AUSTRALIAN ENERGY REGULATOR

VCR Public Forum

5 December 2018

aer.gov.au

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Welcome

Paula Conboy
Chair

Why is the AER doing a VCR review?

- Historically, there has been no single body responsible for determining VCR
- the Australian Energy Market Commission (AEMC) made a rule change on 5 July 2018 to give responsibility to the AER for determining VCR
  - Determining VCR closely aligns with the statutory functions of the AER

What are the Values of Customer Reliability (VCR)?

- VCRs are an estimate of the value customers place on having reliable electricity supply under different conditions
- Usually measured in dollars per kilowatt hour
- How consumers value electricity depends on their energy needs.

Purpose of this public forum

- Much has changed since AEMO's 2014 VCR review and we need examine how this has impacted customer preferences
- This forum is an important chance for us to engage with stakeholders on the VCR review
- Update stakeholders on the progress of the review to date

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Project Overview

Mark Feather
General Manager, AER Policy and Performance

Rule requirements

The new Rule 8.12

- Develop, publicly consult on, and publish a national methodology for estimating VCRs on a consistent basis across the NEM and the NT
- Publish our first determination by 31 December 2019
- Update VCRs at least every 5 years, and adjust the VCR by an appropriate methodology each year

VCR Objective

The VCR objective is that the VCR methodology and values of customer reliability should be fit for purpose for any current or potential uses of values of customer reliability that the AER considers to be relevant.

VCR project

Three main stages to our project:

1. Establishing a methodology to determine VCR values
2. Implementation of the Methodology
3. Finalising VCR values and developing an application guide

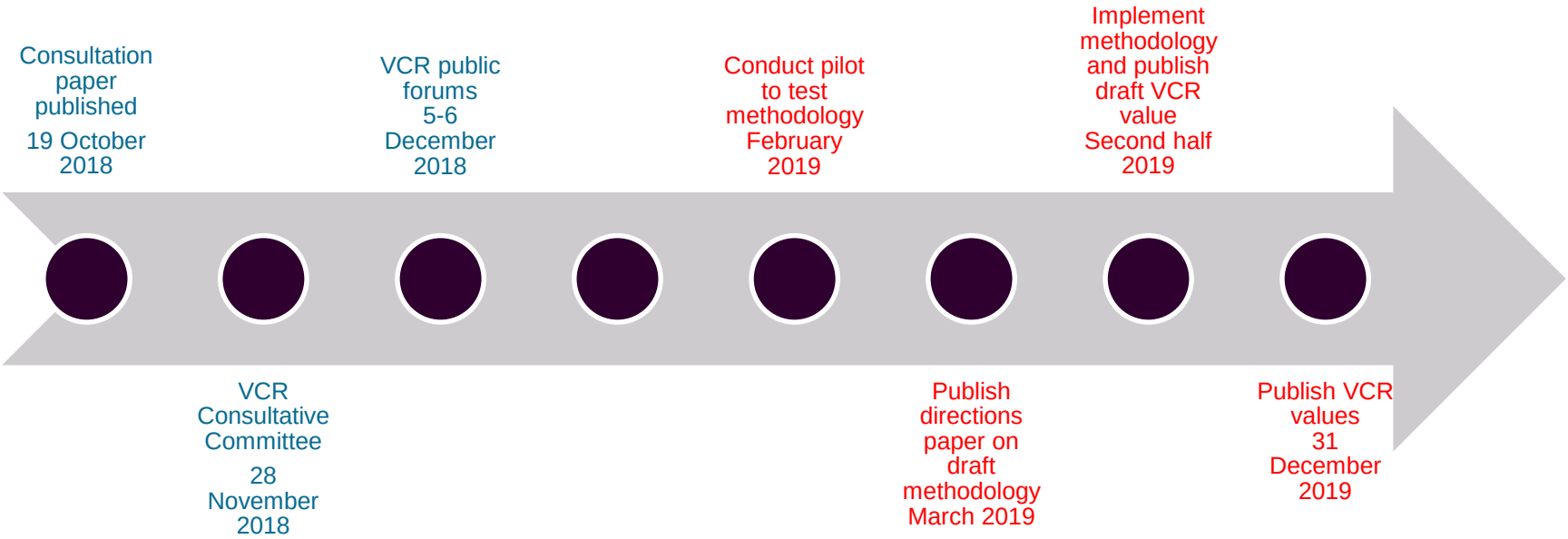
Approach to VCR review

- Starting point is the AEMO NEM-wide VCR review
  - Update to account for changes in the energy market since 2014
- Consult widely with stakeholders
- The VCR methodology will include a mechanism for direct engagement with customers (such as surveys)

