



AUSTRALIAN
ENERGY
REGULATOR

Effectiveness of regulatory environment in driving non-network solutions

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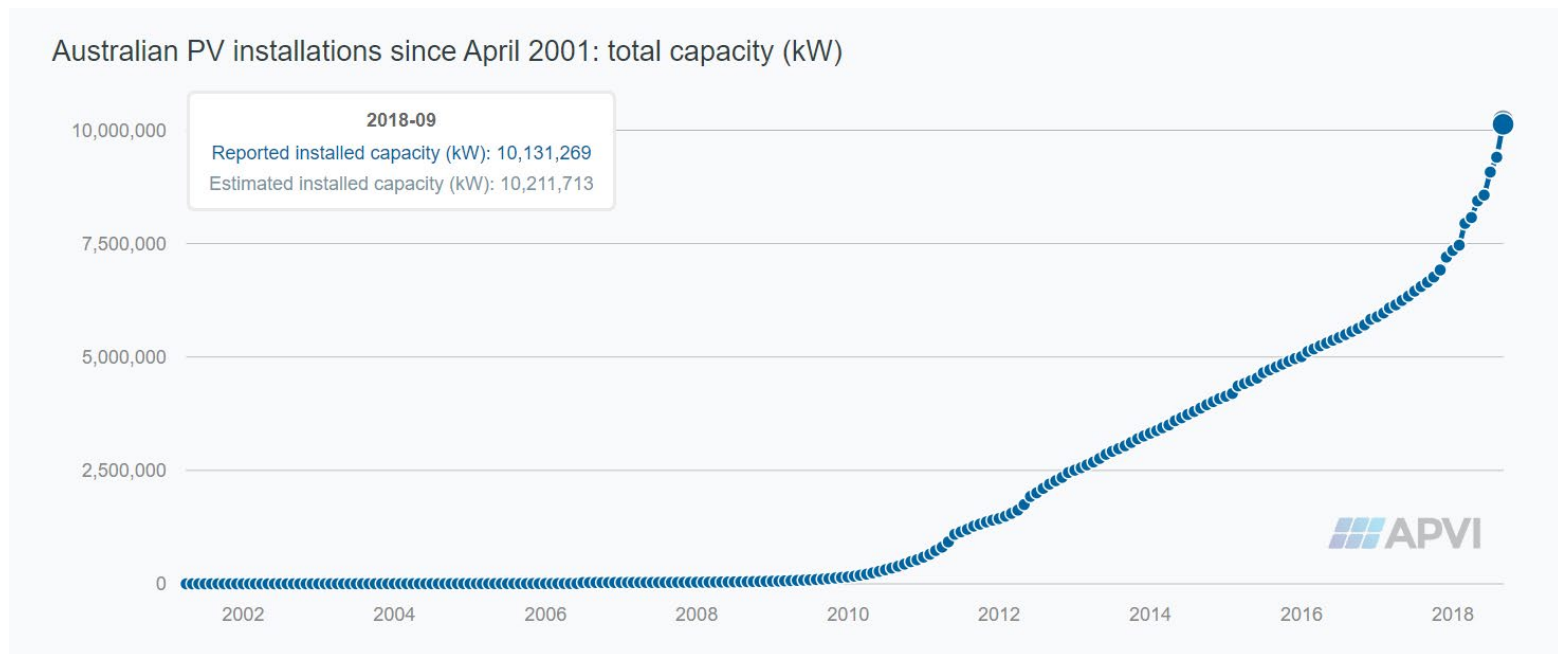
Agenda

- Why are non-network solutions important?
- Trends in DER
- Issues in the regulatory environment
 - The network incentive framework
 - Tariff reform
 - Evolution of the RITs
 - The DSO model
 - SAPS/Microgrids

