

THE AEMC: WHO WE ARE AND WHAT WE DO

PRESENTATION TO THE AIE

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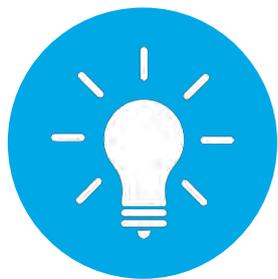
AEMC

Agenda

1. AEMC: Our role and function
 2. The future: **sector's key challenges and the AEMC's priorities**
-

What we do

We make and amend the:



National Electricity
Rules



National Gas
Rules



National Energy
Retail Rules



We also
provide market
development
advice to
governments

We are guided by national objectives for electricity, gas
and energy retail.

Market body roles



Australian Energy Market Commission

Rule maker, market
developer and expert adviser
to governments

*Protects consumers and achieves
the right trade-off between cost,
reliability and security.*



Australian Energy Regulator

Economic regulation
and rules compliance

*Polices the system and
monitors the market.*



Australian Energy Market Operator

Electricity and gas systems
and market operator

*Works with industry
to keep the lights on.*

THE FUTURE

THE KEY CHALLENGES FACING THE SECTOR
AND THE AEMC'S PRIORITIES FOR REFORM

Challenge: Growing geographic dispersion of generation

- Historically, there were a small no. of large geographically-concentrated generators
- Today: increasing numbers of small-sized, geographically-dispersed, generation
- Poses challenges for regime governing network access and pricing

