

8th September 2021

Ofgem
10 South Colonnade
Canary Wharf
London
E14 4PU

Dear Sirs,

Offshore Transmission Network Review (OTNR) consultation response

We refer to the Offshore Transmission Network Review Consultation issued by Ofgem and BEIS and would like to provide a response. Kellas Midstream Limited ("Kellas") is an independent midstream infrastructure company, owned by private equity investors BlackRock and GIC. Kellas has been an active investor in the UKCS for around 6 years and during that time has built a portfolio of significant interests in the Central North Sea and the Southern North Sea, transporting around 40% of total UKCS domestic gas by the end of 2021. In 2018 Kellas, as part of the Tolmount Infrastructure Partnership, won an MER UK Award, sponsored by the Oil & Gas Authority (OGA), in recognition of the unique and innovative partnership formed with Premier Oil and Dana Petroleum to enable the development of the Tolmount gas field. Tolmount is one of the largest undeveloped Southern North Sea gas fields to be discovered in recent years.

We have the ambition and capability to grow our business and are committed to Maximizing Economic Recovery (MER) and to facilitating the energy transition through investment in new business opportunities around Net Zero. De-carbonisation of the North Sea assets will significantly improve the carbon intensity of oil and gas production and make UK oil and gas far preferable to imported oil and gas. Even the most optimistic forecasts agree that the UK will require significant oil and gas consumption for the next 30 years. It seems to us better that this is as low carbon as possible and that as much of it is UK sourced as possible.

Over the last 18 months Kellas has been working with ABB and Aker Solutions to develop schemes to electrify offshore oil and gas assets in support of the industry desire to reduce CO2 emissions from offshore power generation. In our work we've looked at numerous different infrastructure options to provide power to offshore users considering power from UK mainland, power from offshore wind farms and combinations of both.

The general attributes of these schemes are:

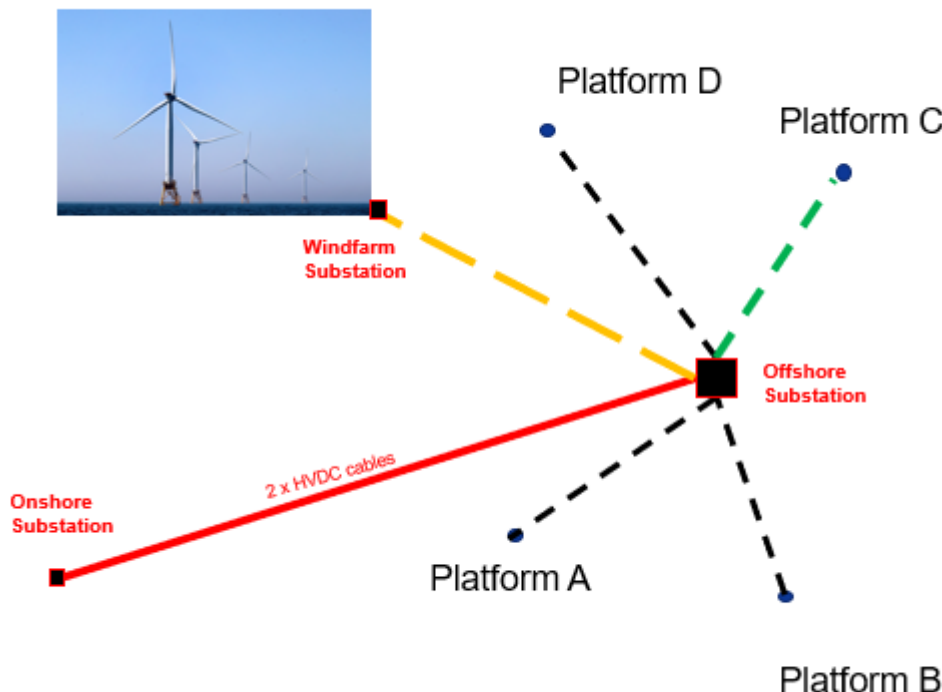
- commercially extremely complex as we are supplying power to multiple offshore joint ventures and importing power from offshore wind farm(s) and the onshore grid
- economically challenging because significant modifications are required to mid-life oil and gas facilities
- needs to happen at pace, (2027/28), because as the production declines from oil and gas facilities the rationale for electrification significantly decreases

because of these attributes, we see the interaction between offshore electrification and the OTNR as providing support to address the key challenges in three areas. These areas are application of OFTO, access to the onshore grid, and network charges, which could be considered for inclusion in the Early Opportunities workstream.

