**Hydrogen Village Trial Detailed Design Studies**

Consultation Response

**Summary**

**Offshore Energies UK** is the leading trade body for the UK’s integrating offshore energies industry. Our membership includes over 400 organisations with an interest in offshore oil, gas, carbon capture and storage, hydrogen, and wind. From operators to the supply chain and across the lifecycle from production to decommissioning, they are safely providing cleaner fuel, power, and products to the UK. Working together with our members, we are a driving force supporting the UKin ensuring security of energy supply while helping to meet its net zero ambitions. We work on behalf of the sector and our members to inform understanding with facts, evidence,and data, engage on a range of key issues and support the broader value of this industry in a changing energy landscape.

Our sector is fully aligned with supporting the government’s objective to achieve net-zero by 2050 and is already committed to reducing emissions from oil and gas production and in delivering objectives on CCUS and Hydrogen. Many of our members are key investors and developers for Hydrogen production projects including both those supported by carbon capture and electrolysis (i.e. “blue” and “green”). The sector recently agreed the North Sea Transition Deal (NSTD) with government with these objectives included.

It is strongly in energy consumers’ interests to continue to develop Hydrogen as a large scale energy resource in terms of, for example, its versatility, energy storage properties, and high energy-mass density. It is particularly well suited to industrial and heavy-duty transport applications and in the development of synthetic fuels for marine transport and aviation. In addition, hydrogen may also form an attractive consumer focused product for domestic heating and personal transport alongside, and complementing, electricity-based solutions. Hydrogen and other decarbonised gases will also help accommodate renewable generation in the overall energy system by managing flexibility and potentially reducing electricity network investment costs, avoiding delays resulting from connection constraints.

Both “green” and “blue” hydrogen will be important routes for the production of hydrogen. The targets set out for 2030 will establish the industry at scale and open up a route to a variety of applications and give the potential for cost reduction. Industry is confident of the potential for blue hydrogen to be developed with low levels of embedded GHG emissions including ensuring further reductions of methane emissions from natural gas production from already low levels. OGUK members have already adopted a Methane Action Plan in this respect, although current estimates suggest methane emissions are already close to the standard of 0.2% of gas production set by the Oil and Gas Climate Initiative.

Developing a hydrogen market at scale, initially through methane reformation, will create space for the green hydrogen sector to develop as more and more renewable electricity generation is added to the system. Reliable supply of hydrogen will encourage more fuel switching and establish a virtuous circle creating growth in the sector and alleviating the various coordination market failures. Government has a key strategic role in nurturing both the production of Hydrogen and the development of demand.

As well as the business models and certification requirements being developed by UK government, there is a strong role for network companies and Ofgem in developing suitable network and storage investment. This includes innovation projects such as the Hydrogen Village Projects.

The main question OEUK members have at this stage is with respect to the allocation of these costs to transmission tariffs. Given the wider contribution of these projects to national energy supply, this seems appropriate in this case. However, both for this project, and for LTS Futures, it is not totally clear if the revenue requirement will be added to both entry and exit charges on a 50:50 basis, or only to exit charges. This may become an issue that needs more examination when investment levels in the networks increases.

**OGUK Sustainability**

**April 2022**