Reliability Panel
AEMC

Australian Energy Market Commission
Reliability Panel

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27 August 2010

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

By email: **john.pierce@aemc.gov.au**

Dear Mr Pierce,

National Electricity Rules – Request for Rule
Reliability Settings from 1 July 2012

The Reliability Panel (Panel) requests that the Australian Energy Market Commission (AEMC) consider making the enclosed proposed Rule under section 91 of the National Electricity Law. The Rule change proposal is intended to implement the recommendations from the Final Report of the Review of the Reliability Standard and Reliability Settings.[1] The key amendments being proposed by the Panel are that:

- starting on 1 July 2012, the value of the market price cap (MPC) is increased annually from $12 500/MWh by the change in the Intermediate (Stage 2) Producer Price Index (PPI) between the calendar year 2010 (the base year) and the year prior to the year that the MPC will apply;
- starting on 1 July 2012, the value of the cumulative price threshold (CPT) is increased annually from $187 500/MWh on the same basis as the MPC;
- the values of the MPC and CPT will be rounded to the nearest $100/MWh to reduce complexity, and will not be lower that the previous year's MPC and CPT in order to increase certainty for generator proponents;
- the Panel conducts an annual review process to determine whether the index is no longer appropriate with regard to how the indexed MPC and CPT has impacted on spot prices, investment in the NEM and the reliability of the power system;
- the AEMC may request the Panel to undertake a more detailed analysis of some or all of the Reliability Standard and Reliability Settings;

[1] This report was published on 30 April 2010. The report is available on the AEMC website at: http://www.aemc.gov.au/Market-Reviews/Completed/Review-of-the-Reliability-Standard-and-Settings.html.

- the MPC and CPT will continue to be indexed according to the process outlined above as long as appropriate, given the Panel annual review process; and
- the requirements for the biennial reviews of the market floor price and the Reliability Standard will be removed.

The enclosed Rule change proposal includes:

- a statement of the issues being addressed by the proposed Rule and a description of how the proposed Rule would address these issues;
- a description of the proposed Rule;
- a description of how the Panel considers the proposed Rule will contribute to the achievement of the National Electricity Objective;
- the Panel's explanation of the expected costs and benefits of the change; and
- a draft of the proposed Rule.

Please do not hesitate to contact Rory Campbell should you have any questions on this matter.

Yours sincerely,

Neville Henderson
Chairman, Reliability Panel
Commissioner, AEMC

RULE CHANGE PROPOSAL

Reliability Settings from 1 July 2012

27 August 2010

Inquiries

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Citation

AEMC Reliability Panel 2010, Reliability Settings from 1 July 2012, Rule Change Proposal, 27 August 2010, Sydney

About the AEMC

The Council of Australian Governments, through its Ministerial Council on Energy (MCE), established the Australian Energy Market Commission (AEMC) in July 2005 to be the rule maker for national energy markets. The AEMC is currently responsible for rules and providing advice to the MCE on matters relevant to the national energy markets. We are an independent, national body. Our key responsibilities are to consider rule change proposals, conduct energy market reviews and provide policy advice to the Ministerial Council as requested, or on AEMC initiative.

About the AEMC Reliability Panel

The Panel is a specialist body within the AEMC and comprises industry and consumer representatives. It is responsible for monitoring, reviewing and reporting on the safety, security and reliability of the national electricity system and advising the AEMC in respect of such matters. The Panel's responsibilities are specified in section 38 of the National Electricity Law (NEL).

Summary

The purpose of this Rule change proposal is to put into effect the recommendations of the Review of the Reliability Standard and Reliability Settings by the Australian Energy Market Commission (AEMC) Reliability Panel (Panel)[1], published on 30 April 2010.[2] In this review, the Panel considered what Reliability Settings should be applied in the National Electricity Market (NEM) in order to be likely to meet the Reliability Standard[3] from 1 July 2012.

The key amendments to the National Electricity Rules (NER) being proposed by the Panel are that:

- starting on 1 July 2012, the value of the market price cap (MPC) is increased annually from $12 500/MWh by the change in the Intermediate (Stage 2) Producer Price Index (PPI) between the calendar year 2010 (the base year) and the year prior to the year that the MPC will apply;
- starting on 1 July 2012, the value of the cumulative price threshold (CPT) is increased annually from $187 500/MWh on the same basis as the MPC;
- the values of the MPC and CPT will be rounded to the nearest $100/MWh to reduce complexity, and will not be lower that the previous year's MPC and CPT in order to increase certainty for generator proponents;
- the Panel conducts an annual review process to determine whether the index is no longer appropriate with regard to how the indexed MPC and CPT has impacted on spot prices, investment in the NEM and the reliability of the power system;
- the AEMC may request the Panel to undertake a more detailed analysis of some or all of the Reliability Standard and Reliability Settings;
- the MPC and CPT will continue to be indexed according to the process outlined above as long as appropriate, given the Panel annual review process; and
- the requirements for the biennial reviews of the market floor price and the Reliability Standard will be removed.

The Panel has included in this Rule change proposal a detailed description of the issues being addressed by its proposal, how the proposed Rule addresses these issues and how the proposed Rule is likely to meet the national electricity objective (NEO). The

1 The Reliability Settings includes the MPC, CPT and the market floor price.

2 The Final Report for this review is available on the AEMC's website at www.aemc.gov.au/Market-Reviews/Completed/Review-of-the-Reliability-Standard-and-Settings.html.

3 A full description of the Reliability Standard is available in Appendix C of the Final Report of the Reliability Standard and Reliability Settings Review.

Panel has also included a proposed Rule in Appendix B that would implement the proposed amendments.

The Panel considers that it has the power to submit this Rule change proposal as it relates to the Panel's functions of monitoring and reviewing reliability in the NEM. In addition, the Panel considers that the AEMC has the power to assess and make the proposed Rule as it relates to the operation of the NEM and the activities of persons participating in the NEM.

AEMC Reliability Panel Members

Chairman

Neville Henderson, Commissioner, Australian Energy Market Commission

Other AEMC Reliability Panel Members

Gavin Dufty, Manager Policy and Research, St Vincent de Paul Society, Victoria

Hugh Gleeson, Chief Executive Officer, United Energy

Mark Grenning, Chief Advisor Energy, Rio Tinto

Gordon Jardine, Chief Executive, Powerlink

Tim O'Grady, Head of Public Policy, Origin Energy

Stephen Orr, Commercial Director, International Power Australia

David Swift, Executive General Manager, Australian Energy Market Operator

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1 Background to the Rule change proposal

1.1 Process for developing the Proposal

This Rule change proposal has been developed by the Reliability Panel following the completion of its Review of the Reliability Standard and Reliability Settings.

1.1.1 Reliability Panel

The Panel is a specialist panel established by the AEMC in accordance with section 38 of the National Electricity Law (NEL) and the NER and comprises industry and consumer representatives. It is responsible for monitoring, reviewing and reporting on the safety, security and reliability of the national electricity system and advising the AEMC in respect of such matters. The Panel's responsibilities are specified in section 38 of the NEL and Rule 8.8 of the NER.

