

Written evidence submitted by EDF (REW0033)

EDF is the UK's largest producer of low carbon electricity. We operate low carbon nuclear power stations and are building the first of a new generation of nuclear plants. We also have a large and growing portfolio of renewable generation, including onshore and offshore wind and solar generation, as well as coal and gas stations and energy storage. We have around five million electricity and gas customer accounts, including residential and business users.

EDF aims to help Britain achieve net zero by building a smarter energy future that will support delivery of net zero carbon emissions, including through digital innovations and new customer offerings that encourage the transition to low carbon electric transport and heating.

EDF Renewables currently operates 2 onshore wind farms in Wales; Cemmaes in Machynlleth (15 MW) and LLangwyrfron near Aberystwyth (9 MW), and is in the process of developing Garn Fach in Powys which will have a capacity of approximately 100 MW. EDF has recently bought a 50 MW consented solar farm in Wales and has secured two 50 MW grid connections near Swansea and Newport due to be used for battery storage, with the potential to support electric vehicles. This demonstrates our strong commitment to renewable energy development in Wales, and we are developing a significant pipeline of further onshore wind and solar projects, highlighting our ambition for future investment in Wales.

However, in order for our own ambitions to be realised, as well as wider nationwide decarbonisation targets, the Welsh and UK Governments must facilitate a number of changes needed to enable this deployment. Therefore, in our response to this consultation we have focused on key issues that must be addressed in order to enable the renewable deployment required to meet Welsh climate goals.

EDF is grateful for the opportunity to provide feedback to the Welsh Affairs Select Committee (WASC) on the future of Renewable Energy in Wales and welcomes any questions or requests for further detail on any of the points that have been raised.

Consultation Questions

1. How can the UK Government best support the deployment of renewable generators in Wales?

EDF was pleased to see the recent change in legislation announced by Lesley Griffiths on the 9th February 2021, committing Wales to a 100% reduction in carbon emissions by 2050, and the update to the intermediary carbon budgets. EDF is supportive of the increase to these targets and is confident that this strong sustainability agenda will bring wider economic and social benefits to Wales. EDF welcomes the recognition that industry and power sectors have the most significant potential to accelerate emissions reductions in Wales. We look forward to working with the Welsh and UK governments to facilitate the necessary change needed to allow rapid decarbonisation of the power sector.

EDF recognises that Wales is already well on its way to meet its current target of 70% of electricity consumed in Wales to come from renewable generation by 2030. However, it is important to note that electricity demand is forecast to increase in the future, which means that renewable deployment will increase to support this demand. It is a concern that, in recent years, there has been a noticeable reduction in the pace of renewable deployment. While this was partly due to onshore wind and solar being removed from the UK Contract for Difference scheme (and only recently being re-instated), a significant contributing factor is the long standing challenge of electricity grid constraints on development in Wales.

Therefore, EDF would like to emphasise the need for improvements to grid infrastructure in Wales, and in particular in Mid-Wales, in order to facilitate further deployment of onshore technologies, which will be crucially important if Wales is to meet its climate goals. There is a clear need for additional transmission infrastructure in Mid-Wales, as well as upgrades to grid infrastructure in other parts of Wales, where the grid is also highly constrained. Grid constraints are currently one of the largest barriers to onshore renewable development in Wales. Whilst EDF understands that such change is not only a government decision, it is important that the government understands the implications of these grid constraints and, in response, works closely with the relevant parties as a matter of urgency. Grid constraints will need to be addressed in order to facilitate further development of onshore renewable technologies in Wales.

Another consideration is that further pressures are likely to be exerted on the grid infrastructure in Wales due to the strong potential of the Welsh seas to accommodate additional fixed bottom and floating offshore wind development. EDF is concerned that the potential benefits of offshore coordination to fixed bottom and floating offshore wind projects in Welsh waters is not a focal point of BEIS' recently initiated Offshore Transmission Network Review (OTNR), nor was the Celtic Sea mentioned in Ofgem's recent determination for pricing control period 2021-6 (RIIO2). Whilst we understand the immediate focus of the OTNR on transmission infrastructure on the East Coast of England, there is potential for offshore transmission infrastructure in Wales to become more constrained in the future. Taking early action will save total capital costs for grid infrastructure across the industry and ultimately bring more cost benefit to the customer.

