

# SHETLAND TRANSMISSION PROJECT

## Consultation on proposed Final Needs Case and Delivery Model

OGUK is the leading representative organisation for the UK offshore oil and gas industry. Our membership includes around 400 organisations with an interest in the UK's upstream oil and gas sector. As the champions of industry, we work on behalf of the sector and our members to inform understanding with facts and evidence, engage on a range of key issues and support the broader value of this industry in a changing energy landscape. From exploration through to decommissioning and located across the length and breadth of the UK, our members are critical to safely providing security of energy supply, while supporting around 270,000 jobs and contributing billions of pounds to the economy each year.

Oil and gas companies increasingly investing into alternative technologies especially offshore. For example, the up to 3.6GW Dogger Bank facility is being developed by Equinor and SSE, both of which have oil and gas interests or affiliates. Many of our members are supply chain companies with offshore expertise who are also involved with development of wind projects. Finally, electricity consumption from offshore oil and gas facilities is significant at around 24TWh per annum, most of which is produced from on-site generation.<sup>1</sup> With the correct economic conditions, some of these needs could be served from renewables or through wider grid connection, reducing the carbon intensity of UK oil and gas production and helping preserve the future of the basin during the transition to a carbon neutral economy.

As discussed in the consultation document, the area West of Shetland is an important area of ongoing production and development of offshore oil and gas. Increasingly, business will need to reduce emissions from oil and gas production in order to align with the UK and Scottish governments' carbon budgets and the objective of a net zero economy. The oil and gas sector recently announced its intention to reduce total emissions by 50% by 2030.<sup>2</sup> Connecting production facilities to both renewable production and the onshore transmission networks are a key element for achieving emission reductions since, currently, oil and gas assets have their own dedicated power facilities which are significantly more emission intensive.

OGUK therefore supports the development of the link between Shetland and mainland Scotland to both serve the needs of local residents and potentially allow for some oil and gas facilities to connect to wider electricity networks. On balance, the case made for the 600MW link is the most convincing and will provide the best value for money in terms of resilience and serving the needs of residential and business consumers (including production facilities and potentially Sullom Voe terminal).

With respect to the delivery model, OGUK generally favours the move to more anticipatory investment in infrastructure across the entire energy sector as set out in Ofgem Decarbonisation Action Plan and the joint regulators energy integration project being led by the Oil and Gas Authority. Ofgem should consider using the ESO process more widely to promote integrated offshore networks through the annual network options assessment (NOA).

**OGUK**  
**June 2020**

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<sup>1</sup> <https://www.ogauthority.co.uk/media/6257/ukcs-energy-integration-interim-findings.pdf>

<sup>2</sup> <https://oilandgasuk.co.uk/uk-offshore-oil-and-gas-industry-outlines-plan-to-cut-emissions-as-talks-on-transformational-sector-deal-formally-begin/>

## Final Needs Case Assessment – Inputs and Assumptions

*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.*

The generation scenarios development by SHE-T are reasonable and are reflective of government policy to further decarbonise electricity production. Significant expansions in both offshore and onshore wind are expected in order to achieve 30GW wind by 2030 and a 75+GW by 2050. Similarly the likely closure of Lerwick power station as a result of IED, alongside the more progressive phasing out much unabated fossil fuel generation suggests that connection of the island to maintain grid connection is a sensible least regrets option for both the zero carbon objective and the interests of local consumers in terms of reliable supply.

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

UK oil and gas production will progressively reduce its carbon dioxide emissions in line with the CCC recommendations and the government's overarching net zero objective. The sector has already made a firm commitment to reduce aggregate GHG emissions by 50% between now and 2030 via a combination of operational improvement, investment and the replacement of decommissioned assets with very low emission new development.

The West of Shetland is a key focus for electrification of both existing and new oil and gas production assets. Depending on the time frame in question, a peak demand assumption of 200MW is, if anything, a relatively conservative estimate corresponding to a maximum annual demand of less than 2TWh. There may also be scope to connect terminals and processing plants such as Sullom Voe. However, in the circumstances such an assumption is prudent given the various uncertainties around production levels and overall economic conditions. To the extent that demand from oil and gas facilities is higher this could be helpful in terms of reducing the need for a second link if larger amounts of wind production are connected.

However, connecting oil and gas facilities to the main transmission network will only be economic if the conditions are right in terms of network charges, electricity prices and reliability. One of the important barriers are the impact of levies on end users relating to legacy schemes to support previous rounds of renewable projects, wider energy efficiency obligations on suppliers, and the application of other network charges to potential offshore electricity users.

*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 noted above, the proposals for a 600MW connection strikes an appropriate balance between initial costs and reducing the chance of a second link being needed. There are various strategies to mitigate against these risks and to reduce the potential costs of managing constraints. During the next decade additional flexibility options and wider technical applications such a battery storage or hydrogen production are likely to emerge reducing the likelihood of a second link being needed in most circumstances.

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

Without reviewing the exact detail of the project and its specification, the estimated £600m cost of the project appears to be reasonable and roughly comparable, although somewhat higher than, similar projects such as Britned.<sup>3</sup>

The fact that the connection is a single cable may also require back-up solutions for offshore oil and gas facilities as well as for domestic customers on Shetland and this may affect the feasibility of further connections to those facilities and the eventual level of demand from oil and gas production. When moving towards final approval of the scheme and associated design and costs, the option of considering a dual cable specification should be retained if possible.

### **Final Needs Case Assessment – CBA and Methodology**

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

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

The ESO analysis based on “least worst regrets” is not conclusive and, as noted in the consultation, there is a fine judgement to be made between 450MW and a 600MW link. The case for a 450MW is stronger, the larger the amounts of oil and gas facility demand.

As noted above, although 200MW may turn out eventually to be a conservative assessment in this respect, there are still a number of uncertainties related to the economics of connecting production facilities and the relative costs and benefits of grid supply against independent production. Taking this into account, as well as the emerging view in support of anticipatory investment in infrastructure, the 600MW link seems to be the most sensible conclusion from the CBA.

Larger connections appear uneconomic and, furthermore, the cost of delay required with respect to development consent means these are less suitable options for a decision at the current point in time.

### **Minded-to view on the revised Final Needs Case, including proposed conditions for approval**

*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?*
- 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?*

OGUK agrees with the proposal to approve the 600MW link. The end 2020 deadline may need to be extended given the current COVID situation. The proposals set out in the consultation in terms of FID decision appear appropriate.

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<sup>3</sup> Britned: 1000MW dual cable connection, 260km, £600m constructed in 2009-10. <https://www.britned.com/more-facts-and-figures/>

- iii. *Do you agree with the factors we have considered to reach our minded-to position?*
- iv. *Are there any other factors that you consider we should take into account when assessing this proposal?*

The consultation covers all the relevant factors in arriving at the proposal.

## **5. Delivery Model**

*Question 8: Do you agree with the findings of our analysis?*

The analysis sets out clearly that recent CMA appeal decisions have reduced the differential between rates of return of projects funded through normal RIIO2 price controls and those from the CPM process. This is a significant development that could have consequences for a wide range of infrastructure investment projects across both electricity and gas and could mean that the logic for separate processes such as CPM and OFTOs is diminishing.

*Question 9: Are there any additional factors that we should consider as part of our analysis and/or decision on whether to apply the CPM for the Shetland transmission project?*

Ofgem's Decarbonisation Action Plan set out a convincing case for anticipatory investment in infrastructure and this will become increasingly important for offshore network connections, vehicle charging infrastructure and the expansion in the use of Hydrogen with the associated upgrades needed to transmission, distribution and storage networks.