Values of Customer Reliability Consultative Committee Meeting Minutes

Date of Meeting: **30 October 2019**
Location: **AER Melbourne office**
Time: **10:05 to 14:40**

Attendees: Committee members: Matthew Webb (ENA), Tom Hallam (ENA), Duncan MacKinnon (AEC), Trevor Armstrong (Reliability Panel),Tom Walker (AEMC), Alisa Toomey (AEMC), Felix Karmel (ESCV, on behalf of Aaron Yuen), Elizabeth Walters (ERAWA, on behalf of Jeremy Cross), Craig Memery (PIAC), Mick Fell (Energeia, on behalf of Lynne Gallagher, ECA)

AER staff: Paul Dunn, George Huang, Ingrid Michel, Danielle Coronel, Jimmy Criticos, Richard Hayes, Su Wu, Eado Varon

AER consultants: Terence Jones (MEI), James Garriock (Insync), Ian Bycroft (Insync)

Apologies: Rowan Mckeown (ESCOSA), Mike Smart (IPART), Kimberley McKay (UCNT), Annette Weier (ICRC), Reena Kwong (AEMO), Gavin Dufty (Reliability Panel), Chris Murphy (Reliability Panel), Andrew Richards (EUAA), Lynne Gallagher (ECA), Chris Lock (OTTER), Aaron Yuen (ESCV), Jeremy Cross (ERAWA)

1. Welcome

George Huang welcomed Committee members and gave the objectives for the meeting.

2. Introduction and apologies

Committee members, AER staff, and Melbourne Energy Institute (MEI) and KPMG/Insync representatives introduced themselves.

3. Minutes from previous meeting and matters arising/action list

Minutes from previous Values of Customer Reliability Consultative Committee (VCRCC) meeting were noted.

George Huang gave a brief recap of the matters discussed at the previous VCRCC meeting.

4. Project update

George Huang gave a brief update on the progress of the VCR project.

4.1. Internal promotion of surveys

Danielle Coronel outlined the various channels through which the AER had promoted the VCR surveys.

Key points covered the following:

- Committee members were thanked for their assistance in promoting surveys.

- The AER undertook a substantial engagement process to promote the surveys through a range of channels, targeting both a general audience and specific categories of customers.
- The channels through which surveys had been distributed included various ACCC/AER communications and networks, business associations, agricultural associations, and Northern Territory bodies.

4.2. Summary of submissions to *Draft decision*

Eado Varon gave a summary of the submissions received in response to the *Draft decision* on the VCR methodology.

Key points covered the following:

- Seven submissions were received in response to the *Draft decision*, expressing general support for the draft VCR methodology.
- Issues raised in submissions included that the AER provide:
    - clarification on the level of aggregation and exactly which regions/customer segments VCR values would be published for
    - additional information along with VCR values including confidence ranges and a range of survey data
    - further information on the timing and method of transition for the use of new VCRs in regulatory investment tests, revenue proposals, etc., including holding a workshop with network planners and publishing an application guideline to help address this.
- A detailed summary of submissions and accompanying AER responses will appear in the *Final decision* on the VCR methodology.

Members:

- queried what the AER's response was to the issues raised. AER staff considered that that there are likely to be benefits in providing guidance to stakeholders, further consideration would need to be given to this. AER staff also clarified that they will seek to publish National Electricity Market (NEM) region VCRs (which will be built on granular VCRs).

ACTION item:

AER staff will give further consideration to what guidance on the application of the VCR values can be provided.

4.3. Brief update on widespread and long duration outages

Jimmy Criticos gave an update on the methodology for calculating widespread and long duration outage VCRs.

Key points covered the following:

- Following a request for quote process, ACIL Allen have been engaged by the AER to undertake economic modelling to estimate VCRs for widespread and long duration outages.
- The AER is currently developing a detailed methodology with ACIL Allen, consisting of a mix of economic modelling (Input – Output tables and multipliers),

literature/case study review, and developing factors to adjust survey-derived VCR results.

- Work on widespread and long duration outage VCRs is expected to be completed in January/February 2020.

Members:

- queried whether the AER would be consulting on the assumptions used to arrive at the multipliers. AER staff responded that they would be relying on the literature review and ACIL Allen's advice, but they will provide Committee members with further information
- queried what the outcome of the study would be. AER staff explained that the output will be a model, for which inputs will be able to be entered to model different outage scenarios.