1.1.2 Reliability Standard and Reliability Settings Review

In March 2009, the AEMC provided the Panel with the Terms of Reference for the Reliability Standard and Reliability Settings Review. The Reliability Settings include the MPC, the CPT, and the market floor price. In addition, the Panel is required to undertake a review and report on the Reliability Standard and Reliability Settings that should apply from 1 July 2012 under clause 3.9.3A of the NER.

The Panel published its Final Report on its Reliability Standard and Reliability Settings Review on 30 April 2010.[4] The objectives of this review that relate to the Reliability Settings were to:

- recommend the appropriate Reliability Settings to achieve the Reliability Standard to apply in the NEM from 1 July 2012, given the Reliability Standard chosen; and
- propose processes for implementing any changes arising from the review.

The Rules provide that the Panel must conduct the review in accordance with the Rules consultation procedures set out in rule 8.9 of the NER. As part of its review, the Panel consulted with stakeholders, including through submissions on the Issues Paper and Draft Report, and through two separate public meetings. The submissions and presentations from stakeholders for this consultation are available on the AEMC website.[5]

The following key dates outline the NER consultation process that led to the delivery of the Panel's Final Report to the AEMC.

4 This report is available on the AEMC's website at www.aemc.gov.au/Market-Reviews/Completed/Review-of-the-Reliability-Standard-and-Settings.html.

Milestone	Date
Publication of Issues Paper	Friday, 26 June 2009
Public Meeting in Sydney[6]	Monday, 13 July 2009
Close of submissions on Issues Paper	Friday, 14 August 2009
Publication of Draft Report	Wednesday, 23 December 2009
Public Meeting in Melbourne	Friday, 12 February 2010
Close of submissions on Draft Report	Tuesday, 23 February 2010
Publication of Final Report	Friday, 30 April 2010

Appendix A contains a discussion of the issues raised during the Panel's consultation.

1.2 Reliability Settings

The Reliability Settings consist of the MPC, the CPT and the market floor price.

The level of MPC, the CPT and the market floor price are the key price envelopes within which the wholesale spot market seeks to balance supply and demand, and deliver capacity to meet the NEM reliability standard with the aim of avoiding unmanageable risks for market participants.

1.2.1 The MPC

The MPC is the price cap on regional reference prices and is currently set at $12 500/MWh.

Until 1 July 2010 the level of the MPC was $10 000/MWh. The level increased to $12 500/MWh on 1 July 2010 following the Panel's recommendation in its Comprehensive Reliability Review (CRR)[7] and subsequent Rule change.[8]

The MPC parameter is crucial because it provides a key signal for supply and demand-side investment and usage. For example, if the MPC is set too high, market participants (predominantly generators and retailers) can be financially exposed and end-use consumers may be paying for reliability at a price that is higher than they

5 Ibid.

6 The Panel held a joint meeting for both the Reliability Standard and Settings Review and the Review of the Operational Arrangements for the Reliability Standards.

7 Further information on the Panel's CRR is available at www.aemc.gov.au/Market-Reviews/Completed/Comprehensive-Reliability-Review.html.

8 The MPC National Electricity Amendment (NEM Reliability Settings: VoLL, CPT and Future Reliability Review) Rule 2009, Final Rule Determination, 28 May 2009. Details on this amendment are available at www.aemc.gov.au/Electricity/Rule-changes/Completed/NEM-Reliability-Settings-VoLL-CPT-and-Future-Reliability-Review.html.

value it. If the value of the MPC is set too low, there may be insufficient incentive to invest in new generation capacity to meet future reliability.

1.2.2 The CPT

The CPT is designed to limit participants' exposure to protracted stress in the wholesale spot market and is currently set at $187 500/MWh. As for the MPC, the level of the CPT changed on 1 July 2010 from $150 000/MWh to $187 500/MWh.[9]

The CPT is an explicit risk management mechanism. If the sum of the half-hourly wholesale market spot prices in a region over a rolling seven-day period exceeds this threshold, then the Australian Energy Market Operator (AEMO) must impose an administered price cap (APC) in that region such that spot market prices do not exceed $300/MWh until the sustained high prices fall away.[10]

1.2.3 The market floor price

The market floor price is the lowest allowable limit for the spot price. Periods of negative prices can occur and are associated with excess capacity. Excess capacity in a region is rare but can occur when the demand in a region is very low (usually overnight), the base-load generating units are operating close to their minimum stable outputs, and all other units are not operating. In addition, the presence of large quantities of wind generation has the effect of reducing the demand that needs to be met by the base-load generating units that are in a region.

Under conditions of excess supply in a region, base-load generators are generally willing to pay to operate (i.e. allow prices to go negative), rather than to shutdown, as restarting a base-load generating unit is relatively time consuming and expensive. Therefore, the level of the market floor price is set at a level that would usually be expected to allow the market to clear without imposing excessive financial risks to market participants. If the market floor price is not sufficiently negative to allow the market to clear, the excess generation in a region would lead to associated interconnector flows exceeding their secure limits and AEMO may need to direct a base-load generator to disconnect in order to return the system to a secure operating state.

The market floor price is currently set at -$1 000/MWh.

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9 This was as a result of the National Electricity Amendment (NEM Reliability Settings: VoLL, CPT and Future Reliability Review) Rule 2009, Final Rule Determination, 28 May 2009.

10 The APC is specified in a schedule that is developed, authorised, published and varied by the AEMC. The AEMC published the Final Determination for the Schedule for the APC on 21 May 2008. Further details on this process can be found on www.aemc.gov.au/electricity.php?r=20071105.151356.

1.3 Panel assessment of the Reliability Settings

1.3.1 Objective of the Panel's Review of the Reliability Settings

As discussed in Section 1.1.2, the Panel is required to review the levels of the Reliability Settings every two years and completed a review in April 2010. In making this recommendation, the Panel notes that the set of Reliability Settings (in particular the MPC and CPT) is required to achieve multiple objectives:

- meeting the reliability standard;
- managing systemic market risk; and
- meeting customer's value of reliability.

1.3.2 Analysis conducted for the Review

The AEMC, on behalf of the Panel, engaged ROAM Consulting (ROAM) to undertake modelling work to assist the Panel to assess the Reliability Settings for the two financial years 2012/13 and 2013/14, in particular the levels of the MPC and CPT. These values would take effect from 1 July 2012. ROAM was also requested to provide the Panel with advice on the impact of any change on the financial risks faced by market participants.

ROAM's Final Report was published by the Panel as an accompanying document to the Final Report.[11] The ROAM modelling includes:

- a bench marking study against the analysis undertaken for the Panel's Comprehensive Reliability Review (CRR), published in December 2007;
- a description of the modelling assumptions; and
- the modelling results.

The ROAM modelling considered the values of MPC and CPT that would be expected to be necessary to achieve the Reliability Standard from 1 July 2012. It was based on determining whether new entry open cycle gas turbines (OCGTs) would be sufficiently profitable at a given level of Reliability Standard and MPC. The expected level of profitability of new entry OCGTs is based on Monte Carlo spot market simulations. The approach used by ROAM to determine the Reliability Settings, in particular the MPC, has been to:

11 The Final Report for the ROAM Study is available on the AEMC's website at www.aemc.gov.au/Market-Reviews/Completed/Review-of-the-Reliability-Standard-and-Settings.html.

