

F.A.O. James Norman

FROM: B F Aeolian Ltd

Dear Sir,

**Shetland transmission project: Consultation response on the final needs case and delivery model.**

We note that Ofgem "particularly welcomes responses from generators and local stakeholders on Shetland."

This company is a shareholder in the Energy Isles wind project on the island of Yell, and are most concerned that Ofgem are minded to approve a 600 Mw. link from the Shetland Mainland to Scotland. Given the current situation where existing and planned generators total just over 800 Mw - even a 800 Mw connector is now insufficient. We strongly believe that the case for a 1 Gw. connection is clearly not just desirable but in all parties' best interest. Firstly it means that all existing projects will be able to be accommodated. Secondly the per MW cost of £797 is significantly lower than the 600MW cable's of £1,182. Thirdly it will provide a buffer - albeit not an overly large one - to allow for future growth and diversification - tidal power (Shetland has several strong tidal streams) and floating wind, for example. And, fourthly, the lower Transmission Use of System Charges will help ensure that Shetland's generation is more competitive. Given the foregoing we feel Ofgem should ask SHETL to progress the development of the cable options and accelerate the delivery dates. Ofgem should also consider the results of this year's CfD auction, particularly the contract for Viking Windfarm, together with any other relevant new information and make the final needs case decision later this year. As already indicated, we believe this decision should be for a 1 GW link.

**Q.1 Do you agree that the current network on the Shetland Isles needs reinforcing in order to connect additional generation?**

Emphatically Yes. Shetland has never had a link to the British Mainland and this has resulted in a first class renewable energy potential source being unavailable outwith Shetland while limiting existing generator's production and denying would-be generators entry.

While Shetland has a strong potential in Renewable Energy this potential from Britain's windiest area (which also happens to have many potential quality sites for tidal energy), remains unexploited. Shetland has looked on powerless over the last several years as the renewable energy industry has built wind farms on sites which have been producing little more than half the yields of the relative handful of turbines currently erected in the islands.

There is an imperative to reduce carbon emissions worldwide. Shetland has a very high carbon footprint - due largely to three factors:- having hosted the largest oil terminal in Europe for nigh on half a century; having diesel - generated electricity for even longer; having the highest vehicle per head of population for many, if not all, of these years. The grid connection with Scotland would potentially eliminate that particular carbon source and the potential of a Norwegian connection would eliminate the need for a spinning reserve if it were realised. The other two sectors will diminish over time as electric and hydrogen vehicles and ships enter the scene and the oil terminal eventually closes. The longest journey starts with the first step .....

## **Q.2 What are your views on the generation scenarios developed by SHE-T?**

They are unrealistically low:-

They don't include any reference to other sources of generation - nor do they mention future interconnection possibilities.

Their largest scenario is 742 MW. - the present situation, as mentioned above, totals 801 MW. Allowing for the various stages of consents through to project completions we anticipate the 801 MW to be operational in 2025 - and the 199 MW spare capacity of a 1 GW connector we would fully expect to be utilised within a very short time frame - given that in the nine years from 2009 to 2018 renewable generation in the UK grew by an annual rate of 18% and in the Net-Zero report a doubling of UK electricity demand and a four-fold increase in low carbon generation by 2050 is predicted- with the potential for UK onshore wind stated to be between 26 to 96 GW. We very much want to have the opportunity to take part in this expansion.

They also don't consider the Scottish Governments commitment to becoming carbon neutral by 2040 - nor the April 2019 BEIS Energy and Emissions Report - which shows that the UK is not on target to meet the 4th and 5th carbon budgets.

## **Q3 What are your views on SHE-T's approach to optioneering, are there other options that SHE-T should have considered?**

SHE-T has concentrated on the development of its proposed 600 MW option with less effort on other options. Had they have given equal effort on building a larger link they would have been able to show that an 800 MW link costs only 6% more than a 600 MW - yet delivers 33% more capacity i.e.26% more cost effective than 600 MW. Similarly with the 1 GW link. - which costs 12% more than 600 MW - yet delivers 66% more capacity - i.e. 48% more cost effective than 600 MW.

The above illustration is reflected in lower Transmission Use of System charges - which would ensure that generation in Shetland will be more competitive and this will surely assist the other 'green' technologies in penetrating the sector.

We do not believe that it need take until late 2025 to deliver bigger links and we would welcome intervention by Ofgem as a matter of urgency instructing SHE-T to restart developing the two larger options with the supply chain. We are further most concerned that there is a suggestion that transmission charges could apply in the future to distributed generation. This would severely impact existing generators in Shetland - making it absolutely imperative that the most cost-effective link be built so as to minimise the effect of these charges should they be imposed.

#### **Q.4 What are your views on the CBA put forward by the ESO?**

With regard to their statement that building a link to connect the project to the mainland "will be in the interests of consumers" we would reiterate that a substantially more cost-efficient 1GW connection would be even more in the interest of consumers.- as detailed in the GHD report - and Energy Isles have calculated that "the increased benefit to the Shetland economy from fully utilised HVDC links for 800 MW as £64 m and for 1 GW as £133 m on top of the benefits of £143 m to £257 m for the 600 MW option." E.I. go on to conclude that "Shetland therefore has a very significant interest in the decision and stakeholders in Shetland should have a say to ensure the economic potential in Shetland is considered in this decision." We wholly concur.

Regarding the ESO LWR analysis:-

Further to our argument supporting a 1GW connection we note that the highest generation scenario in the analysis is 742 MW. As previously stated the current position of present generation added to the present positions of approve applications, submitted applications etc. totals 801 MW. - therefore the modelling using 742 MW is already surpassed - making a wider scenario of options and calculations, including the 1 GW option we currently favour, necessary.

#### **Q.5 What are your views on the technical design and costs of the proposed Shetland link?**

By whatever means, the construction and installation of the link must not endanger the projects presently 'in the pipeline.'  
It is, therefore, imperative that the scenario that delivers the lowest cost per unit of capacity be determined and duly installed. Given the fore-going narrative this would surely result in the 1 GW scenario.

#### **Q.6 What are your views on our minded-to position to conditionally approve the Needs Case? Specifically do you agree with our proposal to approve a 600MW link if Viking Energy Wind Farm secures a CfD in 2019?**

We do not agree. As per the foregoing we believe that the !GW installation offers the best value for money. SHE-T needs to develop the

larger-sized options, and quickly - allowing a decision to be made once the CfD results are known in quarter four of this year.

**Q.8 Do you agree with our proposal not to competitively tender the Shetland project using the SPV mode or under our CATO framework unless there are significant delays to the delivery timelines?**

Unless there is a genuinely compelling reason why the project should not go out to competitive tender it would seem that the project is of sufficient scale to attract more than one tender-thereby delivering the most effective result. If, however, SHE-T are in a monopoly position and this can't be reversed then they will have to be seen to be delivering the project effectively as if they were an independent contractor - and be subjected to knowledgeable scrutiny to ensure that they do.

Yours sincerely,