



DEPARTMENT OF COMMUNICATIONS, CLIMATE ACTION AND ENVIRONMENT

SSE RESPONSE TO

Public Consultation on Mid-term Review of the Offshore Renewable Energy Development Plan (OREDPP) Review Report

DECEMBER 2017

About SSE

SSE owns and operates 2,061MW of generation capacity in Ireland, 768MW of which is from its portfolio of 28 onshore wind farms, making SSE the largest generator and provider of renewable energy in the all-island Single Electricity Market. In 2015, SSE commissioned Ireland's newest and one of its cleanest power plants, the 464MW CCGT (combined cycle gas turbine) power station at Great Island, Co. Wexford, which is generating enough greener energy to power over half a million Irish homes¹.

SSE is also a leading developer and operator of offshore wind energy. We have invested over £1bn so far in developing 871MW² of offshore wind farms now in operation in waters around Great Britain. SSE has plans to develop over 9,000MW of offshore wind farms, including the 588MW Beatrice project currently under construction and the circa 500MW Arklow Bank Wind Park which is at development stage.


In addition, SSE has jointly developed Ireland's largest and best performing wind farm, the 169MW Galway Wind Park, which has now entered commercial operation. Jointly developed and constructed by SSE and Coillte at a total investment cost of over €280m, Galway Wind Park will be Ireland's highest producing wind farm and is forecast to produce almost 600GWh of green energy each year – enough renewable energy to power 140,000 average-sized Irish homes including the equivalent of all of the 112,000 homes in Galway city and county.³

As Ireland's largest wind farm, Galway Wind Park will make the biggest single contribution of any renewable energy site towards greening national energy supply and decarbonising power generation across the island of Ireland. In a typical year, the

¹ 232,725 tonnes of CO₂ emissions offset based on projected annual energy output of 592,176MWh and average CO₂ emissions in the Single Electricity Market of 0.393t/MWh (latest All Island Project Fuel Mix Disclosure, published 2016).

² Including Joint Venture Developments.

³ Homes powered based on typical annual consumption of 4,200 kWh (Commission for Regulation of Utilities, 1 October 2017) and 1-year average forecast capacity factor of Galway Wind Park; quoted figures are for guideline purposes – actual future performance may vary. Equivalent homes in Galway city and county based on 112,054 housing stock recorded in Census of Population 2016, Central Statistics Office.



green energy produced at Galway Wind Park will offset over 230,000 tonnes of harmful CO2 emissions. The project was named Green Project of the Year at the 2017 Irish Construction Industry Awards.

Executive Summary

SSE wishes to make the enclosed submission for consideration as part of the Department of Communications, Climate Action and Environment (DCCAE) consultation on the Mid-Term Review of the Offshore Renewable Energy Development Plan (OREDP) Review Report.

Our submission is focused on the central role the OREDP can play in supporting Ireland's efforts to meeting its climate and energy goals. Large scale offshore wind development will be key to achieving Ireland's transition to a low carbon economy and should be facilitated in future policies including the OREDP.

At a high level our response calls for greater transparency in the activities of the working groups in this space, actions that provide certainty to investors in so far as possible and greater focus on facilitation of technologies that can make meaningful contributions to Ireland energy targets in the short to medium term.

The key points of our response are:

- Offshore wind is the most advanced marine energy technology and its development should be facilitated in order to make a measurable contribution to Ireland's EU targets;
- Providing a clear route to market and industry certainty should stimulate supply chain and infrastructure development;
- Simplification of consenting arrangements and alignment with other relevant policies (eg. Connection Policy) will support investment;
- Greater industry engagement and transparency of OREDP work streams should deliver more informed and collaborative outcomes overall.

SSE Considerations on the Consultation Document

Policy Environment

Energy is central to Ireland's economy and society. Ireland's ability to attract and retain Foreign Direct Investment (FDI) and sustain Irish enterprise depends on achieving a secure, sustainable supply of energy at a competitive cost. Over the coming years, a key objective will be to effectively balance the competing challenges of achieving the necessary transition to a low carbon economy in a manner that will be affordable for customers and businesses whilst ensuring secure energy supplies and the certainty needed to invest in low-carbon alternatives and smarter energy initiatives.

