

Ofgem  
9 Millbank  
London  
SW1P 3GE

Email to: [NTIMailbox@ofgem.gov.uk](mailto:NTIMailbox@ofgem.gov.uk)

31 May 2019

## **Western Isles Final Needs Case and Delivery Model**

EDF Energy is one of the UK's largest energy companies with activities throughout the energy chain. Our interests include nuclear, coal and gas-fired electricity generation, renewables, storage, and energy supply to end users. We have five million electricity and gas customer accounts in the UK, including residential and business users.

We welcome the opportunity to respond to this important consultation. The Western Isles grid link is critical to the success of our own wind farm development (Lewis Wind Power) and more generally to the opening up of the Western Isles to larger-scale development of community renewables.

We believe that Ofgem should approve the development of a larger 600MW cable to the Western Isles if this is contingent on the successful development of the two anchor projects, Stornoway and Uisenis. This is consistent with the conclusion reached by the ESO in their assessment<sup>1</sup> along with SHET's own view and their consultant's analysis. Overall we believe that consumers can be adequately protected if the 600MW cable is developed as set out below<sup>2</sup>.

We recognise that a decision to support a 600MW cable should be contingent on both the Stornoway and Uisenis projects proceeding. We therefore would understand if Ofgem chose to delay their final decision on Needs Case until after the CfD auction when there is clarity on outcome and more certainty on the likely level of generation that will initially use the cable. A short delay to this final decision will mean that all stakeholders and Ofgem will be in a clearer position and is likely to better protect consumers.

We provide further points below to support this view, and in the Annex to this letter which responds to Ofgem's consultation questions.

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<sup>1</sup> ESO CBA report 29 August 2018 p22

<sup>2</sup> In addition to the points made in this letter we note SHET's 'Western Isles Needs Case – Update' press release 22 May 2019. We have not seen supporting detail but this proposal may also be helpful in protecting consumers from the development of the 600MW cable.

## Case for 600MW cable

The Western Isles cost benefit assessment makes clear that it is in consumers' interests to invest in a grid link rather than not, i.e. the investment in a 600MW cable would provide a positive return to consumers under the range of generation scenarios.

We have consistently argued that the 600MW cable link provides the greatest chance of delivering new renewables to the island. As recognised in the consultation a smaller 450MW cable increases the risk that anchor projects, like ours, are unsuccessful in the forthcoming CfD auction stifling any island development.

Ofgem argue that a larger cable will expose consumers to too much risk and stranded cost. We agree that the right balance must be struck to facilitate investment in low carbon generation while protecting consumers. At this stage we consider that Ofgem's cost benefit assessment overestimates the risks of a larger cable. In particular:

### 1) Grid Cancellation Charges

Grid cancellation liabilities mean that developers such as LWP will be required to pay material cancellation charges to the ESO in the event of a reduction of our Transmission Entry Capacity. This ensures that consumers have some protection against reductions in known generation capacities.

The ESO's cost benefit assessment for Western Isles offsets the construction and operational costs of different sized transmission links against constraint costs relieved under different generation scenarios. It does not take into account the protection consumers are afforded from cancellation charges.

As an example, the 'Steady State' generation scenario assumes that at least one of the anchor projects is not developed, i.e. total generation is only 222MW. Should either of the anchor projects (Stornoway or Uisenis) not proceed once there has been commitment to the cable then either developer would be liable for cancellation costs of 10s £ms<sup>3</sup>. We do not believe that this consumer protection is included in the assessment and it is material enough to have an effect on the least worst regrets assessment which determines the optimal cable size.

### 2) Lower Capex

Ofgem's initial views on efficient cable costs are significantly lower (~40%) than those assumed by SHETL/ESO in the cost benefit assessment. While we note that Ofgem have not undertaken their detailed cost assessment process (Project Assessment) with SHETL, the scale of the difference of view is material enough to have an effect on the least worst regrets assessment which determines the optimal cable size. Lower capex will reduce consumer risks from a larger cable.

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<sup>3</sup> These vary depending on timing of cancellation of TEC: as transmission works progress and costs increase so to do developer liabilities.

### 3) Island wind load factors

We note that the cost benefit assessment assumes a wind load factor of 43% on the Western Isles. Our assessment is that higher load factors are likely to be achievable, nearer to 47-48% on the island, through the deployment of larger and new turbine technologies. Again this will help to mitigate consumer risks from a larger cable.