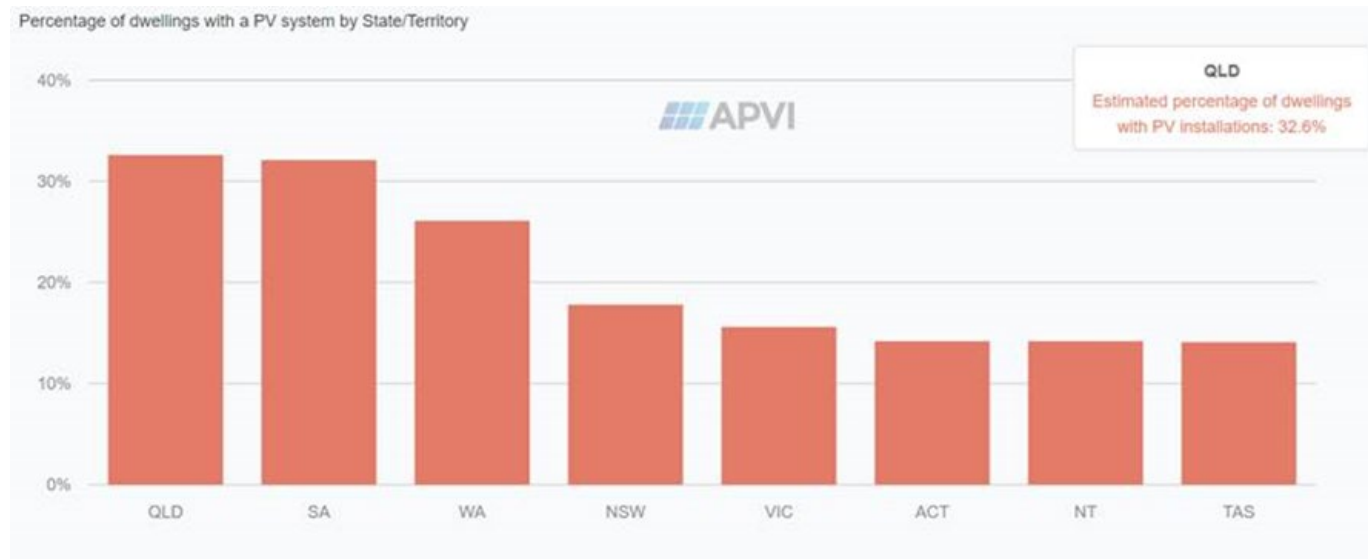
Why are non-network solutions important

- Network solutions often involve investments in assets that customers pay for over a long time. In a fast-evolving energy environment, there is higher risk of mistimed or inefficient investment.
- Non-network solutions, where efficient:
 - Keep future options open: Lower risk of stranding in an environment of rapid change
 - Allow for contestable provision of services to promote competition where possible
 - Mitigate RAB growth: less exposure to changes in cost of capital

