin, Community and Stakeholder Liaison Manager at DP Energy

Hi I'm a fisherman that has fished most of that area for many years and have had experience of working alongside surveys of this kind before where the whelk fishing dropped by two thirds and didn't come back for quite a while also down the line what will happen to the whelk fishery as whelks don't just live anywhere all your area is whelk beds

We understand that the survey area overlaps with Whelk beds as a result of engagement with fishermen and women. DP Energy have engaged Fehily Timoney & Company, Marine Space and Intertek to prepare a comprehensive Environmental Impact Assessment Report on the entire area. As well as this study, and on achievement of Maritime Area Consent, DP Energy have committed to undertake the first baseline survey of Whelk in the area so offshore developers and the fishing community alike can understand any potential effects of the project on the Whelk. There have been no scientific studies undertaken do date, to understand where the whelk are and why they may move.

The economic and social benefits will only be maximised by focused collaboration of the key stakeholders e.g., ORE developers, IDA, Enterprise Ireland, other government agencies, government departments, LEOs, Higher Education Institutions, etc. Building individual projects by different developers will not result in maximising this opportunity. What are DP Energy's plans in this regard?

In a 2020 report [Economic and employment impacts of offshore wind for Ireland: A value chain analysis](#) results suggest that by 2030, 2.5-4.5GW of domestic offshore wind development could create between 11,424 and 20,563 supply chain jobs and generate between €763m and €1.4bn in gross value added.

DP Energy's Community and Stakeholder Liaison Manager Yvonne Cronin is working with a wide range of supply chain stakeholders in this regard.

As a member of Wind Energy Ireland, DP Energy and the other 150 members are working together to promote wind energy as a key Irish industry. Each project will individually require not only construction staff but also operation & maintenance staff plus all the indirect industry needed to support those jobs. Members consult as a group with Government Departments, agencies and the bodies listed in your question in order to approach this incredible opportunity as a whole. The government Department of Enterprise, Trade and Employment have published [Skills for Zero Carbon](#) which details all of the employment opportunities within the renewables industry.

DP Energy's Community Liaison Officer Lisa Enright is working closely with STEAM Ed Ltd. to instil an interest of offshore engineering and renewable energy in primary schools found in the surrounding localities to our proposed projects.

DP Energy have welcomed TY students at secondary level and are working to develop long term relationships with secondary schools in the vicinity of the offshore wind farm projects.

Graduates from our third level institutes have the most immediate skills sets which will be used directly by the offshore industry. DP Energy have welcomed masters' students on site to discuss sustainable engineering and environmental issues and future employment opportunities.

Can you tell me of wind farms that have unfettered access to trawlers?

Trawling is not prevented within offshore wind farms in Scotland. It is DP Energy's preference that disruption to fishing activities is kept to a minimum.

A study by the The Crown Estate; "Changes to Fishing Practices around the UK as a Result of the Development of Offshore Windfarms – Phase I" reported that fishing activity within existing offshore wind farms has changed, primarily stemming from a fear of fouling of fishing gear on cables, cable crossing points and rock armouring. Vessel breakdown and risk of turbine collision were also cited as a reason that fishing activities had changed; however demersal trawling does occur in cable-free corridors between the turbines (for example where inter-array cables run parallel to the trawl tracks).

Is anything the public can do to apply pressure for approval?

Currently the application for a foreshore licence is in processing stage, which means that all submissions to the application have been responded to and the minister is currently making his decision as to whether or not to grant permission to survey. The main delay point now for these applications and ultimately the development of the wind farms seems to lie within the resourcing of the relevant government departments.

What is the opinion of the presenters on early, often and structured engagement considering all project location was decided prior to engagement with major stakeholders and instead engagement took place AFTER location was decided?

