

# Written Evidence Submitted by Maritime UK

## (HNZ0080)

### Executive summary:

- Hydrogen as an alternative fuel and source of power will be an important driver of the decarbonisation of the UK's maritime sector, which again is essential to meeting the Government's net zero targets.
- UK ports are already working to develop the necessary infrastructure for the use of hydrogen, but the development of hydrogen technology and infrastructure requires government support and incentives. Decisive support for the development of infrastructure would also send positive signals to the global shipping community of hydrogen as a viable alternative fuel.
- The development of green infrastructure at ports across the country will benefit local areas, coastal communities and other modes in need of hydrogen, and contribute to the Government's 'levelling-up' agenda through the creation of green jobs.
- The UK maritime sector, its businesses and workers facilitate the movement of 95% of all UK trade, contributes £46.1bn to the national economy and supports 1.1 million jobs.

### Hydrogen and maritime decarbonisation:

The decarbonisation of the maritime sector is essential to meeting the Government's legislative targets of net zero emissions by 2050. Transporting freight by water is by far the most carbon efficient mode of logistics for moving goods. But as an island nation dependent on the sea for 95% of imports and exports of goods, these huge volumes mean domestic shipping is still responsible for high levels of GHG emissions. Action is needed now to support the deployment of low emission vessels and infrastructure to maintain the UK's vital flow of goods whilst meeting an ambitious trajectory for net zero goals across the entire maritime sector. Hydrogen as an alternative fuel and source of energy will be key to these efforts and provide an opportunity for the UK to pull ahead in the zero-emissions maritime race.

As the umbrella body and collective voice for the maritime sector, Maritime UK is submitting evidence for the inquiry on the role of hydrogen in achieving Net Zero on behalf of its members from across the maritime industries: shipping, ports, engineering, leisure marine and professional services.

Hydrogen as an alternative fuel for use in commercial shipping, as well as a source of energy, will play a key role in the decarbonisation of the maritime sector, both in the UK and internationally. Importantly, regulation alone is not going to be sufficient to achieve net zero in the UK's maritime sector: building on the automotive experience, capital investment in maritime decarbonisation is needed to unlock the potential of the sector and kick-start the transition to zero-emission shipping. Significant intervention from government and industry will further contribute to demonstrate the UK's climate leadership ahead of the COP26 summit.

The UK should be positioned as the world-leader in maritime decarbonisation, by taking advantage of the fast-growing market for clean maritime technologies and fuels. Recent government-backed funding calls for clean maritime technologies through Maritime Research and Innovation UK (MarRI-UK) have demonstrated the innovative abilities for UK maritime businesses: 21 projects with a total value of more than £5m have so far been awarded funding. To capitalise further on existing skill and expertise, government should fund a demonstrator programme to provide the commercial case for low and zero-emission technologies to identify innovative and radical solutions to deliver net-zero.

Working collaboratively across the sector, but also across different areas of innovation and technological development will be important, and the synergies between hydrogen strategy and other environmental policy areas should be emphasised. For example, low carbon fuels such as hydrogen should be derived from low carbon sources, and linkages with developments within areas such as carbon capture and storage are therefore important. There is great interest and incentive to work collaboratively across the maritime sector, and government can play an important role in facilitating this cooperation.

### **Hydrogen infrastructure:**

Developing new fuels or propulsion technologies is just one part of the decarbonisation journey; during the development and subsequent operation of these new solutions, UK ports will require the ability to receive and refuel low carbon ships making use of these alternative fuels and technologies. This will require reception facilities including new bunkering and significant new power supplies. As highlighted by the Government's Maritime 2050, policy must consider the entire maritime supply chain, crucially including infrastructure, and many of these projects require significant capital expenditure, which following COVID-19 will be prohibitive for many businesses. Therefore, government support to overcome these barriers to investment in green maritime infrastructure, including for hydrogen, is needed.

Port operators across the UK are already rapidly progressing hydrogen planning and projects. The scope of these projects span beyond the ports itself and therefore bear important applications for the rest of the supply chain and local areas. There is an opportunity for ports to play an important role as catalyst for the UK's hydrogen economy, as committed to developing hydrogen infrastructure and other related developments in the surrounding areas and economic hinterlands.

UK ports are currently working to:

- Develop hydrogen technology for filling stations, hydrogen fuelled mobile plants and conversions of existing plants to run on hydrogen;
- Liaise with other parts of the economy, for example offshore operators who wish to fuel maintenance vessels with hydrogen, and understand the opportunities for a maritime supply chain for hydrogen delivery for other modes of transport such as local buses;
- Understand options for infrastructure to supply hydrogen for a range of vessel operations, including inland waterways, cruise and ferries.

Ports are strategically located to be key hubs for the production of hydrogen required for other modes of transport, and also to support other parts of production of clean energy source such as offshore renewables such as construction, maintenance and storage. Finance for infrastructure in ports, such as conversion parks, storage and import facilities is therefore vital in reaching net zero goals.

Internationally, shipowners may hold off investment decisions because the infrastructure for hydrogen is not yet in place. Demonstrator programmes and decisive government action would send positive signals to the global shipping community and build confidence in hydrogen as a viable fuel and energy option for the future.

### **The role of government:**

The UK Government could play a significant and useful role in facilitating the use of hydrogen as an alternative fuel in shipping, as the development of necessary infrastructure and technologies to support this move toward maritime decarbonisation.

In order for hydrogen to be a successful alternative as fuel, the Government needs to support a standardisation, an increase in production and ultimately supply to other users. Especially standardisation and certainty for which low carbon fuels are preferred and supported by government will enable industry to put programmes in place to address questions around storage, distribution, vessel design and the capital costs of technology. There are currently numerous options for low carbon fuel in the maritime sector, which makes it challenging to develop infrastructure and for ports to bunker. Consolidation is therefore required.

Importantly, government could play a useful role in providing early adoption financial support. There is great ambition to collaborate across the different industries in the maritime sector, but without government support there is currently no way for the financial gap to be bridged. Government should therefore introduce financial incentives and investment initiatives, such as loan guarantees, reduced interest rates for installation of environmentally friendly equipment and export credits accessibly for businesses of all sizes. This would further encourage investment in green technologies including hydrogen by making environmental efforts sustainable.

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