Ireland has a challenging outlook to achieve its ambition as outlined in the Government White paper on Energy entitled "Ireland's Transition to a Low Carbon Energy Future – 2015-2030" where it stated:

'Our vision of a low carbon energy system means that greenhouse gas (GHG) emissions from the energy sector will be reduced by between 80% and 95%, compared to 1990 levels, by 2050, and will fall to zero or below by 2100.'

Furthermore, the 2020 EU Energy and Climate Framework includes a 20% reduction in GHG emissions by 2020, which Ireland is seeking to meet through 40% renewable electricity, 12% renewable heat, and 10% renewable transport.

In October 2014, the EU Energy and Climate Framework was agreed which includes a 40% reduction in GHGs by 2030 and was the EU submission to the COP21 discussions and subsequent global agreement. This is all set against an EU leader's commitment to a reduction in the EU's GHG emissions of 80%-95% by 2050 compared to their 1990 levels. This position is continuing to develop through the Draft Effort Sharing Regulation published by the EU in 2016 which is being progressed towards a definitive target for Ireland for 2030.

The decarbonisation challenge is particularly acute in the area of the non-emissions trading scheme (ETS), where most of Ireland's emissions lie (approximately 70%). A strong contributor to this is that Ireland has proportionately the largest agricultural sector in the EU. This effectively means that efforts to decarbonise heat and transport in Ireland must move more quickly than in other EU Member States. A recent EPA report⁴ noted that Ireland will likely achieve a 4-6% reduction on its 2005 emissions rather than its 20% target. As such, the electrification of the heat and transport sectors will be vital in achieving Ireland's decarbonisation goals. In doing so, it would absorb the non-ETS emissions into the ETS and help reduce the cost of abatement. The electrification of the heat and transport sectors therefore contributes to both the achievement of Ireland's renewable through increased penetration levels and demand side management, and non-ETS targets by reducing our overall emissions.

The proposed revised Renewable Energy Directive,⁵ which was released as part of the European Commission's Clean Energy Package, indicates that Member States cannot reduce the renewable share of energy use below the target for 2020 i.e. Ireland will have a target of at least 16% (made up of 40% RES-E, 12% RES-H, and 10% RES-T) in the period 2020-2030. Ireland's population and economy are set to grow and develop, which will in turn bring about increased demand for electricity. As such, where demand for electricity continues to increase – a greater amount of electricity from renewable sources will be needed to, at a minimum, meet the 2020 EU targets.

Powering Ireland's Future: Offshore wind key to meeting our low-carbon energy targets

Ireland is at a critically important point in its low carbon energy transition and will face multi-million EU fines for missing its 2020 targets. In order to meet our 2020⁶ and

⁴http://www.epa.ie/pubs/reports/air/airemissions/ghgprojections/EPA_2017_GHG_Emission_Projections_Summary_Report.pdf

⁵ http://eur-lex.europa.eu/resource.html?uri=cellar:3eb9ae57-faa6-11e6-8a35-01aa75ed71a1.0007.02/DOC_1&format=PDF

⁶ Ireland has a legally binding EU target to achieve a 16% renewable energy share of gross energy consumption by 2020. This covers all forms of renewable energy usage for heat, transport and electricity. This 16% target combines national targets of 40% of electricity from renewables, 12% of heat, and 10% of road and rail.

2030 targets it will be necessary to build a large quantity of renewable capacity quickly – offshore wind, the costs of which are falling globally is a proven technology which can be delivered at scale large enough to make significant inroads towards our targets with single projects. Although Ireland has one of the strongest offshore wind resources in the world; it is the only country in Northern Europe not currently developing its offshore capacity. Achieving Ireland’s energy ambitions will be based on a policy environment that supports the development of large scale offshore wind development. As such, offshore wind should be a prominent element in the OREDP.

