Energy Strategy
Department for the Economy
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Email: **energystrategy@economy-ni.gov.uk**

Dear Team,

Energy Strategy Call for Evidence 2019

We welcome the opportunity to respond to this Call for Evidence (CfE) and to engage in the process to inform and shape proposals for Northern Ireland's Energy Strategy.

ScottishPower is a major British energy company with network, renewable generation and retail supply interests; it is a leading developer and operator of wind power, and part of the Iberdrola group, the world's leading renewables generation developer. Iberdrola is a global leader in tackling climate change, with a commitment to reaching carbon neutrality by 2050.

While the CfE sensibly adopts a whole system approach and the range of issues arising from this, this response is on behalf of our renewables business, ScottishPower Renewables (SPR) and focuses on key areas relating to the power generation sector, including the wider jobs and economic benefits resulting from the development and deployment of renewable energy projects at scale.

SPR is a leader on progressing with the deployment of cost-effective onshore and offshore wind, as well as solar and battery storage projects, in the UK and Ireland. More specifically, SPR is involved in managing the development, construction and operation of all its projects.

We have 40 operational windfarm sites with over 2GW of installed capacity throughout the UK and Ireland, including our share in the 389MW offshore windfarm, West of Duddon Sands. In addition, we have a substantial development portfolio of onshore wind, solar and battery storage projects in the UK and Ireland and offshore wind projects in the East Anglia Zone, including the 714MW East Anglia ONE project which is currently under construction.

Given the UK's commitment to net zero, the policy approach taken in Northern Ireland to reduce GHG emissions will be a key factor in meeting the UK's overall target. Whilst an overarching climate action plan must be aligned to those of the rest of the UK to meet net zero targets, Northern Ireland also has the freedom to design its own ambitious decarbonised energy strategy.

In our view, the energy strategy should provide a framework to:

- establish a route to market for renewable energy generation, in recognition that renewable energy is essential to decarbonising both the existing demand for electricity but also the increased demand resulting from the electrification of heat and transport.
- support continued and anticipatory investment in the grid to enable timely connection of renewable generation and avoid constraints; and investment in market services to deliver a flexible market that can support renewable generation whilst ensuring security of supply.
- align planning policy with energy policy to properly take into account net zero ambitions. The successful decarbonisation of the economy needs to be facilitated by a planning system which is both transparent and timely.

Our answers to the relevant questions are contained in the accompanying Annex.

We look forward to working with the Department as you develop a strategy and framework to meet decarbonisation targets whilst enhancing security of supply and delivering value for money for consumers. If you have any questions in relation to our response, please do not hesitate to contact me.

Yours sincerely,

[redacted]

ANNEX A

SCOTTISHPOWER RENEWABLES RESPONSE TO THE DEPARTMENT FOR THE ECONOMY – ENERGY STRATEGY CALL FOR EVIDENCE 2019

Chapter 2. Energy in Northern Ireland

Q1. What lessons can we learn from elsewhere in addressing energy within an overarching climate action framework?

There has been significant progress with power sector decarbonisation in the UK led by the successful deployment of both onshore and offshore wind and at much reduced costs. This progress has been supported by key policy frameworks and legislation such as the Renewables Obligation (including the NIRO) and its successor scheme - Contracts for Difference (CfD) - aimed at encouraging investment in low-carbon electricity generation.

Competitive CfD auctions in GB have proven to be a successful tool in supporting the deployment of renewables, providing revenue certainty for investors and facilitating a dramatic reduction in the costs of deployment – as we saw with clearing prices for offshore wind in Allocation Round 3 in 2019 reducing by 30% compared to the previous allocation round in 2017.

The UK Government has also recognised the importance of innovation and collaboration across sectors through their Industrial Strategy and Sector Deals. In March 2019, the Department of Business for Energy and Industrial Strategy published the Offshore Wind Sector Deal[1] setting out an ambitious partnership between government and industry aimed at delivering benefits to the UK economy from the deployment of offshore wind.

Q2. What are the key considerations for decarbonising Northern Ireland's energy sector given existing linkages to other jurisdictions?

We welcome the Department's focus on assessing the potential pathways to reach the net zero 2050 target in Northern Ireland. Given the UK's commitment to net zero, the policy approach taken in Northern Ireland to reduce greenhouse gas emissions will be a key factor in meeting the UK's overall target. Whilst an overarching climate action plan must be aligned to those of the rest of the UK to meet net zero targets, Northern Ireland also has the freedom to design its own ambitious decarbonised energy strategy.