Trends in DER- Leading to rapid uptake



Trends in DER- But not uniform between regions

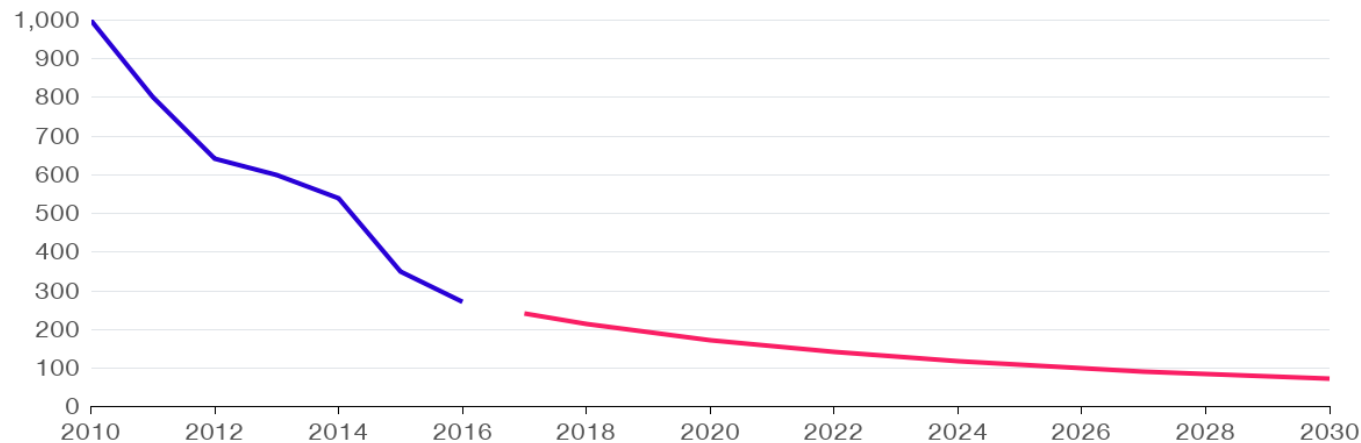


Trends in DER- Storage getting cheaper too

Cheaper, Faster

Lithium-ion batteries are expected to get a lot more affordable very quickly

■ Observed prices (\$/kilowatt-hour) ■ Forecast prices (\$/kilowatt-hour)



Source: Bloomberg New Energy Finance

Bloomberg 

The network incentive framework

- Once every five years, we consider revenue proposals from networks and determine allowances in consultation with stakeholders
- Once we've done so, the service providers are left to run their business and use their allowances efficiently
- The ongoing incentive framework (how networks are ultimately remunerated) should be properly calibrated to promote efficient expenditure during reg periods

Work we have been doing to promote efficient incentives

- Establishment of CESS and DMIS, to go with STPIS and EBSS
- Work to advance tariff reform- Tariff round-tables, TSSs
- Changes to RITs to better accommodate non-network alternatives
- Binding rate of return instrument

