



PRESS RELEASE

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GCMD issues Invitation for Proposal to study the challenges of, and to operationalise the offloading of shipboard captured CO₂

Singapore, 6 December 2022 – The Global Centre for Maritime Decarbonisation (GCMD) is issuing an Invitation-for-Proposal (IFP) to evaluate the safety, technical and operational requirements for offloading shipboard captured CO₂ during port calls. The outcomes of this study will enable the offloading of liquefied carbon dioxide (LCO₂) from shipboard capture systems.

In early October, the GCMD, the Oil and Gas Climate Initiative (OGCI) and Stena Bulk launched Project REMARCCABLE (Realising Maritime Carbon Capture to demonstrate the Ability to Lower Emissions) — the world’s first project aimed at demonstrating end-to-end shipboard carbon capture at scale. Together with Alfa Laval, ABS, Deltamarin and TNO, the 7-member consortium initiated the first stage of a two-year, three-phase project to investigate on-board capture and storage, as well as offloading of captured CO₂ to address the challenges and opportunities of deploying carbon capture technologies on ships.

To accelerate the implementation of shipboard carbon capture and to enable the piloting phase of Project REMARCCABLE, GCMD is issuing an Invitation-for-Proposal to study how best to offload captured CO₂ in the form of liquefied carbon dioxide (LCO₂) to shortlisted engineering consultants and classification societies.

The scope of the IFP encompasses the offloading process of LCO₂ captured onboard tankers, bulkers and container liners at different temperatures and pressures for transfer to different receptacles, including LCO₂-receiving vessels and intermediary storage sites, in ship-to-ship, ship-to-shore (cassette/tank) and ship-to-floating storage configurations.

Since the goal of the study is to assess possibilities and outline detailed procedures for offloading captured CO₂ to shore and ship storage facilities in major ports, existing policy and regulation regimes that may prevent or enable this exercise will need to be taken into consideration. Once the evaluation of submitted proposals is concluded, GCMD expects to make one award in the 2nd quarter of 2023.

On the IFP, Professor Lynn Loo, CEO of the Global Centre for Maritime Decarbonisation, said: “GCMD views shipboard carbon capture as an important mid-term technological

solution that can help reduce shipping's GHG emissions. For shipboard carbon capture technologies to be operationally feasible, the industry needs to develop a value chain for the captured CO₂."

"Whilst IMO has no firm position on the use of carbon capture systems to reduce GHG emissions, the topic is up for discussion at the upcoming MEPC meeting this month. Our study will contribute to the emerging body of knowledge around the complexities of shipboard carbon capture. And the outcomes of this study will specifically inform sea trials aboard Stena Bulk's identified MR Tanker as part of phase three of Project REMARCCABLE".

GCMD's LCO₂ offloading study is expected to complete within 9 months. Thereafter, GCMD will inform the industry of its findings, including design considerations that stakeholders, such as port and terminal operators, vessel owners and shipyards, will need to factor in when deploying shipboard carbon capture systems at scale. The findings should also help shape regulatory and operational guidelines that will steer future demonstration and eventual adoption of shipboard carbon capture technologies.

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About the Global Centre for Maritime Decarbonisation

The Global Centre for Maritime Decarbonisation (GCMD) was set up on 1 August 2021 as a non-profit organisation by the Maritime and Port Authority of Singapore (MPA) and founding industry partners BHP, BW Group, Eastern Pacific Shipping, Foundation Det Norske Veritas, Ocean Network Express and Sembcorp Marine.

Beyond the seven founding partners, with today's announcement GCMD has brought onboard 13 partners that engage at the centre level across sectors, in addition to numerous other partners that engage at the project level.

Strategically located in Singapore, the world's largest bunkering hub and second largest container port, GCMD aims to help the industry eliminate GHG emissions by shaping standards for future fuels, financing first-of-a-kind projects, piloting low-carbon solutions – end-to-end – under real-world operating conditions, and collaborating across sectors.