We agree with the concerns raised by stakeholders that there has been a lack of industry involvement and specifically the approach to offshore wind. SSE also supports the proposal for a dedicated Offshore Wind Working Group to be established to ensure the development of the Irish offshore wind resource should be set up with immediate effect. The OREDP should also make a clear distinction between wave and tidal technologies and offshore wind. It is clear that fixed based offshore wind can be deployed on a commercial scale provide there is market access and a financial support whereas floating offshore wind is at an early stage which can be fostered. Therefore, offshore wind should be classified differently in the OREDP to less advanced technologies. Both floating and fixed offshore wind turbines are currently viable technologies and can be deployed in the short term.

Large scale offshore wind can deliver consistent and predictable power to Ireland’s national grid, along simpler and fewer grid connections, providing significant demand benefits. Proposed offshore wind projects are also located close to demand load centres, enhancing security of supply. Typical load factors are in excess of 40%, considerably higher than most other renewable electricity sources. That means for every megawatt of offshore wind generating capacity installed; more MWh units of renewable electricity are produced. According to the Offshore Renewable Energy Development Plan Ireland has the potential for up to 4,500MW of installed capacity of offshore wind by 2030⁷, without having a likely significant impact on the

⁷ OREDP 2014, pg. 27 <https://www.dccae.gov.ie/documents/20140204%20DCENR%20->

environment (SEA and AA have been applied). In general terms, this means that Ireland's offshore wind industry alone could power 3.75m homes per annum.⁸

The potential scale and strategic location of current offshore wind projects can easily meet the future energy demands of clean-tech multinationals, particularly large-scale load from data centres. As such, offshore wind development, will not only help Ireland reach its climate targets, reduce reliance on important fuels, and improve air quality, it will also bring about significant economic benefits. We have seen a number of FDI companies, particularly data centres seek out locations with green energy. In order to continue to attract this type of investment, Ireland will need to continue to increase the share of renewables on the system. The scale of offshore wind will allow us to meet this demand and encourage this type of FDI as well as bringing significant local benefits in the form of jobs and support for the local supply chain.

SSE has considerable experience in progressing offshore projects in other jurisdictions and would welcome further engagement with the Department on this matter.

Action 1 – Put in Place a Robust Governance Structure for the OREDP

1. Do you have any suggestions or additional measures to support and enhance the governance structures of the OREDP?

SSE supports the stakeholder suggestions for increased transparency, communication, engagement and involvement in the OREDP governance structure and working groups. Greater engagement with industry is required within these structures in order to progress the offshore wind energy sector.

There is a need for greater clarity around the work being undertaken by the working groups e.g. further information on the actions proposed to overcome the regulatory

[%20Offshore%20Renewable%20Energy%20Development%20Plan.pdf](#)

⁸ Total annual TWh and homes powered quoted based on installed capacity, typical load factor of 40%, and typical annual consumption (4,200kWh).

issues for offshore grid connections being considered. A simple database of all the documents prepared by the ORESG work programmes/reports from plenary sessions/other publications would also increase transparency.

For example, reference is made to an ‘opportunities and constraints map for deployment of offshore renewable energy’ in the consultation document. From an industry perspective access to this tool or indeed reliable information on the progress to developing it would provide a level of certainty that is currently lacking.

In addition, and as mentioned above SSE supports the suggestion to set up a dedicated offshore wind working group to oversee the development of the Irish offshore wind resources. We would welcome the opportunity to participate in this working group and to further engage with the Department and other stakeholders in this regard.

Action 2 – Increase Exchequer Support for Ocean Research, Development and Demonstration

- 2. Do you think that the Exchequer support for Ocean Energy R&D has been sufficient?**
- 3. Has the distribution of the Exchequer support been appropriate and can you suggest alternative areas that require additional Exchequer support?**

Support for developmental technologies which are at a more progressed state of readiness and which are more likely to ultimately contribute to Ireland’s targets in medium term would be an efficient use of Exchequer resources. SSE also supports the need for greater recognition of floating wind and hybrid technologies.

There are a number of test facilities in Ireland but a relatively low number of offshore energy deployments. Given our current position in terms of energy targets and GHG reductions, SSE believes support should be focussed on supporting the deployment of technology that can make a meaningful contribution to Ireland energy targets in the short to medium term.

