

Australian Energy Market Commission

RULE CHANGE

DRAFT RULE DETERMINATION

National Electricity Amendment (Application and Operation of Administered Price Periods) Rule 2011

Rule Proponent

Australian Energy Market Operator

Commissioners

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21 July 2011

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For and on behalf of the Australian Energy Market Commission

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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. The AEMC has two principal functions. We make and amend the national electricity and gas rules, and we conduct independent reviews of the energy markets for the MCE.

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Summary of draft Rule determination

On 4 January 2011 the Australian Energy Market Commission (AEMC, the Commission) received a Rule Change Request from the Australian Energy Market Operator (AEMO), requesting that the Commission make a Rule relating to the application and operation of administered price periods in the National Electricity Rules (NER). The Rule Change Request was considered against the requirements set out in the National Electricity Law (NEL) and was deemed by the AEMC to satisfy those requirements. A project for the Rule Change was established, and on 31 March 2011 the Commission published its first round Consultation Paper. Submissions to the first round of consultation concluded on 12 May 2011. Three submissions were received.

The Commission has decided to make a draft Rule that reflects the Rule Change Request, with some amendments.

The Commission has decided to remove the discretionary power of AEMO to extend an Administered Price Period (APP) into a trading day under consent of the Australian Energy Regulator (AER). The continuity of APPs across successive trading days will thus be dictated only by the existing rolling summation of prices, measured against the Cumulative Price Threshold (CPT).

The Commission has decided to clarify that whenever an APP is triggered by a market ancillary service, that all eight Market Ancillary Services (MAS) are to be capped and floored to the Administered Price Cap (APC) and Administered Floor Price (AFP) respectively.

The Commission has decided to clarify that an APP triggered by a market ancillary service is to commence in the dispatch interval immediately following that interval in which six-times the CPT was exceeded by the rolling sum of ancillary service prices across the last 2016 dispatch intervals.

The Commission has decided to correct what it considers a logical error in clauses 3.14.2(e)(4) and 3.9.6A(c) of the NER to refer to flows away from, rather than toward the regional reference node at which an AFP or Market Floor Price (MFP) is applied, respectively. The Commission wishes to draw respondents' attention to this aspect of the draft Determination, as these amendments did not constitute part of the Proponent's Rule Change Request, but were identified partly in one response to the first consultation, and by AEMO in liaison with the AEMC following the receipt of responses.

The Commission has decided to implement as proposed a number of minor clarifications to the NER relating to the application and operation of Administered Price Periods. These are set out in Chapter 9.

In accordance with the notice published under section 99 of the NEL, the Commission invites submissions on this draft Rule Determination, including the accompanying draft Rule, by 1 September 2011.

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1 AEMO's Rule change request

1.1 The Rule change request

On 4 January 2011, the Australian Energy Market Operator (AEMO, Rule Proponent) made a request to the Australian Energy Market Commission (Commission) to make a Rule regarding the Application and Operation of Administered Price Periods (Rule Change Request).

The Rule Change Request seeks to clarify the meaning of the clauses relating to Administered Price Periods in the NER, and proposes an extension to the timeframe in which AEMO is required to include compensation payable due to the application of an APP, Market Price Cap (MPC) or Market Floor Price (MFP) in Participants' preliminary and final statements.

1.2 Rationale for Rule change Request

In the Rule Change Request the Rule Proponent contends that:

- It is necessary to improve the clarity of the Rules relating to the Application and Operation of APPs , including:
 - Clarifying that an APP triggered by Market Ancillary Services (MAS) would commence in the dispatch interval that immediately follows the dispatch interval in which the sum of an ancillary service price for the previous 2016 dispatch intervals exceeds six times the Cumulative Price Threshold (CPT);
 - Removing ambiguity in Clauses 3.14.2(d1) and 3.14.2(d2) of the Rules to clarify that all MAS prices are capped at the Administered Price Cap (APC) during an APP triggered by any single MAS.
- The process for the discretionary extension of an APP to the next trading day is of limited and questionable benefit to the market, as its use would require subjective decision making on the part of AEMO / AER that is not guided by the NER. This could create unnecessary market uncertainty and inconsistent outcomes;
- AEMO currently do not have sufficient time to reasonably settle compensation amounts relating to the imposition of an APC, MPC or MFP;
- Clause 9.45.2 of the Rules, relating to the Tasmanian Region, is redundant given the application of an updated APC to all regions, which occurred in 2008;
- Various references to "market ancillary service price" are misleading as they unnecessarily combine two Glossary definitions.

1.3 Solution proposed in the Rule Change Request

The Rule Proponent proposes to resolve the issues discussed above by making a Rule that seeks to:

- Clarify clause 3.14.2(c)(1A) to make it clear that an APP triggered by MAS commences in the dispatch interval that immediately follows the dispatch interval in which the sum of an ancillary service price for the previous 2016 dispatch intervals exceeds six times the Cumulative Price Threshold (CPT);
- Clarify that clause 3.14.2(d2) requires AEMO to limit all MAS prices to the APC where an APP is notified for energy or any MAS;
- Delete clause 3.14.2(c)(3) which allows AEMO to impose an APP for the next trading day based on its opinion of the likelihood of another APP being applied on that day, or amend the drafting to remove ambiguity relating to how AEMO would decide to exercise such a discretionary function;
- Amend clause 3.15.10(c) to allow AEMO up to 25 business days to fulfill its obligations to include compensation awarded by the AEMC under clause 3.14.6 in statements provided under clauses 3.15.14 and 3.15.15;
- Include a reference to the term 'dispatch prices' in 3.14.1(a), and employ a transitional provision that would direct the AEMC to make this amendment without a Rules consultation (given the matter is a minor clarification only);
- Omit "market" and italicise the term "ancillary service prices" wherever occurring in clauses 3.14.1(a), 3.8.24(b), 3.9.2A(d), 3.13.7(e)(3) and (4), 3.14.1(a) and 3.15.7(c);
- Omit "market ancillary services prices" and substitute with "ancillary service prices" italicised in clause 3.9.2B(e)(1);
- Delete clause 9.45.2, which explicitly stipulated the value of the APC in Tasmania prior to the establishment of the existing APC of \$300/Megawatt-hour (MWh) which now applies to all regions.

1.4 Commencement of Rule making process

On 31 March 2011, the Commission published a notice under section 95 of the NEL advising of its intention to commence the Rule change process and the first round of consultation in respect of the Rule Change Request. A consultation paper prepared by AEMC staff identifying specific issues or questions for consultation was also published with the Rule Change Request. Submissions closed on 12 May 2011.

The Commission received three submissions to the Rule Change Request as part of the first round of consultation. They are available on the AEMC website¹. A summary of

1 www.aemc.gov.au

the issues raised in submissions and the Commission's response to each issue is contained in Appendix A.

1.5 Consultation on draft Rule determination

In accordance with the notice published under section 99 of the NEL, the Commission invites submissions on this draft Rule determination, including the draft Rule, by 1 September 2011.

In accordance with section 101(1a) of the NEL, any person or body may request that the Commission hold a hearing in relation to the draft Rule determination. Any request for a hearing must be made in writing and must be received by the Commission no later than 28 July 2011.

Submissions and requests for a hearing should quote project number "ERC0121" and may be lodged online at www.aemc.gov.au or by mail to:

Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

2 Draft Rule Determination

2.1 Commission's draft determination

In accordance with section 99 of the NEL the Commission has made this draft Rule determination in relation to the Rule proposed by AEMO.

The Commission has determined it should make, with amendments, the Rule proposed by the Rule Proponent².

A draft of the proposed Rule that the Commission proposes to be made (Draft Rule) is attached to and published with this draft Rule determination. Its key features are described in section 3.2.

2.2 Commission's considerations

In assessing the Rule change request the Commission considered:

- the Commission's powers under the NEL to make the Rule;
- the Rule Change Request;
- the fact that there is no relevant Ministerial Council on Energy (MCE) Statement of Policy Principles;³
- submissions received during first round consultation; and
- the Commission's analysis as to the ways in which the proposed Rule will or is likely to, contribute to the National Electricity Objective (NEO).

2.3 Commission's power to make the Rule

The Commission is satisfied that the Draft Rule falls within the subject matter about which the Commission may make Rules. The Draft Rule falls within the matters set out in section 34 of the NEL as it relates to regulating the operation of the National Electricity Market.

2.4 Rule making test

Under section 88(1) of the NEL the Commission may only make a Rule if it is satisfied that the Rule will, or is likely to, contribute to the achievement of the NEO. This is the decision making framework that the Commission must apply.

² Under section 99(3) of the NEL the draft of the Rule to be made need not be the same as the draft of the proposed Rule to which the notice under section 95 relates.

³ Under section 33 of the NEL the AEMC must have regard to any relevant MCE statement of policy principles in making a Rule.

The NEO is set out in section 7 of the NEL as follows:

“The objective of this Law is 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.”

For the Rule Change Request, the Commission considers that the relevant aspects of the NEO include the promotion of efficient investment in, and efficient operation of, electricity services for the long term interests of consumers of electricity with particular relevance to the efficient pricing of electricity. This is because the application and operation of administered price periods directly affects dispatch prices which influence the final price paid by consumers. Other relevant aspects of the NEO include security of supply and of the national electricity system, as administered price periods tend to co-incide with periods of system stress, so their application and operation could impact on the market signals that are sent to providers of electricity and providers of system support services during such periods.⁴

The Commission is satisfied that the Draft Rule will, or is likely to, contribute to the achievement of the NEO because it improves transparency of the market arrangements and provides greater certainty for participants and AEMO. This will, all else equal, reduce barriers to investment, facilitating competition and thereby lowering the long-term price of electricity for consumers.

