



26 November 2013

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Submitted online: www.aemc.gov.au

Dear Mr Pierce

EMO0026 - Advice to SCER on linking the reliability standard and reliability settings with VCR

Origin Energy (Origin) appreciates the opportunity to provide comments to the Australian Energy Market Commission (AEMC) Consultation Paper on providing advice to the Standing Council on Energy and Resources (SCER) on linking the reliability standard and reliability settings with Value of Customer Reliability (VCR). In providing comments, Origin does so with reference to the concurrent reviews being undertaken by the AEMC, the Australian Energy Market Operator (AEMO) and AEMC Reliability Panel into developing a national framework for transmission reliability, VCR review and reliability stand and setting review, respectively.

Origin considers the parameters in the National Electricity Market (NEM) have performed well to date in attracting investment in generation to meet the reliability standard. The AEMC has not demonstrated a deficiency in the current framework or that a change will improve investment signals. The MPC has been high enough to attract investment in generation but not at a level where Market Participants have been unable to adequately manage risk. Where a failure in the current framework has not been demonstrated, a stable approach to market settings is required for large and long-term investment in generation assets.

1. The MPC should not be linked to VCR

Origin would caution against the explicit linking of the MPC with VCR. The practical application of the two has evolved in the NEM with the MPC representing the cost of generation and the AEMC recommending a proposal for VCR to be applied to transmission planning.¹ The two measures have evolved to perform different functions in the NEM and should not necessarily be equal in value. To this extent, Origin offers in principle support for Option 2.

Origin recognises the intent of the AEMC and AEMO reviews to move away from deterministic reliability standards towards economically derived standards. Origin supports the preference for providing an economic assessment for network reliability to align the cost of maintaining a reliability standard with the value consumers place on the reliability of supply. To the extent this approach better aligns network spending with consumer demand. We consider, however, methods for determining VCR are not sufficiently reliable to accurately determine the value consumers place on reliability.

¹ The recent AEMC Final Report on the review of the national framework for transmission reliability recommended applying VCRs to transmission planning.

We recommend reasonable limitations be applied on the application of VCR to market settings. The current MPC is applicable to the NEM as a whole including residential, commercial, industrial and agricultural consumers. It is not clear that generation investment, driven by agreed residential VCR, would enhance the National Electricity Objective (NEO) when any supply short-fall could impact other classes of consumers.

Deterministic and economically derived concepts have separately been used to develop the reliability standard, reliability setting and VCR. The current reliability standard of 0.002 percent unserved energy for each region in the National Electricity Market (NEM) is a deterministic standard. The reliability settings in contrast have been based on economic concepts for an estimation of the Value of Lost Load (VoLL); that could also be used as a synonym for VCR.² On this basis, theoretically at least, VoLL and the VCR should be equal. As the reliability settings have been practically applied since the start of the NEM, however, we question maintaining an implied link between the VoLL and VCR.

2. *The practical application of VoLL and VCR*

The level and setting of VoLL has increased since the start of the market. VoLL was initially set at a level considered appropriate to attract investment in generation and at a level where the market would voluntarily clear; enabling the reliability standard to be met through generation supply or a demand response. Following the Reliability Standard and Reliability Settings Review in 2010, the Market Price Cap (MPC, formerly VoLL) was explicitly set at a level to attract sufficient investment in generation, to ensure the reliability standard is met,³ based around the cost of an Open Cycle Gas Turbine (OCGT).

The final determination of the 2010 Review was a practical decision to ensure the reliability standard would be met through attracting investment in generation. This implies the cost of supply may not necessarily be equal to the value that people place on the reliability of supply. That is, an investment decision in generation could reflect an objective assessment of the risk and return of allocating capital whereas the willingness to pay or willingness to accept a supply interruption may reflect a consumer's subjective evaluation of their needs and preferences. The value of supply and demand is, therefore, not necessarily equal. On this basis, Origin does not consider a link between the MPC and VCR can be assumed.

3. *Options identified by the AEMC for linking the reliability standard and settings with VCR*

Option 1: direct application of VCR as MPC

Directly linking the VCR and MPC could increase the risk profile for operating in the NEM and the cost of electricity for consumers.