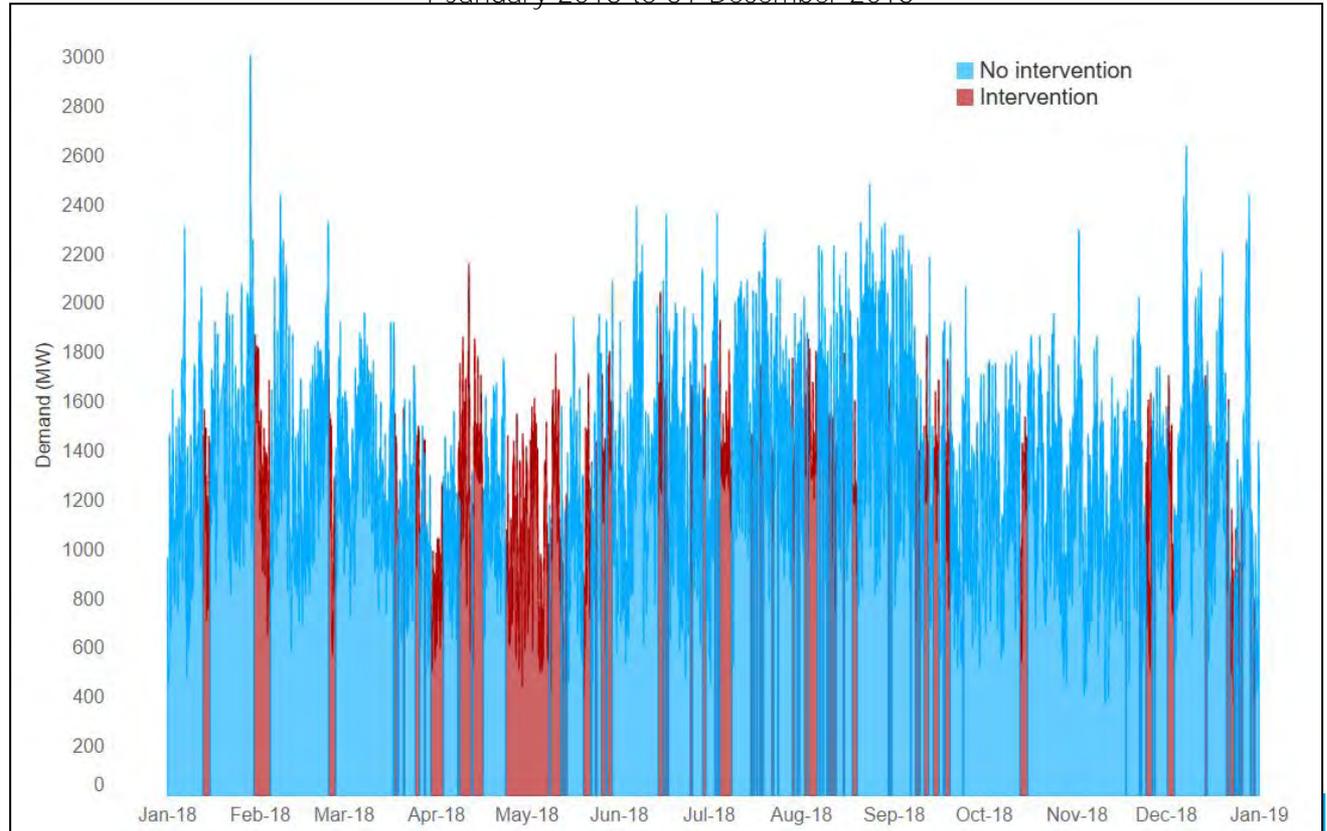


Challenge: Integrating renewables and maintaining system security

- “missing money” issue for ancillary services
- E.g. inertia, system strength

South Australian electricity demand

1 January 2018 to 31 December 2018



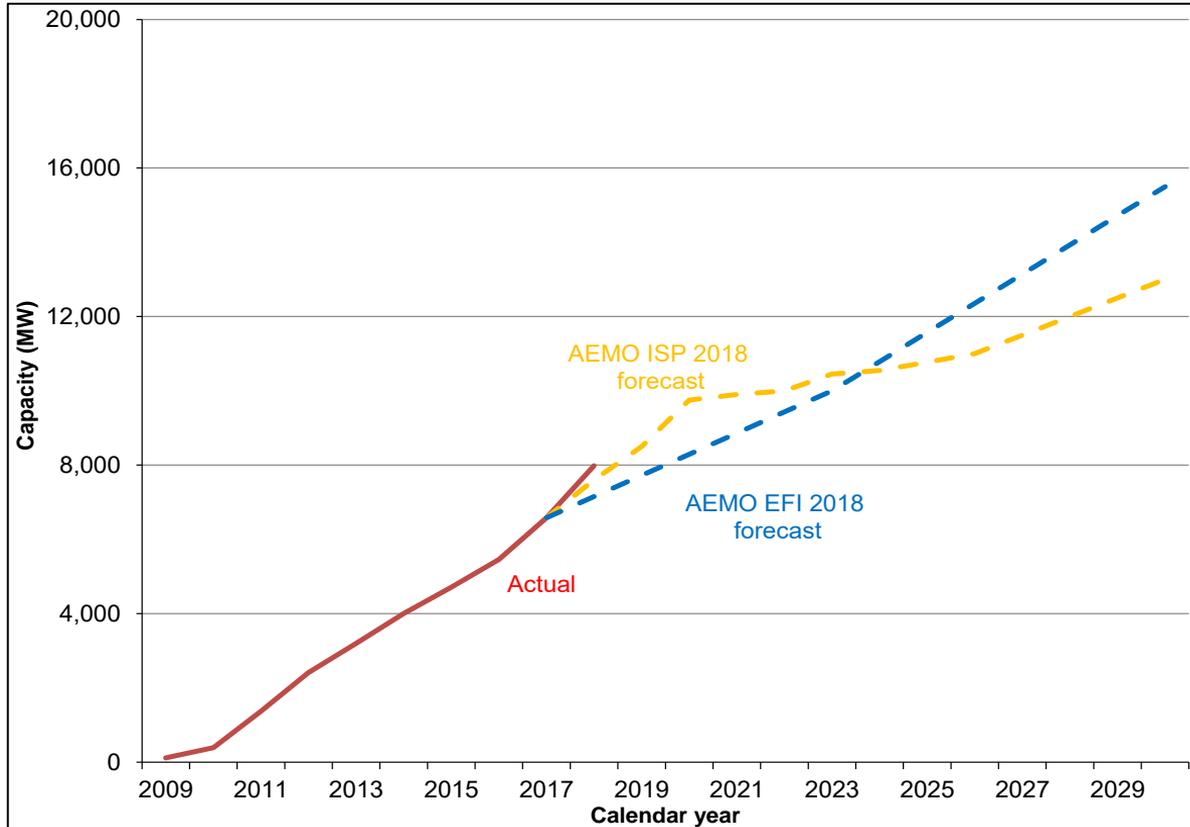
Challenge: Network economic regulation and tariff design

- Following reliability events in mid-2000s, governments tightened reliability standards
 - **Shifted from 'risk-based' network planning to 'deterministic N-1' methodology**
- Led to a large increase in capital spending on electricity networks. Total network assets in some states (esp. QLD and NSW) rose from \$30 bn to ~\$70 bn
- At the same time, consumers were still being charged for the *energy* they **consumed, not the 'capacity' they require**
 - Yet demand has become peakier – peak demand rising, average is flat or falling
 - 2 million households have installed rooftop PV – electricity consumption and income no longer positively correlated
 - Network utilisation rates falling

Challenge: Integrating DER – distribution network access and pricing

Projected uptake of small-scale PV across the NEM

Cumulative, by financial year



Challenge: Financial incentives unaligned with system needs → disorderly transition

- Lack of integrated national climate policy framework has resulted in increased use of technology-specific subsidies (e.g. LRET, SRES, Premium FiTs)
- Such subsidies increase supply but provide no signals for economic substitution of existing generation
 - Abatement driven only by new zero-emissions investment; no signal for low-emissions investment from new or existing plant (e.g. coal2gas switching)
 - Disorderly transition occurs whereby prolonged periods of below long-run average cost (LRAC) pricing are suddenly replaced with prolonged periods of above LRAC pricing
- Use of production subsidies has broken the implicit link between financial risk management and the needs of the electricity system

AEMC priority areas of reform

1. Generator access and transmission pricing



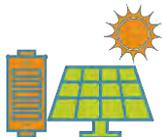
Shift from large geographically concentrated to small geographically dispersed generation

2. System security



Services previously provided for free not necessarily provided by new generation

3. Integrating distributed energy resources



Increased adoption of small-scale solar and energy storage technologies

4. Digitalisation of energy supply

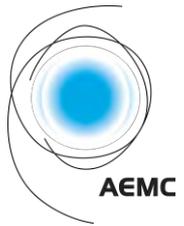


Increased adoption of digital technologies

5. Aligning financial incentives with the physical needs



More variable demand and supply creating price volatility



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