Under section 91(8) of the NEL the Commission may only make a Rule that has effect with respect to an adoptive jurisdiction if satisfied that the proposed Rule is compatible with the proper performance of AEMO’s declared network functions. The Draft Rule is compatible with AEMO’s declared network functions because it does not interfere with, or in any way impact upon, AEMO’s ability to perform its declared network functions.

⁴ Under section 88(2), for the purposes of section 88(1) the AEMC may give such weight to any aspect of the NEO as it considers appropriate in all the circumstances, having regard to any relevant MCE statement of policy principles.

3 Commission's reasons

The Commission has analysed the Rule Change Request and assessed the issues/propositions arising out of this Rule Change Request. For the reasons set out below, the Commission has determined that a Rule be made. Its analysis is also set out below.

3.1 Assessment

The Rule Change Request seeks to clarify the application and operation of Administered Price Periods in the National Electricity Market (NEM), and remove the discretionary power of AEMO to extend Administered Price Periods once triggered.

In addition to the issues raised in the Rule Change Request, the following issues were identified following receipt of responses to the Consultation Paper:

- An unwanted incentive to withdraw market ancillary services could potentially arise under the current APP arrangements when an APP is triggered by market ancillary services,
- Drafting errors appear to exist in clauses 3.14.2(e)(4) and 3.9.6A(c) that should be corrected.

Following a detailed scenario analysis and consideration of responses to the Consultation Paper, the Commission considers that the removal of AEMO's discretion to extend an APP to the next trading day would best contribute to the achievement of the NEO. This approach is preferred to the option of introducing an objective test for the extension of an APP suggested as an alternative by AEMO, or the option of retaining the subjective opinion-based approach presently in the Rules.

The Commission considers that no material risks would emerge by commencing an APP in the dispatch interval immediately following the dispatch interval in which an APP is triggered by the sum of ancillary service prices exceeding six times the Cumulative Price Threshold. Further the Commission considers that this arrangement is the most compatible with the objective of efficiency, in that the intervention in price setting is applied as close as possible to the instance in which the conditions for doing so are triggered.

The Commission considers that for APPs triggered by a high ancillary service price, it should be clarified that all ancillary service prices should be capped and floored at the APC and AFP respectively. No such cap or floor would be applied to the dispatch price, however, for the same reasons laid out by the Australian Competition and Consumer Commission (ACCC) in their Determination relating to Regional Pricing of Ancillary Services of September 2003⁵; in which the ACCC stated "*...the benefits in having an APC in the energy market as a result of high prices in one of the FCAS markets is not*

⁵ Determination 'Applications for Authorisation: Amendments to the National Electricity Code - Regional Pricing of Ancillary Services' 17 September 2003, p16.

clear given that the volumes in the FCAS markets are small relative to those in the energy market."

The Commission notes that no respondents raised a material concern with the proposed extension of the time allowed for AEMO to fulfill its obligations to include compensation awarded by the AEMC under clause 3.14.6 in statements provided under clauses 3.15.14 and 3.15.15. The Commission is subsequently satisfied that the proposal to extend the time allowed is reasonable.

The Commission considers that clauses 3.14.2(e)(4) referring to application of the AFP, and 3.9.6A(c) referring to application of the MFP, should be amended to refer to flows away from, rather than toward the region affected by manual price setting. This issue was not envisaged in the Consultation Paper drafted by the AEMC but has rather been raised in submissions received, and in liaison between AEMO and the AEMC following receipt of submissions. As such, the Commission wishes to draw stakeholders' attention to this decision in particular in making submissions to this draft Determination.

3.2 Draft Rule

The Commission has determined to make the Draft Rule to:

- Amend clause 3.14.2(c)(1A) to make it clear that an APP for MAS commences at the dispatch interval following the dispatch interval in which a cumulative ancillary service price exceeds six times the CPT is exceeded;
- Clarify that clause 3.14.2(d2) requires AEMO to limit all MAS prices to the APC and AFP where an APP is notified for energy or any MAS;
- Delete clause 3.14.2(c)(3), which grants AEMO discretion to extend an APP to the next trading day when the CPT is no longer breached;
- Amend clause 3.15.10(c) to allow AEMO up to 25 business days to fulfill its obligations to include compensation awarded by the AEMC under clause 3.14.6 in statements provided under clauses 3.15.14 and 3.15.15;
- Include a reference to the term 'dispatch prices' in 3.14.1(a), and employ a transitional provision to give this effect;
- Omit "market" and italicise the term "ancillary service prices" wherever occurring in clauses 3.14.1(a), 3.8.24(b), 3.9.2A(d), 3.13.7(e)(3) and (4), 3.14.1(a) and 3.15.7(c);
- Omit "market ancillary services prices" and substitute with "ancillary service prices" italicised in clause 3.9.2B(e)(1);
- Delete clause 9.45.2, which explicitly stipulated the value of the APC in Tasmania and is no longer required;

- Amend clause 3.14.2(e)(4) to refer to flows "away from" instead of "toward" the regional reference node at which the dispatch price is set to the administered floor price; and
- Amend clause 3.9.6A(c) to refer to flows "away from" instead of "toward" the regional reference node at which the dispatch price is set to the Market Floor Price.

3.3 Civil Penalties

The Draft Rule does not amend any Rules that are currently classified as civil penalty provisions under the *National Electricity (South Australia) Law or Regulations*. The Commission does not propose to recommend to the MCE that any of the amendments in the Draft Rule be classified as civil penalty provisions.

4 Commission's assessment approach

This chapter describes the Commission's approach to assessing the Rule Change Request in accordance with the requirements set out in the NEL (and explained in Chapter 2).

4.1 Issues

In assessing the Rule Change Request, the Commission has considered the following issues:

- Discretion (clause 3.14.2(c)(3))
 - The current discretionary arrangement for AEMO to extend an APP to the next day.
 - The potential alternative arrangements, including
 - 1 Abolishing the discretion by deleting the clause as proposed by the Proponent.
 - 2 Obligating AEMO to develop an objective test for the extension of an APP to the next trading day.
 - 3 Creating an objective test that could be written into the Rules.

In each arrangement, the role played by AER could also be

- Retained as currently drafted.
 - Removed as proposed by the Rule Proponent.
 - Modified.
- Dependency of APC / AFP Applications to MAS prices (clauses 3.14.2(d)(1) and (2))
 - Retention of the current drafting relating to dependencies of applications of the APC / AFP to MAS prices.
 - Clarification of the meaning and rewording of the existing clauses.
 - Introduction of more complex dependencies for application of the APC / AFP to MAS prices.
 - Timing of APC / AFP Applications to MAS prices (various parts of 3.14.2)
 - Retention of the current drafting relating to the timing of application of the APC / AFP to MAS prices.

- Clarification that a MAS-triggered APP applies from the start of the next dispatch interval, or clarifying that the APP applies from some other point in time.
- Various miscellaneous issues, including non-controversial re-drafting.
- Specific amendments to relevant sections as proposed by the National Generators Forum (NGF) in their response to the first round Consultation Paper, and subsequently identified by AEMO, relating to the imposition of administered prices to neighbouring regions during the application of the AFP or of the MFP in a region.

4.2 Historical Data Analysis

The Commission conducted a brief review of the historical market data that related to the imposition of APPs, which is presented in Appendix B. As explained earlier, there is only limited data available, as there have been effectively only four⁶ administered pricing events in the history of the NEM, and none of them were caused by sustained high prices in ancillary services. Notwithstanding this, some important observations can be drawn from the historical experience that helped to formulate the principles used to make this draft Determination, as explained later in the paper.

4.3 Principles for Determination

In order to assess the issues and each of the respective options, the Commission reviewed the Proponent's submission and the responses to the Consultation Paper, and drawing on these and its own research formulated a logical set of principles upon which it could make this draft Determination. These are laid out in the respective chapters below, which address each issue in turn. In coming to its draft Determination the Commission sought to satisfy the objective of having transparent, practical rules that intervene in market price setting only to the degree necessary to protect the long term interest of consumers.

⁶ There are five distinct contiguous periods of Administered Pricing in the history of the NEM, two of which occurred in the South Australia and Victoria regions in the week prior to the Black Saturday fires.

5 Discretion to Extend an Administered Price Period

5.1 Rule change proponent's view

The Rule Proponent regards the discretion to extend an APP as unnecessary, and that *"it is inappropriate for AEMO and the AER to have discretion to impose an APP for a future period, based on an assessment of projected future price outcomes."*⁷

The Rule Proponent has proposed that the discretionary power of AEMO and the AER be removed, by deleting clause 3.14.2(c)(3). If this proposal is not accepted, the Proponent proposes that the discretion be replaced with *"an objective test limited to and based on projected pricing outcomes in the pre-dispatch timeframe."*⁸ The Proponent also proposes to remove the AER from the discretionary function under either solution.