[1] https://www.gov.uk/government/publications/offshore-wind-sector-deal

The energy strategy should seek to provide a stable route to market for renewable energy generation, in recognition that renewable energy is essential to decarbonising both the existing demand for electricity but also the increased demand resulting from the electrification of heat and transport. The strategy also needs to support new technologies, such as battery storage.

Additionally, energy policy in Northern Ireland needs to be as closely aligned with that of the Republic of Ireland to facilitate effective development, deployment and operation across the whole island. To ensure decarbonisation targets are met there is a need for continued investment in the networks to ensure renewables can connect to the grid and constraints can be avoided where possible. Policy must enable an efficient interconnected market to operate on both sides of the border.

Therefore, the Department should work closely with other jurisdictions and the Government in the Republic of Ireland to identify successful policy frameworks which could be adopted or adapted to support the ambitions of the Northern Ireland energy strategy.

Q3. To what extent should Northern Ireland implement the key energy-related recommendations from the CCC 'Reducing Emissions in Northern Ireland' report?

We support the Committee on Climate Change's recommendations for energy priorities to 2030 as set out in their 2019 report, whilst noting that these were set prior to the UK's net zero commitment being made and may not go far enough to deliver the necessary change on their own.

However, we would give particular support for policy makers to focus on the lack of a route to market for low-cost renewables in the electricity sector and would recommend the Department introduce a competitive, long-term support mechanism for renewable generation in Northern Ireland, alongside continuing to support grid flexibility and smart system upgrades, to ensure that Northern Ireland's contribution to the UK's 5th Carbon Budget can deliver the required emissions reductions (of at least 35% against 1990 level by 2030).

Q4. Do you agree with the 30-year timeframe? If not, please state your preferred approach and reasons.

We support the proposed 30 year timeframe for the energy strategy, which aligns Northern Ireland's ambitions with the UK's legislative commitments to reach net zero by 2050. We also support the proposal for interim targets and review points to assess delivery and re-scope priorities.

SCOTTISHPOWER RENEWABLES

Chapter 3. The Energy Transition in Northern Ireland

Q6. Is your organisation undertaking or planning to undertake projects to support the energy transition? If so, please provide further details.

We currently operate five onshore wind farms in Northern Ireland[2] and are committed to supporting the energy transition to net zero. We are also looking at repowering existing operational windfarms in Northern Ireland with the intention of increasing the installed capacity from 25MW to potentially over 100MW.

The wind resources in the west, and north-west of Northern Ireland are particularly suitable for new development; however, the lack of network reinforcement makes it impossible to connect new projects without the risk of constraints or curtailments. We believe that investment - and investment certainty - in transmission and distribution networks for developers is paramount in facilitating connection access and removing the very real barriers to entry that exist today. We would urge that in all zones, transmission and distribution network reinforcements are forward looking, instead of reactive, in anticipation of an increase in the renewable deployment required to deliver net zero.

Transparency of information would enable developers to form more realistic business cases and to allocate the resources necessary to progress projects whilst minimising uncertainty. Equally, a defined, time-governed process to allow new network connections or extensions to connection agreements for re-powering should be developed to remove the significant amount of uncertainty around applications that exists at present.

We are actively exploring opportunities for the development of new hybrid sites. Co-locating onshore wind with solar PV and battery storage makes sense and can help to improve the stability and cost-effectiveness of the system. We would therefore encourage policies which are supportive of co-located renewable and storage projects and stand-alone storage projects that could facilitate an increase in the system's non-synchronous penetration (SNPS). Currently there is no policy or regulation that supports hybridisation. Indeed, we believe that current arrangements act as barriers to facilitate optimisation of the assets that will enable decarbonisation.

With the right framework, resolution of grid capacity issues, and support mechanisms, there is potential for SPR not only to support the future repowering of its current windfarm portfolio but also look to invest in the deployment of a range of new renewable projects, with a focus on hybridised sites, standalone solar, and energy storage, which could be brought forward within the timeline of this strategy.

[2] https://www.scottishpowerrenewables.com/pages/onshore_wind_northern_ireland.aspx

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Chapter 7. Power

Q24. What is the appropriate pathway for the decarbonisation of power from now to 2030, and subsequently to 2050?

