



AUSTRALIAN INSTITUTE *of* ENERGY

Sydney Branch

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Evening Presentation - Thursday 28 April 2016

“Implications of high-penetration solar and wind generation and reversible energy storage for the electricity industry”

Solar and wind energy are non-storable, stochastic primary energy resources that are renewable and free of CO₂ emissions. They are expected to play important roles in ameliorating human-induced climate change. However, they also have significant implications for the electricity industry, which operates as a continuous flow industry with minimal intermediate energy storage between electricity generation and end-use.

Reversible energy storage devices (e.g. pumped storage, batteries) can assist; however they introduce their own challenges. Locating these resources as distributed resources, close to or in end-user premises challenges the existing electricity industry structure, which assumes a clear separation between the supply and demand sides of the industry and functional separation of generation, network and retail services on the supply side.

This seminar will discuss these issues and ways in which the industry is evolving and might continue to evolve to accommodate high penetrations of solar, wind and reversible energy storage.



Hugh Outhred

Hugh Outhred is a Senior Visiting Fellow at the University of New South Wales and Managing Director of Ipen Pty Ltd, which provides advisory and educational services on energy, society and the environment. After a 35-year career at UNSW, Hugh retired in 2007 as Presiding Director, Centre for Energy and Environmental Markets and Head, Electrical Energy Research Group. Hugh has been a Fulbright Senior Fellow at the University of California Berkeley, a Member of the National Electricity Tribunal, a Member of the New South Wales

Licence Compliance Advisory Board, a Board Member of the Australian Cooperative Research Centre for Renewable Energy, an Associate Director of UNSW's Centre for Photovoltaic Devices and Systems, a Member of CSIRO's Energy Flagship Advisory Committee and a Lead Author for the IPCC Special Report on Renewable Energy Sources & Climate Change Mitigation, 2012. Hugh is a Fellow of the Australian Institute of Energy.

Time: Networking and registration from 5:30 pm for 6:00 start. Finish 8:00 pm.

Venue: Baker & McKenzie, Level 27, AMP Centre, 50 Bridge Street Sydney NSW 2000

Cost: Non-members \$60; Members free; Full time students free.

RSVP: Register [online](#) by Friday 22 April 2016. NB Register early as places are limited.

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For registration questions please contact AIE Secretariat, aie@aie.org.au t: 1800 629 945
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