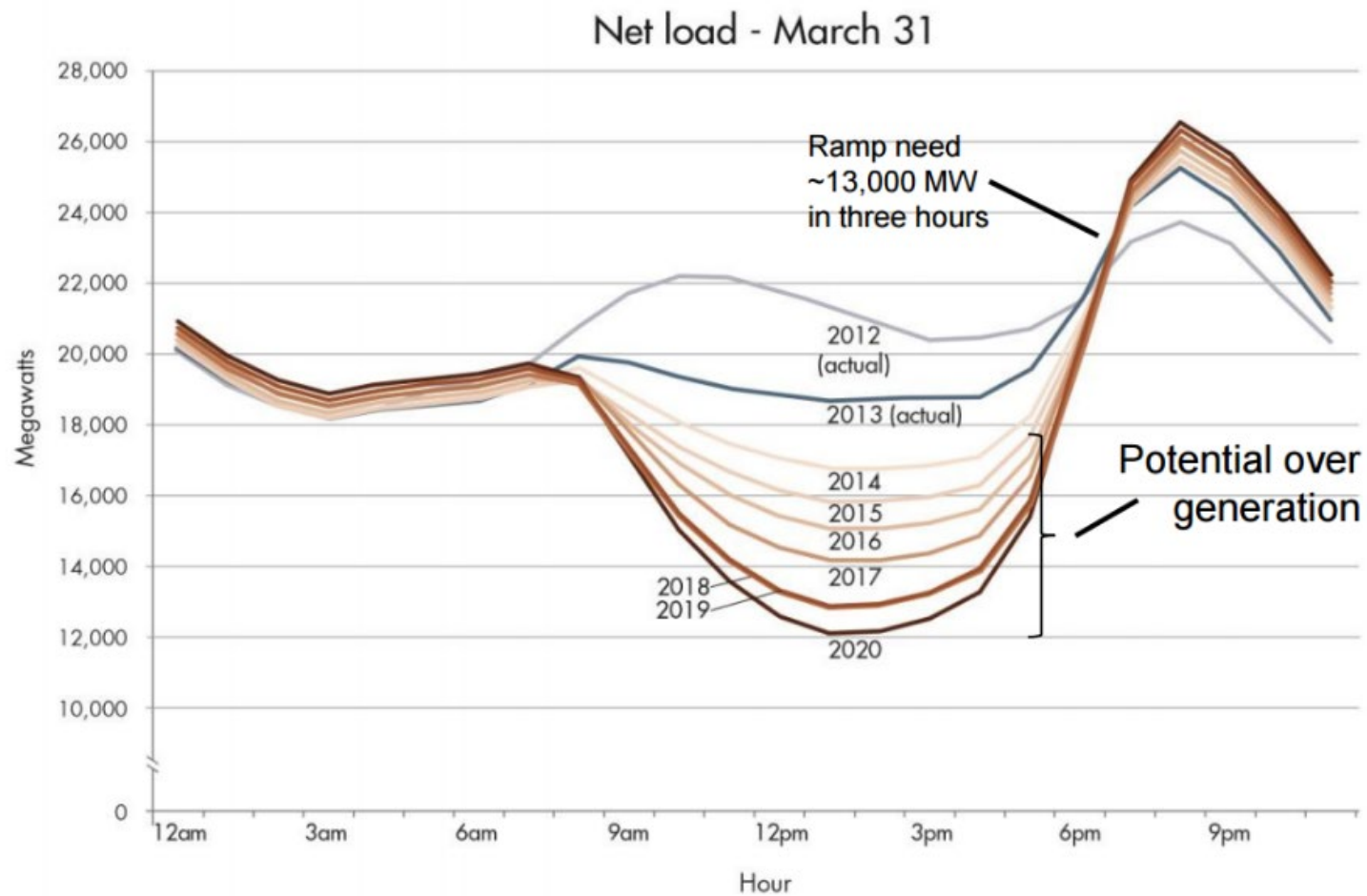
Current incentive mechanisms

- EBSS and STPIS have been around for a while:
 - EBSS rewards service providers for opex efficiency gains and shares the benefits between networks and customers
 - STPIS creates an incentive to maintain a target level of service performance so opex reductions are not driven by reducing service quality
- CESS and DMIS are newer:
 - CESS designed to balance expenditure incentives so there is not a financial incentive to inefficiently substitute capex for opex (where non-network solutions would be remunerated)
 - DMIS designed specifically to increase incentives for demand management solutions