- adjust the level of generator capacity using advanced and/or announced projects so that there is sufficient capacity to achieve the Reliability Standard in each region in each year of the modelling period from 2012 to 2020; then

- adjust the level of the MPC so that a new entrant OCGT is marginally profitable, that is, would recover sufficient expected income to cover its annualised capital and fixed operating costs, plus a return on its investment.

ROAM and the Panel considered this approach was consistent with previous assessments of the required MPC and a valid proxy for the operation of NEM, where contract prices are derived from expected spot market outcomes. The Panel also considered that the approach is both quantifiable and traceable. Following consultation with stakeholders and its own further assessment, the Panel considers that the economics of achieving the Reliability Standard (as modelled) is one of a number of aspects of delivering reliability in the NEM that should be reviewed by the AEMC.

The finding from ROAM was that an increase in the level of the MPC to approximately $16 000/MWh may be required from 1 July 2012, for two years, in order to meet the Reliability Standard. ROAM also found that the level of the CPT was likely to need to be increased to $240 000/MWh. ROAM did not recommend a change to the market floor price from the current level of -$1 000/MWh. This is further discussed in section 2.1.

1.4 The proposed MPC, CPT and market floor price

The Panel recommended in the Final Report of its Review of the Reliability Standard and Reliability Settings that:

- Starting on 1 July 2012, the value of the MPC is increased annually from $12 500/MWh according to the change in the Stage 2 (intermediate) PPI;

- Starting on 1 July 2012, the value of the CPT is increased from $187 500/MWh annually according to the same index that is applied to the MPC;

- The Panel maintains an annual review process to determine whether higher increases in the MPC or CPT are necessary, and whether there were any significant changes that occurred to the economics and mechanism for delivering the Reliability Standard;

- The MPC and CPT will continue to be indexed according to this process as long as appropriate, given the Panel annual review process; and

- The market floor price is maintained at -$1 000/MWh.

A summary of the issues on the Reliability Standard and Reliability Settings Review raised by stakeholders and addressed by the Panel are contained in Appendix A. The full report from the Panel is available on the AEMC's website.[12]

1.5 Extreme Weather Events Review

At the same time that the Panel undertook its review of the Reliability Standard and Reliability Setting, the AEMC completed its "Review of the Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events", which was submitted to the Ministerial Council on Energy (MCE) on 31 May 2010 and published on the AEMC website on 4 August 2010.[13]

The Panel notes that the terms of reference from the MCE included a review of the governance arrangements for the Reliability Standard and the Reliability Settings. However, under the current arrangements the Panel continues to:

- be the entity that reviews the Reliability Standard and the Reliability Settings; and
- have the power to propose Rule changes in relation to its functions,[14] including the Reliability Settings.

12 The Panel's Final Report on its Review of the Reliability Standard and the Reliability Settings is available on the AEMC's website at www.aemc.gov.au/Market-Reviews/Completed/Review-of-the-Reliability-Standard-and-Settings.html .

13 Further information on the review is available on the AEMC's website at www.aemc.gov.au/Market-Reviews/Completed/Review-of-the-Effectiveness-of-NEM-Security-and-Reliability-Arrangements-in-light-of-Extreme-Weather-Events.html.

14 Section 91(4) of the NEL.

2 Statement of the issues with the current Rules provisions

This section sets out the issues with the current Rules provisions and explains how the proposed Rule would address these issues.

2.1 The appropriate levels for the MPC and CPT

The Panel notes that under the current framework for the management of reliability in the NEM, the modelling undertaken by ROAM demonstrates a prime facie case for an increase in the MPC to at least $16 000/MWh from July 2012. Like any modelling, the results may be influenced by the specific terms of reference which frame this modelling. Within these modelling constraints and the reliability framework that drives them, the commentary by both ROAM and Dr E.G. Read, in an independent review of the modelling,[15] suggests that the truncation of potential MPC events by the CPT means that the theoretical MPC should in fact be higher than $16 000/MWh, from July 2012. However, the Panel considers that the current reliability framework may be reaching the point where it is no longer adequate to achieve the multiple objectives of meeting the Reliability Standard, managing financial risk and meeting consumers' value of reliability. In particular, increasing the MPC is likely to:

- increase prudential risks which may prove a barrier to entry or a source of premature exit for retailers;
- increase the risks of physical delivery by generators, including risks caused by transmission constraints, which may reduce generators' propensity to contract, and reduce contract liquidity; and
- increase the risk of price volatility to retailers and generators, which could increase contract risk premiums. These additional costs are likely to be passed through to consumers.

The Panel does not consider that there is sufficient evidence that target reliability will not be delivered in the 2012/13 and 2013/14 period to offset the impact of the increased risks created by significant real changes to the MPC or CPT as suggested by the modelling. Further, if there is doubt over the suitability of the market framework, there is the possibility that other factors and additional issues/risks may need to be addressed in the reliability modelling. These include:

- the potential for the extreme peaking generator to earn other revenue from the market;

15 The AEMC instigated an independent review of the ROAM analysis for the Reliability Standard and Settings Review and the Review of the Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events (Extreme Weather Review). This independent review by Dr E. G. Read is available on the AEMC website at www.aemc.gov.au/Market-Reviews/Completed/Review-of-the-Effectiveness-of-NEM-Security-and-Reliability-Arrangements-in-light-of-Extreme-Weather-Events.html.

- the potential for contractual arrangements to impact the income of the extreme peaking generator; and

- the impact on the extreme generator if it is part of a portfolio of generation. This may change the investment dynamics for building such a generator.

In addition, the Panel considers that while investors would have anticipated the MPC increase on 1 July 2010 prior to this date, it may not be appropriate to increase the MPC or change the CPT before the full impact of the increase on 1 July 2010 is better understood. In particular, whether there may be material impacts on prudential risks.

Lastly, the Panel notes that an MPC of $12 500/MWh is broadly consistent with the Value of Customer Reliability (VCR) of $13 250/MWh that applies for the residential sector in Victoria.[16] This sector has the lowest VCR value and would, from an economically efficient perspective, generally be the first to be shed if there was insufficient capacity to cover customer demand during a reliability incident. This indicates that the current MPC value provides an efficient balance between the cost and the value of reliability of electricity supply at the wholesale level.

For these reasons the Panel does not consider that there is a need to increase the real value of either the MPC or the CPT from 1 July 2012.

2.2 Indexing of the MPC and CPT

In April 2009, AEMO published an updated ACIL Tasman report on fuel resources and generation costs in the NEM.[17] Compared with the data in the corresponding 2007 report, this report showed that the forecast 2012/13 capital costs of new entrant OCGTs:

- were approximately 21% above the 2007 report; and

- were forecast to fall in real terms until the end of the forecasting period in 2016/17.

There are many factors that could support higher capital costs (e.g. increasing demand for gas turbines) or lower capital costs (e.g. alternative manufacturers entering the market) for new entrant OCGTs. Given the importance of capital costs in investment decisions, there is a risk that the real value of the MPC and CPT may erode over time and there may be a risk of insufficient investment in the future. Therefore, the Panel considers that there is a need to index both the MPC and the CPT in order to maintain their real values.