5.2 Stakeholder views

All three respondents stated in their submissions to the Consultation Paper a preference for the option of an objective test, rather than abolishment of the discretionary power. TRUenergy also stated a preference for the removal of the AER from the process, highlighting that the involvement of the regulator in operational interventions could create conflict of interest should that regulator later wish to conduct investigations into the market outcomes or into the behaviour of participants⁹. The AER considers that basing the decision to extend an APP on the pre-dispatch schedule would achieve a similar result to the current arrangements, but without the existing ambiguity and administrative difficulties¹⁰.

5.3 Other relevant considerations

5.3.1 Risk of Discretionary Intervention

The Proponent argues in their Rule Change Request that their proposals would *"make it clearer when AEMO is required to intervene in the NEM and this would improve decision-making for Registered Participants and AEMO. This would increase the predictability of the NER's operation and regulatory certainty by reducing difficulties in predicting and understanding outcomes... The consequences of intervention are material, and ambiguity could result in dispute over the application of these clauses."*¹¹ The Commission agrees that the consequences of pricing interventions in the market can be material, and is of the view

⁷ AEMO, *National Electricity Rule Change Proposal - EM 2010/002*.

⁸ AEMO, *National Electricity Rule Change Proposal - EM 2010/002*.

⁹ TRUenergy, *National Electricity Amendment (Application and Operation of Administered Price Periods) Rule 2011*.

¹⁰ Australian Energy Regulator, *Submission to Application and operation of Administered Price Periods Rule Change Proposal (Ref: ERC0121)*

¹¹ AEMO, *National Electricity Rule Change Proposal - EM 2010/002*.

that this point is particularly relevant regarding the question of AEMO / AER's discretion to extend an APP to the next business day (or trading day, as suggested by the proponent).

As a principle, the Commission is of the view that potential discretionary operational intervention into the market represents - absent other considerations - a material risk for participants and prospective investors in the market. As such, the Commission considers that such discretionary intervention should only be retained if the benefit gained by exercising it can be reasonably expected to at least offset the uncertainty its existence creates for participants.

5.3.2 Existing Incentives on Generators to Avoid Administered Price Periods

The CPT is currently set to \$187,500, and is the threshold of summed half-hourly prices over the course of one week (336 trading intervals) which, when exceeded, cause an APP to trigger. This threshold figure is equivalent to spot prices averaging \$558.04/MWh during those 336 intervals. By comparison the APC is only \$300/MWh. This is an important observation because it leads to the logical conclusion that a Generator participant would face a strong disincentive to allow the APP to trigger¹². This is because more money is available to the Generator if the cumulative spot price is held at one cent below the CPT than would be available to it during the APP, in which the APC would be in force instead. This effect would obviously fall away were the APC ever to be set to a value above the half-hourly CPT.

5.4 Triggering and classification of Administered Price Periods

In seeking to determine whether the discretion should be abolished as proposed, the Commission considered the various circumstances that can give rise to APPs, and then assessed how well the existence of discretion by AEMO contributed to the achievement of the NEO in each circumstance. This, combined with a review of the historical data available (see Appendix B) has allowed the Commission to come to a draft Determination on the question of the discretionary function.

Examining the historical events (see Appendix B for a brief commentary on the APPs that have occurred in the NEM), and assuming that Generators would prefer to avoid APPs from happening, two broad classifications of APPs emerge:

- "Avoidable" events: These are events where an APP is triggered after several days of increasing cumulative prices. The event could occur for example if the spot price reaches close or equal to the MPC at the peak demand period over several consecutive days (such as March 2008). Alternatively there could be a sustained series of days where, despite reasonable system conditions, and despite the opportunity for Generators to act to avoid it¹³, the price is high anyway and

¹² Assuming away any contractual incentives / vertical effects, and assuming the generators are purely profit-maximising agents.

¹³ in a mathematical sense, ignoring desire or incentive

the APP is triggered. Examples of this type include the June 2007 and June 2009 events.

- "Short and Sharp" events: These are events where the market and/or system are under such stress that Generators cannot structure offer data in a way that avoids the APP, even if they are motivated to do so. This could arise when the capacity margin is so tight that the very highest bid prices (close to the MPC) act to set the price. Extreme examples emerge when load is shed, because the price is manually set to the MPC during these periods¹⁴. This may cause the APP to promptly trigger as the cumulative price overtakes the threshold in the space of a few hours. The January 2009 APP is the best example of this type of event.

An APP event may have features of both of the above types of APP, or fall somewhere between the two.

The discretionary power to extend an APP is effectively applicable only at the start of a trading day¹⁵, and is only applicable when the CPT is not exceeded in that trading interval anyway. The discretion band exists between two boundaries:

- The lower boundary is the point at which the CPT is just barely breached in a single period but is not breached in periods after this. Perhaps the average price reaches \$558.04 at 19:00 hrs before falling back under again by 19:30 hrs. AEMO has discretion at the start of the next trading day to extend the APP out across that entire day if they expect the CPT to be breached again at some point during that day.
- The upper boundary is the point at which the CPT is breached anyway at period ending 04:30 the next day. In this case, AEMO have no discretion as the APP is automatically in force for the whole trading day.

5.5 Applicability of Discretion to extend an Administered Price Period

5.5.1 "Avoidable" Administered Price Periods

The Commission considers that APPs that trigger after a gradual build-up of high prices will be more likely to present opportunities for AEMO to exercise their discretion the next day than the "Short and Sharp" events. This is because, in order for the discretion to be enabled, the cumulative spot price must not exceed the CPT at 04:30 hrs on the start of the next trading day. The overnight prices in the "Avoidable" case will be more likely able to offset the prices recorded one week earlier to bring the

¹⁴ More generally, market conditions where demand cannot be served will trigger the manual setting of price to the MPC. Load shedding caused by network outages do not trigger this type of manual price setting, though the price during a network outage may approach or reach the MPC anyway.

¹⁵ The Rule Proponent has highlighted that the clauses should be amended to refer to the next trading day instead of next business day; this is considered non-controversial and appropriate should the discretion be retained.

cumulative spot price down below the CPT to enable the potential exercise of discretion.

All periods of contiguous administered prices will end naturally at 04:00 hrs on some trading day, so long as the CPT is not breached at the time, and AEMO does not exercise its discretion to extend. In the avoidable type of APP, it is considered most likely that, when this condition first arises, the reason that the cumulative price will have dropped below the CPT is that the conditions that caused the APP to trigger in the first place have gone. Should the APP have naturally lasted more than two or three days before the discretion is able to be exercised, there is an even higher likelihood that the abatement of the adverse conditions will be the primary cause of the cumulative spot price having fallen below the CPT. It is thus considered unlikely that discretionary power to extend the APP would be of use in this case.

Should the adverse conditions which caused the APP instead still prevail, AEMO would be in the difficult position of having to assess (either using their opinion or using the pre-dispatch data as mooted) whether the day would be likely to feature a re-triggering of the APP at some point. Should the decision be taken to extend the APP even though the CPT is no longer breached, and the emergent market conditions turn out to be relatively normal (a scenario deemed quite likely since the APP was perhaps only barely breached in this type of event), this could be seen as unnecessary or potentially harmful market intervention.

So in short, it is considered that when discretion is enabled under this type of APP, either AEMO would be very unlikely to extend the APP, or the extension of the APP would carry at least some risk of producing sub-optimal market outcomes.

5.5.2 "Short and Sharp" Administered Price Periods

The Commission considers that "Short and Sharp" APPs are less likely to present AEMO with the opportunity to use any discretion on the immediate day after triggering. This is because the CPT in these events is typically breached by rapidly increasing cumulative spot prices caused by sustained periods of very high spot prices on one or two consecutive days. The January 2009 graphs in Appendix B highlight how the quick escalation in cumulative prices caused by clustered price spiking can take nearly a whole week to be balanced out by lower consecutive prices in the cumulative calculation.

Aside from this observation, it may be asked what economic value there is in deciding *ex-ante* to extend an APP during this type of market event. While the pricing pattern that emerges in the absence of discretion could appear strange, whereby APPs could trigger and re-trigger at peak demand periods each day, AEMO could explain that the pattern was caused by re-triggering of APPs in its market reporting process. It could instead be argued that the signal would be more transparent and easier for participants to model or forecast, because it would be a function of pure algebra and not of the exercise of discretion.

By exercising the discretion during this type of event, AEMO could be preventing an economically efficient price signal. In other words, it could be market intervention that protects consumers in the short term but may damage consumers in the long term. Given that the NEO focuses on economic efficiency for the long term benefit of consumers, it is considered unlikely that use of the discretion during an APP of this type would contribute to the achievement of the NEO.

5.6 Objective Test using Pre-dispatch Schedule

The respondents to the Consultation Paper indicated a preference in their submissions for the creation of an objective test that AEMO would apply, based on the pre-dispatch schedule, which would extend the APP without any subjectivity or role for opinion.

Although it recognises that there are benefits in this approach, the Commission considers that the triggering of APPs and the potential emergence of conditions where Generators could influence the pre-dispatch schedule are probably correlated. As such, it is possible that an objective test based on the pre-dispatch schedule could be influenced by Generators. The Commission also considers that formulation of the objective test on analytic grounds may be potentially controversial, as for example, it must be determined which pre-dispatch schedule calculated during the APP should be used for the test. The Commission notes that no respondents suggested any specific method for such an objective test.