An appropriate pathway should build on the strengths of the current Strategic Energy Framework (SEF), and its supporting policies, whilst considering the need for more ambitious decarbonisation targets. The pathway should set clear targets underpinned by actions which will support investment in both cost effective renewable generation and the energy system, to support decarbonisation of other sectors such as heat and transport.

Q25. What target for electricity consumption generated from renewable sources by 2030 is ambitious, achievable and affordable?

An ambitious renewable target for 2030 will send a clear and important signal of Northern Ireland's commitment to power sector decarbonisation to meet the net zero target by 2050. Action to date has seen the SEF target of 40% of renewables delivered before the end of 2020.[3]

A report by Baringa – 70 by 30[4] - published in October 2018 reports that 70% of renewable generation by 2030 is both achievable and deliverable across the island of Ireland. However, we believe it is feasible for Northern Ireland to have a more ambitious set of targets and further consideration should be given to a target of 80% renewable electricity by 2030, moving towards a net zero emission power sector by 2040. Any target should, of course, be underpinned by new policy mechanisms to facilitate timely progress, including establishing a route to market for renewable technologies.

The most recent BEIS Public Attitudes Tracker[5] shows that UK public support for renewable energy remains very high at 83%.

[3] https://www.economy-ni.gov.uk/articles/electricity-consumption-and-renewable-generation-statistics
[4] https://www.iwea.com/images/Article_files/Final_Baringa_70by30_Report_web.pdf
[5] https://www.gov.uk/government/statistics/beis-public-attitudes-tracker-wave-32

Q26. How can the new infrastructure necessary to meet a new renewable electricity target be delivered in a timely, affordable and acceptable way for consumers and society?

It will be important to facilitate anticipatory investment in our electricity networks. Currently, infrastructure is the main barrier to renewables deployment and that needs to change if targets are to be achieved.

Investment in Associated Transmission Reinforcements (ATRs) and transmission systems is essential, particularly to allow new projects the option of firm and/or non-firm connections. These choices also directly affect other routes to market for renewable projects and has the potential to prevent opportunities in Northern Ireland for Corporate PPA's in the medium to long term.

The result of non-firm connections and exposure to curtailments and constraints increases the levels of uncertainty faced by developers when developing business cases, which in turn risks the investment in projects in Northern Ireland needed to achieve decarbonisation of the sector.

We would be supportive of a regulatory framework, similar to the UK's Ofgem RIIO[6] which takes into account revenues based on incentives, innovation and outputs. Such an approach would support a forward-looking view of projects currently in the pipeline and those required to support decarbonisation.

Q27. What innovations and solutions could contribute to meeting a new renewable electricity target?

Storage

We believe that there will be a much greater role for storage in delivering a low carbon energy system cost-effectively. As noted in response to question 6, we would encourage policies which are supportive of co-located renewable and storage projects and stand-alone storage projects that could facilitate an increase in the system's non-synchronous penetration.

Planning Policy

We fully recognise that the planning process will be fundamental to the successful delivery of the energy strategy. Planning policy should be sensibly aligned with energy policy and should properly take into account net zero

[6] Revenue=Incentives+Innovation+Outputs

ambitions. The successful decarbonisation of the economy needs to be facilitated by a planning system which is both transparent and timely.

Planning policy and guidance does not always support the most up-to-date and efficient turbine designs with higher tip heights, commonly used internationally, which would deliver even better value for consumers in suitable high-wind sites in Northern Ireland.

Indeed, increasingly restrictive local landscape policy, and a wide range of approaches to the development of landscape policy, as well as guidance, has the potential to severely limit renewable development in certain areas. We believe that the absence of regional specialist landscape experts is also impacting the development of coherent and consistent approaches among councils in the consideration of proposals for windfarms and in the preparation of Local Development Plans (LDP's). In order to secure the potential benefits of onshore wind, it is critical that planning applications are treated consistently, fairly and transparently, in line with national and regional policies that have been openly and transparently consulted upon.

We therefore recommend:

- LDPs are developed in line with Regional Planning Policy, and this should be appropriately enforced.
- Clear landscape guidance should be developed for Northern Ireland to facilitate a common approach to the development of LDPs (and any supporting assessments). This could be based on best practice elsewhere i.e. Scottish Natural Heritage (SNH) guidance.
- An urgent update to the Northern Ireland Landscape Character Assessment (2000) should be carried out. LDPs should refer to this, particularly in the absence of any regional landscape advisory body who can advise on a robust approach.
- Consideration is given to either the formation of a new landscape body, or, extension of the role of an existing statutory consultee to cover landscape matters for Northern Ireland, with the appointment of suitably qualified landscape experts who have clear remit of ensuring support for the region's decarbonisation agenda.
- Decisions on renewables projects are made on a case-by-case basis. Any move taken towards a spatial approach must be evidence-based and consistent.
- Given that the above proposals will take time to implement, it may be worth adopting SNH guidance in the interim, to aid a common and consistent approach to the development of landscape policy.