In addition, considering the ocean energy industry as a whole there are established test centres and facilities in the UK with high capacity grid connections, established supply chains and expertise. A shift in focus from demonstration facilities to supporting commercial offshore energy technologies needs to happen.

SSE would also welcome greater recognition of established technology within the OREDP. Please see response to Action 3 below in the context of commercial scale technologies. Where exchequer funding is provided to either a test facility or prototype a value framework should be put in place to track the benefit the investment is delivering to the Irish consumer be that through reduced emissions, FDI linked to the investment or progress towards the achievement of energy targets.

To that end, the Department should outline a clear policy setting out the objectives for supported projects and the desired outcomes. This will allow the market to respond with the most appropriate technologies or solutions.

Atlantic Marine Energy Test Site

4. Do you think sufficient progress has been made on the development of AMETS?

Our view is that sufficient investment has been provided for demonstration facilities in Ireland.

Galway and Cork Test Sites

5. Do you agree that significant progress has been made on the Galway Bay Marine and Renewable Energy Test Site and that it is having a positive impact on the development of the offshore renewable energy sector in Ireland?

See response to 4 above.

Integrated Maritime Energy Research Resource Cluster

6. Do you think that there is a positive impact from the development of the MaREI Centre and Lir National Ocean Test Facility?

See response to 4 above.

Prototype Development Fund

7. Do you believe that the PDF is a suitable funding structure for the sector?

8. What if any improvements would you suggest?

No Comment

Additional Exchequer Support Requirement

9. Do you have any suggestions for additional Exchequer support required for the development of the offshore renewable energy sector in Ireland?

In order to ensure cost effective and efficient use of resources, Exchequer funding should focus on technologies that are most likely to contribute to Ireland's targets in the short to medium term.

Action 3 – Introduce Initial Market Support Tariff for Ocean Energy

10. Do you have any suggestions on how to enhance or further implement support tariffs for this sector?

As outlined above, in order to meet our 2020⁹ and 2030 targets it will be necessary to build a large quantity of renewable capacity quickly – offshore wind, the costs of which are falling globally is a proven technology which can be delivered at a scale large enough to make significant inroads towards our targets with single projects. Clear energy policy signals and mechanisms are needed to stimulate the investment required to meet these targets. The new renewable electricity support scheme needs to include a specific auction category for offshore wind energy from the outset.

The Department's recent consultation on the design of the new renewable electricity support scheme will set the future course of how Ireland meets its climate and energy targets. One of the debates in the consultation was whether specific support categories should be set in the auction process for different renewable technologies

⁹ Ireland has a legally binding EU target to achieve a 16% renewable energy share of gross energy consumption by 2020. This covers all forms of renewable energy usage for heat, transport and electricity. This 16% target combines national targets of 40% of electricity from renewables, 12% of heat, and 10% of road and rail.

– such as onshore wind, offshore wind, solar and biomass – or whether all technologies should compete against each other, which is described as a ‘least cost’ solution. This purely price-based, technology neutral approach risks putting the technologies that are best placed to deliver future large-scale renewable energy capacity – especially onshore and offshore wind – against each other on a pure cost per MWh basis. ‘Least-cost’ technologies, such as onshore wind and solar will not deliver Ireland’s overall targets on their own, especially in a world where social acceptance to onshore energy developments is not where it was, and where greater grid and planning constraints have been imposed as a result.

As such, SSE strongly supports the need for a separate category for offshore wind within the new renewable electricity support scheme. If we are to make up ground on meeting our 2020 and 2030 targets, then we need to fast-forward the build-out of large scale renewable energy capacity – and offshore energy is ready to deliver.

We understand there is a balance to be struck between the immediate costs of support through the PSO and the future costs of non-delivery of energy from renewable sources. Ultimately, SSE believes that strong carbon pricing (in both the ETS and Non-ETS sectors) is the most effective way to provide a more stable, cost effective, and technology neutral incentive to decarbonise. We are supportive of reforms to the ETS regime at EU level, however given that it may take time for these reforms to become effective, we believe there is strong merit in considering the introduction of a carbon price floor mechanism in Ireland.¹⁰ In assessing the best approach for Ireland, the Government should look to other countries where such mechanisms have been effective, for example GB. As outlined in the recently published National Mitigation Plan and Budget 2018, the review of existing carbon taxes and levies by the Department of Finance, in conjunction with the Department of Communications Climate Action and Environment, is welcomed. In any event, it is

¹⁰ <https://www.pwc.ie/media-centre/assets/publications/transitioning-to-a-low-carbon-energy-system-pwc-ireland-2017.pdf> (p.16)

important that Ireland's renewable support scheme works alongside an appropriate carbon pricing regime.

