

14 April 2009

Dr John Tamblyn
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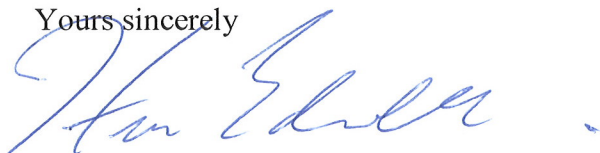
Dear Dr Tamblyn

**RE: NEM Reliability Settings Draft Determination, February 2009
(AEMC Reference ERC0080)**

Please find attached the AER's submission on the AEMC's Draft Determination for the National Electricity Amendment (NEM Reliability Settings: VoLL, CPT and Future Reliability Review) Rule 2009.

Please contact me if you have any questions in relation to the matters raised in our submission.

Yours sincerely



Steve Edwell
Chairman



AER Submission

National Electricity Amendment (NEM Reliability Settings: VoLL, CPT and Future Reliability Review) Rule 2009 Response to AEMC Draft Rule Determination

April 2009

Introduction

The Australian Energy Regulator (AER) welcomes the opportunity to respond to the Australian Energy Market Commission's (AEMC) Draft Rule Determination on the National Electricity Amendment (NEM Reliability Settings: VoLL, CPT and Future Reliability Review) Rule 2009.

This submission examines the rationale for the proposed increases in the Value of Lost Load (VoLL) and the Cumulative Price Threshold (CPT), and discusses the proposed timing of the increases.

The AER understands the need to ensure that the market settings (VoLL and the CPT) deliver sufficient incentives to encourage investment in the generation sector. The current importance of generation investment as a means to increase reliability is particularly evident given estimates that the reliability standard of 0.002% unserved energy (USE) is likely to be breached NEM-wide at some point after 2011.

Central to this submission, however, is the need to draw a distinction between the market settings that create incentives to invest in generation capacity, and those that are largely designed to cap market risk. Failure to appreciate the separate roles performed by these market settings creates the possibility of unnecessarily exposing market participants to added risk, without significant reliability benefits for the NEM being produced.

The proposed increase in VoLL

The level of VoLL is an important factor in the decision to invest in generation capacity. VoLL has not been increased since April 2002, whereas the costs associated with the construction of generation plant have risen considerably over this period. The gradual increase in these costs over time is likely to have somewhat diminished the investment signalling ability of the current VoLL.

The AER considers that the AEMC's analysis of the need for an increased VoLL to ensure that the 0.002% USE target is met supports the case for an increase to \$12 500/MWh.

The proposed increase in the CPT

The other major element of the AEMC's Draft Determination is the proposal to raise the level of the CPT to \$187 500. The AER is not opposed to increases in the CPT when they can be justified. However, in this instance the AER does not believe that the AEMC has provided the necessary reasoning for the proposed increase. As highlighted in the discussion below, the analysis provided to suggest that an increase in the CPT will encourage additional generation investment, or that failing to increase the CPT will mute the investment effects of an increased VoLL, is ambiguous. Given the potentially significant downsides associated with an increase in the CPT, the proposed increase should only be implemented when it is clearly warranted. The AER considers that such a justification has not been provided to date.

Differences between VoLL and CPT

The Draft Determination has proposed an increase in both VoLL and the CPT as a necessary response to the issue of future NEM reliability. While both VoLL and the CPT are intended to deal with extreme market events, it is important to note that they were also intended to perform fundamentally different roles.

The proposed amendments have the potential to drive significant changes in observed market outcomes. When assessing a proposed modification of the market structure, the benefits of any proposed change need to be carefully considered in the light of potential costs to the market. It is, therefore, essential to consider from first principles the intended purposes and functions of both VoLL and the CPT when assessing the proposed rule change.

VoLL is set at a level that balances the financial risks faced by market participants through exposure to peak prices, with the need to promote investment through high price events. While a high VoLL exposes market participants to significant risks, it promotes generator investment by:

- providing high returns during peak periods, which can make it commercially viable to invest in generators that are only dispatched for a handful of periods throughout the year; and
- perhaps more importantly, providing a high price risk for retailers which, requires them to manage that risk either through financial instruments, or by purchasing additional physical cover. By appropriately managing their risk, retailers sponsor greater long-term reliability, as their risk management financial arrangements can effectively underwrite new generation investment.

Determining the optimal level of the CPT, however, is a fundamentally different issue to setting the appropriate level of VoLL. The CPT is an ‘explicit risk management mechanism’.¹ It was designed to limit the exposure of market participants to high spot prices over a protracted period of time, rather than just the short-term peaks. The temporary administered pricing regime that is invoked after a breach of the CPT is intended to protect the market from extreme events which may threaten its stable operation.

Although a higher CPT may increase the returns for generators, it is unlikely that generators will have significant regard to this factor when making investment decisions. This is because events which result in a breach of the CPT are irregular and, by nature, extreme events. VoLL, on the other hand, is reached on a relatively regular basis. As such, the level of VoLL will be much more relevant to generators when making investment decisions.

