

James Norman
NTIMailbox@ofgem.gov.uk

8 February 2019

Dear Mr Norman

Ofgem: Orkney transmission project: Consultation on Final Needs Case and Delivery Model

Background

Orkney Islands Council (the Council) is grateful for the opportunity to respond to this consultation document. Renewable energy resources from the wind and sea in and around Orkney constitute significant concentrations of potentially exploitable renewable energy resources in the UK. The region is well placed to contribute to UK carbon reduction and renewable electricity generation targets if key regulatory barriers can be effectively addressed to facilitate deployment of renewable technologies.

The Council has invested considerable time and effort engaging with Government and regulators to ensure renewable energy generators in the Scottish islands can compete to provide renewable electricity. To support the needs case for a transmission connection, the Council is developing its own onshore wind farm(s) whereby all profit arising from the development would be reinvested in the delivery of public services.

We are grateful to Ofgem for meeting the Council and developers in Orkney, to view the proposed route of the cable and to meet and hear from SSEN, the Council and island developers. Developers were very open, providing information on their projects, their timelines, costs incurred in obtaining planning permission and a grid connection to demonstrate their commitment to project development. In doing so the Council believes that this provides compelling evidence of developer commitment, and therefore a very low risk of a stranded asset to the GB consumer.

We fully support SSEN's proposed approach to securing the necessary investment approval. We are however, concerned that despite Ofgem's minded to approve position for the transmission connection, the proposed additional conditionality Ofgem seeks may be over onerous on developers. We welcome Ofgem's willingness to take views on this matter and seek to reach a solution which works for all parties.

Please note that the Council will be submitting 2 separate responses – one as a developer and this one as the local authority for the Orkney Islands with responsibility for delivering a range of services to the local community. The following response should be considered in tandem with the local authority's response to Ofgem's consultation *SSEN Derogation request for Alternative Approach on Orkney*.

Our Council Plan identifies renewables as a top priority and sets out our ambitions to make the best use of our energy resources and opportunities, increasing grid connection with affordable charges, as a means of eradicating fuel poverty and creating opportunities for a skilled, highly trained workforce in Orkney.

Questions

Question 1: Do you agree that the current network on Orkney needs reinforcing in order to connect additional generation?

Unequivocally yes.

There is no transmission link from Orkney to the Scottish mainland connection, instead there are two 33kV submarine cables (installed in 1982 and 1998). With an annual demand between 8.7 and 33MW, and an export limit of 38MW, generation on the island was first constrained in 2003. This was when the connection capacity for distributed generation was first reached, which led to the granting of non-firm connection offers (non-compensated curtailment).

This grid constraint led to Orkney becoming a focus area for smart grid and active network management, through multiple innovations which allowed extra generation capacity to be added to the network without installing another subsea cable. The first example was an inter-tripping solution implemented by the Distribution Network Operator (DNO) Scottish Hydro Electric Power Distribution (SHEPD) in 2004, which allowed a further 20MW of capacity to connect to the network.

The current level of capacity was only made possible by the design and installation (from 2006 to 2009) of an Active Network Management (ANM) system by SHEPD and the University of Strathclyde, which unlocked the connection of a further 24.2MW of (wind) distributed generation and 5MW of microgeneration. This system monitors the flow of power around multiple points on the network, more accurately controlling generation to match the real-time available network capacity. With a large amount of generation from wind turbines, a nascent wave and tidal industry and a constraint on the amount of energy that is possible to import and export via a submarine cable to the mainland, Orkney was seen as an ideal location to trial the concept of energy storage. In 2013, a 2MW lithium ion battery was connected to the distribution grid. The trial was primarily a commercial investigation of commercial incentives to encourage an Energy Storage Provider (ESP) to locate an Energy Storage System (ESS) to manage network constraints.

Orkney currently has 77MW of generation, made up from 72MW of distributed generation and around 5MW of microgeneration. Orkney has one of the highest densities of onshore wind in the UK in part due to the uptake of micro generation. Despite these innovations, grid access remains a substantial barrier with the existing distribution grid at capacity. Curtailment levels have been many times higher than predicted in generation offers, with one (wind) generator seeing a 70% curtailment

level. There has been a moratorium on new grid connections on Orkney since September 2012.

The two existing distribution cables are near the end of their useful life. The harsh conditions of the Pentland Firth and Orkney waters has resulted in significant wear and tear on the cables, with the most recent cable break occurring at the end of January 2019. Investment in a transmission connection could improve improved security of supply for residents and lessen the risk of further curtailment.

Question 2: What are your views on the generation scenarios developed by SHE-T? We are particularly interested in views on the likelihood of wind generation progressing without subsidy support and the likelihood of tidal generation around Orkney developing to the levels predicted by SHE-T's scenarios.