Action 4 – Develop Renewable Electricity Export Markets

11. Do you think that Ireland should develop offshore renewable energy resources to export electricity?

12. Do you have any suggestions on further measures that can be taken to support the implementation of this action?

Our view is that the first priority should be to utilise our indigenous resources to achieve our own targets. In the medium term it may be prudent to consider export recognising that Ireland has a significant renewable resource. However, any further interconnection should only be pursued if it delivers benefits for Irish customers based on a thorough and independent cost-benefit analysis.

In addition, a comprehensive analysis of the implications of Brexit on the Irish energy market would be welcomed.

Action 5 – Develop the Supply Chain for the Offshore Renewable Energy Industry in Ireland

13. Do you think that significant progress has been made, to develop the supply chain for the offshore renewable energy industry in Ireland?

14. Do you have any suggestions on how to further implement this action?

Creating an environment that promotes offshore wind development will act as a dramatic catalyst for Ireland's maritime sector. Offshore wind energy can be an enabler to unblock new infrastructure investment in Ireland's ports and maritime businesses. Irish ports are important nodes where future renewable and offshore energy projects could be based to stimulate new employment and investment opportunities.

The development of the offshore wind sector has the potential to bring considerable local economic and supply chain benefits. To date, there has been little development of the offshore supply chain in Ireland. Providing a category for offshore wind in the new Renewable Electricity Support Scheme would give the industry certainty, which would stimulate investment and give investors the confidence to make the decisions needed to develop and capture maximum benefits locally – particularly infrastructure requirements like ports.

In 2014 the Offshore Wind Industry Council in the UK produced a report¹¹ highlighting the key barriers to the supply chain for energy development. It stated that the need for clearer visibility and volume in the order pipeline and market was one of the most widespread barriers. In that context, if an offshore wind auction category was included in the final RESS design it would create a competitive environment for bids thus driving down the overall costs. Further, a technology specific auction would notify the market of the expected volume of a particular technology to be developed within a specified timeframe providing certainty to the market.

Further, the Irish Maritime Development Office (IMDO) published a report on the Irish Offshore Renewable Energy Services (IPORES) in 2014 recognising the potential growth in offshore wind in the next twenty years; over 11,000 wind turbines at a cost of £100 Billion¹². The report goes on to say that *“given the scale of development planned for the Irish Sea over the next decade, there are clear opportunities for Irish companies and Irish ports to take advantage and profit from the business. This development, if exploited, could result in the creation of hundreds of sustainable jobs in the medium to long term”*.¹³ Clear market signals to supply chain companies and port authorities could underpin inherent economic and employment potential to maximise this opportunity.

¹¹ <https://www.thecrownestate.co.uk/media/389763/owic-uk-offshore-wind-supply-chain-review-opportunities-barriers.pdf>

¹² In Ireland and the UK

¹³ <http://oar.marine.ie/bitstream/10793/838/1/IMDOIPORESReport.pdf>

Growth in a burgeoning offshore wind energy sector will not only maximise regional economic benefits and create local sustainable jobs, it can also unlock focused community participation in the sector, particularly around port towns. Offshore wind energy can create industry sub-sectors delivering output and jobs across overlapping skill sets – from new roles in engineering operation and maintenance (O&M) and offshore turbine servicing to new opportunities for existing maritime businesses to provide supply chain services to the offshore energy industry.

SSE estimates that a development of the scale of Arklow Bank Wind Park could lead to the creation of around 60 sustaining jobs in (O&M) work. Typically, this could involve a range of companies within the O&M supply chain, including vessel services, water and fuel, technical inputs, and loading and unloading of project cargoes.