Performance Based Regulation

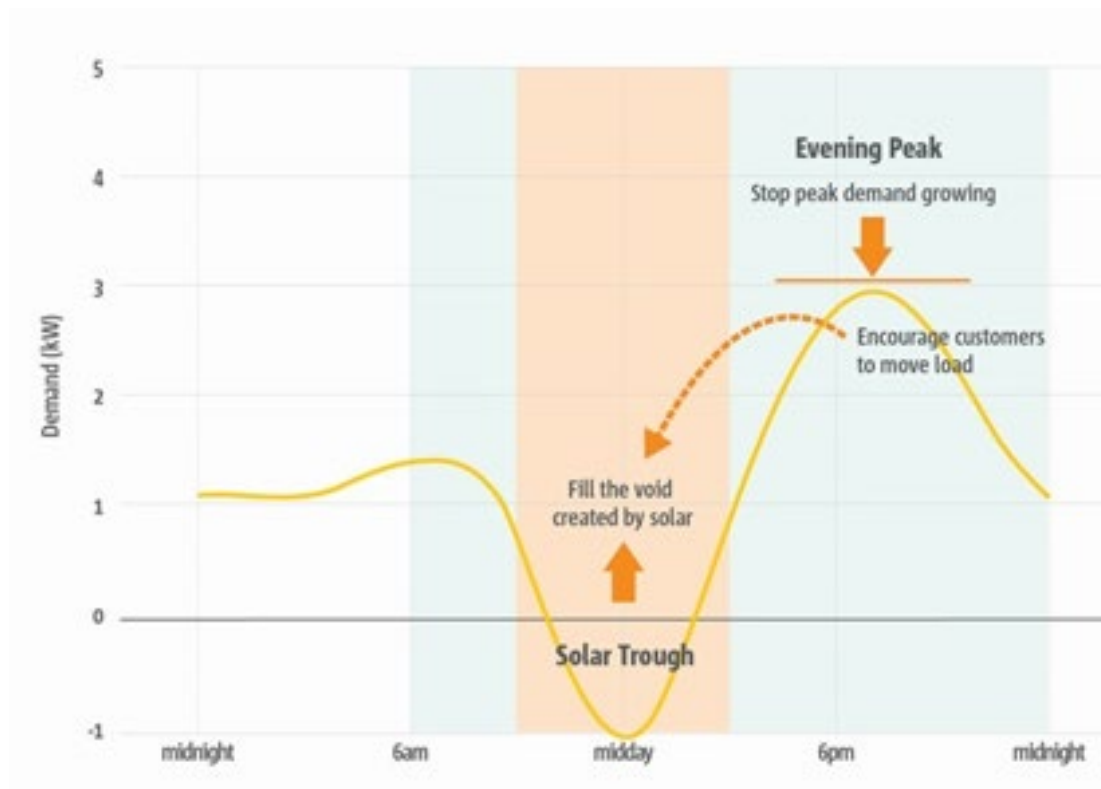
- Significant international debate underway on performance based regulation.
- Is the existing CPI-X model in need of an update?
- Ofgem RII0 2 model very different:
 - Totex – currently being considered by AEMC
 - Innovation funding – strong emphasis, cultural change
 - Regulatory flexibility and discretion
 - Competition – exploring network and non-network solutions
 - Whole of system coordination
 - Incentives – risk sharing and dynamic
 - Mechanisms to manage uncertainty
 - Customer engagement (AER active in this space through New Reg initiative)

Tariff reform



Network Tariff Reform

The rational use of storage should result in reductions to peak demand and flatter load curves – driving efficient take up of DER



Tariff design will be critical to driving efficient behaviour

AER work on tariff reform

- Tariff reform – ensuring consumers can choose to use the network in ways that maximise their lifestyle choices
- Sending efficient pricing signals that:
 - Deliver efficient network investment to meet peak demand
 - Encourage efficient take up of DER
 - Drive service innovation to consumers (e.g aggregation models)
- AER roundtables (Nov 18 and Jan 19) with network businesses, consumer groups and retailers.
- Retailers a key focus for cost reflective tariffs – how should networks package up tariffs for the retailers.
- Importance of trials and initiatives to fully understand demographic impacts
- Must be accompanied by complementary measures – social policies, government and industry led action (eg education)

Changes to RIT-T and RIT-D

- After AEMC rule-change in 2017 to require use of RITs for repex, we are expecting to see a greater volume of RITs and for these to play a greater role in our expenditure assessments
- Planning to take a more active role in monitoring and reporting RIT compliance breaches
- Have refined our guidance in the RIT-T and RIT-D application guidelines, especially with respect to more and better guidance on the identification of options and treatment of option value in those processes—should better capture the value of non-network solutions
- Also identification of needs as an outcome or end rather than the means to an outcome or end

Open Energy Networks initiative – some observations

- Articulating and quantifying value of DSO to consumers is important
- Timing and sequence of steps to DSO will be important – manage the risk of adopting a tech solution before it is needed
- Location– value likely to be greatest where DER penetration most advanced
- Common platforms, standards and protocols– the ‘rail gauge’ issue
- Framework/policy optimisation
- Independent DSO vs AEMO/DB platforms requires policy debate – a material issue in other overseas jurisdictions

SAPS/Microgrids



- Framework consideration ongoing- many live issues:
 - DNSP-led or third party?
 - Retail competition?
 - Regulation required? If so who?
 - Safety, replacement, long-term viability
 - Opt in/out, administration, oversight
 - Trading systems and DUOS methodologies.