Origin would not recommend the application of the VCR as MPC. A report by Oakley Greenwood⁴ outlined the findings of a number of survey results for determining VCR with all results consistently indicating a VCR at a multiple above the current MPC. Applying a determined VCR as a MPC could, therefore, significantly increase the risk profile for operating in the NEM and cost of hedging.

² Ric Scarpa, *Methodology for the estimation of the value of customer reliability for AEMO*, New Zealand, 2013. p. 2.

³ AEMC Reliability Panel 2010, *Reliability Standard and Reliability Settings Review*, Final Report, 30 April 2010, Sydney. p. 8.

⁴ Oakley Greenwood, *Valuing Reliability in the National Electricity Market*, Final Report, Brisbane, 2011.

The 2010 Review recognised that increasing the MPC could create additional risk in the NEM and encourage retailers to hedge to a higher level.⁵ With a higher MPC, generators could also be exposed to an increase in market risk, charging a higher premium for hedge cover that could be passed through to consumers in the form of higher electricity prices.

Option 2: use VCR as a cross-check on the reliability standard and reliability settings

Option 2 is consistent with the current NEM arrangements and would be Origin's preferred option.

Origin offers in-principle support for Option 2 with the MPC based around the cost of generation to achieve the reliability standard. Application of VCR should not be a determining factor in determining market settings but could be used to assess whether the reliability standard and settings are broadly appropriate and reflect a value consumers place on the reliability of supply. This approach also recognises the distinction in investment decision-making between generation and transmission assets.

Option 2 is also consistent with the approach taken by the AEMC to develop a nationally consistent framework for network reliability, supported by the AEMO VCR review. The national framework for transmission reliability could optimise transmission planning and investment to reflect the value that consumers place on the reliability of supply or for jurisdictions to apply a planning 'safety net' to achieve the reliability standard when it may not be necessarily economic to do so.

Option 3: direct application of VCR as MPC at "periods of scarcity"

A MPC is required to cap and quantify the level of market risk.

Price volatility in the NEM is not limited to periods of extreme demand created by a lack of generation capacity or "periods of scarcity." Significant price volatility can be created when network constraints bind and a high level of generation is available. In these instances, it is important for Market Participants that the level of market risk can be quantified and adequately managed. The MPC performs this function. The removal of a MPC during periods that would not classify as a "period of scarcity" could create significant risk and uncertainty for market participants, inconsistent with the NEO.

Option 4: different levels of VCR offered into dispatch.

VCRs can be subjective, prone to large margins of error and not suitable for representing bid offers for demand response.

Calculating a VCR can be a subjective exercise and inherently prone to error. More detailed input data could result in a more accurate reflection of VCR, however, the cost of doing so needs to be balanced against the perceived value. In addition, VCR levels are likely to change over time with changes to societal expectations and adoption of new and different technologies by residential, commercial and industrial customers. The use of VCR as default demand response bid is, therefore, inherently problematic.

An important principle for operating in the NEM is competitive neutrality. It is important for the market parameters to apply equally to all Participants and for Market Participants to be able to submit bids and offers within those parameters, in accordance with their commercial interests. There are also a range of mechanisms for demand response in the

⁵ AEMC Reliability Panel 2010. p. 8.

NEM. Changing the market parameters to facilitate demand response is a disproportionate response that is unlikely to be effective given most published VCR would be significantly higher than the MPC, making a generation offer more economic in achieving the reliability standard than a demand response.

Conclusion

Origin would caution against the explicit linking of the MPC with VCR. The practical application of the two has evolved in the NEM with the MPC representing the cost of generation. In addition, the recent AEMC review on developing a national framework for transmission reliability would separately apply VCRs to transmission planning. The two measures have evolved to perform different functions in the NEM and should not necessarily be equal in value. Origin, therefore, offers in-principle support for Option 2.

Should you have any questions or wish to discuss this information further, please contact Ashley Kemp on (02) 9503 5061 or ashley.kemp@originenergy.com.au.

Yours sincerely,

A handwritten signature in blue ink that reads "K. Robertson".

Keith Robertson
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