ACTION item:

AER staff will provide Committee members with more information on the methodology for developing widespread and long duration outage VCRs.

5. Preliminary residential and small to medium business survey results

5.1. Contingent valuation results

James Garriock (Insync) gave a presentation on the residential and business surveys run by KPMG/Insync and the preliminary results.

Key points covered the following:

- A breakdown of the survey timeline and median[1] survey completion times.
- Survey response numbers for residential and business customers from each of the survey channels (the paid panel, open links and computer assisted telephone interviewing), and for each of the customer cohorts listed below.
- A comparison of preliminary willingness to pay (WTP) averages from survey responses to the contingent valuation question for a range of respondent characteristics (including residential electric vehicle ownership and business outage experiences) suggesting that the data has face validity.
- Preliminary WTP averages from survey responses to the contingent valuation question for:
    - residential customers, reported NEM wide and by state, climate zone, and remoteness category
    - small to medium business customers, reported NEM wide and by business segment.
- A recap of the changes made to the layout of the choice model from the pilot survey to the main survey, including the repositioning of the discount level and the randomisation of the position of the baseline option.

Members:

[1] Median times were presented because mean times can be skewed by survey respondents leaving their computers idle for extended periods while completing the survey.

- discussed the results for different cohorts, including possible reasons for the figures and differences between them, and how they compared to AEMO's 2014 results
- queried whether results would be re-weighted to match population proportions. James Garriock explained that there were arguments for and against doing so, but results would not be re-weighted as this could cause false precision.

5.2. Choice model results and likely customer segmentation

Richard Hayes gave a presentation on the likely customer segments and preliminary choice model results.

Key points covered the following:

- Climate zone has been focused on as the primary driver of residential customer reliability preferences. The original aspirational residential cohorts of every remoteness category in every climate zone have been collapsed, primarily through combining certain remoteness categories within a climate zone. Business cohorts were also discussed, noting that these are still likely to shift.
- Preliminary average WTP results for the proposed climate zone - remoteness cohorts and business sectors were shown and discussed. Methodological and real changes since AEMO's 2014 survey were explained with respect to business results.
- The residential choice modelling results are qualitatively similar to AEMO's 2014 results. Business results are more mixed than residential, similar to AEMO's findings. Preferences for different outage characteristic, and their statistical significance, were discussed.

Members:

- discussed how the residential customer cohorts have been combined and split. AER staff noted that a range of splits and combinations had been considered and tested
- commented that the choice modelling results will give network businesses interesting insights for planned outages
- queried how the final data cleanse is likely to affect sample sizes and statistical significance. AER staff responded that the small number of classifications and re-classifications of responses are unlikely to affect the statistical significance of results
- queried whether AEMO's data could be assessed using the AER's WTP methodology, noting that it would be nice to know the relative sizes of the effects of methodological and real changes. AER staff noted a comparison of the subset of business results that had the same methodology but explained that, more generally, the two surveys cannot be made directly comparable as AEMO did not have an open-ended question
- reiterated their support for the AER to develop an application guideline for VCR values, and hold working groups on the application of the VCR values, noting that several other processes are reliant on the VCR process. AER staff acknowledged these views and noted they would give further consideration to this.

6. Preliminary large business survey results

6.1. Number of survey responses and proposed segmentation

Danielle Coronel gave an overview of response numbers for the direct cost survey.

Key points covered the following:

- Committee members were thanked for their assistance in promoting the direct cost survey.
- Many respondents had difficulty determining their costs for different lengths of outages, due to variable and intangible costs. Some respondents were not able to provide direct cost information for outages and so their surveys will be unable to be used to derive VCR values.
- The breakdown of survey response numbers for each of the different large business customer types was provided.
- Based on responses, the AER is likely to have mining and metal segments similar to AEMO's, a broader manufacturing segment that would capture AEMO's wood, pulp and paper segment, and potentially an additional service industry segment.

Members:

- queried the nature of transport respondents, and whether their responses could be extrapolated. AER staff responded that transport responses were too limited to extrapolate.

6.2. Qualitative analysis

Ingrid Michel presented a qualitative analysis of responses to the direct cost survey.