Due to the risk that in certain circumstances the content of the pre-dispatch schedule could be influenced by Generators in order to affect the likelihood of an APP being extended under an objective test, the Commission considers that this option is inferior (with regard to contributing to the achievement of the NEO) to the abolishment of the discretionary power, and that it is also inferior to retaining the existing subjective discretionary arrangement.

5.7 Conclusion

Having considered the responses to the Proponent's arguments, the Commission is of the view that the involvement of the AER in the discretionary function - should one ultimately be retained upon final determination - is unnecessary and impractical. This is because the decision to extend an APP into the next day will usually need to be taken close to the end a trading day, at which point it is considered very unlikely that the AER would be in a better position than AEMO to make such a decision or to adjudicate on whether or not the exercise of the discretion would be likely to be in the best interests of the market or of consumers. Consequently, the Commission's draft Rule determination on this point is that the involvement of the AER is to be removed from any discretionary or operational functions to extend APPs.

The Commission considers that the number of occasions where AEMO would be in a position to reasonably consider the use of discretion to extend an APP should be

minimal, and further that the rare occasions where it could be reasonably used would have some probability of leading to sub-optimal economic outcomes¹⁶.

The Commission considers that the abolition of the discretionary power will contribute to the achievement of the NEO, because:

- The abolishment improves certainty to participants and to AEMO, as it will no longer be possible for periods of interventionary pricing to occur based on opinion;
- This improved certainty will, all else equal, improve the climate for investment in generation, lowering the wholesale price customers would expect to be exposed to over the long term;

Consequently, the Commission has decided to make a draft Rule determination that the discretion be abolished by deleting clause 3.14.2(c)(3).

¹⁶ In principle, every APP features at least one day where the discretion is able to be exercised (i.e. at the end of the last day of the APP).

6 Dependency of Administered Price Cap / Administered Floor Price Applications to Market Ancillary Services

This chapter considers those aspects of the Rule Change Request that relate to clarifying what happens when an APP is triggered by one of the eight MAS.

6.1 Rule change proponent's view

The Proponent argues that the clauses as currently drafted are ambiguous as to which of the eight ancillary service prices are capped and floored (by the APC and AFP respectively), when an APP is triggered by a single cumulative ancillary service price exceeding the CPT.

The Proponent argues with reference to relevant Code Change documentation published by the National Electricity Code Administrator (NECA) (application) and the ACCC (authorisation) that the meaning of the clauses should be such that whenever an APP is triggered by a MAS, then all eight MAS prices are capped and floored by the APC and AFP, but that energy should not be capped and floored. The Proponent also notes that AEMO presently interpret the clauses in this way in operating the market.¹⁷

6.2 Stakeholder views

In its submission, the NGF argue that an APP triggered by Raise service prices should not cause prices for Lower services to be capped; and vice versa. Further, the NGF suggest that there would be expected to be a high correlation between high prices in one type of Raise service and another (or Lower service and another), and that these should be capped together; as the additional complexity involved in only capping one would be of little benefit.¹⁸

TRUenergy highlight that not all plant capable of providing MAS can provide all eight MAS services, and this could create a risk because capping all eight services when only one is under stress could adversely affect providers of just one or a few of the other services. TRUenergy support the capping of the particular MAS that caused the APP to be triggered, but failing that, ask that the Rules should be amended to clearly state whatever option is decided upon.¹⁹

6.3 Other relevant considerations

Having regard to the submissions received, the Commission considers that:

¹⁷ AEMO, *National Electricity Rule Change Proposal - EM 2010/002* page 4

¹⁸ NGF, *Consultation Paper: Application and Operation of Administered Price Periods - ERC0121*.

¹⁹ TRUenergy, *National Electricity Amendment (Application and Operation of Administered Price Periods) Rule 2011*.

- There is likely to be a positive correlation between high prices in one type of Raise service and all the other Raise services when one of those services triggers an APP; and likewise for Lower services.
- There is likely to be a negative correlation between high prices for Raise and Lower services when one of the services triggers an APP.

The Commission also considers that the Rules should where reasonably possible, not incentivise the withdrawal of volumes from services that are under stress. This is explored in the next two subsections.

6.3.1 Potential incentives on Market Ancillary Service providers to move volume from Market Ancillary Services to Energy during a Market Ancillary Service-triggered Administered Price Period

The Commission considers that the current Rules, whether interpreted as per the Rule Change Request, or interpreted such that only the single service under stress is capped and floored, do not completely address the potential incentive for providers of MAS to move volumes away from stressed services. For example, consider what incentive a Raise-MAS provider faces at the start of an APP, triggered by one of the Raise services. Currently, if a MAS-triggered APP commences, then AEMO automatically cap all the MAS at \$300/MWh, and leave the energy price to be set as normal. Conceptually, a Generator participant can choose to offer volumes into any of the four Raise services, or they can instead offer the volume into the energy market, or a combination of both. The generator is usually bound by the 'trapezoid' effect of Raise volumes (i.e. most units cannot provide any Raise volume while running at maximum capacity). During a Raise-MAS-triggered APP, a Generator might choose to move its volumes out of the capped ancillary service and into energy if it is profitable to do so.

Energy dispatch requires the plant to pay its avoidable or short-run costs of generating, whereas being enabled to provide MAS usually incurs relatively little real Short-Run Marginal Cost (SRMC). The following indicative commercial incentives emerge in this example:

Table 6.1 Potential incentives on a Raise provider to move volumes from Raise to Energy

SRMC of Plant	Energy Price < \$300/MWh	\$300/MWh < Energy Price < \$600/MWh	Energy Price > \$600/MWh
\$0 / MWh	Keep providing Raise	Switch to Energy	Switch to Energy
\$150 / MWh	Keep providing Raise	Switch to Energy if EP > \$450	Switch to Energy
\$300 / MWh	Keep providing Raise	Keep providing Raise	Switch to Energy

Table 6.1 indicates, for example, that a plant with \$300/MWh SRMC would be better off withdrawing volume from the capped MAS market and moving that volume over

to energy, provided that the resulting energy dispatch price remained above \$600/MWh. The table suggests that participants with units that have higher SRMC will be less incentivised to withdraw from the stressed Raise MAS service than those with plants that have low SRMC, but only up to a point. If the energy dispatch price is spiking to thousands of dollars during the MAS-triggered APP, then it is clear that all plants will earn more money by actually withdrawing their volumes from the stressed Raise service and transferring those volumes to energy.

This argument can be extended to the remaining Raise services. For example, if the particular service that triggered the APP was, say 'Raise 6 seconds' and only that service was capped, then the participants could look to move their volumes to other Raise services if the prices prevailing there are higher than the APC. AEMO's current approach prevents this type of movement from being incentivised currently, because all of the MAS services are capped simultaneously once a single MAS triggers the APP. This argument does indicate however that the incentive would be created should the clauses be clarified to state that only the MAS that triggers the APP is capped and floored rather than all eight.

The argument does not extend to Lower services, because there is nowhere to move Lower volumes other than to other Lower services. Most units can provide their full compliment of Lower volume while operating at maximum capacity.

The Commission considers that, while it may be technically preferable that Raise and Lower services be treated separately as they are so distinct by nature, there would likely be limited circumstances where capping of both types (as a result of only one type triggering) would produce different market outcomes to those obtained by capping them independently under their own triggers.

6.3.2 Possible Remedies to the 'Withdrawal-of-Raise' Problem

One solution to the problem highlighted by the NGF would be the application of the APC and AFP to the dispatch price during a MAS-triggered APP. This solution is however not very favourable due to the reasons of scale between the energy and MAS markets.

The Commission developed the following potential solution to remove the incentive that MAS providers could face to withdraw volumes from distressed Raise services during MAS-triggered APPs. In order to make the provider of the particular service at least indifferent to moving their volumes to energy, the cap applied to the ancillary service price can be set at the maximum of either the APC, or the energy dispatch price. The existing capping and flooring works such that the MAS price for service X during a MAS-triggered APP is:

$$\text{Ancillary Service Price } \mathbf{x} = \max \{ \text{AFP}, \min \{ \text{Calculated "as if did not apply"}, \text{APC} \} \}$$

The new calculation would become:

$$\text{Ancillary Service Price } \mathbf{x} = \max \{ \text{AFP}, \min \{ \text{Calculated "as if did not apply"}, \max [\text{APC}, \text{Dispatch Price}] \} \}$$

Though it is hard to conceive of a scenario where it would matter, the analogous case is probably true for the application of the AFP. Where a Raise MAS price is set to the AFP during a MAS-triggered APP, providers would be better off moving volumes *in to* the MAS service if the energy price was below that floor. The alternative for the provider is that they will be better off simply not providing the service, and this is a reasonable outcome also.

A more pragmatic approach to the problem for Raise services would be to simply acknowledge that it exists, and rely on the existing mechanisms to handle the problem should it ever emerge²⁰. These mechanisms include:

- AEMO's power to issue operational directions to Generator participants to maintain system security, and
- Compensation arrangements.

While a detailed estimate of the cost involved in implementing this potential solution has not been determined, the Commission considers that the likely cost of changing the market systems would outweigh the benefit of the change, because of the very low likelihood of a MAS-triggered APP ever occurring.

