

Consultation on treatment of non-mainland GB onshore wind projects

About Us

Scottish and Southern Electricity Networks (SSEN), operating under licence as Scottish Hydro Electric Transmission plc, owns and maintains the 132kV, 275kV and 400kV electricity transmission network in the north of Scotland. By statute, SSEN is required to develop and maintain an efficient, coordinated and economical system of electricity transmission. Working with the GB system operator, National Grid, SSEN is required to offer terms to connect electricity generators to the transmission system to allow the electricity generated to be transported to areas of demand across the country. SSEN has worked closely and collaboratively with National Grid in this regard since the Island links were first proposed in 2004.

Overview

SSEN welcomes the opportunity to respond to the consultation on treatment of non-mainland GB onshore wind projects. SSEN has been working with stakeholders and communities on developing links to Shetland, Western Isles and Orkney for over 10 years. During this time, responding to changes in the needs of prospective renewable energy developers on the islands, in part due to the changing policy framework underpinning investment in renewable energy, the scope of transmission works related to each island group has evolved. One constant has been the underlying requirement for new transmission links to provide the necessary capacity to export renewable developers' electricity output.

Of the three Scottish Island groups, only the Western Isles currently has transmission infrastructure. Orkney is connected to the Main Interconnected Transmission System (MITS) via low voltage distribution cables; Shetland is not connected at all. For all three island groups, the existing electricity network is designed primarily to meet local demand requirements. Large scale generation cannot be accommodated without reinforcement. Also in all three, the limit for small scale (typically domestic) generation has long been reached.

SSEN has a responsibility with the System Operator to offer timely connections to renewable developers looking to export energy to the GB transmission system and SSEN remains fully committed to developing links to the three island groups. Any such investment made by SSEN must be demonstrably needed and likely to be used. For this reason, SSEN requires developers to commit to their projects in accordance with industry rules before it can seek development approval by the industry regulator, Ofgem. SSEN understands developer commitment to be dependent, in part, on receiving policy support to underpin their investments.

Another key consideration in the development of the transmission links is the overall volume of generation contracted to connect. As such, equally important to providing policy support is therefore ensuring that sufficient budget and time is made available to allow the current contracted projects to progress.

SSEN therefore welcomes the Government's intention to provide clarity on this matter following the outcome of this consultation.

Maximising the Economic, Environmental and Social Benefits

SSEN recognises the renewable energy potential of the Scottish Islands and the associated benefits that it would provide to the UK and each of the respective island groups. Possible economic, environmental and social benefits are highlighted in studies^[1,2,3] undertaken by Baringa, TNEI and Xero Energy on behalf of the UK and Scottish Governments.

As a responsible developer SSEN also recognise its responsibility to consider the social and economic opportunities and outcomes of its activities and is committed to maximising the local and national benefits of its investments. This has been highlighted in a recent sustainability report^[4] on the Caithness-Moray project; a project comparable to an Island reinforcement. The report evaluated the UK and Scottish economic and social opportunities and outcomes from the £1.1bn investment and the study found that the Caithness-Moray project is supporting the equivalent of over 10,000 years of employment in the UK and is providing a £640m boost to the UK Economy.

The report also looks at the positive economic influence the project has had on local businesses and jobs in the north Highlands and Moray through initiatives such as Scottish and Southern Energy's Open 4 Business platform. For example, the report highlighted that on 31 March 2016 there were 217 locally resident workers on sites within Caithness, Sutherland and Moray with spend on local accommodation estimated at £4.55m (91156 bed nights). The report findings demonstrate the significant contribution and positive impact that projects of this scale have on the local and national economy.

Industry Collaboration

SSEN has long been an active participant in efforts to establish a case for investment in links to the Scottish Islands. Most recently, SSEN has supported the work of the Scottish Island Renewables Delivery Forum, an intergovernmental working group established by the previous UK and Scottish Governments to realise the renewable energy potential of the Scottish Islands and overcome barriers to investment.

By adopting a collaborative approach through the forum it has been possible to establish a realistic timetable for reaching a coordinated financial investment decision for both the generation projects and the associated transmission infrastructure. A coordinated and realistic programme is essential for long lead time, high value infrastructure investments with dependencies on a global supply chain.

To ensure a continued coordinated approach to investment in island renewables and associated infrastructure, SSEN strongly supports the continuation of the forum following the outcome of the consultation.

Timeline for Delivery

An overview of the readiness of the proposed Island reinforcements is provided below. This position follows many years of development work to establish optimal routing, consents and technology, in consultation with affected stakeholders.