Key points covered the following:

- The information provided by businesses is confidential and so the qualitative analysis could only provide a high level overview.
- Most businesses indicated that the impact of an outage is the same regardless of time and temperature. The main costs businesses would incur as a result of an outage are lost production, damage to equipment and overtime costs, and the majority of businesses would incur additional costs as an outage lengthens.
- Momentary outages would cause disruption to most business sites, and more than a quarter of respondents have made investments to reduce the risk/impact of momentary outages.
- Respondents were generally satisfied with the reliability of their electricity supply, and nearly half had not experienced an outage of 10 minutes or more in the last year. Nearly half of respondents have installed back-up generation or a battery, and more than a quarter routinely generate their own electricity.
- The next step is to derive VCR numbers from the responses. Late responses are still being received, and consumption data will then be obtained from businesses and AEMO.

7. Consumption and outage data

7.1. Consumption profiles

Jimmy Criticos presented an overview of the AER's methodology to calculate consumption profiles for the different types of outages.

Key points covered the following:

- Consumption data is used to find the unserved energy in kilowatt hour (kWh) associated with each type of outage. This unserved energy is required to convert dollar values for different outage scenarios derived from the contingent valuation and choice model questions to dollar per kWh VCR values.
- In 2014, AEMO used:
    - 2012 demand from the Electricity Supply Association of Australia for residential consumption, and
    - survey respondents' National Meter Identifiers (NMI), bills and AEMO Market Settlement and Transfer Solutions (MSATS) data for business consumption,

  combined with adjustment factors for different outage scenarios.
- For residential consumption, the AER is using ACIL Allen 2018 Bill Benchmarking data (cross checked against survey respondent NMIs where possible) and smart meter interval data.
- For business consumption, the AER is using survey respondent bill and NMI data, and Australian Bureau of Statistics data.

Members:

- queried whether the ACIL Allen data gives a good representation of the NEM. AER staff responded that the data has representation for every state and territory except Western Australia, and is used to inform the comparison that appears on electricity bills and the AER's Energy Made Easy website
- queried the differences between the AER's consumption data and AEMO's, and suggested that a comparison of the two would be useful. AER staff explained AEMO used a single NEM-wide average, while the AER approach is more nuanced as it uses consumption amounts for each climate zone, which will hopefully be more representative, but also perhaps more variable
- queried whether the consumption data was normalised for ambient temperature. AER staff responded that the data is not normalised for ambient temperature, but it gives an average summer/winter curve.

ACTION items:

AER staff will update the Committee on how the AER's consumption data compares to AEMO's.

Relevant Committee members will provide assistance, if able, with business consumption data.

7.2. Outage probabilities

Jimmy Criticos presented an overview of the AER's methodology to calculate probabilities for the different types of outages.

Key points covered the following:

- Outage probabilities are used to weight the VCRs associated with different outages when combining into one overall segment VCR.

- In 2014, AEMO used 2012 Category Analysis Regulatory Information Notices (RINs) to calculate relative likelihoods of different outages for each NEM region by combining the outage data of relevant Distribution Network Service Providers (DNSPs). AEMO considered outages in certain remoteness categories for its business segments (e.g. outages in rural areas were used for the agricultural sector).
- The AER is using 2017-18 Category Analysis RINs (2018 for Victorian DNSPs). DNSPs have provided the lists of postcodes served by feeder, allowing each outage to be allocated to the residential climate zone and remoteness segments.

Members:

- discussed the AER's decision not to exclude outages which affected less than 50 customers. AER staff noted that they did not see a basis for excluding such outages and clarified that they will be weighting all outages by the customer outage minutes, so the effect of an outage that affects few customers would be relatively small
- suggested that the AER look at criteria used by AEMO to classify outages to help determine whether an outage is localised or widespread. AER staff noted that whether an outage is widespread can be used as a variable, but will be difficult to include in the probability weighting of outages.

ACTION items:

AER staff will attempt to find out AEMO's rationale for excluding outages that affected less than 50 customers.

AER staff will update the Committee on how the AER's outage data compares to AEMO's.

AER staff will provide the relevant Committee members with a list of the feeder data that they are lacking, and members will follow up on this.

8. Next steps & close meeting

The next VCRCC meeting will be held on 18 November in Melbourne, where AER staff plan to discuss the following with the VCRCC:

- a preview of dollar per kWh VCR numbers
- a more detailed update on widespread and long duration outage VCRs.