16 VENCorp, 2008, Assessment of the Value of Customer Reliability (VCR).

17 ACIL Tasman, 2009, Fuel Resources, new entrant and generation costs in the NEM".

2.3 Future issues with meeting the Reliability Standard

The Panel believes that under the current framework, there are risk factors (see section 2.1) that may cause the market to approach a "tipping point" beyond which the reliability value of increases in the MPC are offset by the changed behaviour of participants in response to increased financial risk.

The Panel also notes that there are a number of factors that bring the efficacy of the current reliability framework, and specifically the "single lever" of MPC/CPT, into question. These include:

- Investment appears to be occurring at a level that meets the Reliability Standard. The AEMO 2009 Electricity Statement of Opportunities (ESOO) shows that there is sufficient generation capacity to meet the Reliability Standard up to 2011/12 in South Australia, 2012/13 in Victoria, 2013/14 in Queensland and 2013/14 in New South Wales. In addition, in their modelling, ROAM needed to remove capacity in order to achieve the Reliability Standard. This indicates that plant appeared to be profitable, despite the modelling assumptions.

- There have been significant changes in the market structure from that which was in place at NEM formation, including significant vertical integration.

- The use of a uniform Reliability Standard across all NEM regions means that the cost of ensuring reliability in the region with the worst reliability is spread across market participants in all NEM regions.

Consequently, the Panel recommended in its Final Report on its Review of the Reliability Standard and the Reliability Settings that the AEMC perform a comprehensive review of both the mechanism for delivery of the capacity to ensure reliability, and the impact of the risk allocation framework in the NEM on achievement of reliability in the long term.[18]

18 The Panel's Final Report on its Review of the Reliability Standard and the Reliability Settings is available on the AEMC's website at www.aemc.gov.au/Market-Reviews/Completed/Review-of-the-Reliability-Standard-and-Settings.html .

3 Proposed Rule

This chapter provides a description of the Proposed Rule developed by the Panel, the power for the Panel to submit the Rule change proposal, and the power that the Panel considers that the AEMC has to consider the Rule change proposal.

The Panel has attached a copy of the Proposed Rule in Appendix B.

3.1 Description of the Proposed Rule

This Rule change proposal is proposing that:[19]

- Starting on 1 July 2012, the value of the MPC is increased annually from $12 500/MWh by the change in the Intermediate (Stage 2) PPI between the calendar year 2010 (the base year) and the year prior to the year that the MPC will apply;
- Starting on 1 July 2012, the value of the CPT is increased annually from $187 500/MWh on the same basis as the MPC;
- The Panel conducts an annual review process to determine whether the index is no longer appropriate with regard to how the indexed MPC and CPT has impacted on spot prices, investment in the NEM and the reliability of the power system;
- The MPC and CPT will continue to be indexed according to the process outlined above as long as appropriate, given the Panel annual review process;
- The AEMC may request the Panel to undertake a more detailed analysis of some or all of the Reliability Standard and Reliability Settings;
- The market floor price is maintained at -$1 000/MWh; and
- The requirement for biennial reviews of the Reliability Standard and the market floor price will be removed.

3.2 How the proposed Rule would be implemented

This section sets out how the Panel proposes that its Rule change proposal would operate.

19 This report is available on the AEMC's website at www.aemc.gov.au/Market-Reviews/Completed/Review-of-the-Reliability-Standard-and-Settings.html.

3.2.1 How will the MPC and CPT be indexed?

In this Rule change the Panel is proposing that the MPC and the CPT be indexed to maintain their real values.

Selection of an appropriate index

The Panel considers that a suitable index for the MPC and CPT should:

- be based on the supply side costs of meeting the Reliability Standard;
- follow similar economics trends to those parameters used in setting the MPC and CPT, particularly the capital cost of new OCGTs;
- be independently verifiable; and
- be amenable to forecasting, which is important in providing certainty to investors on the likely changes to the MPC and CPT over time.

The Panel considers that the Intermediate (Stage 2) PPI will adequately fulfil the criteria identified above. The PPI provides a summary measure of the movements in the prices of commodities over time. The PPI uses a "stage of production" framework, which means that commodities are categorised on a sequential basis along the production chain, from preliminary (stage 1) to final (stage 3). The Panel considers that the Intermediate (Stage 2) PPI provides a good reflection of the costs associated with meeting reliability and avoids being too general, such as the CPI-type index, or too specific, such as a commodity specific index (i.e. steel).

While the Panel considers that the Intermediate (Stage 2) PPI is an appropriate index for the MPC and CPT, it notes that the choice of index has not been tested by stakeholder consultation. However, it would be possible to consult on the robustness of index when the AEMC considers this Rule change proposal.

Selection of the indexing method

The Panel is proposing that the Intermediate (Stage 2) PPI be applied using the average of the four quarterly values.

The Panel considered two main approaches to indexing using the PPI:

1. The PPI value for a given year is compared with the equivalent value for the base year; and
2. The average of the four quarterly PPI values are used.

The Panel considers that averaging four quarterly PPI values would smooth the quarterly values and would make the indexing process less susceptible to shocks in the PPI while still capturing trends in the underlying costs. The Panel considers this is

appropriate as the MPC and CPT are designed to be a longer term investment signal and therefore do not need to reflect any short term fluctuations in costs.

Selection of the PPI values for indexing

The Panel is proposing to compare the average of the four Intermediate (Stage 2) PPI values from the previous calendar year to the average of the four PPI values from the base calendar year.

The PPI is prepared by the Australian Bureau of Statistics (ABS) for the March, June, September and December quarters. The December quarterly data is generally available late in January (the following month) but can be subsequently revised. Therefore, to give stakeholders three months notice of the indexed value of the MPC and CPT, the Panel proposed that:

- the four quarters for the previous calendar year (up to the December six months prior to the new values taking effect) be used for the index; and
- the Intermediate (Stage 2) PPI values as of the end of February (four months prior to the new values taking effect) be used, removing the risk that a late revision of the Intermediate (Stage 2) PPI values could affect the MPC and CPT with little notice.

The Panel considers that the six month delay between the December quarter and the beginning of July is not significant given that the MPC and CPT are long term investment signals that are only indexed annually.

This means that the index to be applied to the MPC and CPT for the year beginning on 1 July 2012 would be equal to the ratio of the average quarterly Intermediate (Stage 2) PPI values for the 2011 calendar year to the average of the quarterly Intermediate (Stage 2) PPI values for the 2010 calendar year.

Rounding of the MPC and CPT

The Panel is proposing that the levels of the MPC and CPT will be rounded to the nearest $100/MWh.

The Panel considers that the MPC and CPT are long-term investment signals, and that the exact relationship between the level of investment and the levels of the MPC and CPT cannot be known precisely. Therefore, the Panel considers that the levels of the MPC and CPT should be rounded to the nearest $100 to reduce complexity for market participants.

In addition, the Panel has had advice from AEMO that operationally, rounding to the nearest $100 is preferred. If the MPC were not rounded, it would not be possible for a generator to bid at the MPC given the number of decimal places in the loss factors and bids.

