

Shetland Transmission Project:

Ofgem Consultation on proposed Final Needs Case and Delivery Model 2020

17 June 2020

This document is the response of Renewable Energy Foundation (REF), a registered charity¹, to the Ofgem consultation relating to the Shetland Transmission Project.²

Background and Summary

REF's interest in this matter relates to the consumer cost of wind power curtailments and interconnector reliability, on which it has commented extensively (www.ref.org.uk).

In reviewing the Viking and interconnector project history and consultation documents we are concerned that there is a risk of an unconscious bias leading to a pre-determined decision despite changed circumstances. We are very far from convinced that the cost assessment is adequate, or that either the wind farm or the interconnector represent value for money for the people of Shetland or for the broader consumer population of the United Kingdom who will be required to pay for it.

Discussion

In 2019, Ofgem indicated it was “minded to approve” the transmission cable proposed by Scottish Hydro Electric – Transmission (SHE-T) – if the Viking wind power plant was given a Contract for Difference (CfD) in the 2019 round. When the project failed to receive a CfD in 2019, Ofgem immediately invited SHE-T to revise and resubmit its proposal. One wonders why? The previous decision was clear – that Ofgem judged a CfD to be an indispensable requirement for Viking. It is difficult to see why Ofgem needs to re-assess in the absence of that CfD. The public may infer that Ofgem is already minded to approve, regardless of the changed economic and financial conditions, and is seeking to justify that predetermination. The public will note that Ofgem has changed its decision criteria in a way that seems to make a positive decision more likely, notably in relation to Cost Benefit and, now, also with regard to the provision of local power in Shetland.

No consideration of a low-cost option for local distribution, such as the proposed LNG power station

The local Shetland power supply is provided by Scottish Hydro Electric Power Distribution (SHEPD). Although integrating the local power supply with a cable to mainland UK was not regarded as critical to the 2019 proposal, it is now a key part of SHE-T's rationale for approval – because SHEPD would need to contribute to the funding, to meet the Cost Benefit Analysis (CBA) threshold. The CBA assumes a claimed benefit from providing the Shetland local power supply by using intermittent power from the Viking wind farm and other local renewables, supported by a reverse flow of power through the proposed interconnector to Shetland when local uncontrollable generation is inadequate.

This complex and therefore expensive and hazardous option is offered instead of the much simpler reliable alternative of a gas-fired power station. However, as the consultation document states, even

¹ The Renewable Energy Foundation is a registered charity England and Wales (1107360)

² <https://www.ofgem.gov.uk/publications-and-updates/shetland-transmission-project-consultation-proposed-final-needs-case-and-delivery-model>

“SHEPD has confirmed that it would (need to) secure backup solutions to provide security of supply for link outages, and that this would be required irrespective of whether a distribution or transmission link proceeds”.

It would therefore seem that the whole Cost Benefit Analysis now hangs on the *shoogly peg* of the benefits of the inter-connector to local supply as a back-up should renewable energy be the only local supply. This is despite the dramatic renewable capacity envisaged for the islands. This is also despite the acknowledgement that some non-renewable source of power supply would still be needed on Shetland as a back-up in the event of cable failure.

In our view it is a failure of due diligence on Ofgem’s part not to have considered a low-cost supply for local power, as an alternative to the wind + interconnector scheme. In this context we note with alarm the fact that in its 2018 assessment the Electricity System Operator (ESO) ominously washed its hands of any responsibility for the net economic effects of the interconnector:

“It is important to note that this report does not assess whether a connection to the islands is in the economic interest of the GB consumer and only compares the economic benefit of each connection option relative to each other.”

We also note that Ofgem does not appear to have made any assessment of the economic, social and environmental benefit or disbenefit for the local area and population.

Interconnector reliability

All parties, including Ofgem, should acknowledge that a guarantee of very high levels of interconnector reliability is a pre-requisite for any decision to approve the project, not least because the capacity envisaged is sufficiently large that any failure would have a serious knock-on effect further south in the grid system, with important implications for consumer cost and security of supply. Yet the performance of the Hunterston-Deeside Western Link – the late delivery and poor track record of which Ofgem will know well – suggests that no guarantee of reliability can be plausible. International experience of HVDC confirms this; in spite of being a well-established technology, every HVDC project presents unique engineering difficulties which can sometimes be very difficult to resolve.

Despite the large scale of the wind farms envisaged in Shetland, they would not offer a reliable supply, and an alternative source of supply would be required in order to provide reasonable guarantees of service. However, due to the almost complete redaction of financial information in the relevant documents it is impossible to determine whether Ofgem has given appropriate consideration to the consumer cost of securing supply.

Cost to the nation of rapidly increasing constraint payments and other subsidies

Constraints payments, or more properly curtailment payments, to many wind farms in the far north of the UK mainland have escalated rapidly since they began in 2010. Constraints payments to Scottish wind farms from 2010 to June 2020 amounted to £780 million, and the payments to date (17 June) this year come to £118 million. Payments are clearly spiralling out of control, and it is to be suspected that wind farms in Shetland would benefit hugely if they were permitted to bid for curtailment compensation. Since this is an entirely foreseeable risk, Ofgem has a statutory duty to protect the consumer interest by ensuring that any such curtailment payments are limited or prevented altogether through a price control or other clause embedded in a Licence Condition.

