

会 員 各 位

主催：電 気 学 会 中 国 支 部
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講 演 会 の ご 案 内

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【日 時】 平成 29 年 3 月 6 日(月) 15:00～16:30

【場 所】 広島大学（東広島キャンパス）工学部 A1 棟 1 階 A1-141 室
（〒739-8527 東広島市鏡山 1-4-1）

【演 題】 「Current challenges and emerging opportunities for Queensland electricity distribution utilities」

【概 要】

For decades, the distribution of electricity in Australia and most of the western world operated on a centralised distribution model, where large remote generators delivered electrical energy to households across electricity networks. The electricity distribution business, however, is experiencing change on an unprecedented scale. The transformation is driven by customers as they embrace new technologies that enable local electricity generation. This is disrupting the existing centralised electricity transmission and distribution model.

With more than one in every four detached homes having PV systems on their premises, South Australia and Queensland lead the world in domestic solar PV installation. Queensland government recently announced their vision of installing 1 million rooftop solar PV.

The high penetration of solar PV on residential premises provides very little benefit to distribution service providers during peak demand time. At the same time it has caused reverse power flow in the LV and MV network during base load (morning) and also reduced energy sales (kWh). Hence, under the current volumetric tariffs, solar PV customers are avoiding their fair share of network cost. When battery storage becomes more cost effective, majority of residential PV and battery systems would be almost self-sufficient and only use the electricity network as backup.

Emerging technologies that offer alternative sources of electricity supply will continue to penetrate the market and customers' electricity consumption patterns will continue to evolve as a consequence. This creates a set of challenges and new opportunities for the electricity industry. In order to sustain future business operations while meeting the customer needs, strategies need to be in place to mitigate the risks of potential decreasing demand for network services, and to capitalise on the opportunities of a changing electricity sector.

This presentation gives an overview of the electricity distribution network in Queensland and focuses on the impacts of distributed energy resources. Energex has been proactively working with universities and research institutes to develop new capabilities required to operate the future grid. A number of pilot projects have been initiated to investigate the impacts of large scale and residential scale battery energy storage systems, dynamic solar export and distribution network state estimation.

(※講演は、英語にて行われます。)

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【参加料】 無料

【事前の参加申込】 不要

以 上