Not allowing the levels of the MPC and CPT to reduce

The Panel is proposing that the nominal value of the MPC and CPT should not be reduced should the annual change in Intermediate (Stage 2) PPI be negative.

The Panel considers that not allowing the MPC and CPT to reduce when the PPI reduces would provide greater certainty for investors, compared to the case where the MPC and CPT would be allowed to reduce.

The Panel also notes advice from AEMO that this is operationally preferred as a trading day starts at 4am, but the new MPC becomes effective at midnight. If the MPC were reduced, then all offer prices greater than the new MPC and already accepted for the trading day would become invalid after midnight.

Formulation of the indexing process

Given that the Panel is proposing to index using the average of the four quarterly values, with December being the last quarter, it is proposed that the following formula be used for indexing the MPC for a given year x:

$$MPC^x = 12{,}500 \times \frac{\left(Q_1^{x-1} + Q_2^{x-1} + Q_3^{x-1} + Q_4^{x-1}\right)}{\left(Q_1^b + Q_2^b + Q_3^b + Q_4^b\right)}$$

where:

MPC^x is the market price cap in dollars per MWh

$Q_{1\text{-}4}$ are the quarterly values of the Intermediate (Stage 2) PPI index

x is the year for which the MPC and CPT are being calculated

b is the base year of 2010

Similarly, following formula should be used for indexing the CPT:

$$CPT^x = 187{,}500 \times \frac{\left(Q_1^{x-1} + Q_2^{x-1} + Q_3^{x-1} + Q_4^{x-1}\right)}{\left(Q_1^b + Q_2^b + Q_3^b + Q_4^b\right)}$$

where

CPT^x is the cumulative price threshold in dollars per MWh

The values of the MPC^x and the CPT^x calculated using the formulae above are then rounded to the nearest $100/MWh and checked to ensure that they do not reduce compared to the previous values.

The Panel will publish the updated MPC and CPT values (based on the change in the PPI) within 10 business days of the end of the March each year. As described above,

the Panel proposes to use the data that is published for four quarters to the December quarter in its analysis.

3.2.2 Indexing for the first time for the year beginning 1 July 2012

The Panel is proposing that the first change to the level of the MPC and CPT, starting on 1 July 2012, should be equal to the ratio of the average quarterly Intermediate (Stage 2) PPI values for the 2011 calendar year to the average of the quarterly Intermediate (Stage 2) PPI values for the 2010 calendar year. The same indexing methodology will be used for the CPT.

The Panel considers that the current levels of the MPC (i.e. $12 500/MWh) and CPT (i.e. $187 500/MWh) that apply in 2010/11 and 2011/12 take into account the real costs of meeting the Reliability Standard, including the capital costs of OCGTs. Therefore, the Panel considers that levels of the MPC and CPT that apply from 1 July 2012 need to be indexed by one year.

3.2.3 Sunset and review

The Panel recommends this indexation of the MPC and CPT continue indefinitely with no sunset. However, the Panel proposes to conduct an annual review which will consider whether the indexation of the MPC and the CPT is no longer appropriate, with regard to how the calculated levels have impacted on spot prices, investment in the NEM, and power system reliability. This will be particularly important initially, pending the outcome of the recommended AEMC review of the reliability framework, to ensure sufficient resources are predicted to meet the Reliability Standard in Victoria and South Australia, which the 2009 ESOO indicates are the first regions at risk.

This review will be completed by the end of April each year, following publication of the revised MPC and CPT values. The Panel will provide its advice to the AEMC, who will publish it. As part of this review, the Panel may recommend to the AEMC that a more detailed review of the indexation of the MPC and CPT may be required.

In addition, the AEMC may, at any time, request the Panel to review and report on some or all of the Reliability Standard and Reliability Settings that it considers should apply two years after the year in which the review is being undertaken. To initiate such a review, the AEMC would provide the Panel with Terms of Reference. This review would be conducted in accordance with the Rules consultation procedures and would examine the Reliability Standard and Reliability Settings to a greater level of detail than the annual review process.

3.2.4 Review of the Reliability Standard and the Market Floor Price

Currently under Clause 3.9.3A of the Rules, the Panel is required to conduct a review of the Reliability Standard and the market floor price every second year.

The Panel is proposing that these requirements be removed from the Rules. The Panel considers that this is appropriate as the AEMC can initiate a review of either the Reliability Standard and the market floor price under the proposed Rule should a need be identified. In the case of the market floor price, any stakeholder could initiate an appropriate Rule change request if it considers that a more appropriate value should apply.

3.3 Power of the Panel to Submit this Proposal

The Panel is a specialist body within the AEMC and comprises both industry and consumer representatives. It is responsible for monitoring, reviewing and reporting on the safety, security and reliability of the national electricity system and advising the AEMC in respect of such matters. The Panel's responsibilities are specified in section 38 of the NEL and rule 8.8 of the NER.

The Panel requests that the AEMC make this Proposed Rule in accordance with the NEL.

Under section 91(4) of the NEL the Panel may only request the AEMC to make a Rule that relates to the Panel's functions. Section 38(2)(c) of the NEL states that the functions of the Panel include any functions and powers conferred on it under the NEL and the NER.

Clause 3.9.3A of the NER requires that, by 30 April each year (commencing 2010), the Reliability Panel must conduct a review in accordance with the Rules consultation procedures on the Reliability Standard[20] and Reliability Settings[21] and publish a report on the Reliability Standard and Reliability Settings that it recommends should apply from 1 July in the year commencing 2 years after the year in which the review is conducted.

The Panel completed this review for 2010 and published its Final Report on 30 April 2010.[22] The Panel recommended changes to the MPC and CPT from 1 July 2012. This Rule change proposal, if made, would implement the Panel's recommendations.

The Panel considers that each aspect of this proposal relates to the overall reliability of the power system and, therefore, is within the power of the Panel to recommend changes to the Rules.

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20 The Reliability Standard forms part of the Power System Security and Reliability Standards, defined in Chapter 10 of the NER.

21 The Reliability Settings are specified in clause 3.9.3A of the NER and consist of the MPC, CPT and the market floor price.

22 The Panel's Final Report is available on the AEMC website at www.aemc.gov.au/Market-Reviews/Completed/Review-of-the-Reliability-Standard-and-Settings.html.

3.4 Power of the AEMC to make the Proposed Rule

The subject matters about which the AEMC may make Rules are set out in section 34 of the NEL and, more specifically, in Schedule 1 to the NEL.

The Panel considers that this proposed Rule change falls within the subject matters that the AEMC may make Rules about, as it relates to:

- the operation of the national electricity market (as it involves the market reliability settings of the MPC and the CPT); and
- the activities of persons (including Registered participants) participating in the national electricity market or involved in the operation of the national electricity system (as it affects the offers and bids of scheduled generators, semi-scheduled generators and scheduled loads through the Reliability Settings of the MPC and the CPT).

