
Decarbonising Smaller Vessels

Department for Transport

UK National Clean Maritime Research Hub's response 8 September 2025

The UK National Clean Maritime Research Hub is focusing on research at lower technology readiness levels to inform future research, development and deployment. Through collaboration with stakeholders from across the maritime sector, the Hub aims to drive forward innovation and transformation, establishing the UK's competitive advantage by setting a global benchmark for excellence.

Website: <https://www.clean-maritime-research-hub.org/>

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Barriers

What, if any, do you think are the main barriers to accelerating the use of zero or near-zero emission technologies?

- Technology cost
- Operating costs
- Lack of government certainty
- Minimal incentives

Other issues: This category of vessel types has a great deal of diversity and retrofitting may require complex bespoke solutions. Near term and future demand for electricity charging and alternative fuels is unclear inhibiting infrastructure investment at ports and marinas serving this vessel category. A skills barrier can inhibit the adoption of new technologies as well as concerns around the safety of alternative fuels. Commercial confidence - decarbonising the maritime sector requires global cooperation and not rely on conventional technologies. Need to integrate cutting edge innovations such as artificial intelligence (AI) and big data but problems due to commercial sensitivity with the latter.

Exemptions

What, if any, sub-sectors do you think should be excluded from potential future policy which aims to accelerate the adoption of zero emission and near zero vessels?

The provision of exemptions in some cases may be appropriate, or a longer transition period may be preferable for say fishing or tug vessels. Exemptions may be appropriate where used for the construction, operation and maintenance of offshore wind farms to avoid comprising decarbonisation targets more broadly. Any exemptions needs to be balanced with national financial conditions and international pressures. However, there

are a number of tools that could be introduced alongside emissions targets such as targeted grants and subsidies and prioritising charging infrastructure in the busiest ports and marinas.

What, if any, are the 3 environmental impacts that you are most concerned about in the transition to zero emission fuels?

While alternative fuels may be zero emission in use need to consider the environmental impacts associated with the production and distribution of the fuels ("upstream" emissions and impacts). There will be a need to consider pollutants beyond carbon dioxide e.g. nitrous oxides from ammonia as a fuel. More generally, there needs to be stability and cross-party support for national decarbonisation policy to provide greater certainty in direction. For recreational vessels the rising living costs can inhibit an owner's ability to adopt transition technologies, undertake retrofitting, or switching to alternative fuels if they are more expensive. It should be noted too that some researchers anticipate that while the UK has abundant wind resources, climatic change could adversely affect the availability of wind over time and therefore impact on financial viability.

Clear technological pathway for decarbonisation

Do you agree or disagree with our identified subsectors having a clear technological pathway for decarbonisation?

Agree

Unclear technological pathway for decarbonisation

Do you agree or disagree with our identified subsectors having an unclear technological pathway for decarbonisation?

Undecided

Final comments

Any other comments?

The majority of the UK fleet is represented by small craft (vessels <24m length for recreational purposes) and superyachts over 24m and up to 400GT. These vessel types would benefit from clarity of decarbonisation pathway and support as well as incentives and regulation, similar to the automotive sector. Retrofit pilots and training programme in new technologies and around the safety of alternative fuels for small vessel owners would be helpful for this sector to demonstrate feasibility and provide confidence. When implementing emissions reduction targets for this sector it would be good to consider forms of support to be made available such as grants, subsidies or other

financial incentives and in considering the different vessel types of this diverse sector. Vessels serving offshore wind farms have different technology and fuel requirements not least due to operating in harsher environments. Decarbonisation incentives needs to be balanced with the national decarbonisation targets i.e. need to encourage not inhibit the deployment of offshore wind.