Approach to VCR review

- VCR is an subject area that requires specialist expertise and detailed input. To do this:
  - set up the VCR Consultative Committee to advise us on the methodology and process
  - engaged the Melbourne Energy Institute
  - in the process of engaging a survey consultant

VCR project timeline

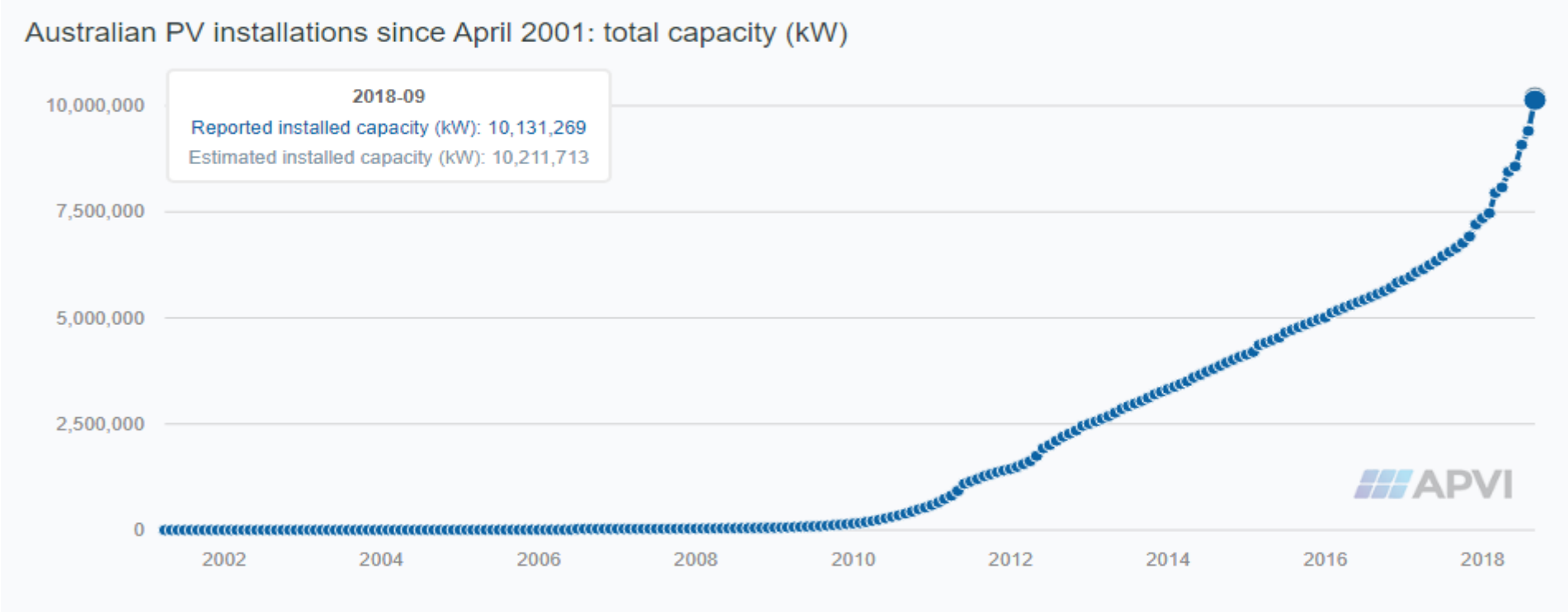


Accounting for impact of energy market changes since 2014

A key challenge of the VCR review will be to factor in energy market changes since AEMO's review and how this may change customer preferences. These are:

- Increased concern of customer regarding cost of electricity
- Flat demand growth and consumption decreased
- Increased penetration of roof top solar PV and battery

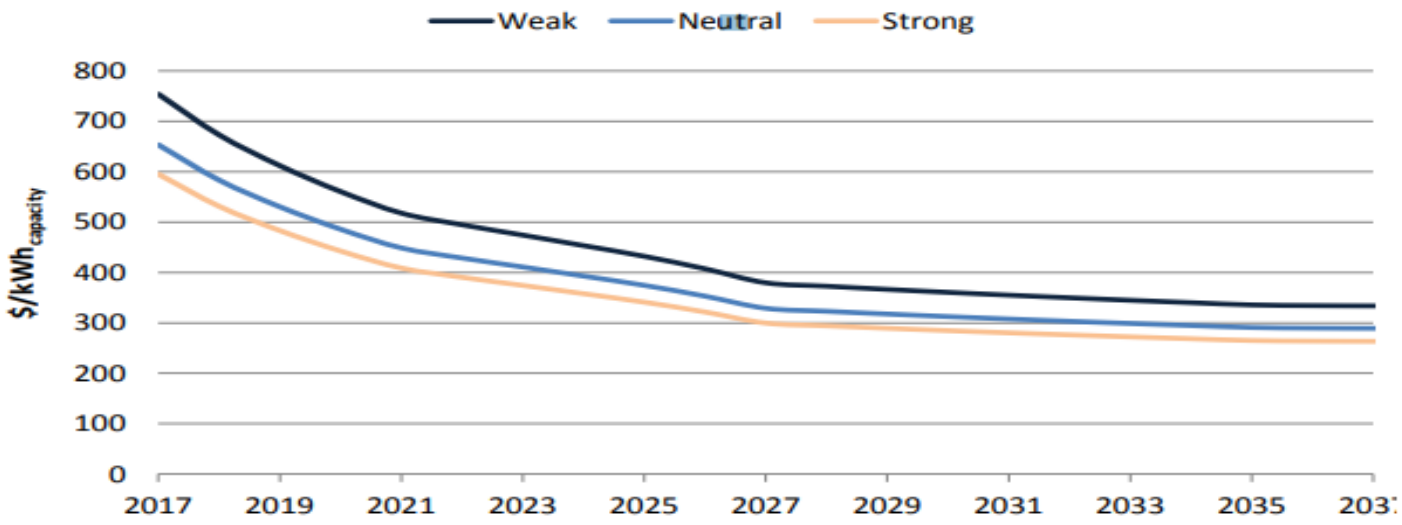
As of 30 September 2018, there are over 1.95 million PV installations in Australia, with a combined capacity of over 10.14 gigawatts.



PV and battery penetration

- 20 789 energy storage systems were installed in 2017, a threefold increase from 6750 in 2016
- Cost of residential battery technology is projected to continue falling

Figure 9: Projected capital cost trajectories of LI-ion batteries for Neutral, Weak and Strong scenarios



Source: Jacobs' analysis based on CSIRO's ""Future energy storage trends"

PV and battery penetration

- 12 per cent of 172 000 PV installations in 2017 included a battery, up 5 per cent from 2016
- As of 30 September 2018, there are 1.95 million solar PV installations with a combined capacity of 10.14 gigawatts and Australian PV Institute

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AEMO 2014 VCR review

George Huang

Previous VCR review

- The last NEM wide VCR review was undertaken by AEMO in 2014
- AEMO used a survey approach to determine VCR values for residential, business and direct connect customer VCR values ($/kwh)
  - Combination contingent valuation and choice modelling approach for residential and business customers
  - Direct cost approach for direct connect customers

Previous VCR review

- Total 2928 customers surveyed consisting of:
  - 1416 residential customers
  - 1499 business customers
  - 13 direct connect customers
- Residential and business customer recruitment was targeted based on sample plans to ensure statistically robust and representative group of customers surveyed
- Residential and business customer VCR segments based on AEMO stakeholder consultation and feedback from pilot survey