The Panel also considers that this proposed Rule change is also within the matters set out in Schedule 1 to the NEL as it relates to:

- the setting of prices for electricity and services purchased through the wholesale exchange operated and administered by AEMO, including maximum and minimum prices, in that the Reliability Settings of the MPC and the CPT set the maximum prices that can occur in the wholesale exchange (item 7 of Schedule 1 of the NEL);and
- reviews by or on behalf of the Reliability Panel (item 33(b) of Schedule 1 of the NEL).

4 Requirements in terms of the National Electricity Objective and the economic impact

4.1 How the Proposed Rule will, or is likely to, contribute to the achievement of the National Electricity Objective

A request for the making of a Rule must contain an explanation of how the proposed Rule will or is likely to contribute to the achievement of the NEO.[23] The NEO is defined in section 7 of the NEL as:

> "to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to –
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system."

The proposed Rule can be summarised as:

1. fixing the real values of the MPC and CPT at their current levels of $12 500/MWh and $187 500/MWh; and

2. indexing the MPC and CPT from 1 July 2012 to maintain their the real values going into the future.

As such, this Rule change proposal is in relation to the wholesale market price cap. Therefore, it contributes to the achievement of the NEO, in relation to the long term interests of electricity consumers, in the following areas:

- efficient investment in electricity services;
- efficient use of electricity services;
- price of supply of electricity; and
- reliability of the national electricity system.

The Panel considers that the long term interests of consumers of electricity would be served by fixing the real value of the MPC and CPT at the current levels. At these levels, there is a balance between the values being high enough to attract investment in generation but not being so high as to create unmanageable wholesale trading risks. It is also noted that the MPC is approximately equal to one component (residential customers) of the Value of Customer Reliability determined in Victoria.[24] Whilst there

23 Clause 8(d) of the National Electricity Regulations.

24 In 2008 VENCorp published its report "Assessment of the Value of Customer Reliability (VCR)", with the VCR for Victorian residential customers being $13 250/MWh. The Panel notes that residential customers generally have the lowest VCR and would, from an economically efficient

is no similar published survey measure in other regions of the NEM, it is not unreasonable to assume that, at least in the case of residential customers, any variation between NEM regions would not be material. That is, the current level of MPC is arguably reasonably reflective of the value that residential customers would place on reliability. In addition, the Panel and several stakeholders have observed that the current levels of the MPC and CPT appear to be delivering sufficient investment to meet the existing Reliability Standard.[25]

While it considers that the Reliability Settings appear to be currently set at levels that contribute to meeting the NEO, the Panel considers there is a risk that the real value of the MPC and CPT may erode over time and increase the risk of insufficient investment in new capacity to meet the Reliability Standard. Therefore, the Panel considers that the Reliability Settings should be appropriately indexed to maintain their real values. This would be expected to maintain wholesale prices at the level that would encourage sufficient investment in electricity services so that reliability of the national electricity system meets the Reliability Standard. The Panel considers that maintaining wholesale prices at the level expected to meet the Reliability Standard is in the long term interests of consumers and, hence, will continue to promote the NEO.

The Panel considers that the proposed Rule is preferable to the current arrangements, and will contribute to the achievement of the NEO, as it is likely to promote a more efficient level of investment in electricity services. The proposed Rule achieves this by indexing the values of the MPC and CPT, thereby providing greater regulatory certainty, transparency and predictability of these values for stakeholders. The proposed Rule also removes the requirement for a review of the market floor price and reliability standard. The Panel considers that removing the review process for these parameters will provide further regulatory certainty for participants. The proposed benefits are specified in greater detail below in section 4.2.1.

4.2 The expected benefits and costs of the proposed change and the potential impacts of the change on those likely to be affected

This section provides an explanation of the expected benefits and costs of the Panel's proposed Rule change and the potential impacts of the change on those likely to be affected.

4.2.1 Indexing the MPC

The expected benefits of indexing the MPC include:

- aiming to maintain efficient prices that reflect the value of consumer reliability;

perspective, generally be the first to be shed if there was insufficient capacity to meet customer demand during a reliability incident.

25 ERM Power, Reliability Standard and Reliability Settings Review, Draft Report submission, p.3; Macquarie Generation, Reliability Standard and Reliability Settings Review, Draft Report submission, p.2; National Generators Forum, Reliability Standard and Reliability Settings Review, Draft Report submission, p.5.

- increasing certainty for investors through maintaining the real value of the MPC over a longer period and in a predictable manner;
- not increasing the real levels of volatility of the wholesale market prices (when compared to an increase in the level of the MPC);
- aiming to maintain the real value of the average revenue that generators can expect over the long-term;
- managing the risk of breaching the reliability standard due to an increase in the capital costs of generators;
- maintaining the real value of the current incentives for customers to participate in demand side responses;
- maintaining the incentive for participants (especially those not vertically integrated) to enter into longer-term contracts; and
- removing the administrative costs to the Panel of performing a biennial detailed assessment of the MPC and CPT required to meet the Reliability Standard.

The expected costs of indexing the MPC include:

- a potential risk that the indexing of the MPC and CPT does not fully support the investment in new capacity required to maintain the Reliability Standard (we note that this risk is expected to be small because of the Panel's annual review of the indexing process); and
- a small administrative annual cost to the Panel of performing the indexing process and publishing its results.

4.2.2 Indexing the CPT

The expected benefit of retaining the real level of the CPT is to maintain consistency with the philosophy that underpinned its creation, namely to act as a financial safety net without hindering investment.

The expected costs of retaining the level of the CPT relative to the MPC would appear to be minimal. As the level of the CPT is indexed in the same manner as the MPC, the Panel anticipates that the costs and benefits of retaining the level of the CPT relative to the MPC would be the same as those of the MPC.

Abbreviations

ABS	Australian Bureau of Statistics
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
APC	administered price cap
CPT	cumulative price threshold
CRR	Comprehensive Reliability Review
ESOO	Electricity Statement of Opportunities
MCE	Ministerial Council on Energy
MPC	market price cap
NEL	National Electricity Law
NEM	National Electricity Market
NEO	national electricity objective
NER	National Electricity Rules
OCGT	open cycle gas turbine
Panel	Reliability Panel
PPI	Producer Price Index
VCR	Value of Customer Reliability

A Issues Raised During the Panel's Consultation

As part of the consultation on the Panel's Draft Report, the Panel sought stakeholders' views on the ROAM analysis, and the implications of potentially higher MPC and CPT levels of $16 000/MWh and $240 000/MWh, respectively. This Appendix summarises the issues raised by stakeholders during the consultation and by the Panel under its own analysis.

A.1 Market Price Cap

A.1.1 Regular reviews of the MPC

Under the current NER, the Reliability Settings are reviewed every two years. In their submissions on the Issues Paper, the National Generators Forum (NGF) and Origin Energy supported regular reviews of the Reliability Settings because uncertainties associated with changes in climate change policies are likely to affect the costs of investment in new generation for a given level of the Reliability Settings.[26]

A.1.2 The key driver for generation investment is the contract market

Many stakeholders consider that investment in electricity generation is driven by a number of factors, including forecast contract prices, forecast demand growth, cost and availability of project finance. While the forward contract price may be expected to correlate with the forecast spot market price, uncertainty over forecasts and regulatory stability may mean that they are not well correlated.