While we have not been able to model these effects on the cost benefit assessment undertaken it is clear that they collectively would reduce consumer risk of developing a 600MW cable.

#### **Significant grid cost uncertainty**

As noted above, there is still a very material degree of uncertainty over the ultimate cost of the grid link. Grid costs are a very large part of our overall windfarm project costs. This creates material uncertainty for us in preparing for this summer's CfD auction. For instance if Ofgem's initial view on capex was realised this could reduce our bid by as much as £8/MWh (very material in the context of administered strike prices of £53/MWh<sup>4</sup>). If realised, and known in advance of the CfD auction, it could reduce costs for consumers in the auction.

We understand that Ofgem will not be proceeding with the Project Assessment until after CfD auction outcome. Given this, we urge Ofgem to work with island developers and SHETL to help provide as much certainty as possible on likely cable costs in the available time before the CfD auction.

#### **Next steps**

We would understand if Ofgem sought to delay its final decision on the Needs Case until the outcome of the CfD auction is known. This will provide greater certainty on likely generation developments on the island which underpin the grid link, allow more time to get greater confidence on grid costs, and provide a clearer basis on which parties could provide further consumer protection if considered necessary.

In the meantime, we urge Ofgem and SHETL to continue to work collaboratively with island developers on the cable capex costs.

More generally we think that there are lessons that can be learnt in the case of island wind from the alignment of Ofgem's processes to deliver transmission infrastructure (Strategic Wider Works) and deployment of renewable generation through the CfD process to support decarbonisation of the energy system. This is in contrast with the

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<sup>4</sup> CfD Auction Round 3 administrative strike prices for Offshore Wind (2024/25); Remote Island Wind set at £82/MWh  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/798885/Final\\_Budget\\_Notice\\_AR3.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/798885/Final_Budget_Notice_AR3.pdf)

experience for Offshore wind development where developers are entitled to procure and build their own grid connection enabling much greater degree of cost certainty and which is not contingent on the successful outcome of other parties in the auction. Further alignment between network investment and renewable deployment will be in consumers' interests.

Should you wish to discuss any of the issues raised in our response or have any queries, please contact Mark Cox on 0208 1861460 or myself. I confirm that this letter may be published on Ofgem's website.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Angela Hepworth".

**Angela Hepworth**  
**Corporate Policy & Regulation Director**

## **Annex: Questions**

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

Yes. The scale of generation expected to connect to the Western Isles under the range of scenarios will require significant transmission reinforcement. The alternative of constraining generation far outweighs the cost of transmission reinforcement.

### **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 on the Western Isles developing to the levels predicted by SHE-T's scenarios.**

We consider that the ranges of generation scenarios proposed by SHE-T are reasonable. While we agree that the development of generation beyond that currently contracted (~420MW) is uncertain, delivery of the transmission grid link, facilitated by larger anchor wind projects, will enable smaller and community based projects to come forward. The Western Isles has an excellent wind resource and, with the high level of support from both the local community and local council, it is likely to continue to be an attractive place for wind development.

### **Question 3: What are your views on SHE-T's approach to optioneering, specifically relating to the routes and link capacities considered, and are there other options that SHE-T could have considered?**

The options considered by SHE-T provide a reasonable basis to assess the Needs Case. We believe that the 600MW cable provides the greatest chance of delivering new renewables to the island. As recognised in the consultation a smaller 450MW cable increases the risk that anchor projects, like ours, are unsuccessful in the forthcoming CfD auction stifling any island development.

### **Question 4: What are your views on the CBA put forward by the ESO, particularly in relation to the results it produces?**

We consider that the cost benefit assessment overestimates the risks of a larger cable. In particular:

#### **1) Cancellation Charges**

Due to the nature of grid cancellation liabilities, developers such as LWP will be required to pay material cancellation charges to the ESO in the event of a reduction of our Transmission Entry Capacity. The ESO's cost benefit assessment offsets the construction and operational costs of different sized transmission links against constraint costs relieved under different generation scenarios. It does not take into account the protection consumers are afforded from cancellation charges.

As an example the 'Steady State' generation scenario assumes that at least one anchor project is not developed, i.e. total generation only 222MW. If this were the case then LWP would have to pay cancellation costs of 10s £ms<sup>5</sup>. We do not believe that this consumer protection is included in the assessment and is material enough to have an effect on the least worst regrets assessment which determines the optimal cable size.