6.4 Determinations on Dependency

The Commission's draft Determination regarding the question of dependency is that:

- For the avoidance of doubt, clarify that the wording of 3.14.2(d2) means that all MAS prices are capped and floored during a MAS-triggered APP, rather than just one or a subset of different MAS prices.

This would contribute to the achievement of the NEO because it provides simplicity and is more predictable than the more complex options such as divorcing the application of APPs between Raise and Lower services. By maximising simplicity where possible, the market environment improves for investors and participants, leading to lower costs of participation and lower prices for consumers in the long run, thereby contributing to the achievement of the NEO.

The Commission considers that the option not to change the APP mechanism to explicitly cater for the 'withdrawal incentive' issue is preferable. This option is considered to best contribute to the achievement of the NEO, because it is the most predictable, and because the issue is expected to arise very infrequently and would fall within AEMO's operational capacity to manage in any case. By making no change to the Rules in this regard, participants will always be certain of the magnitude of the cap and floor that is in place during the APP. This certainty and simplicity contributes to the achievement of the NEO in the same way described above.

²⁰ Noting that a MAS-triggered APP has never happened in the history of the NEM.

7 Timing of Administered Price Cap / Administered Floor Price Applications to Market Ancillary Services

This chapter considers those aspects of the Rule Change Request that relate to clarifying the time that an APP is to commence following the exceedance of a cumulative ancillary service price above six times the CPT.

7.1 Rule change proponent's view

The Proponent argues that it does not appear reasonable to apply an APP only from the beginning of the next Trading Period when an ancillary service price exceeds the threshold part-way through a trading interval. The Proponent requests that "*Where an ancillary service price exceeds the ancillary service price CPT threshold, the NER should make it clear that the APP commences immediately following the dispatch interval that exceeded the ancillary service price CPT threshold. This would provide certainty for Registered Participants and AEMO.*"²¹

7.2 Stakeholder views

TRUenergy and the NGF argue in favour of the Proponent's proposed clarification.

7.3 Other relevant considerations

The Commission considered the potential adverse incentives or market conditions that could be caused by commencing an APP part-way through a trading interval. No adverse incentives were identified, other than the existing 'incentive to withdraw' problem identified earlier; in that the five-minute energy price may be high enough to incentivise withdrawal from Raise services inside the trading interval in which the trigger is activated. However, this concern is encapsulated within the broader issue described in section 6.3.1.

The Commission considers that there would be no risk of perverse outcomes in implementing the APP at the next relevant dispatch interval.

7.4 Determination of Timing

The Commission determines that clause 3.14.2(c)(1A) be clarified as proposed by the Proponent to state that an APP triggered by an ancillary service price is to commence in the dispatch interval immediately following the dispatch interval in which the CPT was exceeded. This will contribute to the achievement of the NEO by providing improved clarity to the Rules.

²¹ AEMO, *National Electricity Rule Change Proposal - EM 2010/002*.

8 Extension of Time for AEMO to include Compensation from Administered Price Periods, Market Price Caps, or Market Floor Prices

The Proponent proposed an extension to the time that AEMO may take to include compensation payable from an APP, MFP or MPC event in preliminary and final statements. The existing time period is 15 business days. The Proponent contends that in some cases, 15 business days is not enough time to comply with its obligations, depending on the date at which AEMO is notified of the compensation amount payable and the position of that date relative to the ongoing settlement calendar.

The Proponent has proposed to increase the time that may be taken to 25 business days. TRUenergy suggested that the impact on Participants of this extension from 15 to 25 days would likely be minimal, provided that such extension furthers the efficient operation of the market²².

The Commission is satisfied that the Proponent's case for an increase in the allowed time as laid out in the Rule Change request is reasonable. The Commission determines that clause 3.15.10(c) be amended to allow AEMO up to 25 business days to fulfill its obligations to include compensation awarded by the AEMC under clause 3.14.6 in statements provided under clauses 3.15.14 and 3.15.15. This will contribute to the achievement of the NEO because it will improve AEMO's ability to meet its obligations, and improve the degree of certainty for AEMO in carrying out those obligations, without unduly burdening participants or other stakeholders.

²² TRUenergy, *National Electricity Amendment (Application and Operation of Administered Price Periods) Rule 2011*.

9 Miscellaneous Amendments

9.1 Minor Drafting Changes

The Proponent made several other proposals for change to the Rules, which are chiefly of a clarification nature. These are laid out below:

- Include a reference to the term 'dispatch prices' in 3.14.1(a), and employ a transitional provision to give this effect,
- In clauses 3.14.1(a), 3.8.24(b), 3.9.2A(d), 3.13.7(e)(3) and (4), 3.14.1(a) and 3.15.7(c), omit "market" and italicise the term "ancillary service prices" wherever occurring,
- In clause 3.9.2B(e)(1) omit "market ancillary services prices" and substitute with "ancillary service prices" italicised,
- Delete clause 9.45.2, which explicitly stipulated the value of the APC in Tasmania and is no longer required

The Commission considers that all of these proposals are merited in the interest of improved clarity in the Rules. These amendments further enhance the clarity of the wording in the NER. This higher clarity comes at no cost and improves conditions and certainty for market participants, thus contributing to the achievement of the NEO. Consequently the Commission agrees that these amendments are appropriate, and has included them in the Draft Rule as part of its draft Determination.

9.2 NGF Proposal - Clause 3.14.2(e)(4)

In its submission to the Consultation Paper, the NGF identified what they considered a logical error in the drafting of Clause 3.14.2(e)(4), and proposed that the clause be amended as part of this Rule Change.

The submission argues that the wording "*... that have an energy flow towards that regional reference node ...*" is incorrect and should instead refer to flows *away from* the regional reference node at which the AFP has been used to set the dispatch price.

The Commission has liaised with AEMO on the proposal, and is of the view that it is technically sound. The current drafting of clause 3.14.2(e)(4) acts to ensure that prices in neighbouring regions which are exporting energy to the floored region are not set below the AFP. But conceptually this would not be problematic, as the un-floored price would reflect the economics of the flow (i.e. the energy would be flowing from the region with lower price toward the region with higher price). The clause was clearly intended to address the case in which the neighbouring region is importing energy from the floored region. In this case, absent a clause to cover it, it is possible that the neighbouring region's dispatch price could be lower than the AFP that is applying in the floored region. Flows in this case would be from the region with higher price

toward the region with lower price, resulting, all else equal, in inefficient market outcomes and the possibility of substantial negative residues.

The Commission makes the following draft Determination, that clause 3.14.2(e)(4) be amended to refer to flows away from the region in which the APP is in force.

Following discussions with AEMO, the Commission also considers that a corresponding problem is evident in clause 3.9.6A(c), which explains the interaction of regional pricing whenever the MFP is used to set price in a region. Specifically, it is considered that the clause should also refer to flows 'away from' rather than 'toward' the relevant regional reference node. The Commission notes that the apparent error in clause 3.9.6A(c) was not identified in the Rule Change Request or in submissions on that Request. Rather, the apparent error was identified by AEMO as a result of NGF's identification of a corresponding problem with clause 3.14.2(e)(4).

The Commission's draft determination is that clause 3.9.6A(c) be amended in step with Clause 3.14.2(e)(4) to refer to flows 'away from', rather than 'toward', the relevant regional reference node as provided in the accompanying Draft Rule. The Commission seeks submissions as to whether the apparent errors identified in clauses 3.9.6A(c) and 3.14.2(e)(4) should be corrected, and if so whether those corrections should form part of the Commission's determination on this Rule Change Request.

Abbreviations

ACCC	Australian Competition and Consumer Commission
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AFP	Administered Floor Price
APC	Administered Price Cap
APP	Administered Price Period
CPT	Cumulative Price Threshold
MAS	Market Ancillary Services
MCE	Ministerial Council on Energy
MFP	Market Floor Price
MPC	Market Price Cap
MWh	Megawatt-hour
NECA	National Electricity Code Administrator
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
NGF	National Generators Forum

A Summary of issues raised in submissions

Stakeholder	Issue	AEMC Response
Australian Energy Regulator	Agree that 3.14.2(c)(3) [Discretion to extend an APP] is difficult to implement.	While this view is noted, following analysis and review of the historical information, the Commission considers that the removal of the clause will not lead to material risk of increased volatility, or material risk of increased exposure to extreme spot prices. Commission is of the view that the pre-dispatch objective test is exposed to both implementation and legitimacy issues; and considers it inferior to either abolishment of the relevant clause or continuation of the opinion-based approach.
Australian Energy Regulator	Support amending rather than removing 3.14.2(c)(3), as removal could potentially increase price volatility and the risk that market participants are exposed to extreme spot prices for a protracted period.	
Australian Energy Regulator	Support extension of APPs based on the pre-dispatch schedule, arguing that the approach achieves similar result to the current arrangements, but without existing ambiguity and administrative difficulties.	
National Generators Forum	Support the option to retain AEMO / AER discretion to extend an APP when the CPT is not breached by use of the predispach schedule. Argue that it is important to retain an option to extend the APP, and that replacing AEMO discretion with an objective test would give participants greater certainty and better ability to manage risk. NGF go on to state that the use of an objective test could be 'gamed' by Generators seeking to manipulate the predispach outcomes, but then note that the triggering of an APP would in itself lead to a high likelihood that the test would not be needed, reducing the power of generators to game it.	Commission agrees that the test could be subject to gaming by Generators, and that the need to apply the test should be rare. However the Commission considers that the low likelihood of the test being needed is not sound justification for creating it.
TRUenergy	Support amending of 3.14(c)(3) in accordance with option 3(b) of the proposal, such that discretion to extend an APP be based purely on an objective test as proposed by the proponent. Also suggest removal of	As above in relation to the objective test. Regarding the role of the AER, the Commission agrees that if AEMO's discretion were to remain that it would be preferable to remove the AER

