

MEDIA RELEASE

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Southeast Asia's First Floating and Stacked Energy Storage System Deployed at Seatrium's Floating Living Lab

Southeast Asia's first floating and stacked Energy Storage System (ESS) has been deployed at Seatrium Limited's (Seatrium) Floating Living Lab (FLL) and will commence operations by Q1 2024. The stacked ESS is a key component of an integrated floating energy solution that could help to overcome Singapore's land constraints, with a deployment footprint of up to 40% less than land-based ESS.

2 The project was awarded to a consortium led by Unifers (formerly Envision Digital International Pte Ltd). This is part of the S\$10 million partnership between EMA and Seatrium to develop innovative energy solutions in the marine sector, which was announced in April 2020.

3 An ESS functions as a large-scale battery that stores energy during off-peak periods and dispenses it at other times when there is high electricity demand. The fast-response nature of ESS also allows it to actively manage mismatches in electricity supply and demand, and helps regulate second-to-second fluctuations in the power grid. As such, ESS can manage the intermittent nature of solar power which fluctuates throughout the day due to rain and cloud cover in Singapore's tropical climate.

4 On the project's deployment, Mr Ngiam Shih Chun, Chief Executive of EMA, said: "Given Singapore's limited land area, we need innovative solutions for our energy infrastructure such as Seatrium's floating solution for energy storage. I thank our industry partners for their commitment in developing sustainable energy solutions."

5 Mr Chris Ong, Chief Executive Officer of Seatrium, said: "We are proud to be at the forefront of developing innovative energy solutions in the offshore, marine and energy industries. The deployment of Singapore's first floating and stacked ESS at Seatrium's FLL is testament to our commitment towards leveraging technology and innovation to optimise energy efficiency and reduce our operational footprint."

6 The floating ESS at Seatrium's FLL has a maximum storage capacity of 7.5 megawatt hour (MWh) and can meet the electricity needs of more than 600 four-room HDB households for one day, in a single discharge. The ESS is integrated with a suite of intelligent energy management functionalities including a Smart Energy Management System supported by artificial intelligence and machine learning algorithms to enhance operational efficiency and energy dispatch. It is also capable of supporting locations with intermittent power supplies or be activated for rapid deployment in remote islands affected by power disruptions.

ANNEX A: Photos of Project

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About the Energy Market Authority

The Energy Market Authority (EMA) is a statutory board under the Singapore Ministry of Trade and Industry. Through our work, we seek to build a clean energy future that is resilient, sustainable, and competitive. We aim to ensure a reliable and secure energy supply, promote effective competition in the energy market and develop a dynamic energy sector in Singapore. Visit www.ema.gov.sg for more information.

About Seatrium

Seatrium Limited (formerly Sembcorp Marine Ltd and renamed as Seatrium Limited following its merger with Keppel Offshore & Marine Ltd) provides innovative engineering solutions to the global offshore, marine and energy industries. Headquartered in Singapore, the Group has 60 years of track record in the design and construction of rigs, floaters, offshore platforms and specialised vessels, as well as in the repair, upgrading and conversion of different ship types.

The Group's key business segments of Oil & Gas Newbuilds and Conversions; Renewables and New Energies; Specialised Shipbuilding; and Repairs & Upgrades provide a diverse suite of products and services, with a growing focus on sustainable solutions to advance the global energy transition and maritime decarbonisation.

As a premier global player offering offshore renewables, new energy, and cleaner offshore & marine solutions, Seatrium is committed to delivering high standards of safety, quality, and performance to its customers who include major energy companies, owners of floating production units, shipping companies and cruise and ferry operators.

Seatrium operates shipyards and other facilities in Singapore, Brazil, China, Indonesia, Japan, the Philippines, Norway, the United Kingdom and the United States.

Discover more at seatrium.com.

ANNEX A: PHOTOS OF PROJECT



Photo of Seatrium's Floating Living Lab, the first such offshore floating testbed in Singapore. (Photo credit: Seatrium Ltd)



Photo of Southeast Asia's first floating and stacked Energy Storage System, with maximum storage capacity of 7.5 megawatt hour (MWh) to power over 600 four-room HDB households in a single discharge. (Photo credit: Seatrium Ltd)