If Wales is to become a leading player in future fixed bottom and, in particular, floating offshore wind, then port infrastructure needs to be well equipped to accommodate this transition, and the scale of projects that could be deployed. The space requirements for floating foundation assembly, along with "wet storage" (required until turbine components are ready for serial installation upon the foundations), are likely to be a significant constraint to large scale deployment of floating offshore wind that captures significant elements of the supply chain.

Potentially linked to this, the Welsh Government is currently undertaking work to publish its recommendations for port infrastructure developments and consideration is being given to the economic benefits that freeport status could bring to the Welsh and UK economy. EDF is of the opinion that it is of major importance that Wales acts fast to adapt ports to the needs of offshore wind development and therefore urges WASC to ensure that this work is prioritised. Delays could significantly impact the ability to capture the local supply chain development and the benefits of deployment of offshore wind projects at pace and scale.

EDF would like to highlight that onshore wind and solar are very low cost, mature technologies which can be deployed at pace. The development of these technologies has been proven to create jobs, community investment opportunities and provision of direct investment into communities across the UK, and the same economic benefits can be realised if further investment is made into onshore renewable development in Wales. With the declaration of the Climate emergency in Wales in 2019, it is important that Wales takes immediate action to decarbonise, especially given recent announcements by the Senedd to front-load action to 'avoid the cumulative emissions which delayed action would incur'. Onshore renewable technologies are most suitable to facilitate this immediate decarbonisation trajectory, and will be vital in order for Wales to meet its near term carbon budgets.

2. How should the UK and Welsh Governments work together to support the development of renewable energy projects in Wales?

Whilst planning for high voltage grid infrastructure is ultimately a Westminster decision, co-ordination between a number of parties, including National Grid, Ofgem and DNOs will be necessary to devise the most optimal solution to overcome the current issues with grid infrastructure in Mid Wales. EDF would like to encourage the Welsh and UK governments to work closely with Ofgem and National Grid to set out a clear workplan to tackle this issue.

The continuation of Pot 1 (covering onshore wind and solar technologies) in future Contract for Difference (CfD) rounds will support further development of onshore renewable energy projects in Wales. The guaranteed revenue stream from a CfD is necessary to give developers and investors confidence over project returns and will continue to deliver a steady pipeline of onshore wind and solar projects across Wales. Therefore, EDF is supportive of the continuation of Pot 1 in future CfD rounds, as this will enable the deployment of onshore wind and solar projects that are necessary for Wales, as well as the UK more widely, to meet its climate targets.

There is great potential for floating offshore wind in the Celtic Sea and in the outer Bristol channel due to the deep waters and high wind speeds in these areas. To realise this potential, there is a role for the Welsh Government to play in enabling supply chain capabilities to support local infrastructure development, along with export capabilities for wider nationwide floating offshore wind projects. For example, deployment of commercial scale floating projects will require the development of foundation production facilities. These facilities will require deep water quayside access, adjacent to large areas of land for foundation assembly and sheltered water for wet storage of these foundations until the turbine components are delivered for assembly on the foundation.

There will need to be a clear pipeline of projects to warrant the upfront investment that would be needed to scale up the supply chain for the development of commercial scale projects for floating offshore wind. In his Ten Point Plan, the Prime Minister announced a target of 1 GW out of the 40 GW offshore wind target for 2030 to come from floating offshore wind, which provides some certainty to developers and supply chains to begin investment. However further clarity is needed on the specific opportunities that this presents within Wales. We recommend that WASC seeks clarity from The Crown Estate on the approach for the inclusion of the Celtic Sea in future seabed licensing rounds, as this will give more clarity on The Crown Estate's assessment of the Celtic Sea compared to other potential areas for development.

More generally a strong intergovernmental approach is advised for successful development of floating offshore wind in this area and the Welsh Affairs Select Committee should endeavour to ensure this remains a key discussion point when engaging with the UK Government on renewable energy.

3. What mechanisms can ensure that subsidies for renewable generators are good value for money?

The Contract for Difference (CfD) has been a highly successful support mechanism and has procured large volumes of low carbon power, at the cheapest cost to the consumer. Over time, the certainty of revenue afforded by the CfD has provided confidence to investors and made UK wind projects competitive in global markets for infrastructure capital investment. This in turn means projects can obtain lower costs of capital, which feeds directly into further cost reductions. Furthermore, the competitive dynamics of auction-based allocation have driven down project costs. Developers of projects must build the most efficient business case possible if they are to put forward the most competitive bid. It is anticipated that onshore wind and solar projects securing CfDs in the next auction round will make net payments back to the consumer, as costs have continued to fall for these technologies.

