7 November 2014

Mr Matt Zema
Chief Executive Officer
Australian Energy Market Operator
Level 22, 530 Collins St
Melbourne VIC 3000

By email: VCR@aemo.com.au

Dear Mr Zema

The NSW DNSP's Response to the *Value of Customer Reliability Review Application Guide*

The NSW Distribution Network Service Providers, Ausgrid, Endeavour Energy and Essential Energy (the NSW DNSPs) welcome the opportunity to provide this joint submission in response to the *Value of Customer Reliability Review Application Guide*.

We understand that the purpose of the Application Guide is to provide stakeholder guidance on AEMO's initial thinking in respect of the current and potential applications of AEMO's VCR review results as set out in its VCR Review final report. We appreciate that AEMO has made a solid attempt at calculating national VCR levels in circumstances where there is no definitive methodology or consensus on how VCR values should be calculated and applied. This is important to note because the confidence interval for a VCR produced in this study has been identified by AEMO as +/-30 per cent.

We also note that the AEMC commissioned a VCR study in 2012 specifically for NSW. The results indicated an aggregate VCR of $94.99/kWh which is more than twice the aggregate result reported in the AEMO national study. Accordingly, we seek feedback from AEMO as to why there may be such a large difference between the two studies.

In our response to the Value of Customer Reliability Issues Paper we cautioned about relying on VCR estimates as the only factor to consider when undertaking investment planning. As evidenced above, estimating the VCR will always involve a level of subjective judgement and there remain challenges in quantifying the economic and value based VCR measures. For example, economically derived values generally do not adequately reflect the community's value of convenience and lifestyle impacts, while willingness to pay surveys have proven unable to adequately derive meaningful measures for the impact of events for which the respondents have no recent experience (for example high impact, low probability events such as a CBD outage). It is for this reason, and because of the wide confidence intervals produced from this study, that in sensitivity testing with a given a range of VCR values, a higher VCR value as one of the planning inputs is likely to be a prudent risk management approach for investment planning.

As the Productivity Commission notes:

> "…the consequences of underestimating the VCR might include underinvestment, and over the longer-run, a greater frequency of outages. At the margin, the consequences of overestimating the VCR are likely to be less severe. Given the difficulties with estimating an accurate VCR and the fact that VCR is an aggregate of the differing preferences of many customers, adopting a VCR that is at the higher end of the reasonable range of possible values would be sensible"[1].

[1] Productivity Commission 2012, *Electricity Network Regulatory Frameworks*, Draft Report, Canberra. P 52.

For example, analysis has been undertaken by NSW DNSPs in examining implied VCR values from recently completed projects. From our analysis we found that whilst some projects (simple minor augmentation projects) could be readily evaluated in these terms and had costs that are similar to or below current VCR estimates, complex projects, with multiple drivers and constraints involve significant assumptions that greatly impacts the estimated cost of avoiding the risk of unserved energy. A simple VCR measure struggles to capture the complexity of these decisions, however on any reasonable engineering assessment these projects were needed to ensure long term security of supply in accordance with the National Electricity Objective (NEO).

In recognition of the above, the NSW DNSPs submit that it is important that AEMO include in its Application Guide some commentary regarding the limitations of the VCR results for network planning purposes by reference to other factors that AEMO recognises as important (such as high impact, low probability events) but were unable to be sufficiently accommodated within the confines of this study. This commentary is particularly important given the wide confidence intervals for the VCRs produced in this study.

More generally, it is important that the Application Guide recognise that the VCR is a survey of the economic cost of outages not the level of acceptable reliability performance valued by customers (i.e. by reference to minimum service standards). It is a proxy for the value customers place on reliability in the absence of something more robust. While there is still merit in measuring the cost of outages, the Application Guide could state that a VCR could be combined with a minimum service standard (MSS) approach where customers' preferences for reliability standards are determined. Any reliability improvements that exceed the MSS would be considered effective reliability investment which could then be tested for its efficiency using a VCR approach. The VCR approach could have a role in determining that the investment is efficient if the cost of the improvement does not exceed the cost of the benefit.

While it is appropriate that AEMO considers (and incorporates) these issues as part of the Application Guide, we understand that the COAG Energy Council will likely determine the full scope and role of how the VCR should be applied as part of its consideration of its National Framework for Electricity Network Reliability.

Our specific comments on the Application Guide are provided at Attachment A. If you would like to discuss our submission further or arrange a meeting with NSW DNSP representatives please contact Mr Matt Webb, Group Manager Asset Strategy and Performance at Networks NSW via email at Matthew.Webb@endeavourenergy.com.au

Yours sincerely,

J. Hardwick

John Hardwick
Group Executive Network Strategy
Networks NSW

Attachment A – NSW DNSPs' Comments on the Application Guide

Guideline Section	NSW DNSPs' Comments
4.1	We support the notion of deriving locational VCRs by demand weighting. We note that difficulties may arise in allocating a large number of business customers to the agricultural, commercial and industrial sectors. We note that it may be appropriate to apply assumptions guided by local knowledge to the business sector demand weightings.
4.2.1	We support the notion of demand weighting using maximum demand. We note that maximum demand data is likely to only be available for large business customers. We also note that a demand weighting by a mix of maximum demand and annual energy consumption may be appropriate for some scenarios.
4.3	We are very supportive of the re-weighting of outage probabilities to better reflect locational VCR values. We are developing methodologies with the potential to apply specific event VCRs to portions of the unserved energy. The re-weighting of outage probabilities would enable us to prioritise investment to address constraints with the highest risk profiles.
5	We note that VCRs can inform investment decision making; however they should not be used as a sole investment criteria. We also note that the VCRs may not fully capture the cost of unserved energy in relation to the following high impact, low probability events: 1. Interruptions affecting parts of the Sydney CBD. 2. Interruptions affecting wide geographic areas. Additional analysis may be required in order to quantify the benefits associated with investment that addresses risks of the above interruptions. This is important with respect to the subtransmission part of the network where the feedback loop between investment in the network backbone and reliability outcomes seen by customers can be lengthy. It is likely these events would require a much higher VCR than is reflected in these study results.
6.2	We note that it is preferable that the AER undertake a review of the STPIS as soon as possible. It is not appropriate that DNSPs make investment decisions on the basis of VCRs that are inconsistent with the VCRs that are used to penalise/reward DNSPs based on the outcomes associated with the investment decisions.
General	We note that there is no guidance as to whether the VCR is appropriate to use in the case of greenfield developments where potential customers are not connected yet. Initial analysis suggests that the VCR benefits exceed the costs by orders of magnitude. This result raises questions about the validity of using VCR analysis to justify projects to supply new developments.