## 2) Lower Capex

Ofgem's initial views on efficient cable costs are significantly lower (~40%) than those assumed by SHETL/ESO in the costs benefit assessment. While we note that Ofgem have not undertaken their detailed cost assessment process (Project Assessment) with SHETL, the scale of the difference of view is material enough to have an effect on the least worst regrets assessment which determines the optimal cable size. Lower capex will reduce consumer risks from larger cable which has not been factored into the CBA.

## 3) Island wind load factors

We note that the cost benefit assessment assumes a wind load factor of 43% on Western Isles. Our assessment is that higher load factors are likely to be achievable, nearer to 47-48% on the island, due to larger and new turbine technologies. Again this will help to mitigate consumer risks from a larger cable.

While we have not been able to model these effects on the cost benefit assessment undertaken it is clear that they collectively could reduce consumer risk of developing a 600MW cable.

We agree that both the Uisenis and Stornoway projects need to proceed to support the case for the 600MW cable.

### **Question 5: What are your views on the technical design and costs of the proposed Western Isles link?**

Our assessment of the technical design is that it is reasonable at a high level. The costs of the link, and Ofgem's view on these, create material uncertainty to our project development. The scale of difference could amount to ~£8/MWh on our bid price in the imminent CfD auction. This is very material in the context of administered strike prices of £53/MWh<sup>6</sup>.

<sup>5</sup> These vary depending on timing of cancellation of TEC: as transmission works progress and costs increase so to do developer liabilities.

<sup>6</sup> CfD Auction Round 3 administrative strike prices for Offshore Wind (2024/25); Remote Island Wind set at £82/MWh  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/798885/Final\\_Budget\\_Notice\\_AR3.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/798885/Final_Budget_Notice_AR3.pdf)

While we understand that Ofgem will not be proceeding with the Project Assessment until after CfD auction outcome, we urge Ofgem to work with island developers and SHETL to help provide as much certainty as possible in the available time before the CfD auction. We believe this is in the interests of consumers.

**Question 6: What are your views on the following points:**

- i. **Do you agree with our minded-to position to reject the 600MW link conditional on only the two Lewis Wind Power projects securing CfDs?**
- ii. **What are your views on our analysis of the information, which suggests a 450MW link would represent the best outcome for existing and future consumers if only the two LWP projects secure CfDs?**
- iii. **Do you consider that consumers could be appropriately protected from the costs of funding a potentially significantly oversized link if we were to approve the needs case for a 600MW link? If so, how could this be achieved?**

As noted above we believe that there are good arguments to support the development of a 600MW link if this is contingent on the successful development of the two anchor projects, Stornoway and Uisenis. Assuming a slight delay to Ofgem's final decision does not jeopardise delivery timescales we would support Ofgem taking a final decision on the link size after the outcomes of the CfD auction are known. This will increase certainty and likely to be in consumers' interest.

We believe that consumers can be appropriately protected from the costs of funding the 600MW cable. Notwithstanding the points made above about the case for the 600MW cable, further contributions / securitisation of the additional costs could be taken on by the island developers (and other stakeholders) to mitigate consumers' risks if higher levels of generation do not come forward. Given the level of uncertainty at this stage though, we do not believe it is possible for developers to offer anything firm. We also note the proposal<sup>7</sup> by SHET designed to protect consumers against the risks Ofgem have identified from the development of the larger cable.

Finally, if Ofgem decide that they will only support the 450MW cable, we do not agree that this should be contingent on both anchor projects (Stornoway and Uisenis) securing CfDs. We do not agree that the analysis supports this view and it is likely that consumers' interests would be appropriately safeguarded at a lower level of conditionality.

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

Yes, the Western Isles project meets the criteria for competition set by Ofgem. However, this assumes that the consumer benefits can be realised and this will be contingent on

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<sup>7</sup> 'Western Isles Needs Case – Update' SHET press release 22 May 2019.

ensuing that, by adopting this new approach to funding, it does not delay the connection of the island generation.

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

Yes. There is limited time to adopt these innovative delivery models in this case.

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

We agree, based on Ofgem's modelling, that the Competition Proxy Model is likely to lower costs for consumers for the delivery of the transmission link. The absolute numbers will be affected by final decisions on capex and network charging arrangements in addition to final decisions on funding allowances.

**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 Western Isles project?**

Adjustments to reflect the likely construction periods appear reasonable.