

# Singapore's Long Term Energy Future PV, Storage, & Virtual Power Plants

**Monday, 09 October 2017  
9:15 am - 5:30pm**

**ESI Conference Room  
Energy Studies Institute  
29 Heng Mui Keng Terrace  
Block A, #10 – 01  
Singapore 119620**

### **Abstract:**

The seamless integration of solar PV and energy efficiency improvements form the key pillars of Singapore's climate action plan to fulfill its commitments under the Paris Climate Change Agreement. However, issues with intermittency, as well as limited land space remain key constraints to the mass deployment of solar in the small island state. Recent technological advancements in energy storage systems and innovative deployments of PV installations such as floating PV, have opened up new opportunities for solar in Singapore. Such developments are accompanied by shifts in policies, such as the Smart Nation programme in Singapore, which aims to facilitate a change in the way people consume energy, not only through the use of smart devices, but also through innovative ways for consumers to interact with energy through demand response capabilities. This expert consultation gathers key stakeholders to discuss the long term outlook for the electricity sector in Singapore, with a particular focus on how developments in solar, energy storage technologies, as well as potential business innovations such as prosumage and Virtual Power Plants will help forge the future electricity landscape.

## Programme

09:00 – 09:15	Registration
09:15 – 09:20	<b>Opening Remarks</b> Professor Anthony David Owen, Principal Fellow, Division Head – Energy Economics, ESI
09:20 – 09:45	<b>Introduction to Research Project</b> Dr. Yang Liu, Senior Research Fellow, ESI Mr. Gautam Jindal, Research Associate, ESI
09:45 – 10:30	<b>Technical and Economic Developments in Distributed PV</b> Mr. Christophe Inglin, Managing Director, Energetix Pte Ltd
10:30 – 10:45	<b>Refreshments Break</b>
10:45 – 11:30	<b>Session Chair – Dr. Dina Azhgaliyeva, Research Fellow, ESI</b> <b>Integrating Intermittent Renewables in Electricity Markets</b> Dr. Jenny Riesz, Principal, Australian Energy Market Operator, Australia
11:30 – 12:15	<b>Virtual Power Plants</b> Ms. Stephanie Bashir, Senior Director (Public Policy), AGL Energy, Australia
12:15 – 13:45	<b>Lunch at Chilli Padi Nonya Café</b>
13:45 – 14:30	<b>Session Chair – Ms Jacqueline Tao, Research Associate, ESI</b> <b>Operation and Economics of Storage in Electricity Markets</b> Dr. Qixin Chen, Associate Director for Energy Internet Innovation Research Institute, Tsinghua University, China
14:30 – 15:15	<b>System Effects of PV Prosumage and Self-consumption – The German Perspective</b> Dr. Alexander Zerrahn, German Institute for Economic Research (DIW Berlin), Germany
15:15 – 15:45	<b>Refreshments Break</b>
15:45 - 16:30	<b>Session Chair – Professor Anthony Owen, Principal Fellow, ESI</b> <b>Business Models for Storage: Implications for Singapore</b> Mr. Mark Leslie, Director Asia Pacific, AES Energy Storage, Singapore
16:30 – 17:30	<b>Roundtable Discussion</b> PV, Storage and VPPs in Singapore's Long Term Energy Future
17:30 – 18:30	<b>Refreshments and Networking</b>