Stakeholder	Issue	AEMC Response
	the AER from the process for practical reasons and potential conflict that could arise given the <i>ex-post</i> investigative powers of the AER.	from the process.
National Generators Forum	Argue that the dispatch interval should be used as the basis for the rules relating to APPs; more broadly including for APPs relating to / triggered by energy as well as MAS prices.	The Commission considers that the possibility of moving the timing of energy-triggered APPs to the five-minute basis would more rightly be explored as part of any broader review on the timing of energy pricing.
TRUenergy	Agrees with the proponent and submits that the option whereby the APP is applied in the dispatch interval immediately following the dispatch interval in which the breach of the CPT occurs should be adopted.	The Commission agrees and this is reflected in the drafting of the Determination.
National Generators Forum	Argue that an APP triggered by Raise service prices should not cap Lower service prices and vice versa. Argue that there would be expected to be a high correlation between high prices in one type of raise service and another (or lower service and another), and that these should be capped together as the additional complexity involved in only capping one would be of little benefit.	Commission agrees with these views in principle, but considers that the capping/flooring of all eight ancillary service prices during a MAS-triggered APP will not create material distortions or risk to Participants or system security. The Commission considers that the cost of separating the capping of Raise and Lower in the software systems would not be offset by a sufficient increase in market efficiency or transparency.
TRUenergy	Argue that not all plant capable of providing MAS can provide all eight MAS services, and this could create a risk that capping all eight services when only one is under stress could adversely affect providers of just one or a few of the other services. Consequently support the capping of the particular MAS that caused the APP to be triggered. Failing that, Rules should be amended to clearly state whatever option (under Question 2) is decided upon.	Commission notes these views, but considers that the possibility of capping only the single service that caused the APP to trigger, could create unwanted incentives for providers to withdraw volume from that service, and move to other services instead.
Australian Energy	Do not consider that the current CPT/APP mechanism	The Commission agrees that the architecture of the CPT/APP mechanism

Stakeholder	Issue	AEMC Response
Regulator	as a whole achieves its purpose in managing spot price risk. Highlights that the APP cannot prevent generators from manipulating the spot price to a level that comes close to, but does not exceed the CPT for a number of days. Argue that Generators can thus potentially structure their bids to maximise returns without triggering an APP.	<p>and the existing settings of the APC and CPT would strongly encourage a price-manipulating Participant to prevent an APP from triggering in the first place. This point has helped to underpin the logic used to formulate this Determination.</p> <p>The Commission's investigation of the historic examples, including the 'near miss' of June 2007 did not extend to an assessment of whether the energy price was being manipulated in the way suggested in AER's response.</p> <p>It is noted that the historic examples do show the APC binding on several key days during the APP, removing the exposure of consumers to sustained spikes on those days. The Commission considers that, absent concerns about price manipulation and the intentional avoidance of APPs, the four APPs that have occurred in the NEM appear to have served their purpose relatively well.</p>
Australian Energy Regulator	Argue that there is a need to review the CPT and in particular its role as the primary risk management mechanism in the NEM. Suggest the next review of the Reliability Standards and Settings in 2012 would be the appropriate vehicle for this.	The Commission agrees that the Reliability Standards and Settings workstream is best placed to consider any change to the application and / or operation of the CPT.
National Generators Forum	Considers that the likely incidence of APPs due to MAS is so low that there will be little effect on the longer term market incentives. Hence, consider that the questions relating to long-term incentives should not be afforded any weight.	Whilst the Commission agrees that APPs triggered by MAS are unlikely to occur, it is still important to consider the directional impact of the Rule Change on incentives (both long and short term).
National Generators Forum	Argue that the main consideration in making determination should be the risk to system security, and that any increase in the need for AEMO to use its discretion should be avoided.	Commission agrees with this view but has also considered the impact on the economic efficiency of market outcomes, and the impact on transparency and certainty for Participants in coming to this draft Determination.

Stakeholder	Issue	AEMC Response
National Generators Forum	Highlight risk to system security that may arise if an APP triggered by a MAS produces market incentives to withdraw bids for the services that have been capped.	The Commission believes that this is a key point that has been highlighted by the NGF, and has considered its implications in depth in compiling this draft Determination.
National Generators Forum	Raise detailed issue regarding a logical error in clause 3.14.2(e)(4), arguing that the wording should be reversed to refer to flows 'away from' a region that is subject to administered price floor, rather than 'toward'.	The Commission considers that this is indeed a logical error and that the amendment should be made as suggested by the NGF. Consequently the draft Determination includes the explicit amendment of clause 3.14.2(e)(4) to refer to flows away from the region that is subject to an administered price floor.
TRUenergy	The complexity of the interactions between energy, the eight different MAS services, and the reaction and commercial decisions of the providers of MAS make it difficult to predict what may or may not happen once an APP is triggered.	The Commission agrees with this point, but considers it important to seek to assess the incentives and disincentives created by the various pricing rules incoming to determinations.
TRUenergy	Note that when an APP is triggered by a MAS service, then there has by definition been a period of high prices preceding that time, and large revenues have been earned as a result. However, MAS providers may rely on short isolated periods of high price in order to cover their costs.	The Commission notes this point.
TRUenergy	Argue that the combination of infrequency of APP events, and the lack of complete information, makes the risk of exertion by a participant of influence over the imposition of an APP very low.	The Commission considers that the question of historical or potential future influence by Generators over the imposition of an APP is as yet neither proven or disproven, but that the risk exists in principle and should thus be considered as part of the rule making process where relevant.
TRUenergy	Suggest that the impact of an extension to the time proposed to make compensation payments following a market price cap, price floor or APP would be minimal, providing the extension supports the efficient operation of the market.	The Commission notes this view and weighs it heavily given TRUenergy's potential exposure to the impact of an increased time allowance. The Commission is satisfied that the Proponent's case for an increase in the allowed time is reasonable.

B Historical Data Analysis

This section explores the APP events that have occurred in the NEM so far, and offers a high level commentary and analysis of these events. There have been four Administered Pricing events in the NEM which are explored here along with an example of a 'near miss'; which occurred in NSW in 2007.

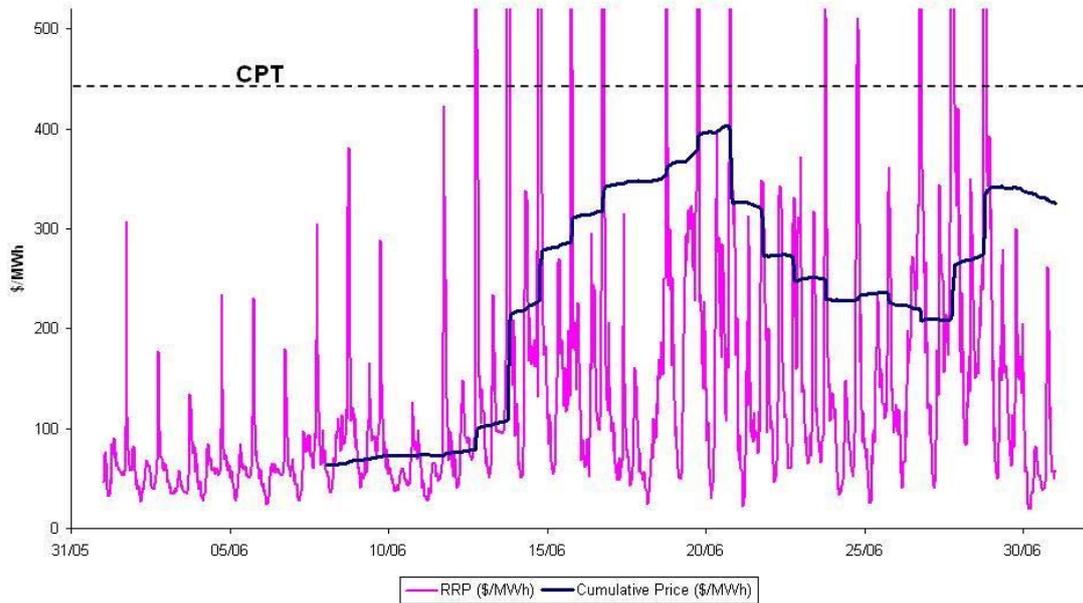
NEMMCO / AEMO did not exercise any discretion to extend any of these APPs under the powers conferred on them by clause 3.14.2(c)(3). The successive continuation of APPs beyond a single trading day was thus dictated purely by the calculated 'Pre-Cap' prices; that is, the prices that would have been calculated and used for settlement in absence of the APP clauses.

