

Keppel Infrastructure to develop floating renewable energy system with NUS, NTU

THU, OCT 27, 2022 - 8:33 PM **UPDATED THU, OCT 27, 2022 - 8:57 PM**

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A German offshore wind farm that Keppel has invested in. The floating hybrid renewable energy system in Singapore consists of integrating offshore floating solar panels with other renewable energy technologies. PHOTO: KEPPEL GROUP

KEPPEL Infrastructure, a subsidiary of [Keppel Corporation : BN4 +1.5%](#), will be working with the National University of Singapore (NUS) and Nanyang Technological University (NTU) to study the technological and economical feasibility of developing a floating hybrid renewable energy system in Singapore.

This hybrid system consists of integrating offshore floating solar panels with other renewable energy technologies.

This includes ocean wave energy conversion systems, tidal energy turbines and paddles, as well as wind turbines.

Keppel said in a bourse filing on Thursday (Oct 27) that the study would involve exploring the deployment of the system at a particular offshore test site in Singapore waters, subject to the relevant regulatory approvals.

“If successful, the parties plan to design and deploy a pilot system with at least 100 megawatt of renewable power generation capacity which can be scaled up over time. After implementing the novel system in Singapore, the aim is to roll out the floating hybrid renewable energy system innovation to other regions in Asia and beyond,” said Keppel.

It added that such a system can provide continuous power output over 24 hours, higher capacity factor and a lower cost of energy compared to single-source energy platforms.

It also reduces the amount of marine space required and increases efficiency through the concurrent use of critical electrical infrastructures and combined operation and maintenance methodologies.

Cindy Lim, chief executive officer of Keppel Infrastructure said: “With limited land space in Singapore, moving into waters offshore presents opportunities to unlock the potential for more diversified renewable energy sources, thereby enhancing energy security and supporting Singapore’s transition to a greener energy mix. This is in line with Keppel’s Vision 2030 which puts sustainability at the core of the group’s strategy”.

Keppel Infrastructure will leverage its expertise in developing and operating energy and environmental infrastructure, low-carbon solutions, and electricity retailing.

NUS’ Solar Energy Research Institute of Singapore and NTU’s Energy Research Institute will provide their know-how on the pontoon-based floating solar structure and its integration with other ocean renewable energy systems.