The CfD therefore continues to be the most efficient procurement mechanism available for high capex low opex projects such as onshore and offshore wind and can continue to deliver capacity for Wales.

EDF was supportive of the reintroduction of onshore wind and solar to Pot 1 in the upcoming CfD auction, and this presents a clear route to market for the development of onshore technologies in Wales. EDF hopes that this is one factor that will lead to a step up in the rate of development of onshore technologies in Wales compared to recent years and encourages the UK government to continue to include solar and onshore wind in Pot 1 in future CfD auctions.

EDF was also supportive of the creation of Pot 2 for emerging technologies. The establishment of Pot 2 will likely lead to rapid cost reductions in the technology costs for emerging technologies, such as floating offshore wind, as has been the trend in previous CfD allocation rounds. The CfD will give developers and investors' confidence in the level of future revenue streams, thereby enabling the development of such technologies and driving down capital costs.

4. What opportunities are there for renewable generators in Wales of greater interconnection with other electricity markets?

No comment.

5. How can the UK Government facilitate Welsh contributions to COP26?

No comment.

6. What implications is COP26 expected to have for Wales?

With COP26 due to take place in Glasgow later this year, this presents an opportunity to highlight the decarbonisation progress Wales has made so far, and to outline the further action to be taken to reach its climate targets. It presents an opportunity for the Welsh Government to publicise the recent more ambitious climate targets that have been made legislation in Wales, as well as key policy changes planned, or already enforced, to enable a more rapid transition to net-zero.

The UK aims to expand its supply chain capabilities for renewable development, for example, for offshore wind. In light of the 60% target for UK content stated in the Offshore Wind Sector Deal, this presents an opportunity to gain global traction on the UK's offshore wind supply chain capabilities.

7. Has the COP26 Year of Climate Action had any significant implications for Wales?

The Senedd pledged to bring in regulations to strengthen Welsh net-zero targets ahead of COP26 later this year and this has now been enacted. EDF is supportive of these more ambitious targets for decarbonisation in Wales, in particular the recognition by the Government to ensure that the transition to net zero is a just transition, where the costs and benefits are shared fairly across society. The decision to front-load action sends a strong signal about the importance of taking action now, and EDF hopes that this message will be reinforced at COP26 to highlight the need for immediate collective global action to tackle climate change. EDF looks forward to the publication of the All Wales Plan, which the Senedd has committed to publishing ahead of COP26.

8. What opportunities are there for renewable energy to aid Wales post-COVID-19 economic recovery?

The prime minister recently announced his 10 point plan, which most notably includes a target of 40 GW of offshore wind by 2040, with an ambition of 1 GW to come from floating offshore wind. The plan also highlights the aim for 250,000 green jobs to be created through this Green Industrial Revolution. The plan makes particular reference to Wales regarding accelerating the UK's transition to electric vehicles by backing world leading car manufacturing bases already established in the UK. This highlights the UK Government's belief and commitment to a green recovery from the pandemic and the important role that all devolved nations must play to together meet these goals. Such ambitious nationwide renewable capacity targets will undoubtedly lead to increased development of projects in Wales, which in turn will lead to further job creation in the green sector, local supply chain benefits and increased community benefit schemes in Wales.

A report by *Vivid Economics (Quantifying the benefits of onshore wind to the UK)* suggests that deploying 35 GW of onshore wind in the UK by 2035 could support 1,600 direct jobs in Wales. Although difficult to project the future location of jobs supported by onshore wind development activities, a continuous pipeline of onshore and offshore projects in Wales will, without doubt, bring significant economic benefit, assisting with the recovery from the pandemic. Therefore, it is imperative that the UK and Welsh Governments take action to enable the development of these projects.

Wales has significant potential in a wide range of renewable technologies including onshore wind, solar, offshore wind, marine energy and hydrogen production, and it is well placed to benefit from a green recovery to the pandemic. EDF would like to highlight the importance of encouraging a variety of renewable technologies to be developed in parallel in Wales. This will allow Wales to benefit from the diverse range of natural resources that are suitable for renewable energy generation, without over reliance or overuse of any one particular technology.

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