Furthermore, the AER is not aware of any evidence which indicates that a higher CPT will lead to retailers seeking to purchase more risk management instruments of a type that can underwrite new generation investment. Hypothetically, a higher CPT may encourage retailers to address the possibility of higher rolling weekly prices, or high prices over a protracted period, with their hedging arrangements or other risk

¹ AEMC Reliability Panel, *NEM Reliability Settings: VoLL, CPT and Future Reliability Review Rule Change Proposal*, December 2008, p2.

management strategies. However, the AER does not consider that it has been demonstrated that this behaviour, if it actually occurred, would significantly alter the incentives for new investment. Due to the evident differences in the manner that retailers address the risk associated with spot prices and cumulative prices, a corresponding increase in the CPT is likely to create only a limited response from retailers' risk management strategies compared to an increase in VoLL. Therefore, the ability of a higher CPT to specifically encourage an increase in peaking generation investment appears to be significantly weaker than the potential of VoLL.

It is also important to consider the different impacts that arise from a change to the CPT when compared to an increase in VoLL. The CPT is fundamentally designed to limit the risk that participants – both retailers and generators – are exposed to in unforeseen events.² As VoLL addresses the short-term market fluctuations that are of particular importance to peaking generators, it is the key market mechanism that directly addresses investment incentives. Accordingly, the AER suggests that it is inappropriate to consider the CPT and VoLL together. In particular, it does not automatically follow that an increase in VoLL should trigger a commensurate increase in the CPT.

In this context, the AER considers that the Draft Determination does not adequately justify the rationale for an increase in the CPT to \$187 500. It appears that the increase in the CPT to this level is being proposed in order to maintain the status quo of the CPT being 15 times VoLL, as it does not appear to have been conclusively justified in its own right. As noted in the Draft Determination, while the Comprehensive Reliability Review analysed several different levels of VoLL before recommending the level of \$12 500/MWh, a sensitivity analysis on alternative levels of the CPT was limited. Further, the Reliability Panel did not examine a CPT of \$187 500 in their modelling, yet this level was ultimately recommended by the final report. The analysis was also based on the current level of VoLL, rather than the proposed higher VoLL.³ Later analysis undertaken by a consultant for the AEMC was also not directed to ascertain the optimal level of the CPT.⁴

The consequences of an increased CPT for market participants

An increase in the CPT has the potential to create significant consequences for market participants. The prolonged high prices that can result during an extreme market event can significantly threaten market stability. Should the CPT increase from \$150 000 to \$187 500, the average spot price before the invocation of administered pricing would increase from around \$450/MWh to around \$560/MWh. The allowance of higher average prices over a prolonged period would increase this financial exposure and the risk of participant failure, but, as discussed earlier, is unlikely to be particularly beneficial in terms of encouraging peaking generation and greater reliability.

² Retailers and customers can be directly exposed to wholesale prices. Also, contracted generators that have insufficient physical cover to match their contractual position can be exposed to wholesale prices in order to make up the contract for difference with the contract counterparty.

³ AEMC, *National Electricity Amendment (NEM Reliability Settings: VoLL, CPT and Future Reliability Review) Rule 2009, Draft Rule Determination*, 26 February 2009, p19-20.

⁴ *Ibid*, p20.

The existence of a CPT also creates an implicit incentive for generators to avoid a breach of the threshold. However, as shown by the events of June 2007 in New South Wales, market participants can still be exposed to sustained high cumulative prices even when the CPT was not breached. These events resulted in a retailer exiting the market due to financial pressures and NEMMCO's prudential conditions.⁵ The proposed increase in the CPT could prolong periods of extreme prices and, therefore, would expose participants to greater risks which appear to be difficult to manage, even under the current CPT.

Given the potential for significant detrimental outcomes for market participants, particularly due to the increased risk of retailer failure, the AER considers that greater evidence which demonstrates that an increase in the CPT will encourage a significant peaking generation investment response needs to be provided before an increase in the CPT can be justified.

The analysis provided by the AEMC and the Reliability Panel of an increased VoLL and unchanged CPT

The market modelling undertaken by Concept Economics for the Reliability Panel highlights another important market issue if both VoLL and the CPT are increased. The analysis used market simulations of the events of June 2007 in New South Wales and March 2008 in South Australia to analyse the effects of different levels of VoLL and the CPT. Their analysis of the June 2007 events indicated that with VoLL at \$12 500/MWh and the CPT at \$150 000, increases in peak net revenues of 12.7 per cent would be expected.⁶ The modelling of this event indicates that the investment signalling properties of an increased VoLL can be maintained without a corresponding increase in the CPT.