Previous VCR review findings

- The most important outage characteristics affecting residential VCRs are:
  - length of outage
  - whether outage occurred at NEM daily peak
- The most important outage characteristics affecting business VCRs are:
  - length of outage
  - off peak and weekend timing of outages preferred by industrial and commercial customers
- Business VCRs on average continued to be higher than residential VCRs
- Larger businesses tend to have a lower VCR than smaller businesses

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Overview of submissions

James Criticos

Overview of submissions

- Consultation paper – October 2018
- Received 18 submissions which discussed
  - Methodologies for deriving VCR
  - Applications and uses for VCR
  - VCR customer segmentation
  - VCR outage characteristics
  - Frequency of VCR reviews
  - Adjusting VCR values between reviews

Building on AEMOs methodology

- Building upon AEMO's approach
  - Include more granularity (CBD and regional representation)
  - Consider increase in solar PV and storage
  - Greater representation of business customers
  - Use direct cost approach for large business customers (major commercial/industrial, data centres, and major transport)
  - recognise
- Achieve greater sample size
- Calculate VCR for widespread, long duration events
- Consider:
  - Budget and time
  - Transitionary issues
  - Achieving and adequate response rate

Summary of submissions in response to Methodology

- Residential Customers
  - Contingent valuation and choice modelling
- Business Customers
  - Contingent valuation and choice modelling
  - Direct cost approach for large business customers?
- Direct Connect Customers
  - Direct cost approach

VCR applications

- It's important to consider VCR applications because:
  - The rule change gives the AER the responsibility to establish VCRs and develop the VCR methodology
  - The VCR methodology must be fit for any current or potential uses of VCR that we consider relevant.
  - Different contexts may require different degrees of customer and outage segmentation.
  - Different customer and outage segmentation requirements could potentially impact survey design.

Overview of submissions – VCR applications

- Support for VCR's role continuing in network planning and Regulatory Investment Tests
- Wholesale Market Price Cap – mostly supportive of an informative role
- Load Shedding Priorities – mixed views
- Ancillary Services price cap – mixed views
- RERT – mostly supportive of limited role
- Planned outages – mostly unsupportive
- Allocating shared costs –mixed views

Customer Segmentation

- Customer segmentation is important as there is likely to be a large variation in VCR among customers.
- This variation is a reflection of the range of circumstances of customers, and for what purposes they use electricity.
- Not only variation in customers, but variation in the composition of these different customers
- Need to approach segmentation intelligently to minimise:
  - methodology complexity
  - required respondent numbers
  - derivation and application of VCR values.

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Overview of Submissions - Segmentation

- Nearly all submissions discussed customer segmentation.
- Strong support for VCR to be at least as granular as AEMO's study
- Many submissions supported further segmentation by
  - DER, solar PV, storage technologies
  - low carbon technologies – e.g. solar water heating, Electric Vehicles
  - Access to gas
  - Distance from population centres (remoteness)
  - Climate zones

Overview of Submissions - Outage characteristics

- VCR also varies with the nature of the outage being considered.
- Submissions supported the VCR review considering
  - Duration (including Momentary Outages)
  - Timing
  - Extent of geographical spread
  - Season
  - Frequency

Overview of submissions – Frequency of reviews and adjusting between reviews

- We must conduct a review at least every 5 years
- Our methodology can include annual adjusting of VCR values
- Submissions supported a range of review frequencies from annually to every 5 years, with most submissions supporting at least every 5 years.
- Mixed views on the use of CPI or another indexation method for annual adjustments
- Mixed views on smoothing or transitioning VCR values between reviews

Questions?

Guest presentations – Sydney

- Mark Grenning – Energy Users Association of Australia
- Matthew Webb – Energy Networks Australia
- Lynne Gallagher – Energy Consumers Australia

Q&A session

Next steps

- We are giving stakeholders another opportunity, until **20 December,** to provide submissions on the consultation paper. In particular, views on:
  - Whether we should determine a HILP VCR, and if so, how?
  - Whether we should develop VCR values for customers with DER, and if so, how?
  - Whether we should develop VCR values for momentary outages, and if so, how?
  - Appropriate business and industry segmentation

Next steps

- Thank you for attending

- If you have any further questions or would like to discuss specific issues with the VCR project team, please contact VCR@aer.gov.au.