B.1 Historical Events

In June 2007 the spot price in New South Wales repeatedly reached very high levels over a series of days. The event is mainly attributed to the effects of drought, which caused water shortages at power stations in inland southern Queensland and inland NSW, reducing thermal plant availability. The event featured regular daily spikes that emerged at peak demand periods each day. As a result an APP came close to being triggered. In this sense, the event was a 'near miss'. The graph below shows the half-hourly spot price in the NSW Region during the event, as well as the calculation of cumulative prices across a rolling 336-period window. The cumulative prices and the CPT are both shown in per-half-hour terms so that they can be compared more easily to the half-hourly spot price.²³

²³ The CPT in June 2007 was \$150,000, divided by 336 yields an average per-half-hour CPT value of \$446.43/MWh.

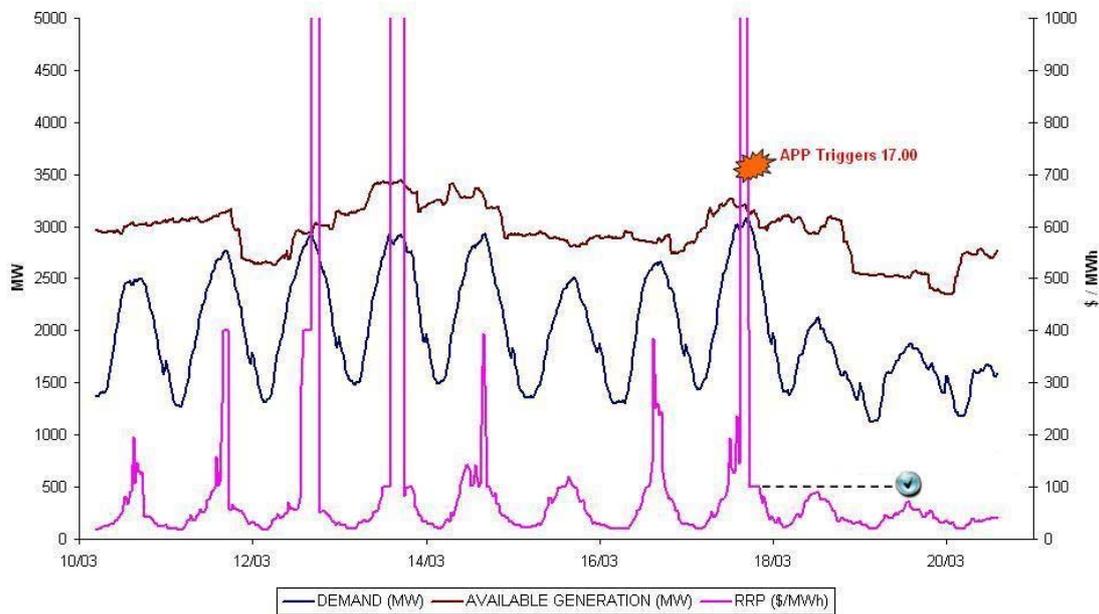
Figure B.1 **New South Wales, June 2007**



A detailed examination of the bidding data, demand, plant availabilities and inter-regional flows would be required to assess whether Generator participants were either able to detect the likely or impending imposition of an APP and/or whether or not commercial decisions may have been taken to prevent the APP triggering in the days between the 20th and 24th June. It is clear however from this example that the rolling average of the spot price in a region can in theory be sustained at high levels, potentially well above the APC (which was \$100/MWh in June 2007) but below the CPT, avoiding the triggering of an APP.

The first APP to be triggered in the NEM occurred in the South Australia region on 17 March 2008. The APP was triggered following three significant spikes over a six-day period. The graph below shows the spot price, demand and plant availability in the SA Region in the week leading up to the APP, and also across the days it was in place.

Figure B.2 South Australia, March 2008



The price in South Australia spiked heavily on both 12 and 13 March, and this was followed by three days of average daily prices in the region of \$80/MWh. A final spike in the evening of 17 March triggered the APP, which commenced at 5pm. The APC (at the time \$100/MWh) was used to cap prices for the first five trading intervals of the APP. The APC was not required again during the APP, which ended at 4am on 19 March. The graph of demand and availability in SA indicates that the event seems to have been driven by tight capacity margin in the SA region at the time, which subsequently widened significantly after the APP started, due to cooling temperatures in the region. Upon a brief review of the bidding data that was submitted for 17 March, participants did not appear to make any unusual decisions as the APP approached.

The next APP to occur in the NEM happened on 29 January 2009 and affected both the South Australia and Victoria regions. The APP was caused by record high demand in both regions driving extremely tight margin in the week prior to the bushfire disaster in Victoria, which began on 7 February.

Figure B.3 South Australia - January / February 2009

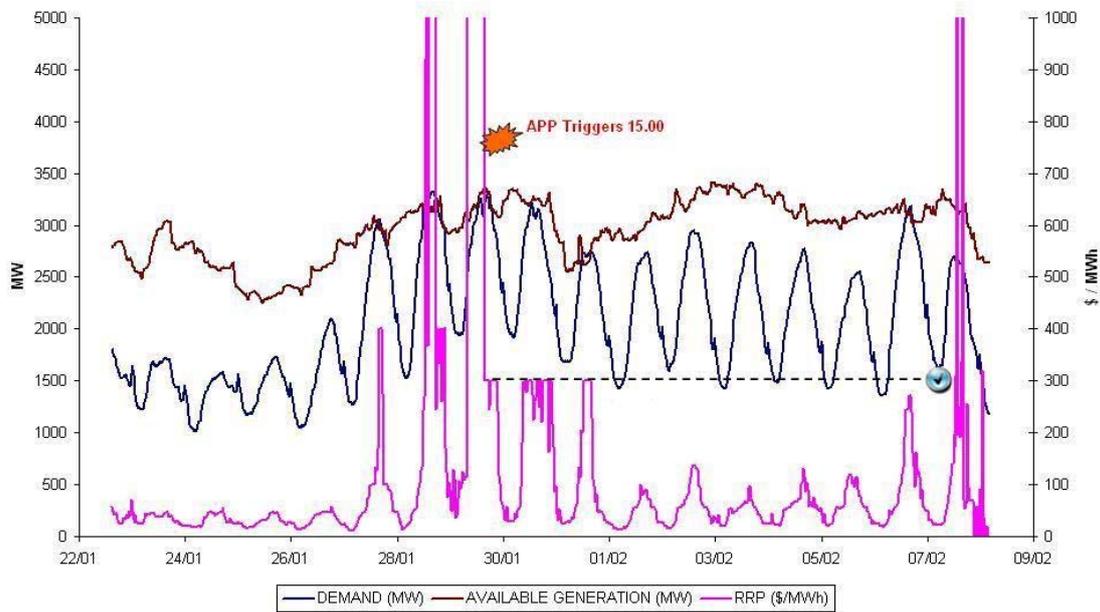
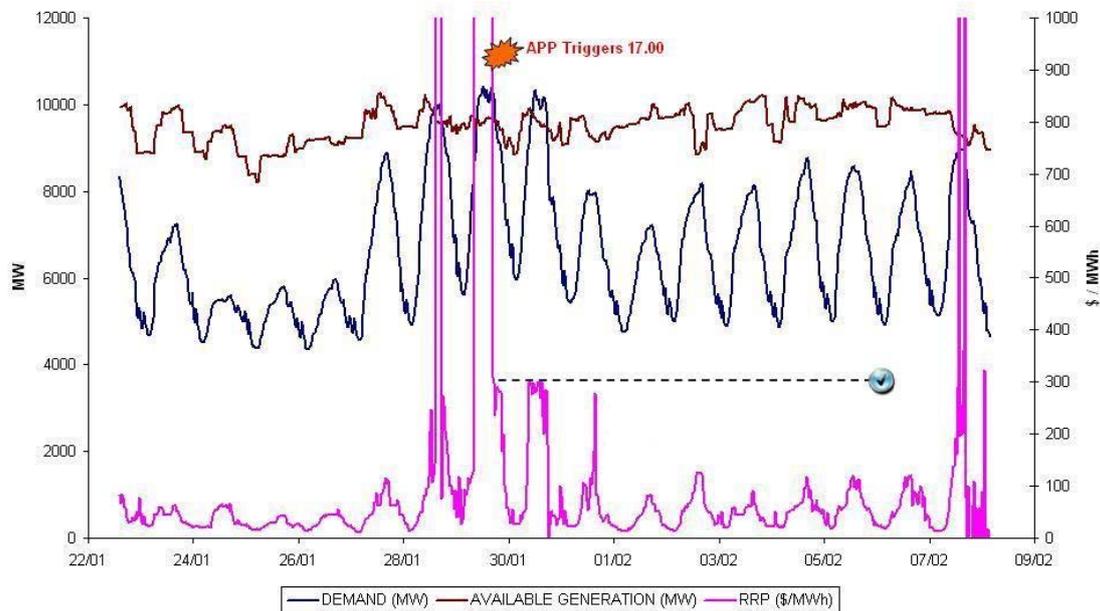


Figure B.4 Victoria - January / February 2009



The patterns of price and demand in the two regions are very comparable, and the APPs in each region were very closely aligned temporally, with the Victoria APP commencing two hours after SA on 29 January and ending one day earlier at 04:00 hrs on 6 February. The NEMMCO Market Event Report released following the event suggests that a Generator participant in South Australia offered 807MW of capacity at prices above \$9900/MWh for the peak demand periods of 28 January. The report also explains that prices calculated 'Pre-Cap' (i.e. as if the APP clauses did not apply) were

above \$9000/MWh during the peak demand periods at which the APC was effectively in force on 30 January (both regions) and 31 January (SA only).