Case Study – SSE and Galway Harbour

SSE has direct experience of the transformative role that energy infrastructure development can play in stimulating growth in regional port infrastructure in Ireland. In 2016/17, Galway Harbour played a key role in the delivery of SSE and Coillte's 169MW Galway Wind Park development, now the largest onshore wind farm in Ireland.

Galway Harbour worked with SSE to overcome existing port infrastructure constraints to upgrade the facility so as to enable it to be used for the delivery and storage of turbine components for the nearby development. Providing support to SSE and Galway Wind Park was critical to Galway Harbour's ongoing sustainability and the promotion of its own plans for new port facilities with increased capabilities.

As a result, Galway Harbour has maximised local economic benefits from the project during construction, including a significant uplift in income and employment over a two-year period. More importantly, the strategic investments made mean Galway

Harbour is now ideally placed to support and benefit from the delivery of other renewable energy projects in the region into the future.

Action 6 – Communicate that Ireland is Open for Business

15. Do you think that Ireland has been presented at home and abroad as open for business in offshore renewable energy?

16. Do you have any suggestions on how to further implement this action?

There is currently no route to market for offshore wind in Ireland and therefore no rational investor has made any commitments in the sector to date. In order to communicate that Ireland is “Open for Business” the Government needs to take meaningful steps towards facilitation of offshore development. More specifically, there is a need for the publication and enactment of the MAFA Bill, timely foreshore planning decisions, a more efficient licensing system, and a new/revised consenting framework put in place. The grid application process is also an obstacle to project delivery – an improvement in this, allowing for quicker decisions and delivery of connections, would allow more projects to be built. As such, a streamlined consenting process, in addition to concurrent movement on grid, licensing, funding etc, will be vital to set Ireland apart from the competition.

Policy decisions need to be made in the short term to provide the right signals for investment and to allow the offshore wind energy sector to develop. For example, support for offshore wind through a separate auction in the new Renewable Electricity Support Scheme, will communicate Ireland is open for business and attract investment in this area.

Action 7 – Explore Potential for International Collaboration

17. Does the progress section capture all the relevant information and activities that have taken place for this action since publication in 2014?

18. Do you have any suggestion on how to further implement this action?

SSE supports the intention to explore the potential for international collaboration. The Government should endeavour to maintain the ability to collaborate with the United Kingdom (in addition to other Northern-Western European countries) post-Brexit and other European counterparts through bilateral contracts.

SSE has experience of working with international collaborators through our offshore wind developments in the UK. Given the status of offshore wind in Europe where its roll out has been extension compared to Ireland there are naturally lessons to be learned through a collaborative approach.

Action 8 – Introduce a New Planning and Consent Architecture for Development in the Maritime Area

19. Do you think that sufficient progress has been made on the action to introduce a new planning and consent architecture for development in the marine sector?

20. Do you have any suggestions on how to best implement this action?

SSE agrees that there is a need for the publication and enactment of the MAFA Bill and the associated secondary legislation.

Clear timeframes are a vital aspect of permitting and licensing procedures as they allow developers to plan and make investment decisions with confidence. Difficulties arise for developers where there is a lack of clarity surrounding different permitting procedures e.g. where they cannot run together or when they produce conflicting requirements. Clarity around the foreshore application process and an efficient and streamlined licensing and permitting procedure for offshore wind projects (fixed and floating base turbines) is needed to support investment. And on the other side, clarity of the permitting process assists with planning the pathway to renewable targets.

SSE submits that existing leases should be dealt with as a priority and in a timely manner. Given that most existing leases were issued 10 years ago, the Department

should have the flexibility to review project specifications to reflect technology advancements. The fact that there has been minimal project progression since issuance is a direct reflection on the policy and investment environment. In order for Ireland to benefit from offshore wind development existing leaseholders should have the ability to update these leases accordingly.

