

# \$22m boost for deeper research into greener marine ops

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The use of ammonia as a marine fuel and the study of alternative sources of energy for next-generation multi-purpose ports will move to the next stages of research with an injection of \$22 million over the next five years.

The Singapore Maritime Institute (SMI) will work with two local universities on deeper research into these and other projects, as well as technologies related to decarbonisation and improving the operational efficiency of real-time management of port operations.

Senior Minister of State for Transport Chee Hong Tat announced the funding on Tuesday at the 12th SMI Forum held at Orchard Hotel. Mr Chee is also Senior Minister of State for Finance.

SMI is awarding \$12 million to the Maritime Energy and Sustainable Development (MESD) Centre of Excellence at the Nanyang Technological University. This is the continuation of work that began in October 2017 in the areas of energy management, emissions management and sustainable maritime operations.

MESD has worked on 14 maritime decarbonisation research and development projects, including the use of ammonia as a marine fuel.

With input from industry partners and the Maritime and Port Authority of Singapore, MESD has identified 16 other research and development projects to work on from September 2022. The work will focus on the management of emissions and the decarbonisation of maritime operations, supporting Singapore's energy strategy to switch to low-carbon alternatives.

SMI said that the areas are aligned with the recommendations from the Singapore Maritime Foundation's international advisory panel on maritime decarbonisation. The Centre of Excellence in Modelling and Simulation for Next Generation Ports (C4NGP), which is part of the College of Design and Engineering at the National University of Singapore, will be receiving \$10 million. The five-year funding starts from Jan 2, 2023, and is a continuation of the initiative that started in 2018.

Among the projects undertaken in the earlier phase, C4NGP developed a simulation platform that enables companies to plan their maritime operations based on past, present and future simulated data, without the need for expensive and time-consuming physical simulations. Projects in the works include advanced port operation planning systems and performance analysis of future automation systems.

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