GHD's new wind generation scenarios S1-S5 are a reasonable basis for assessing the need for a new transmission link to Orkney. We agree with the assessment of probable scale and timing of new renewable energy generation capacity on Orkney subject to stable policy and regulation. Much of this potential new generation is unlikely to be able to participate in the next planned Contracts for Difference (CfD) auction, secure planning consent or have financial closure by the end of 2019. However, we do not believe that the outcome of the 2019 CfD auction is likely to have a significant bearing on the first phase deployment of new onshore wind generation capacity on Orkney.

The assessment undertaken by SSEN was based on submitted applications for grid connections, however as Ofgem will be aware during a recent meeting with developers in Orkney, there are a number of schemes in development which will be sufficient to trigger the 70MW tipping point.

Orkney developers have been stuck in a catch-22 situation where they require certainty from SSEN that the network will be reinforced to allow them to connect and by Ofgem requiring certainty from developers before approving investment in any reinforcement.

The scenarios for wave and tidal cover a wide range of possible generation. As the site for the worlds first wave and tidal test site, Orkney is an ideal location to host then next phase of commercialisation of the sector. We are acutely aware of the potential of this sector to the UK's industrialisation aspirations and, subject to UK Government favourable policy support would agree with the analysis undertaken.

Question 3: What are your views on the technical design and costs of the proposed Orkney link?

The Council is not qualified to respond.

Question 4: Do you agree with our concerns that a constraints-based CBA may not robustly demonstrate the true consumer cost/benefit of a radial extension to the transmission network?

The Council does not agree with the concerns expressed by Ofgem. As part of the Needs Case submission, SSEN submitted a Cost Benefit Analysis (CBA), based on established industry standards and Ofgem guidance. This analysis identified the a 220MW (220kV) link as the most economical solution and that the breakeven threshold occurs at 70MW of new generation connections, where the lifetime costs of developing the link is equal the estimated value of constraining that generation off from the system should no link be constructed.

We note that SSEN has undertaken additional work at Ofgem's request. We are concerned that Ofgem are applying more stringent conditions of assessment for island transmission links than that undertaken for Mainland connections.

In addition, Ofgem does not appear to have given sufficient weighting to the socio-economic benefits that connecting generation could bring to the local Orkney community and wider UK benefits. The analysis indicated that, over the lifetime of the transmission asset, the economic benefit to Orkney residents could be in the range of £46m - £417m across the range of generation scenarios studied.

Question 5: What are your views on the 'additional CBA', outlined in this chapter, which has been used to sense check the results of the original constraints-based CBA?

It is not clear why there was a need for Ofgem to undertake an additional CBA given SSEN followed established industry standards and Ofgem guidance.

The Council is concerned that Ofgem's do not appear to have provided justification for the assumptions used in the CBA. The model discounts the value of benefits provided to the GB consumer from the offsetting carbon. The model assumes that all projects will require a CfD – a matter embedded generators have contested and will provide additional information and evidence to Ofgem. The model also assumes that there will be no transmission connections and hence not factored in use of system charges (TNUoS).

In conclusion the Council believes that the assumptions used in the additional CBA do not accurately reflect the costs and benefits of the transmission connection and therefore distorts the tipping point. The Council urges Ofgem to reconsider their minded to position and approve the 70MW tipping point.

**Question 6: What are your views on our proposed conditions of approval?
Specifically:**

- i. **Do you agree with our view that the information available does not demonstrate that building a 220MW connection to Orkney would be**

beneficial for GB consumers if only 70MW of generation came forward to use the link? Do you agree with our proposal to set a minimum-generation threshold of 135MW?

It is clear that in Orkney, it is not just high transmission charges that has been holding up renewable projects, but also the difficulty of satisfying the requirement for an assured critical mass of new projects. The aggregation of several medium scale onshore wind projects being developed by local companies should not be considered as an additional or higher risk. We believe that 70MW is a realistic target to trigger investment in the grid considering the number of generators that have committed considerable sums and are in the process of consenting projects.

The higher minimum-generation target recommended by Ofgem may in itself, act as a deterrent to developers who currently developing projects given it will result in greater co-dependency between developers who will all have upfront risks associated with cost and timescales required to achieve the necessary consents.

The Council is confident that if grid capacity is made available then the market will quickly respond and further onshore wind projects be developed to fill the cable. Demand for connections under the ANM scheme, and the volume of constraint that already exists on the existing network is evidence commitment to develop onshore wind on Orkney.

We are concerned that the 135MW figure proposed by Ofgem is not evidence based. This appears to be generated from the midpoint between SSEN's well-established industry best practice (70MW) and Electricity System Operator's (ESO) CBA (199MW). We therefore disagree that 135MW is required to ensure cost efficiency to GB consumers because the calculation of that figure lacks transparency.

In summary, we believe that the threshold set by Ofgem is unsubstantiated and an unachievable target within the current timescale.

ii. Do you agree that the fact of a generator signing up to SHE-T's 'Alternative Approach' does not provide an adequate level of certainty that the generator will progress to full commissioning?