SSE fully supports the need for community engagement. Our experience to date has shown that projects and considerations can vary substantially from site to site. The Department should be mindful to maintain a level of flexibility, avoiding an overly prescriptive approach, in order to enable projects and project developers to take into account local project, community and broader stakeholder requirements within the confines of the licences and permits afforded to the project. SSE's Communication and Engagement Strategy involves identifying key local stakeholders and local sensitivities. SSE focuses on keeping local residents, community groups, local businesses and political representatives engaged at all times during any of our projects, and to proactively pre-empt and address any concerns they may have. A range of communications options have been used on projects to engage with stakeholders including public meetings, letters, newsletters, SMS notification systems, local signage indicating increased project activity, a schools programme, local 'Meet the Buyer' events and dedicated project websites.

SSE submits that it may be beneficial to zone areas suitable for ORE project development, including large scale offshore wind, in unison with the enactment of MAFA to facilitate progress of development at an early stage. In the first instance zoning, should include both existing sites and those which have been granted leases. However, reference to specific projects is a serious concern. SSE proposes that the Department should outline policy which sets out the framework for outcomes sought and the market should be able to respond with the most appropriate technologies or solutions.

Marine spatial planning assists planners, investors, communities and a wide range of other stakeholders to make informed decisions about offshore wind development,

which would help to minimize costs and incentivise investment. SSE welcomes the intention to develop a Maritime Spatial plan by 2021 and agrees that ORE should be incorporated into the MSP process. However, further consultation is needed prior to the identification of initial development zones.

Action 9 – Environmental Monitoring

21. Does the progress section capture all the relevant information and activities that have taken place for this action since publication in 2014?

22. Do you have any suggestion on how to further implement this action?

SSE agrees that the development of commercial ORE projects to construction and operation stages would allow associated environmental monitoring to take place and provide meaningful data that can inform the Irish ORE sector, filling data gaps and benefitting developers, regulators and the environment.

A challenge in the Scottish process has been to get the right balance between the level of monitoring and the cost of gathering information. The questions asked and information gathered must serve a purpose, otherwise monitoring will add costs to project development and ultimately consumers with no demonstrable benefit.

It will be necessary to achieve a balance of strategic and development specific monitoring (using central data gathering or data sharing) to achieve the outcome at least cost.

In SSE's view, compliance with environmental legislation is sufficient. This will avoid duplication and ensure there is an efficient use of resources.

SSE would suggest that the Department considers the option of having a set of core data gathered at strategic level that would be useful to all developers, either through central data gathering or a data sharing process. This would mitigate the potential for

repetitive surveying and duplication of the same data and minimise the cost and risk of development.

Action 10 – Ensure Appropriate Infrastructure Development

23. Does the progress section capture all the relevant information and activities that have taken place for this action since publication in 2014?

24. Do you have any suggestion on how to further implement this action?

As identified in the Consultation Document significant infrastructure development is needed to support ORE, especially commercial scale projects.

Grid connection is a central factor in the overall considerations for developing a project. Following EirGrid's studies, action needs to be taken to ensure the efficient and optimal deployment of grid infrastructure to support investment. The Irish Sea is close to Ireland's largest demand centre, Dublin, which reduces the grid reinforcement required to connect large scale MW to the grid.

Further, we believe it is essential that a legal and regulatory framework for the Irish offshore transmission network is put in place to facilitate offshore wind projects economically connecting to the Irish electricity grid. Under current transmission licensing conditions, the wind farm generators will not be able to own and operate the export cable to the onshore substation therefore the interface point to the Irish Grid will be the at the offshore substation.

In other European jurisdictions, such as the GB, a legal framework was put in place to allow competent parties to competitively tender to become the Offshore Transmission Operator (OFTO) for offshore wind farms offshore transmission infrastructure. The generator is given the option of building out the offshore transmission infrastructure and then the regulator tenders the asset for operation and maintenance. The winning operator receives a guaranteed return on their investment in return for achieving acceptable availability for the asset over a 20-year period. The

OFTO tender can also include the construction of the asset if the generator chooses not to construct it themselves. This process would attract inward investment into the Irish Offshore Transmission system and bring competition to the Irish Transmission Grid.

From the GB experience this has driven down grid costs for the offshore wind industry and provided better value for money for the generator and the customer. The DCCAE has already signalled in the recent RESS consultation that they would like to see offshore wind compete in the RESS auction so it is essential that the DCCAE now creates a legal and regulatory environment to allow offshore wind to be as competitive as possible. SSE look forward to working closely with the DCCAE in order to facilitate this.