Environmental duty

Time and again, Ofgem have made the excuse that it is not part of its role to assess the overall value to national interest of a particular plan put forward by a Transmission Operator (TO). Ofgem states that it is merely considering the different options presented by a TO (which is a self-interested party). Ofgem,

like National Grid (see above), in effect washes its hands of responsibility for any negative outcomes by interpreting its remit as narrowly as possible.

However, we note that Ofgem does have an environmental duty which does not appear to us to have been satisfactorily addressed in the current decision-making. Both wind farm and transmission cable have significant negative environmental impacts, and the presence of both is required if there are to be any compensating benefits. The transmission cable is worthless unless the Viking Energy wind farm is constructed; the Viking wind farm is worthless without the transmission cable, and both require substantial grid reinforcement down into Scotland and perhaps beyond, entailing further negative environmental impacts. Far from being only a local, Shetland matter, this is in fact a project with costs and environmental implications that are of national significance.

We suggest that *Ofgem has a duty to consider national environmental (and economic) disbenefits as well as benefits.*

Conflict of interests and monopoly

The way this collection of applications for generation, distribution and transmission in Shetland has been put forward to regulatory agencies, and the way in which they are being considered, will seem to many members of the public to be an abuse of a monopoly situation. Perhaps a referral to the Competition and Markets Authority (CMA) would be appropriate. Viking wind farm is, to all intents and purposes, owned by Scottish and Southern Energy (SSE). SHE-T is also owned by SSE. Lerwick Power Station is owned by SHEPD which is also owned by SSE. So it is unsurprising that the “alternatives” to this interconnector being considered in this consultation, which are SHE-T’s proposed alternatives, do not include a local LNG power plant – as that is a proposal from a rival energy consortium. Should the LNG plant be constructed, the needs of Shetland and its people would be immediately met at low cost, and a decision on an inter-connector could be deferred, with a substantial saving to the consumer. Given the very difficult circumstances faced by the United Kingdom post-Covid-19, with low power demand and a deep recession for some time to come, it seems to us that a rapid decision on the Viking wind farm and its interconnector is not in the public interest. **Indeed, we judge that deferral is the least regret option, both economically and environmentally.**

Consultation questions

Question 1: What are your views on the generation scenarios developed and updated by SHE-T? We are particularly interested in views on the likelihood of wind generation on the Shetland Isles developing to the levels predicted by SHE-T’s scenarios and any further changes or updates since SHE-T’s October 2018 Final Needs Case submission that you think should also be considered.

There are many complex problems – e.g. outstanding planning issues and the unsuitability of the Shetland roads for the construction traffic – associated with the major generation proposals in Shetland, and the completion of these projects is uncertain. Although the load factor of Shetland wind power would be higher than the average on the UK mainland, there will still be periods when wind speed is low and total output from the wind turbines is not sufficient to meet demand on the Shetland Islands, meaning that an alternative source of energy will be needed to secure supply.

Question 2: What are your views on the demand sensitivity explored by SHE-T?

SHE-T appears to have explored the range which suits its parent company, SSE, while other perspectives are ignored.

Question 3: What are your views on the link options considered by SHE-T? We are also interested in views on the options proposed by SHE-T to mitigate against the risks of a second link being needed.

As stated in our preamble to these responses, REF's view is that there is no economic or social justification for any link to the mainland at this time.

Question 4: What are your views on the technical design and costs of the proposed Shetland link?

REF does not have the capacity to assess this in detail, as stated above, but our observations of long sub-sea cable links, such as the Hunterston-Deeside Western Link, casts grave doubt on the reliability of this option.

Question 5: What are your views on the CBA put forward by the ESO?

The extensive redaction regarding the costs in the CBA and other related documents, not to mention their late release, one week before deadline, makes a meaningful assessment impossible. We protest at both late release and redaction. This is unworthy of a public regulator.

Question 6: What are your views on other approaches we have taken to assess the costs and benefits to GB consumers?

REF sees no evidence that Ofgem has in fact fully explored the costs and benefits or disbenefits to the GB consumers.

Question 7: What are your views on our minded-to position to conditionally approve the revised Final Needs Case? Specifically:

- i) Do you agree with our proposal to approve a 600MW link subject to Ofgem being satisfied, by the end of 2020, that Viking Energy Wind Farm is likely to go ahead? **No**.
- ii) Do you have any views on the type of evidence we should expect to see that would confirm that Viking Energy Wind Farm is likely to go ahead? REF has stated above the deficits we see in Ofgem's analysis.
- iii) Do you agree with the factors we have considered to reach our minded-to position? **No**, see full response above.
- iv) Are there any other factors that you consider we should take into account when assessing this proposal? **Yes**, see full response.

Q8 and 9 – no comment.