We are firmly of the opinion that early engagement is an important aspect of successful project development. Prior to engaging however, it is important to have an understanding of the potential of a site and all the constraints as otherwise stakeholder engagement would be unfocussed. We undertook some very early-stage desktop assessments and constraint identification. This process resulted in the current overall site area that we are considering. The site area that we have depicted is for surveys and consultation only at this stage. The results of the various surveys and the consultation process will inform and steer the ultimate area that we will seek consent to develop. This area will be considerably smaller than the overall site survey area.



DP ENERGY



Electricity Transmission – Sara Armstrong, Grid Manager at DP Energy

How deep are the cables in the seabed, are they covered and how are they maintained?

The cables are buried to protect them from damage from marine activity, like anchor strikes from a vessel. The optimum burial depth will be determined from a cable burial study which will examine the likelihood of risks of damage to the cables, the seabed material, and the best installation method given the seabed or any environment concerns. This will be informed by the marine surveys, and feedback from our Environmental Impact Assessment Report consultants. As a general guide, the cables may be buried by 1 to 1.5 meters. If it is not possible to bury the cables by a sufficient amount, coverings such as rock placements or rock mattresses may be placed over the cables for their protection.

After the offshore wind farm has been constructed, EirGrid will own and maintain the subsea cables. The subsea cables should need very little maintenance.

They may be inspected visually at intervals to ensure that the cables have not become exposed on the seabed. Additionally, the cables contain additional optic fibres which may be used to monitor the temperature of the cable. A localised rise in temperature can be used for early selection of a fault, and the cable can be repaired in advance to prevent long outages.

Where will most likely landfall be to connect to the grid?

We are currently shortlisting a number of landfalls. A landfall with the shortest route to grid is very favourable as this minimises cost and local disruptions when laying the cables. However, there are other factors that we must consider before choosing a final landfall location. These factors include environmental constraints or habitats, consideration of the social and the community impacts and technical constraints, constructability, etc. All these factors must be considered in a multi-criteria based assessment before the final location is chosen.

Would offshore windfarms join with present onshore windfarms as regards the grid connection and cable?

The most typical locations of onshore wind farms relative to offshore wind farms are not likely to be close to one another. The subsea cables of offshore wind farms come ashore at landfall, and then connect to the nearest grid substation. The location of onshore wind farms is largely determined by the location of the best onshore wind resources. This tends to be in more rural locations. Another factor to consider is that the onshore wind farm export cable has been sized to accommodate their project output, and there would not be sufficient capacity in the cable to accommodate another project. Finally, most onshore wind farms connect at 38 kV or 110 kV. Given the size of offshore wind farms, it is necessary to target 220 kV or higher voltage infrastructure in order to transmit the power, and therefore not technically feasible to share the grid infrastructure.

Do you think Eirgrid and ESB are capable of delivering the grid infrastructure to facilitate the state renewable generation targets in the climate action plan?

Ireland's climate action targets for 80% renewable energy electricity by 2030 are very ambitious, but very necessary in light of the climate emergency and the need for Ireland to create our own energy to improve security of energy supply. In order to facilitate these renewable energy targets, more transmission grid which includes new cables and substations must be built to transport the renewable electricity to where it is needed. EirGrid are aware of the need for this and have designed a roadmap for the development of transmission infrastructure needed for 2030, called [Shaping our Electricity Future](#).

A focus of this roadmap is maximising the use of existing infrastructure, plus optimising the development of new grid by 2030. This is a sizeable upgrade of our electricity system which will take serious design, and EirGrid and ESB will face similar resourcing challenges expected to be experienced by other bodies, such as An Bord Pleanála. Similarly, the construction of new infrastructure takes considerable time to bring through the necessary environmental, public consultation and planning processes. EirGrid actively engage with the public and with industry and are focused on enabling Ireland to reach our climate goals. However, the difficulties in achieving this in the coming decade cannot be underestimated. It is also essential that we do not look upon 2030 as a stopping point, but instead as a steppingstone on the 2050 zero emissions path, and this should be considered when developing Ireland's future infrastructure.