The consultant's analysis of the March 2008 events indicates, however, that if VoLL was increased without a similar increase in the CPT occurring, only a slight increase in the net revenues of peaking generators is predicted. Unlike the period used for the analysis of the June 2007 events, cumulative prices were already at high levels at the start of the 11-17 March period that was selected to study the March 2008 events. The build up of cumulative prices is therefore considered in the analysis of the June 2007 events, but not in the analysis of the March 2008 events. Consequently, as the modelling used does not account for the different patterns of cumulative prices that were experienced during the reference timeframes, the analysis of the June 2007 and the March 2008 events reach fundamentally different conclusions. As a result, this modelling appears to be of limited value in examining the possible effects that an increase in the CPT may have on investment incentives.

Furthermore, the 11-17 March period included fifteen spot prices of more than \$1 000/MWh. As noted, cumulative prices were already high on 11 March. Rolling cumulative prices in South Australia began to increase significantly, and consistently, from 5 March 2008.⁷ If the analysis encompassed this wider period, a further thirteen spot prices of above \$1 000/MWh (including nine spot prices above \$9 000/MWh)

⁵ AEMC Reliability Panel, *NEM Reliability Settings*, p9.

⁶ Concept Economics, *Risk Assessment of Raising VoLL and the CPT*, 13 October 2008, p54.

⁷ Rolling cumulative prices rose from less than \$10 000 to over \$67 000 on 5 March, to be more than \$133 000 on 10 March 2008.

would have been included. The exclusion of this initial period that directly led to the breach on 17 March results in the analysis ignoring the significant returns to capital costs peaking generators would have received with a higher VoLL during this time. These aspects of the consultant's modelling further indicate that the proposed increase in the CPT should be carefully considered and justified in its own right, given that there are potentially significant consequences associated with an increase in the CPT. This is particularly an issue of concern as no other analysis that demonstrates the need for an increase in the CPT to the specific level of \$187 500 was provided by the AEMC. Again, it does not appear that the case for a reliability linked increase in the CPT has been justified.

The timing of the Rule change

A concern also exists with the timing of the Rule change as the increases in VoLL and the CPT are scheduled to be implemented on 1 July 2010, the same date as the commencement of the Carbon Pollution Reduction Scheme (CPRS). Electricity generation will be the sector of the economy most affected by the implementation of the CPRS, and the introduction of a carbon price of \$25/tonne⁸ will lead to higher costs and prices faced by participants within the NEM. Any further changes to the NEM, such as the proposed increase in both VoLL and the CPT, should therefore be considered carefully in order to justify the placing of added pressure onto market participants.

The analysis undertaken by Concept Economics indicates that an increase in both VoLL and the CPT would create the potential for prices to increase appreciably during extreme market events. While it is not predicted that the introduction of the CPRS will negatively impact the operation of the NEM, the CPRS will certainly impact prices. It appears unnecessary to change the instrument which acts as the risk cap for market participants at the same time as the most significant structural reform the energy market has experienced since its inception is due to commence. At the very least, changes to the CPT should be delayed to allow the observance and analysis of both the effects of the CPRS, and market responses due to the increase in VoLL.

Further analysis required in light of recent events

The decision by the AEMC to propose this Rule change was instigated by the Reliability Panel's Comprehensive Reliability Review, whose final report was published in December 2007. Since then, the CPT has been breached twice.⁹ This has not been adequately addressed by the AEMC's Draft Determination.

The CPT was breached for the first time on 17 March 2008 in South Australia, and again on 29 January 2009 in South Australia and Victoria. Conditions in South Australia and Victoria leading up to the 29 January 2009 breach saw high wholesale prices and the cumulative price reach the CPT in a relatively short amount of time.

⁸ Commonwealth Treasury modelling estimates that the Australian Emissions Unit (AEU) price will be \$25/tonne (nominal) in 2010.

⁹ There also have been a number of other recent events when the cumulative price has approached the CPT, such as in June 2007 in New South Wales (when high prices reoccurred over a 17 day period) and in the first quarter of 2008 in Queensland (24 days).

The March 2008 breach in South Australia is perhaps of greater interest here, as a lengthy period of high prices was experienced before a breach of the CPT occurred. Rolling seven day cumulative prices reached close to the CPT on 10 January, and were just below the CPT from mid to late February and for the 5-17 March period before finally breaching the CPT on 17 March.¹⁰ An increase in the CPT would create the possibility for these types of market outcomes to occur over a more prolonged period.

Following the breach of the CPT for the first time in March 2008, no significant review of its effectiveness as a risk management mechanism has been undertaken. Similarly, the circumstances of the most recent breach on 29 January 2009 have not been analysed. The analysis provided by the AEMC and Concept Economics also could not consider the events surrounding the most recent breach in January 2009. It appears counter-intuitive, therefore, to proceed with important changes to the CPT without a detailed review of the effectiveness of the CPT as a financial risk management mechanism being completed.

¹⁰ AER 2008. *Spot Prices greater than \$5000/MWh - South Australia: 5-17 March 2008*, May 2008, p4.