The event featured shedding of load because of Lack of Reserve on 29 January. NEMMCO's report explains; "*The energy price in Victoria was manually set to \$10,000/MWh from 12:40hrs to 15:20hrs on 29 January 2009 when an LOR 3 condition was declared and instructions for load shedding were issued. The energy price in South Australia was manually set to \$10,000/MWh from 13:55hrs to 15:20hrs on 29 January 2009 when an LOR 3 condition was declared in the region.*" Load was also shed in Victoria on 30 January in order to restore power system security following a major short-notice transmission outage. The resulting price in Victoria collapsed to the AFP between DI 17.45 and 17.55 on that day. 30 January also featured Lack of Reserve Conditions.

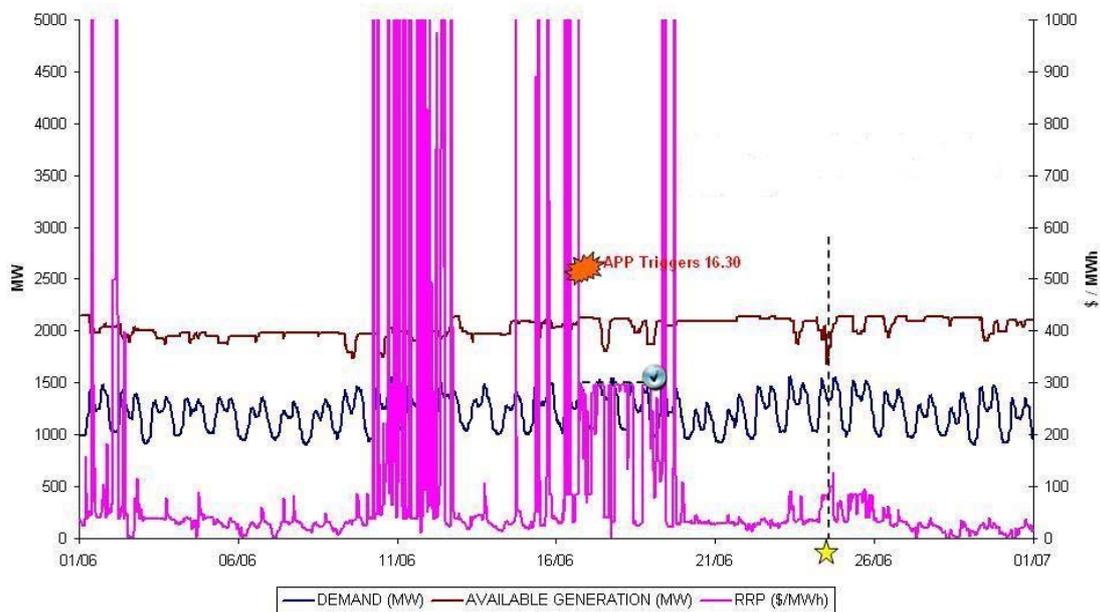
The NEMMCO Market Event Report also explains that spikes were observed in FCAS prices in Tasmania on 30 and 31 January, with several factors contributing to this including the unavailability of the Basslink interconnector and FCAS offers being shifted to higher price bands. FCAS prices in the mainland regions of the NEM were not materially affected on these days.

Following the lifting of the APP, the energy and FCAS prices became volatile again on 7 February as the bushfires began to affect power system operation and the available capacity margin again tightened as shown in the graph. A second APP was not triggered, though NEMMCO's subsequent market report explains that periods of sustained high prices in FCAS were observed in SA, Victoria and Tasmania on 7 February, driven by significant transmission outages.

This APP appears to have acted well to mitigate the impact of very high sustained prices on market participants, particularly on 30 and 31 January 2009. Given the continued extreme conditions across these days and the general inflexibility of market demand to respond to it efficiently, the Commission considers this to be a good example of the APP framework 'doing its job' - by acting to reasonably insulate the market from distortions caused by sustained periods of significant scarcity, without overwriting the important and relevant market signal sent to potential investors in generation and/or demand-side management.

The next APP occurred in the Tasmania region and was triggered following a period of large, repeated price spikes.

Figure B.5 Tasmania - June 2009

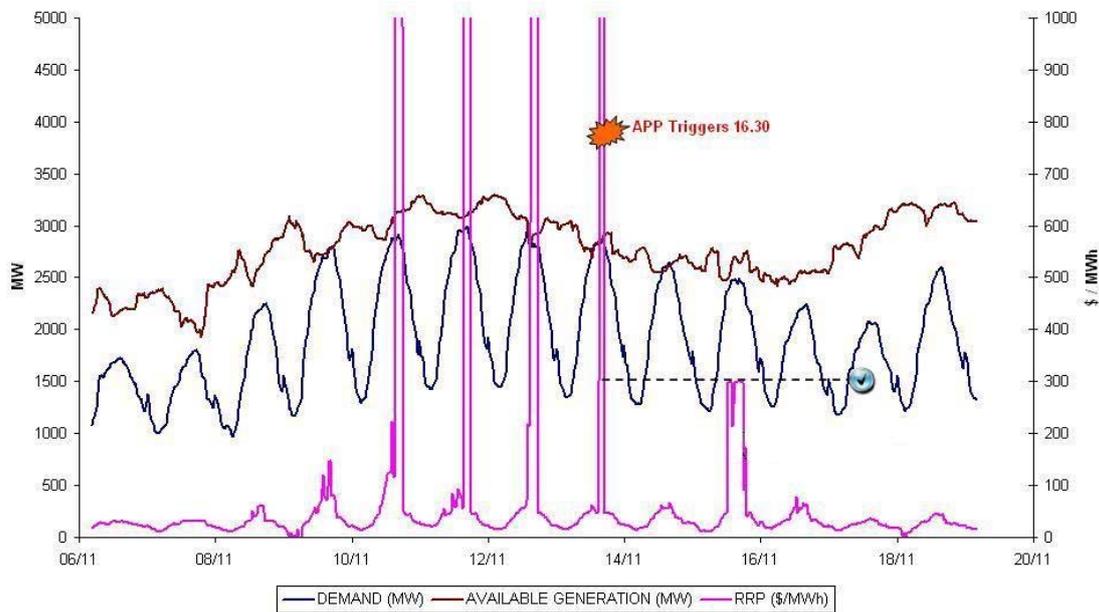


The local margin in Tasmania, (indicated by the gap between the blue and brown lines on the graph) was not very tight during the period prior to the APP, and the Basslink interconnector was available and importing between 300 and 445MW to Tasmania during most of this time.

Following commencement of the APP on 16 June the price was repeatedly capped at the APC until the APP was lifted at 4am on 19 June. Following the lifting of the APP, the price quickly spiked again before reducing to lower levels on the 20 June. Interestingly, 24 June (five days after the APP ended) was the tightest margin day of the month, but it did not yield a material spike in the spot price (this is marked with a star on the graph). Market data suggests that Generator bids appear to have played a significant role in the triggering of the APP and in the emergent prices in Tasmania prior to, during and after the APP.

The most recent APP to have occurred in the NEM triggered on 13 November 2009 in the South Australia region. This APP followed four days of extremely tight margin at peak demand periods, resulting in a price of \$9999.77/MWh being reached at these periods, for four days in a row.

Figure B.6 South Australia - November 2009



The APC acted to cap prices on 15 November but by the 17th, the widening margin acted to push prices down and the APP was lifted on the 18 November at 4am.

B.2 Commentary

The historical data set contains a mix of events, which occur across three different regions and appear to have been driven by varying effects and system conditions. Most often, and particularly for the events in South Australia, there appears to have been a tendency for the APP to last until system conditions were reasonably stable, without lasting for an unnecessarily long time beyond that. While the examples do feature a degree of 're-spiking' effects in places (where the price became volatile following the lifting of the APP - see January 2009 and June 2009), the APP framework appears to have served its purpose well in each of the instances it was triggered.

Some of the energy price spikes that emerged before and after the APPs corresponded with spikes in MAS, and some MAS services did indeed reach the APC during the APP (as per the existing rules). The capping of MAS under APPs seems to have been driven mainly by a combination of significant unplanned transmission network outages and Lack of Reserve conditions, leading to system separation effects and/or short supply of ancillary service volumes. It seems likely that the capping of raise ancillary service prices would tend to correlate strongly with the capping of energy prices, and/or very high energy prices. This assertion does appear to be backed up by the historical observations.

The historical data doesn't conclusively demonstrate that Generators are able to easily control the imposition and / or lifting of an APP; though it is clear that Generators' bidding decisions did heavily influence the behaviour of the price and the

characteristics of the APP (duration and number of APC/AFP events) in some of the cases.

The market data doesn't suggest that any Generators withdrew volumes *during* the Trading Period that an APP was triggered, though a degree of bidding movement can be observed across a longer time period as day to day system conditions tightened in some of the cases.

The potential for a participant with at least some power to influence the rolling spot price and dictate the imposition (or aversion of the imposition) of an APP certainly exists in principle. The 'near miss' from June 2007 is not necessarily an example of this type of outcome, but it illustrates the type of market outcomes that could emerge should sufficient sustained conditions of market power arise, whereby the cumulative spot price could be tuned and retained at a level just below the CPT, without ever triggering an APP.