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## ZERO EMISSION OPERATIONS IN OFFSHORE RESEARCH VESSELS

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### SUMMARY

The OSE led research and development project to demonstrate the technical and economic feasibility of achieving zero emission operations in offshore survey and research vessels (OSRVs) has been awarded funding under the UK government's Clean Maritime Demonstration Competition Round 2.



Starting in January 2023, the eight partners will investigate innovative ship designs and integration with energy efficient hybrid drive train systems to increase overall ship efficiency resulting in significant reduction of greenhouse gas emissions and accelerating the transition to zero emission fuels.

*O.S. Energy concept Design for Zero Emission OSRV*

While in the short term a mix of fuel will be used to allow zero emission propulsion in an industrial environment with an innovative engine room configuration, moving with regulatory and technological developments in the long term the vessel will be able to operate purely fueled by hydrogen, ammonia, or other alternative fuels.

The project addresses key challenges and barriers of achieving zero-emission propulsion and strengthening the UK maritime industry such as:

- Energy efficiency improvements of ship and integrated systems in light of transition from high energy fossil fuels.
- Significantly reducing GHG emissions of offshore renewable support activities.
- Integration of innovative drive train systems and control strategies for hybrid electric operations.
- Advancing development and justification of new rules and regulations relating to the storage, handling and operation of alternative fuels in the maritime industry.
- Accelerating supply chain developments, skills and education towards building world leading offshore support vessels in the UK.

The ProjectZERO – Zero Emission Research and Offshore Service Vessel is part of the Clean Maritime Demonstration Competition Round 2 (CMDC2) which was launched in May 2022, funded by the Department for Transport (DfT), United Kingdom and delivered in partnership with InnovateUK. As part of the CMDC2, the Department allocated over £14m to 31 projects supported by 121 organisations from across the UK to deliver feasibility studies and collaborative R&D projects in clean maritime solutions.

The CMDC2 is part of the UK Shipping Office for Reducing Emission's (UK SHORE) flagship multi-year CMDC programme. In March 2022, the Department announced the biggest government investment ever in our UK commercial maritime sector, allocating £206m to UK SHORE, a new division within the Department for Transport focused on decarbonising the maritime sector. UK SHORE is delivering a

suite of interventions throughout 2022-2025 aimed at accelerating the design, manufacture and operation of UK-made clean maritime technologies and unlocking an industry-led transition to Net Zero.

#### PROJECT PARTNERS