No. The 'Alternative Approach' can be used to reduce risk to the consumer by allowing projects with the highest certainty to progress. Although we note that SSEN's proposal of meeting milestones within a certain timescale creates more arduous conditions for less established technologies (e.g. tidal) to progress to full commissioning, there are stronger reasons to support the Alternative Approach because it allows the least risk projects to essentially 'jump the queue' and therefore reduces the risk of stranded assets.

We believe that the 'Ready to Connect' approach should provide Ofgem with greater certainty and allow more generators to progress to full commissioning. Over the past decade, there has been extensive pre-planning and site assessment work undertaken and with the aid of the Alternative Approach, there is a very strong

likelihood that those projects can proceed. With a number of projects in the pre-planning stage, this means that if one developer drops out then there are others that can replace them.

All of the proposed island transmission links have been caught in a vicious cycle caused by mis aligned timescales. The timeline for wind farm development and build out is not aligned with the timeline to develop and build out transmission network reinforcements. This mismatch in timelines provides both developers and SSEN with additional risks. The primary risk for Orkney generation projects is that the necessary transmission reinforcement is not built. The primary risk for SSEN and the regulators is that a sufficient volume of generation will not come forward to connect.



The Alternative Approach submitted by SSEN acknowledges the timing mismatch and attempts to change the risk profile for the benefit of both the developer and GB consumer. Without such a solution, all of the island links will remain caught in this catch 22 position. Ofgem must be willing to accept that this proposal provides it with greater certainty and holds developers to commitments beyond current industry standards.

In terms of underwriting, we would support adjustment of the financial arrangements to which small independent developers on Orkney are subject. This will increase the likelihood of more of the new generation planned to come forward.

If Ofgem does not allow a temporary adjustment to securities and liabilities arrangements, the methodology for which builds in consenting risk, then there should be no additional need for the additional consent conditions to be imposed on Orkney developers.

iii. Do you agree that the award of a CfD to a generator would provide an adequate level of certainty that the generator will progress to full commissioning?

Yes, but it should not be treated as the only indicator. The awarding of a CfD would create favourable conditions for a generation project to progress to full commissioning but there are other circumstances and indicators that could provide a similar level of certainty.

In Orkney, two potential routes to market are being developed one based on an embedded connection that could be subsidy free and one based on the need for a CfD for transmission connected projects.

iv. Do you agree that, in the absence of a CfD, a generator securing planning consent and finance to construct a project is a good indicator of a project's likelihood of progressing to commissioning?

These factors are not the only indicators. These proposed conditions, taken with the generation level requirement and deadline of December 2019, are unachievable and therefore prohibitive to progress being made by developers on Orkney.

The majority of Orkney based projects are unlikely to bid for CfD for several reasons, including the challenge of trying to compete with offshore wind operating under a different transmission connection arrangements, the cost of the actual bid process for relatively small scale projects, and the potential that subsidy free will offer a more viable option. During Ofgem's recent visit to Orkney developers made this point strongly and have offered to share project specific financial information with Ofgem to evidence this point.

We strongly urge Ofgem to further consider its proposed conditions in conjunction with SSEN and Orkney developers to ensure any solution proposed works for all parties and provides Ofgem with the confidence it needs to adequately protect consumers.

If you answered no to questions (iii) and (iv) above, can you propose any alternative ways to assess, to an adequate level of certainty, whether a generation project will progress to commissioning?

Industry standard methodology for securities and liabilities already factors in the risk associated with securing planning consent. It recognises that 4 years in advance of connection projects are unlikely to have planning consent or finance in place, and the securities requirement is altered to reflect this. For developers signing up to the alternative approach and posting securities, they accept that they are liable for any costs incurred. This methodology is therefore intended to protect GB consumers.

It is our view that developers on Orkney already face considerable challenges over and above those seeking to connect on the mainland, and therefore to require additional commitment beyond that required through this standard methodology, is discriminatory and places island developers at a disadvantage.

Question 7: Do you agree with our assessment of the Orkney project against the criteria for competition?

The proposed criteria is restrictive – for radial links it is easier to establish ownership boundaries for any asset however just because it is easy to establish boundaries does not mean that competition models should not be considered for other projects. The

Council therefore requests a consistent approach in the treatment of all SWW projects.

Question 8: Do you agree with our proposal not to competitively tender the Orkney project using the SPV model or under our CATO framework unless there are significant delays to the delivery timelines?

Alternative mechanisms for funding grid infrastructure to the remote islands are possible but given the work to-date by network owners and developers we believe the current approach is the one best placed to deliver non mainland onshore wind against realistic timescales, at lowest cost to bill payers and within the boundaries of the Levy Control Framework.

Question 9: Do you agree that the Competition Proxy Model would deliver a favourable outcome for consumers relative to the existing SWW delivery arrangements?

The Council is not qualified to comment

Question 10: What are your views on the way in which we have applied project specific updates to the Competition Proxy Model methodology to account for the specific characteristics of the Orkney project?

The Council is not qualified to comment

Orkney Islands Council,
February 2019