ROAM's modelling for the Panel assumed that investment in the extreme peaking generator[27] will occur if the forecast spot market prices are sufficient. Some stakeholders do not consider that the forecast spot market price provides sufficient revenue certainty and, therefore, do not consider it to be the key driver for investment.

A.1.3 Increased wholesale market price volatility

An increase in the level of the MPC may mean that the spot market prices become more volatile. This price volatility occurs primarily at times of high demand, as a result of the inelastic nature of demand and the supply side response. The volatility increases as the MPC increases. Higher price volatility is likely to lead to an increase in costs and risks for market participants. For example, participants may have higher prudential

26 NGF Issues Paper submission, 14 August 2009, p.2; Origin Energy Issues Paper submission, 21 August 2009, p.2.

27 The extreme peaking generator is the generating unit in a region with the highest operating cost and hence the last generating unit to be dispatched before load shedding in that region. An extreme peaking generator is, therefore, expected to operate for only a few hours per year. This means that, if its only source of revenue is the spot market, it must receive sufficient revenue in these few hours to cover its long term capital costs.

costs or difficulty obtaining finance and these costs would be expected to be passed on to consumers to the extent allowable under retail price regulation.

The Panel notes that the energy only market design effectively requires that costs increase as a result of increased MPC in order to provides incentives for new investment. Therefore, the MPC should be determined at a level which reflects the value of reliability to customers.

A.1.4 Investment occurred at an MPC of $10 000/MWh[28]

Table A.1 below shows the last year in which generation capacity is predicted to be sufficient to meet the Reliability Standard.[29]

Table A.1 Last year in which reserve is predicted to be sufficient to meet the Reliability Standard

Region	Year
South Australia	2010/11
Victoria	2011/12
Queensland	2012/13
New South Wales	2012/13

While the Reliability Standard assessment is for the period from 1 July 2012, the Panel notes that the AEMO 2009 ESOO suggests two states, South Australia and Victoria, are currently at risk of not meeting the Reliability Standard at this point (or a year later). It is arguable whether the Reliability Settings for 2012 would influence decisions for installing capacity at this time, as these decisions would have been made some time ago, given the lead times for installation.

A.1.5 Increased prudential requirement

The Panel notes that the prudential requirements required by market customers will be likely to increase if the level of the MPC is increased. This is an additional burden for market customers and may become a barrier to entry into the market.

28 On 1 July 2010 the level of the MPC was increased from $10 000/MWh to the current level of $12 500/MWh.

29 AEMO, 2009, Electricity Statement of Opportunities. The years in which it is anticipated that there would be insufficient reserve to meet the Reliability Standard may change when AEMO revises the minimum reserve levels.

A.1.6 Transient market power

An increase in the MPC may reduce the opportunities to exercise transient market power in a competitive market. That is, in the short-term, the possibility of higher prices may increase the level of contracting in the energy market, thus reducing the incentive to exercise transient market power. In the long-term the potential of higher prices is likely to encourage increased generator and demand side investments, thus increasing competition at times of high spot prices. However, if the market is not fully competitive, an increase in the MPC may increase the potential for higher spot prices and hence the financial impact at times when market participants exercise transient market power.

The likelihood of high prices during periods of scarcity is a natural outworking of the energy only market and, therefore is necessary to encourage sufficient investment.

The Panel notes the regulatory framework provides for the Australian Energy Regulator to monitor, investigate and enforce compliance with the bidding and rebidding requirements of the NER and for the Australian Competition and Consumer Commission to ensure compliance with competition law.

A.1.7 Additional demand side response

ROAM's modelling for the Panel assumed that the most efficient investment to meet the Reliability Standard is in OCGT capacity (the extreme peaking generator). This is the cheapest available supply side option currently available.

The Panel considers that a substantial increase to the level of the MPC may make more demand side options economically viable. If this is the case, the price would be capped below the higher MPC when the demand side options are dispatched, thus the MPC may not need to be increased by as much as the increase indicated by the ROAM analysis.

A.1.8 Additional risk premiums for retailers and higher prices for consumers

A significant increase in the MPC increases the threat of higher spot prices. This will be likely to lead to higher risk premiums on energy contracts and hence higher prices to market customers. In the case of retailers, these higher contracting prices will generally be passed onto the individual consumers through higher retail tariffs. The Panel notes that this is a necessity of the market design.

A.1.9 Additional risks for generators

A significant increase in the MPC will also increase risks to generators trading in the NEM. In particular, generators may be less willing to contract their capacity as they would be exposed to increased risks at times of high prices should their physical generation not be available due to plant failure, network congestion or network outages.

This may eventually lead to generators being less willing to contract, or to invest in further capacity due to the perceived increase in the risks. Conversely, it may lead other generators to consider additional capacity to act as a physical hedge for their existing portfolio of generating units, thus improving the reliability of the supply in that region.

A.2 Cumulative Price Threshold

The NGF considered that the CPT does not necessarily protect participants from extreme events.[30] The Major Energy Users (MEU) considered that the need for the CPT, and hence the administered price cap (APC), demonstrated that the MPC is set too high. It considered that if the MPC was lower and another mechanism was used to meet reliability then the CPT may perhaps not be needed at all.[31]

In Draft Report submissions, a number of stakeholders considered that the Panel should reconfirm the objective of the CPT[32] and that the value of the CPT should then be derived from this objective.[33]

AGL and Snowy Hydro considered that the CPT should be increased, in line with the change to the MPC, in order to maintain the CPT as the 15 times multiple of the MPC.[34] However, International Power and the MEU considered that the CPT should not be increased simply in response to an increase in the MPC.[35] They considered that changing the CPT was unlikely to influence future investment, but may add to the risk faced by participants.

The CPT is an explicit risk management mechanism. Originally designed to replace the force majeure provisions in the National Electricity Code, the CPT was only intended to be breached in the event of a market failure, where supply failed to meet demand, or where, due to the unique nature of electricity, supply and/or demand were unable to respond to market signals.[36]

The Panel considers that the CPT is designed to limit participants' financial exposure to the wholesale spot market during prolonged periods of high prices, while not hindering investment. This means that the CPT should ideally be set at a level that is unlikely to be triggered except in extreme circumstances.

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30 NGF, Issues paper submission, p.2.

31 MEU submission "Review of the Operational Arrangements for the Reliability Standard (REL0035) and Review of the Reliability Standard and Settings (REL0034)", August 2009, p.38.

32 Energy Retailers Association of Australia (ERAA), Draft Report submission, p.2; Hydro Tasmania, Draft Report submission, p.1; NGF, Draft Report submission, p.7; TRUenergy, Draft Report submission, p.2.

33 ERAA, Draft Report submission, p.2; NGF, Draft Report submission, p.7; TRUenergy, Draft Report submission, p.2.

34 AGL, Draft Report submission, p.3; Snowy Hydro, Draft Report submission, p.5.

35 International Power, Draft Report submission, p.6; MEU, Draft Report submission, p.38.

36 NECA Reliability Panel, VoLL and the cumulative price threshold – Issues Paper, December 2003, p.40.

The Panel disagrees with the MEU that the CPT is needed because the MPC is too high. In an energy only market the MPC needs to be high enough to encourage sufficient investment. The CPT provides a safety net to mitigate participants' financial risks, as described above, should a period of high prices extend beyond what is necessary to provide a strong investment signal. Under market designs other than an energy only market, a CPT may not be required but this was outside the scope of the Panel's review and, hence, is outside the scope of this Rule change proposal.

