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## CONFERENCE

# Prospects for Solar PVs and Storage Technologies in the Future Energy Landscape

The energy sector is undergoing a paradigm shift from a fossil fuel based system to a much more distributed system with increasing renewable capacity and energy efficiency. Digital and clean energy technologies are transforming the way the electricity system functions and catalyse system-wide changes.

New policy frameworks are required to value increased flexibility of electricity grid systems. The energy system transformation in each country and region has a unique set of characteristics.

In Singapore, issues with intermittency, as well as limited land space remain key constraints to the mass deployment of solar in this 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.

This expert consultation gathers key stakeholders to discuss the long-term outlook for the electricity sector, with a particular focus on how developments in solar PV, energy storage technologies, as well as business models will help to forge the future electricity landscape in Singapore and beyond.

### When

Wednesday, 20 June  
2018  
9:00 am – 5:30 pm

### Where

Maharajah Suite Holiday  
Inn Singapore Orchard  
City Centre,  
11 Cavenagh Road,  
Singapore 229616

### Admission

Free and open to public  
but advanced  
registration is required.  
Click here to register:  
[http://esi.nus.edu.sg/e-  
registration](http://esi.nus.edu.sg/e-registration)

### Enquiries

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# CONFERENCE AGENDA

- 08:30 am – 09:00 am **Registration**
- 09:00 am – 09:15 am **Opening Address**  
**Professor Ang Beng Wah**  
  
Executive Director, Energy Studies Institute, National University of Singapore
- 09:15 am – 10:30 am **Session 1: Power System Transformation**  
Session Chair: Dr. Yang Liu, Senior Research Fellow, Energy Studies Institute, National University of Singapore
- ***Energy Integration and Transition: Perspective from Clean Energy Ministerial***  
Mr. Rui Luo, Deputy Head, Clean Energy Ministerial Secretariat, International Energy Agency (IEA), France
  - ***Flexibility: Key to Unleashing Power System Transformation***  
Mr. Jeffrey Logan, Chief Analyst, National Renewable Energy Laboratory (NREL), Operating Agent of the 21st Century Power Partnership, USA
- 10:30 am – 11:00 am **Coffee & Tea Break**
- 11:00 am – 12:45 pm **Session 2: Roadmaps for Clean Energy Transition**  
Session Chair: Dr. Thomas Reindl, Deputy CEO, Solar Energy Research Institute of Singapore (SERIS), National University of Singapore
- ***Electricity Network Transformation Roadmap in Australia***  
Dr. Paul Graham, Chief Economist Energy, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia
  - ***Roadmaps for Renewable Energy Development: Accelerating Global energy Transformation***  
Mr. Yong CHEN, Programme Officer – Sustainable Urban Energy, IRENA's Innovation and Technology Center, International Renewable Energy Agency (IRENA), Germany
  - ***Integrating Solar PV and Storage into Singapore's Long-term Energy Portfolio***  
Dr. Yang LIU, Senior Research Fellow, Energy Studies Institute, National University of Singapore

12:45 pm – 2:00 pm

### **Lunch Break**

2:00 pm – 3:45 pm

### **Session 3: Policy and Innovative Business Models**

Session Chair: Dr. Dina Azhgaliyeva, Research Fellow, Energy Studies Institute, National University of Singapore

- ***Grid Connected Solar: Global Experience With Auctions and Mobilizing Commercial Finance***  
Ms. Julia Fraser, Practice Manager for Energy, World Bank
- ***Business Models and Market transformation: Integrating PV, Storage, EV Charging Infrastructure and VPPs***  
Mr. Vijay Sirse, Founder, Chairman & CEO, Red Dot Power
- ***Enabling India's 100 GW National Solar Mission: Role for Energy Storage, EVs and Demand Response***  
Dr. Rahul Walawalkar, President & MD, Customized Energy Solutions India Pvt. Ltd.; Executive Director, Indian Energy Storage Alliance & Vice Chair, Global Energy Storage Alliance

3:45 pm – 4:15 pm

### **Coffee & Tea Break**

4:15 pm – 5:20 pm

### **Session 4: Emerging Technologies**

Session Chair: Professor Anthony David Owen, Head of Energy Economics Division, Energy Studies Institute, National University of Singapore

- ***Beyond Virtual Power Plants: Opportunities for Distributed Market Mechanisms in Coordinating PV and Battery Storage Systems in Electricity Networks.***  
Dr. Evan Franklin, Senior Lecturer, University of Tasmania, Australia
- ***The Future of Storage Technologies and the Role of Flow Batteries***  
Mr. Tim Harris, CEO, RedFlow Limited, Australia

### **Closing Remarks**

#### **Professor Anthony David Owen**

Head of Energy Economics Division, Energy Studies Institute, National University of Singapore