MEDIA RELEASE

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EMA Awards $14.9 Million to Strengthen Singapore's Electricity Grid

To ensure Singapore's electricity grid continues to deliver reliable power as energy sources and demand become more varied, the Energy Market Authority (EMA) has awarded grants totalling $14.9 million to four industry projects to strengthen the resilience of Singapore's electricity grid.

2 These projects will develop and test practical solutions across four areas. They will improve the maintenance and operation of grid infrastructure, manage the impact of growing distributed energy resources, provide new forms of support for system stability and enable distributed resources to contribute more actively to grid operations.

3 Puah Kok Keong, Chief Executive of EMA, said: "The grid will need to do more as Singapore's power system evolves. These projects will help us develop and test practical solutions to improve how we maintain and operate the grid, strengthen system stability, and harness distributed energy resources. This will help us better prepare the grid for future needs."

Using AI and Data to Strengthen Grid Maintenance

4 EMA has awarded $8.7 million to two projects by **SP PowerAssets** under the SP Technology Laboratory, established by EMA and SP Group to develop solutions to future proof the grid. The projects will use artificial intelligence and data to optimise maintenance and renewal decisions for grid infrastructure. They will also test solutions to manage voltage and power quality as more distributed resources, such as solar photovoltaics and electric vehicle chargers, connect to the grid.

Developing Fast-Response Support for Grid Stability

5 EMA has awarded $4.2 million to **Yokogawa Engineering Asia** to explore and develop fast-response services to ensure the stability of the power grid. The project will be funded by the Energy Grid 3.0 Grant, which aims to enhance Singapore's grid planning and operational capabilities, while developing solutions to manage new needs of the power system, such as inertia.

6 Inertia slows changes in system frequency after a sudden disturbance, giving the power system time to respond. The project will explore how resources such as batteries, solar inverters, industrial loads and electric vehicles can be coordinated to provide similar fast-response support for the grid.

Coordinating Distributed Energy Resources

7 EMA has awarded $2.0 million to **Green Union Pte Ltd** to develop strategies that can better coordinate distributed energy resources (DERs). These include solar photovoltaics, battery energy storage systems, and electric vehicles. The aim is to strengthen grid resilience and maximise the use of existing infrastructure. The project will be funded under the EMA and Korean Institute of Energy Technology Evaluation and Planning (KETEP) Joint Grant, which supports industry-led research and development projects that will develop innovative solutions to tap on DERs to strengthen the power system.

8 EMA and KETEP have cooperated and engaged in joint research and development projects in smart grids and energy technologies since 2019. In 2024, EMA and KETEP signed a Memorandum of Understanding to enhance their collaboration. This collaboration includes the areas of energy efficiency, renewable energy, smart grids, energy storage systems, carbon capture and storage, and information exchange, as well as other areas relating to energy technologies and policies of mutual interests.

9 The four awarded projects will be overseen by the Advanced Energy and Decarbonisation Office as part of a broader portfolio of research and development, and innovation projects under the Decarbonisation Grand Challenge.

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About the Energy Market Authority

The Energy Market Authority (EMA) is a statutory board under the Singapore Ministry of Energy, 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.