A.3 Market Floor Price

Few submissions to the Panel's Draft Report commented on the level of the market floor price. Those that did considered that there was no justification for a change to the level.[37] Snowy Hydro considered that the level of the market floor price should be sufficiently negative to differentiate between all different generation technologies and minimum operating levels.[38]

The Panel agrees with these submissions considers that there is no evidence that shows a need to change the level of the market floor price for the period from 2012/13 onwards.

37 AGL, Draft Report submission, p.4; International Power, Draft Report submission, p.5; NGF, Draft Report submission, p.8; Snowy Hydro, Draft Report submission, p.4.

38 Snowy Hydro, Draft Report submission, p.4.

B Proposed Rule

Proposed National Electricity Amendment (Reliability Settings from 1 July 2012) Rule 2010

1 Title of Rule

This Rule is the Proposed National Electricity Amendment (Reliability Settings from 1 July 2012) Rule 2010.

2 Commencement

This Rule commences operation on [COMMENCEMENT_DATE].

3 Amendment of the National Electricity Rules

The National Electricity Rules are amended as set out in Schedule 1.

Schedule 1 Amendments of the National Electricity Rules

(Clause 3)

[1] Clause 3.9.3A Reliability standard and reliability settings review

Omit clauses 3.9.3A(a) and 3.9.3A(b), and substitute:

(a) By 30 April of each year (commencing 2012) the *Reliability Panel* must consider, and report to the *AEMC* on, whether the *Reliability Panel* considers that the indexation of the *market price cap* and the *cumulative price threshold* under clauses 3.9.4 and 3.14.1 respectively is no longer appropriate having regard to the impact of the resultant *market price cap* and *cumulative price threshold* on:

(1) *spot prices*;

(2) investment in the *National Electricity Market*; and

(3) the *reliability* of the *power system*.

(b) The *AEMC* may request the *Reliability Panel* to review in accordance with the *Rules consultation procedures* some or all of the *reliability standard* and *reliability* settings and publish a report on the relevant *reliability standard* and *reliability* settings that it recommends should apply from 1 July in the year commencing 2 years after the year in which the review is conducted.

(c) The *AEMC* must advise the *Reliability Panel* of the terms of reference for any review by the *Reliability Panel* under paragraph (b) and the *Reliability Panel* must conduct the review in accordance with those terms of reference.

[2] Clause 3.9.4 Market Price Cap

Omit clause 3.9.4(b) and substitute :

(a) The value of the *market price cap* is $12,500/MWh prior to 1 July 2012. Effective from 1 July 2012, the value of the *market price cap* for each year commencing on 1 July is the dollar amount per MWh determined by the *Reliability Panel* under paragraph (c).

[3] Clause 3.9.4 Market Price Cap

Omit clauses 3.9.4(c), 3.9.4(c1), 3.9.4(d), 3.9.4(c2), and 3.9.4(d), and substitute:

(c) By 10 *business days* after 30 March of each year (commencing 2012), the *Reliability Panel* must determine the *market price cap* to

apply from 1 July of that year in accordance with paragraphs (d) and (e) and *publish* its determination.

(d) Subject to paragraph (e), the *Reliability Panel* must calculate the *market price cap* for a year commencing on 1 July (year x) using the following formula:

$$MPC^x = 12{,}500 \times \frac{\left(Q_1^{x-1} + Q_2^{x-1} + Q_3^{x-1} + Q_4^{x-1}\right)}{\left(Q_1^b + Q_2^b + Q_3^b + Q_4^b\right)}$$

Where

MPC is the *market price cap* in dollars per MWh;

Q1 to Q4 are the values of PPI as at 1 April of year x for each of the four quarters of calendar year x -1 or year b (as the case may be);

x is the year commencing 1 July to which the *market price cap* will apply; and

b is calendar year 2010.

(e) If the value calculated by the *Reliability Panel* under paragraph (d) is:

(1) not in whole hundreds of dollars, then the *market price cap* for year x will be the value calculated under paragraph (d) rounded to the nearest $100/MWh.

(2) less than the *market price cap* determined under this clause 3.9.4 for the preceding year (year x – 1), then the *market price cap* for year x will be the value of the *market price cap* for year x-1.

[4] Clause 3.9.6 Market Floor Price

Omit clauses 3.9.6(c), 3.9.6(d), and 3.9.6(e).

[5] Clause 3.14.1 Cumulative Price Threshold and Administered Price Cap

Omit clause 3.14.1(c) and substitute:

(a) The *cumulative price threshold* is $187,500/MWh prior to 1 July 2012. Effective from 1 July 2012, the *cumulative price threshold* for each year commencing on 1 July is the dollar amount per MWh determined by the *Reliability Panel* under paragraph (d).

[6] Clause 3.14.1 Cumulative Price Threshold and Administered Price Cap

After clause 3.14.1(c), insert:

(d) By 10 *business days* after 30 March of each year (commencing 2012), the *Reliability Panel* must determine the *cumulative price threshold* to apply from 1 July of that year in accordance with paragraphs (e) and (f) and *publish* its determination.

(e) Subject to paragraph (f), the *Reliability Panel* must calculate the *cumulative price threshold* for a year commencing on 1 July (year x) using the following formula:

$$CPT^{x} = 187{,}500 \times \frac{\left(Q_1^{x-1} + Q_2^{x-1} + Q_3^{x-1} + Q_4^{x-1}\right)}{\left(Q_1^{b} + Q_2^{b} + Q_3^{b} + Q_4^{b}\right)}$$

Where

CPT is the *cumulative price threshold* in dollars per MWh;

Q1 to Q4 are the values of PPI as at 1 April of year x for each of the four quarters of calendar year x-1 or year b (as the case may be);

x is the year commencing 1 July to which the *cumulative price threshold* will apply; and

b is calendar year 2010.

(f) If the value calculated by the *Reliability Panel* under paragraph (e) is:

(1) not in whole hundreds of dollars, then the *cumulative price threshold* for year x will be the value calculated under paragraph (e) rounded to the nearest $100/MWh

(2) less than the *cumulative price threshold* determined under this clause 3.14.1 for the preceding year (year x – 1), then the *cumulative price threshold* for year x will be the value of the *cumulative price threshold* for year x-1.

[7] Chapter 10 New Definition

In Chapter 10, insert the following new definition in alphabetical order:

PPI

At a particular time, the total Intermediate (Stage 2) Stage of Production Producer Price Index published by the Australian Bureau of Statistics for the relevant quarter. If that index ceases to be published or is substantially changed (including as a result of a change to the base year for the *PPI*), *PPI* will be such other index as is determined by the *AEMC* on the advice of the *Reliability Panel* as a suitable benchmark for measuring movements

in the prices of goods or services that are used in the intermediate stage of production.