

News

Sunseap leads NTU, Wärtsilä consortium for Singapore's first utility-scale energy storage system



Singapore's first Utility-Scale Test-bed (Energy Market Authority)

October 23, 2020

Sunseap Group Pte Ltd said it is leading a consortium comprising Nanyang Technological University (NTU) and Wärtsilä, a global provider of technologies and solutions for the energy and marine markets, to participate in a test-bed for a utility-scale energy storage system (ESS).

The test-bed is a collaboration between the Energy Market Authority and SP Group to develop and support utility-scale battery storage. ESS can provide ancillary services such as regulation and reserve and is integral to manage the intermittency of solar energy and to reduce peak demand.

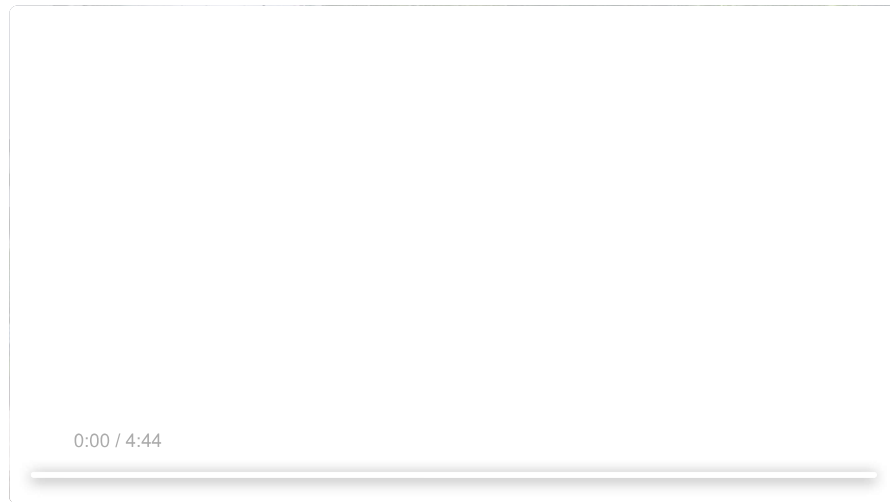
The consortium will deploy a 2.4 MW/ 2.4 MWh of battery energy storage at the substation using a lithium-ion battery system that was designed and supplied by Wärtsilä.

Sunseap, as the principal investigator of this test-bed, is responsible for the management, installation and operation of the ESS. NTU as the co-investigator and research partner will carry out data collection and analysis using machine learning to build models to predict battery safety and health. The test-bed will be one of the first to assess how ESS performs under hot and humid conditions, as well as the space and safety issues associated with deploying ESS in Singapore's dense urban environment.

Mr Frank Phuan, Co-Founder and Director of the Sunseap Group, said: "Sunseap generates an abundance of solar energy from our installed network of panels and we have a vested interest in supporting the development of efficient, innovative utility-scale battery storage. As Singapore transitions to a cleaner energy economy, storage systems will play an important role in balancing the supply and demand of energy flowing into the grid, creating long-term reliability and resilience for our power system."

Data gathered from the test-bed will help make informed decisions about how ESS can enhance the stability of the national grid, provide additional capacity quickly and improve operational flexibility. The information will also be used to facilitate the establishment of standards, guidelines and policy frameworks for the deployment of ESS in the electricity market.

Sunseap is one of the largest and most established players in the solar energy industry in the region, with a pipeline of projects in Singapore, Australia, Vietnam, China, Taiwan and Cambodia. As the project lead for the test bed, Sunseap will be able to strengthen its engineering expertise to carry out utility-scale ESS projects in Singapore in the future.



About Sunseap Group

Sunseap Group is the leading solar energy system developer, owner and operator in Singapore, with almost 300 MegaWatt-peak (MWp) of solar energy projects contracted, of which 168 MWp have been completed on more than 1,500 buildings in Singapore including public housing estates, as well as commercial and industrial buildings. It operates through five key units: Sunseap Leasing, Sunseap International, Sunseap Energy, Sunseap Engineering and Sunseap Solutions.

Sunseap Leasing is the first and largest solar leasing company in Singapore. Sunseap International targets markets in the Southeast Asian and Pacific regions. These include a 168 MWp solar farm in Vietnam, a 140 MWp solar farm in India, and a 10 MWp solar farm in Cambodia. Sunseap Energy provides renewable energy solutions utilising off-site arrangements by drawing on solar systems within the Group's portfolio of distributed generation assets. A notable client of Sunseap Energy is Apple, which signed an agreement with Sunseap to procure 100% of its local energy requirements from renewable sources. Sunseap Energy is also providing Microsoft 100% of the renewable energy produced from 60 MW of rooftop solar projects in Singapore. Sunseap Engineering provides engineering, procurement and construction as well as operation and maintenance services for PV projects. Sunseap Solutions focuses on energy efficiency solutions by providing services such as energy audits, lighting retrofitting and green roof systems.

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