Mark Feather
General Manager, Policy and Performance
Australian Energy Regulator
GPO Box 520
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14th November 2018

Submitted via e-mail to: AERInquiry@aer.gov.au

Dear Mr Feather,

Values of Customer Reliability
Reference: PRJ1003080

The Australian Energy Council (the "**Energy Council**") welcomes the opportunity to make a submission in response to the Australian Energy Regulator's ("**AER**'s") *Values of Customer Reliability Consultation Paper*.

The Energy Council is the industry body representing 22 electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. These businesses collectively generate the overwhelming majority of electricity in Australia, sell gas and electricity to over ten million homes and businesses, and are major investors in renewable energy generation.

Introduction

The value of customer reliability ("**VCR**") is a critical industry input datum which has widespread application in both the wholesale market and in the planning of networks. It is not straightforward to determine, so it is crucial that a major, professional effort is undertaken to survey it as accurately as possible. This consultation paper represents a good first step towards that end.

As the AER rightly sets out, the value of reliability to customers is difficult to observe, and depends on:

- the type of customer;
- season;
- type of day (e.g. business day);
- time of day;
- duration of the outage;
- weather;
- the use to which electricity is being put at the time; and
- whether there are alternative fuels or arrangements available.

The Rules specify that the AER must determine values of customer reliability,[1] rather than a single value, therefore to make an appropriate assessment the AER will need to consider an amalgam derived from the different parameters which affect the values' determination.

Scope

The Energy Council supported the rule change to allocate this important function to the AER, an institution which is considered to have the appropriate expertise, independence and understanding of the tension between cost and reliability. The Energy Council also considers the survey must be taken dispassionately to find the most accurate possible values.

Section 4 of the consultation paper lists the many areas that VCR influences. This is useful background for the reader, but many of the questions invite commentary well beyond the scope of the task. Questions 1-8

[1] National Electricity Rule 8.12(g)

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are matters largely for the Reliability Panel, or for the Australian Energy Market Commission when considering rule changes. Questions 10-13 are matters for the AER, but for different regulatory processes distinct from VCR surveying.

This series of questions could give the impression that:

- part of the limited resources allocated to this important and complex survey will be diverted into questions of market design that are beyond the scope of the task, and in some cases beyond the role of the AER; and
- that the survey itself may be influenced by preferences in the outcomes of the processes affected by it.

The Energy Council suggests that at this time the task's focus remain directed squarely at surveying the most accurate possible quantification of VCR, without regard to pursuing matters of market design.

Discussion

AEMO 2014 approach

In 2013 and 2014, the Australian Energy Market Operator ("**AEMO**") conducted a comprehensive National Electricity Market-wide survey of customers' values of reliability.[2] The study involved approximately 3,000 respondents and took the better part of a year to complete. While any survey necessarily has a margin of error, the Energy Council believes that the work completed by AEMO is the best to date, and gives a fair indication of the worth customers ascribe to various levels of interruption, compared with the alternative of constantly paying more to have fewer interruptions. The Energy Council believes that the work is best practice, and the AER should use similar techniques in the future to make its assessment, and is therefore supportive of the discussion in Section 5.1.

Substitutable Products

Falls in the price of batteries and control equipment have very significantly improved customers' options to seek uninterruptible power supply in recent years. It is economically irrational for the power system to invest in common reliability at a greater cost than is achievable privately.

It is likely that many customers with high VCRs have not invested in backup for whatever reason, and will therefore estimate impacts of grid interruption that are greater than the cost of installing backup. As this is indicative of informational or regulatory failure, such responses should be capped at the price of backup. This appears to be the approach proposed in Section 5.1.5 and is therefore supported. Thus an important first step in the survey will be seeking technical advice on the cost of such backup options.

This feature of the survey may ultimately prove useful in informing customers and government if under-investment in backup, or, in other words, inefficient over-reliance on grid reliability, is shown to be widespread.

Determining outage characteristics

With respect to wholesale market design, outage timings consistent with rotational load shedding are most important. These are in the order of one hour.

For network investment, there is also value in assessing the cost of very short interruptions, say 15 minutes, and also prolonged at around 8 hours. There seems little value in assessing the cost of extremely long durations as these would generally only result from unforeseen *force majeure* events that would be outside any reasonable planning framework.

The Energy Council is aware of claims from AEMO that customers are exceptionally sensitive to:

- interruption events that occur over a wide-spread geographical area, that typically occur as a result of events in transmission or generation; or
- interruptions during high ambient temperatures.

[2] Australian Energy Market Operator, *Value of Customer Reliability Review Final Report*, September 2014, available at http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/Value-of-Customer-Reliability-review

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However the Energy Council is unaware of any empirical evidence that suggests the VCR, measured in $/MWh, is particularly high during these events. The survey provides an opportunity to test these claims.

Timing and transitioning

As the consultation paper correctly points out, there is a balance between survey cost and its regularity. While it is true that the supply side of the industry is undergoing rapid change, VCR is a measure of customer preferences, and to the Energy Council's mind a survey frequency of five years should not significantly undermine its currency. Given the size of the task and the risks of inadequate surveying, it seems more important that the task be completed very thoroughly rather than very frequently. Between these dates, inflating at the Producer Price Index, as is done for the Market Price Cap, seems appropriate.

The Energy Council also believes it is important that changes in values of customer reliability occur smoothly, in order to avoid significant step changes which suddenly affect the outcomes of studies, cost-benefit analyses and reports which are reliant on VCRs as input assumptions. While it is accepted that changes in VCRs may, for example, cause projects to become justified between one VCR assessment and the next, swingeing changes in value may cause marginal projects to be built, and erode industry confidence due to the assessment volatility.

If a significantly different value emerges, before its implementation, the Energy Council would first recommend a review of the survey's approach and possibly even a repetition for confirmation. After that, a step change of greater than, say, 20% should probably be introduced with a glide path.

Metrics for behind the meter supply

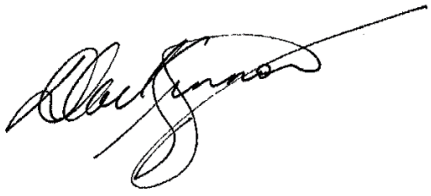
An interesting development that the consultation paper has not yet identified is that progressively more customers are using the grid for reliability services but not necessarily for energy. Customers with solar are frequently both consuming behind the meter whilst exporting energy, and, should the external grid supply be lost, the premises will be blacked out. This then leads to the question of whether VCR can be expressed on a $ per grid-supplied MWh basis. For some customer classes, a $ per connection per hour may be a more useful metric.

Conclusion

In conclusion, the Energy Council supports the AER developing a methodology for determining VCRs starting from work which AEMO completed in 2014. It must be clearly stated how these values can be used, and how the figures should be interpreted, and the AER should institute measures to ensure that VCRs don't change markedly from assessment to assessment.

Any questions about this submission should be addressed to the writer, by e-mail to Duncan.MacKinnon@energycouncil.com.au or by telephone on (03) 9205 3103.

Yours sincerely,



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