One scheme we have considered where the offshore wind farm is located closed to the oil and gas platforms, (as envisaged by the Innovation and Targeted Oil and Gas licensing round), is shown in the diagram below (figure 1).

In this scheme a group of offshore oil and gas platforms would be provided with power from an offshore substation with a connected wind farm and an onshore link allowing power to be supplied from the grid during low wind conditions and power to be exported to the grid during high wind conditions. The onshore grid connection is necessary to balance the system and ensure consistency of supply to the oil and gas customers, and to make the economics work.

Figure 1 - Example Offshore Electrification Scheme



The scheme proposed in figure 1, (one of a number of different possible arrangements), is built primarily for the purpose of supplying power to the offshore oil and gas platforms. Although there is a link to the onshore grid, exporting wind power to the grid is not the prime purpose of the system. In fact, there will be occasions during low wind conditions when the onshore grid will be supplying “top-up” power to the oil and gas assets.

The general attributes of the infrastructure schemes we have considered are:

- 1) offshore electricity demand provided by offshore oil and gas assets
- 2) the primary purpose of the wind farm is to provide power to offshore oil and gas assets
- 3) onshore connection to balance the system – provides top-up power during low wind conditions and a potential export route for excess power during high wind conditions.

To create the investment conditions the following areas are ones which we believe the OTNR process may be able to help us with.

Discussion on application of OFTO regime

The current OFTO regime has been entirely designed to drive competition for the one-way connection of offshore wind to the onshore grid. De-carbonisation of the North Sea requires multiple oil and gas assets to be connected together in a distribution level system with a link to shore and, to provide the lowest carbon power possible, a link to offshore wind. Building such a system is economically very challenging, has no CFD support available for electrification, and yet the system would appear to be subject to the OFTO regime as soon as a wind farm is involved.

Oil and gas companies (both operators and midstream companies who might be interested in investing in infrastructure designed to facilitate oil and gas) are disincentivised from investing by the current regime which insists that any transmission asset which has a wind farm connected must be auctioned off at the end of the construction phase. Under the current regime, and without changes being considered to support the connection of offshore demand to offshore and onshore supply, we believe that the government's, and indeed the industry's ambition, of de-carbonising oil and gas extraction on the UK continental shelf is very unlikely to come to fruition.

It is our opinion that an exception to the current OFTO rules should be considered for offshore wind farms and their transmission systems which are primarily intended to supply electrical power to offshore oil and gas platforms (and indeed any other offshore demand customer) to encourage the kind of investment required to build such a system.

Access to the onshore grid in the required timeline

The system as described requires an onshore grid connection to ensure power is always available to the oil and gas platforms during low wind conditions and to provide overall system balance. Our preliminary investigations have indicated that grid access is extremely constrained on the east coast of Scotland between now and 2030. The system proposed would provide an offshore source of demand, potentially easing the grid issues as multiple windfarms connect in this region. Because of the limited time window to achieve offshore electrification we believe that the Early Opportunities

workstream should therefore consider the needs of oil and gas electrification as a priority with respect to access to the onshore grid.

Network charges

The primary purpose of the wind farm in an electrification scheme is to supply power to the oil and gas assets. We therefore believe that power supplied from the wind farm to offshore oil and gas customers which does not use the onshore grid infrastructure should not attract any network charges at all. In addition, the oil and gas industry should be considered as an Energy Intensive Industry so that network charges applied to power supplied from the grid to oil and gas customers are reduced in line with other energy intensive industries onshore.

If you require any further information, or further clarification on the Kellas response to the consultation, please do not hesitate to contact us. For your information, Kellas has contributed to the OGUK response to the consultation. We would welcome the opportunity to meet with the OTNR Early Opportunities workstream to discuss our ideas for electrification of oil and gas assets.

Yours sincerely,



Guy Appleton
Finance Director