Existing timelines are based on a CfD auction which was anticipated to take place in autumn 2016 with the subsequent successful award of a CfD for island developers expected in the first quarter of 2017, for CfD delivery in the financial year 2021/22. Due to the continued uncertainty and delay in providing policy support to Island onshore wind developers, project timelines are subject to regular

review. SSEN would therefore strongly encourage Government to ensure that any timing associated with policy support for island developers coordinates with the readiness of island developers and that of the required transmission reinforcement.

Shetland

At present there is no connection between Shetland and the MITS. On Shetland today, a total of 488MW of generation is either connected or contracted to connect in the future. There are further interests from Developers of renewable energy projects of up to 204MW; a mix of onshore wind and marine energy projects. There is no spare capacity on the existing Shetland network to connect additional generation. SSEN has a detailed plan to construct a 278km 600MW HVDC link between Shetland and Caithness on the North East coast of Scotland. SSEN has the option under the current Caithness-Moray contract to appointed ABB as the principle contractor for the delivery of the Link. Subject to developer commitment and regulatory approvals, work on the Link is due to commence in December 2017 with completion scheduled for December 2021.

Western Isles

At present the existing Western Isles system operates with a restricted 132kV connection to the Scottish mainland. There is a total of 380MW of generation either connected, under construction or contracted to connect in the future. There are further interests from Developers of renewable energy projects in excess of 200MW; a mix of onshore wind, pump storage hydro and solar energy projects. There is no spare capacity on the existing Western Isles network to connect additional generation. As a consequence a higher capacity link to the Scottish mainland is proposed to facilitate export. SSEN has detailed plans to construct a 156km 600MW HVDC link between Beaulieu on the Scottish mainland (located North West of Inverness) and Arnish on the east coast of the Isle of Lewis via Dundonnell on the west coast of Scotland. SSEN is currently tendering for the Link and it is anticipated that a 'Preferred Bidder' will be appointed in April 2017. Subject to developer commitment and regulatory approvals, work on the Link is due to commence in January 2018 with completion scheduled for September 2021.

Orkney

At present there are two 33kV low voltage distribution connections between Orkney and the MITS. There is a total of 461MW generation capacity contracted for connection; 420MW of tidal energy projects. There are further interests from Developers of renewable energy projects of up to 324MW; a mix of onshore wind and marine energy projects. There is no spare capacity on the existing Orkney network to connect additional generation. As a consequence a higher capacity link to the Scottish mainland will be required to facilitate export. Recognising the uncertainty surrounding the final volume of generation (due in part to the project scale and the commercial readiness of the technology) an optioneering exercise is progressing to identify the most economic, efficient and coordinated development option for the phased connection of circa 900MW of generation. It is anticipated that the initial phase of reinforcement will be completed no earlier than 2022.

Conclusion

Due to many years of development and engagement SSEN is ready and committed to deliver the Island links. Projects have been developed for Shetland and the Western Isles and work to identify a solution for Orkney is at an advanced stage of development.

Over the last 18 - 24 months SSEN, in conjunction with Ofgem and developers, has gone to great lengths to align their respective delivery programmes so that key investment decisions are managed in an open, transparent and timely manner. This has helped to optimise the delivery programmes and reduce the risk of abortive expenditure.

It is therefore essential that there is a coordinated approach to the timing of policy support and the readiness of both island developers and the associated grid infrastructure, including the supply chain. Of particular importance is ensuring there is sufficient policy support budget available to allow the current contracted projects to progress in full. This will allow for any potential changes in the timeline for delivering the links to align with the needs of developers and the timing of policy support.

To maintain the current momentum and commitment a positive and timely decision by BEIS on the treatment of non-mainland GB onshore wind is therefore essential.

References

1. Report jointly prepared by Baringa and TNEI for the UK and Scottish Governments titled "Scottish Islands Renewable Project" dated May 2013.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/199038/Scottish_Islands_Renewable_Project_Baringa_TNEI_FINAL_Report_Publication_version_14May2013__2_.pdf
2. Report prepared by Baringa for the Scottish Government titled "Economic Opportunities of Renewable Energy for Scottish Island Communities" dated March 2016.
<http://www.gov.scot/Resource/0049/00495193.pdf>
3. Report prepared by Xero Energy for the UK and Scottish Governments titled "Scottish Islands Renewable Project – Grid Access Study" dated April 2014.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/306497/REP_1374_001_001E_Islands_grid_access.pdf
4. Report titled "Caithness Moray Transmission Project – Delivering Economic and Social Benefits" dated November 2016.
<http://www.ssen-transmission.co.uk/media/1694/caithness-moray-delivering-economic-and-social-benefits.pdf>