Q28. What market incentives and support are necessary for investors to deliver the investment in renewable generation assets at a scale that will achieve a new renewable electricity target?

In order to develop new, and sustain existing, onshore wind projects, the industry and its supporting supply chain requires a stable energy policy regime together with an efficient and effective planning system which delivers timely and robust decisions.

Onshore wind is now the lowest cost form of electricity generation and, when located in suitable areas, should continue to play a critical role in achieving cost-effective decarbonisation, including maintaining and/or repowering onshore wind farms that are already reaching the end of their consented lives.

To encourage the investment needed to deliver renewable generation there is a need for a policy framework which provides a clear route to market and which provides sustainable investment opportunities.

Relative to many other forms of electricity generation, renewable electricity has higher capital costs and lower operating costs. As a result, the cost of capital is an important commercial driver for the costs of renewable electricity projects. It is widely recognised that schemes that provide long-term, predictable, and stable revenue streams are successful in attracting low cost capital and therefore delivering low cost renewable projects. This is evidenced by the findings of a report by ARUP[7] which considered the impact of revenue stabilisation on the cost of capital. The report shows that revenue certainty improves project viability and also allows investment to come forward at a lower cost of capital, lowering the levelised cost of energy for an onshore wind project by between £6/MWh and £12/MWh relative to position where no stabilisation is provided.

We support an approach to develop and introduce a scheme similar to the new RESS in Ireland and would welcome further engagement between the Department and industry to progress and develop this proposal.

We also support robust carbon pricing as a key tool in promoting the transition to a low carbon economy and consider that the Department should continue to work with the UK Government on promoting the use of carbon pricing as a key policy tool.

There is also a need to support continued and anticipatory investment in the grid to enable timely connection of renewable generation and avoid constraints; and investment in market services to deliver a flexible market that can support renewable generation whilst ensuring security of supply.

[7] https://www.arup.com/perspectives/publications/research/section/onshore-wind-financing

Q29. What steps need to be taken by Government to facilitate investment in offshore and marine renewables for NI?

The Government should encourage the development of offshore wind through supportive policy (including a route to market mechanism), identification of appropriate sites and a collaborative approach to planning.

The UK Conservative Party manifesto (ahead of the UK General Election in 2019) includes an ambition to reach 40GW of offshore wind by 2030, which will in turn deliver significant economic benefit to local areas. We believe that Northern Ireland should develop a forward looking strategy that has offshore wind as key part of a low carbon energy mix consistent with this kind of high ambition long-term approach being taken by the UK Government

Chapter 9 - Other Issues for consideration

Security of Supply

Q36. What specific risks to security of energy supply are likely to emerge as a result of our changing energy mix, and what actions can be taken to mitigate these?

We believe that any risks to security of supply are currently being successfully addressed within the 'Delivering a Secure, Sustainable Energy Strategy' (DS3), that is applicable up to 2023. Therefore, we would encourage the scoping and progression of the new version of the programme (DS3+) which should aim to facilitate SNSP beyond 90% and provide access to the new developments and new technologies required to support net zero. We would also encourage incentives around storage deployment, along with system restoration services, that can be activated in moments of system stress.

Q37. What measures or indicators could be adopted or developed to monitor energy security of supply?

It is important to ensure transparency in relation to system events and acceleration of programmes that can strengthen the reliability of the system. Regulatory codes such as the grid code need to be revised in a timely manner to ensure compliance with current and future challenges. SNSP is also a good measure as it indicates how suitable the system is to a varied generation mix without relying on single centralised units.

SCOTTISHPOWER RENEWABLES

Energy and the Economy

Q43. What specific economic opportunities will arise from the decarbonisation of energy?

As a leading developer of onshore and offshore wind, SPR recognises the importance of economic benefits to the UK from investing in renewable electricity generation.

With the right strategic support, SPR is committed to continuing to invest in renewable energy in Northern Ireland which will be required to meet the decarbonisation challenge (including increased demand in electricity required to support the electrification of heat and transport) whilst delivering direct economic benefits to the country and local communities.

