



Innovative battery at heart of zero-emissions OSV gets green light

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An innovative non-flammable maritime battery technology that promises long life and will be incorporated in a new zero-emissions offshore support vessel has received New Technology Qualification (NTQ) from ABS

Called Blue G, the vanadium redox flow battery system from Singapore's Gennal Engineering Pte Ltd is now planned to move into prototype testing later this year.

The Blue G battery is comprised of a water-based electrolyte solution, storage tank, stack cell and regulating pump. The process of charging and discharging energy does not produce excess heat – a unique feature of the system, said ABS.

“Vanadium redox technology is a potential game changer in the application of batteries at sea,” said ABS vice president technology Gareth Burton. “It has the advantages of a long lifespan, greatly improved energy capacity and an improved safety profile as a non-flammable product. This technology is one that has the potential to accelerate the energy transition in the maritime industry, supporting global decarbonisation goals,” said Mr Burton.

According to Gennal Engineering, the advantages of its system include scalability and a longer lifespan – more than 25 years, which is double that of a typical lithium-ion battery.

Gennal Engineering emphasised the battery design’s recyclable feature, showing the vanadium electrolyte is easily extracted and recycled when the Blue G battery is decommissioned.

“We are glad to be partnering with ABS in achieving this qualification for Blue G,” said Gennal Engineering director Alex Peck, adding, “It reflects the confidence ABS has in Gennal in helping the industry to accelerate forward toward marine decarbonisation.”

[As OSJ previously reported](#), Gennal Engineering is part of a consortium that is developing a new generation zero-emissions hybrid-battery offshore support vessel that will be built in Malaysia. The project is the result of a memorandum of understanding signed in July 2022 in Kuala Lumpur by Malaysian shipbuilders Grade One Marine Shipyard, Muhibbah Marine Engineering and Shin Yang Shipyard and Singapore company Evolution Concepts. Gennal Engineering is one of Evolution Concepts’ key technology suppliers in the project.



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