

Written Evidence Submitted by the Shetland Islands Council

(HNZ0053)

Introduction to Shetland Islands Council

Shetland Islands Council is the local authority responsible for the Shetland Islands Area. The Council operates the Port of Sullom Voe serving the Sullom Voe Oil Terminal and has been directly involved in the national energy industry for over 40 years. Shetland is also an abundant source of renewable energy. It is the windiest place in the UK with the largest onshore wind farm (443 MW) in the UK currently under construction to supply electricity to the national grid. Significant as that is, there is a far bigger clean energy opportunity that is available for national scale development. A vast offshore wind resource exists in the sea area around Shetland. Emerging floating wind farm technology can be deployed to bring energy onshore for electrolysis conversion to national scale quantities of hydrogen fuel. That fuel could then be transported to the UK mainland using the existing gas pipelines from Sullom Voe Terminal and the Shetland Gas Plant. Another route to market is using the deep water berthing facilities at the Port of Sullom Voe for hydrogen laden tankers bound for national and international markets. The ORION Clean Energy Project has been set up to promote the offshore hydrogen opportunities in the Shetland area along with a number of other transitioning to net zero energy developments.

The ORION Project

The ORION project, which is a partnership between Shetland Island Council (SIC) and the Oil & Gas Technology Centre (OGTC), is looking at utilising abundant local wind and tidal energy sources, coupled with gas and hydrogen, to generate energy on a local, regional and national scale and in addition reduce emissions. The ultimate aim of the project is to ensure Shetland is self-sufficient in clean energy, has the capability of exporting renewable electricity into the national grid and offshore, significantly contributing to the UK hydrogen demand, and helping develop offshore carbon capture and storage projects. The project is a transformational shift for Shetland and the surrounding oil and gas province, which will benefit the local community, the wider supply chain, secure employment and energy security of significance at a regional and national scale.

ORION Project Objectives

- By 2050 supply **32TWh** of low carbon hydrogen to UK consumers annually which is 12% of the expected UK total requirement.
- Produce green hydrogen locally, utilising wind and tidal energy, to fuel domestic heating, road, and marine transportation.

- Provide more than 3GW of wind generated electrical power to Shetland, the UK grid and electrification of the offshore oil and gas sector.
- Enable all West of Shetland hydrocarbon assets to be net zero by 2030 and abate 8Mt/year CO2 by 2050.
- Generate £5bn in annual revenue by 2050 and contribute significantly to the UK Exchequer.
- Provide sustainable employment, both regionally and locally, whilst maintaining a pristine environment

Reason for Submitting Evidence

The main reason for Shetland Islands Council submitting evidence to the UK Parliament's Science and Technology Committee is to make sure that the UK Parliament is fully aware of the hydrogen development opportunities that exist in and around Shetland. These hydrogen development opportunities could make an enormous contribution to the UK's future energy requirements just as oil and gas from the Shetland region has done since 1978. Our second purpose is to encourage the UK Parliament to persuade the UK Government to be more ambitious in the development of national hydrogen development policies and funding, as stated below.

Comment

While Shetland Islands Council welcomes the general clean energy sentiments included in the recently published UK Government Ten Point Plan, we are very worried that the section on "Driving the Growth of Low Carbon hydrogen" falls well short of the actual drive that will be necessary to make the UK a world leader in clean hydrogen production. In particular, it is difficult to see how 5GW of low carbon hydrogen by 2030 can be developed from £4Bn of private sector funds and a Government investment fund of £240M. In order to achieve the transformational growth required to replace fossil fuels with clean hydrogen, the Government has to commit to a far higher level of investment. The national investment in clean hydrogen has to be similar to other European countries such as Germany and France. If we set off with a hydrogen development strategy on the basis included in the Ten Point Plan the UK will fall behind as hydrogen technology develops in other countries at a greater pace. It is therefore imperative that the UK Government understands the need for the nation to be fully competitive on hydrogen development, otherwise we will struggle to achieve our hydrogen development targets and much of the economic benefit of hydrogen development in the UK will be realised by service providers based overseas.

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