Onshore Wind

The following summary of three reports by independent economic consultant BVG Associates show that with supportive policies in place to facilitate investment in renewable technologies, there are direct benefits for the economy.

Economic benefits from onshore wind farms[8]

Published in 2017, the report analysed the economic benefit of SPR's eight new onshore windfarms in Scotland commissioned during 2016/17 with a combined capacity of 474 MW.

Over the lifetime of the eight projects the economic benefits are estimated to be:

- Total investment £1.6 billion
- 66% UK content, 51% Scottish content[9]
- £1.3 billion gross value-added in the UK
- 31,118 UK FTE years, including 7,768 local FTE years
- £59 million community benefit funding

The Power of Onshore Wind[10]

Published in June 2018, this report demonstrates that government commitment to hold 5 x 1GW competitive CfD auctions in the 2020s could:

- stimulate further investment of £6 billion over the lifetime of projects
- lead to UK content increasing to almost 70%
- deliver 8,500 long term, skilled jobs

[8] https://bvgassociates.com/economic-benefits-onshore-wind-farms/
[9] UK / Scottish content is the value of all supplies sourced from within UK / Scotland
[10] https://bvgassociates.com/the-power-of-onshore-wind/

- provide a net payback to the consumer of more than £1.6 billion over the 15 year contract life (based on auction clearing prices relative to the forecast wholesale electricity price)

10 years of Whitelee wind farm - a decade of economic, environmental and social benefits[11]

Published in June 2019, this report shows the economic benefits delivered from 10 years of operating Whitelee wind farm (539MW) in Scotland:

- Lifetime investment of £1.5 billion by SPR, with 60% spent with UK companies.
- Over 4000 FTE jobs created during peak construction and around 600 Scottish FTE jobs generated per year through operations, including the long-term skilled jobs in directly operating and maintaining Whitelee.
- Estimated that Whitelee will generate earnings in Scotland of £512 million over its lifetime this equates to £26k/FTE.
- FTE jobs created over the lifetime of Whitelee is estimated to be 19,500 in Scotland of the total of 25,300 in the UK. Many of the jobs created by the operating and maintenance phase are sustainable, skilled, long-term jobs.

In addition, the Whitelee Visitor Centre promotes STEM learning through providing workshops that align with the Science and Technology experiences and outcomes that are laid out in the Scottish Government's Curriculum for Excellence Guidelines. This means that the courses offered are integrated with the wider learning programmes delivered in schools. More generally, we continue to contribute to skills and career development directly within SPR and indirectly through suppliers.

Offshore Wind

East Anglia ONE is one of the largest offshore windfarms under construction and once fully operational in 2020 will have an installed capacity of up to 714MW. Located in the North Sea, 43km from the East Anglian coast, the windfarm is a joint venture between ScottishPower Renewables and Green Investment Group.

£25million has been invested in a state-of-the-art new operations and maintenance base at Lowestoft Port, delivering 100 long-term skilled jobs, with thousands of supply chain operators using the site and nearby facilities for the lifespan of the windfarm. A further £5million was co-invested in Great Yarmouth Port to prepare the facility for construction and assembly of the turbine components. £70million has been committed to suppliers across the East of England, delivering jobs and investment to local communities

[11] https://bvgassociates.com/10-years-of-whitelee-windfarm/

Community Benefit

To date, SPR has voluntarily contributed over £34 million in community benefit across the UK and over recent years we have developed a model of community investment. We remain committed to offering a package of community benefits for our future onshore wind developments (subject to an appropriate and cost-effective 'route to market' being available). Such future packages could include a traditional community benefit fund, as well as the opportunity for the local community to invest in the windfarm.

SPR developments in Northern Ireland have also contributed around £230,000 of community benefits. To date, our Wolf Bog Windfarm has contributed £30,000 to two local primary schools to help with the delivery of educational initiatives including:

- Breakfast and after school clubs
- Online musical resources
- Purchase of IT equipment
- Transport costs for travel to sports

Our Callagheen Windfarm has contributed £200,844.27. This fund is administered by the Fermanagh Trust and has recently helped fund:

- Sports and recreational equipment at a local sports complex
- The development of an environmental and social awareness programme for a local playgroup
- The provision of nesting boxes for the protection of barn owls in the area through for a local wildlife group
- A local community carers day out
- Kitchen equipment for a local community association
- Creation of an outdoor classroom area at a local pre-school