

Singapore International Energy Week

\$24m boost for research on solar power

Energy Market Authority awards grants to custom-build solar forecasting model, develop energy storage solutions

Jose Hong

The Energy Market Authority (EMA) has awarded a \$6.2 million research grant to a consortium to improve Singapore's abilities to forecast the amount of solar power the Republic generates.

This will allow the authorities to better plan for the demand and supply of electricity in the national grid.

The launch of the consortium, led by the National University of Singapore, was announced by Senior Minister of State for Culture, Community and Youth, and Trade and Industry Sim Ann yesterday at the opening of the Singapore International Energy Week.

She said the consortium would build a solar forecasting model customised to the city-state's tropical weather conditions.

This is key to ensuring the national grid remains stable, especially as Singapore becomes more reliant on solar power, said EMA. This form of energy fluctuates on a daily basis, much like wind power.

At the event held at the Sands Expo and Convention Centre at Marina Bay Sands, Ms Sim also announced the launch of \$17.8 million in grants to build a test bed to develop energy storage capabilities.

Two consortiums led by CW Group and Red Dot Power will set up the Energy Storage System.

EMA, which awarded the grants

with SP Group, said that energy storage can support solar power by providing energy reserves and reducing the energy needed from the grid during peak hours.

Over three years, both consortiums will test different types of storage solutions, essentially gigantic rechargeable batteries, to see which work best in Singapore's climate.

Ms Sim also said that consumers will find it easier to sell excess solar energy back to the power grid.

From next April, those with an installed capacity of up to 10MW of their own energy will be able to sell the excess directly back into the grid, without having to register as a market participant.

Currently, under the Central Intermediary Scheme, consumers with an installed capacity of more than 1MW have to register as a market participant - a process that takes around 50 business days.

The first residents to benefit from this will be in Jurong, as they will have access to the Open Electricity Market, which allows them to pick from multiple electricity providers. An EMA spokesman said that 1MW is enough to power 250 four-room Housing Board flats for a month.

During his Singapore Energy Lecture at the event, Deputy Prime Minister and Coordinating Minister for National Security Teo Chee Hean said that the Government will set up a National Energy Transformation Office within EMA to coordinate inter-ministerial efforts towards the country's long-term energy goals.

Mr Teo said Singapore needs to focus on solar energy because its geography prevents it from effectively using other forms of renewable energy such as wind and water.

Nanyang Technological University's Energy Research Institute executive director, Professor Subodh Mhaisalkar, said the energy storage and solar forecasting initiatives are essential to properly plan and forecast the generation of solar energy, in the event of variable rain and cloud cover.

"This really is an essential step to get ready for the high penetration of solar energy into the Singapore electrical grid."

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\$6.2m

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\$17.8m

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The floating solar panel test bed at Tengeh Reservoir was launched last year to study different photovoltaic systems. Solar energy is important to Singapore since other forms of renewable energy are not as viable here.
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