In addition, SSE would welcome the publication of the previously proposed report on the integrated infrastructure requirements of offshore renewable sector. In the context of the re-examination of funding priorities - SSE proposes that rather than identifying a specific commercial project, the Department should outline a policy which sets out the framework to allow for the most efficient use of funding to support the most appropriate technologies or solutions.

Flagship Project for Ireland: Arklow Bank Wind Park – A world-class offshore energy opportunity

SSE is progressing the development of Arklow Bank Wind Park, circa 500MW, located off the coast of Arklow, Co. Wicklow, in the Irish Sea. The foreshore lease area is ideally suited to the efficient development of offshore energy infrastructure being relatively close to the coastline, thereby minimising subsea cable connection distances, and in shallower waters at Arklow Bank. SSE plans to bring this world-class project from construction through to commercial operation by 2021, subject to market conditions. Delivery in this timescale will qualify towards Ireland's 2020 targets, significantly helping to meet our obligations through this single large-scale project investment.

SSE is proposing to invest around €1bn in capex to develop its Arklow Bank project which could generate around 500MW of green energy. The project is ideally situated in the Irish Sea, being close to the East Coast's large demand centre, and will be capable of generating around 1.75TWh annually.

Arklow Bank Wind Park will require fewer grid connections than equivalent onshore energy developments of matching scale to bring power to where it's needed. As a result, Arklow Bank Wind Park is a more efficient development option compared with several smaller and more decentralised onshore energy projects.

Conclusion

SSE is available to discuss any aspect of this submission further and would like to thank the Department of Communications, Climate Action, and Environment for the opportunity to respond to this consultation.

Further information about SSE in Ireland

SSE is Ireland's second largest energy utility and the country's leading developer and investor in cleaner energy infrastructure. It is part of SSE plc, a UK-listed, FTSE 100 company and the broadest-based energy utility on the London Stock Exchange. Since 2008, we have invested over €2 billion in the development of Ireland's sustainable energy infrastructure, helping to green our economy and secure our energy future.

SSE's retail arm, SSE Airtricity, is proud to be Ireland's largest provider of 100% renewable energy to all its home and business customers and the second largest energy provider on the island of Ireland, supplying greener electricity, natural gas and essential services to around 800,000 homes and businesses. Its street lighting division SSE Airtricity Utility Solutions is Ireland's largest public lighting contractor responsible for the maintenance of over 250,000 street lights across the country.

Since 2010, SSE has contributed over €5bn to Irish Gross Domestic Product (GDP), demonstrating the scale of economic activity that SSE's operations support across Ireland. In the last year, SSE's Irish operations have contributed almost €800m to GDP, equivalent to 0.4% of the country's entire GDP and supporting over 4,700 jobs regionally and nationally. In direct capital expenditure, SSE has invested over €2bn since 2008 in the developing new and cleaner energy infrastructure for Ireland.

SSE is Ireland's largest single contributor of funding to rural communities from wind energy. Since 2008, SSE's Community Funds have provided voluntary funding totalling over €5million to over 2,100 groups near SSE wind farms in regional Ireland supporting community-led energy efficiency and sustainability projects. To view the report in full, click on the link here: [Energising Communities in Rural Ireland - Community Funds Annual Review 2016/17](http://ireland.sse.com/media/21125/Energising%20Communities%20in%20Rural%20Ireland.pdf)¹⁴.

¹⁴<http://ireland.sse.com/media/21125/Energising%20Communities%20in%20Rural%20Ireland.pdf>



As the largest company by market capitalisation in the FTSE 100 whose revenues are derived solely from the UK and Ireland, SSE plc is committed to continuing to invest in new renewable energy development to help Ireland meet its 40 per cent renewable energy generation targets by 2020. SSE produces more renewable energy supply in the SEM than any other company, making it the most significant contributor towards Ireland's current performance level of 27 per cent of electricity generation from renewable sources. We will continue to play a leadership role with policy makers and regulatory authorities as we set our low carbon ambition for 2030 and 2050.