



Australian Energy Market Commission

DRAFT RULE DETERMINATION

National Electricity Amendment (Amendments to PASA-related Rules) Rule 2010

Rule Proponent(s)

AEMO

Commissioners

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9 September 2010

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For and on behalf of the Australian Energy Market Commission

RULE
CHANGE

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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 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.

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Summary of draft Rule determination

On 29 April 2010, the Australian Energy Market Commission (AEMC or Commission) received a Rule change request from Australian Energy Market Operator (AEMO). In this Rule change request, AEMO is seeking to amend the Medium Term Projected Assessment of System Adequacy (MTPASA) process to allow reserves to be shared across multiple National Electricity Market (NEM) regions. The Rule change request is also seeking to address 22 miscellaneous issues relating to Projected Assessment of System Adequacy (PASA) provisions in the Rules.

Commission draft Rule determination

Under section 99 of the National Electricity Law (NEL), the Commission has determined to make this draft Rule determination and the draft National Electricity Amendment (Amendments to PASA-related Rules) Rule 2010 (the Draft Rule).

As proposed by AEMO, the Draft Rule amends the MTPASA process to allow sharing of required reserves across multiple NEM regions. The Commission also accepts the policy positions proposed by AEMO in light of the 22 miscellaneous issues. In order to provide further clarification and promote consistency within the Rules, the Commission has made some consequential amendments to the proposed Rule.

The Commission is satisfied that the Draft Rule meets the Rule making test and will, or is likely to, contribute to the achievement of the national electricity objective (NEO). In making this assessment, the impacts of the Draft Rule on economic efficiency and good regulatory practice were taken into account. The Commission also took into account the impacts of the Draft Rule on the reliability and security of the power system in the NEM.

The revised MTPASA process is likely to produce better information relating to reserve outlook by allowing reserves to be shared across multiple NEM regions, reflecting that forecast reserve shortfall in one region can be offset by forecast surplus in a neighbouring region. AEMO uses MTPASA information to make market intervention decisions. The improved MTPASA information is likely to allow AEMO to make better decisions, and the decisions are likely to result in a reduced number of instances where AEMO is required to unnecessarily intervene in the NEM due to a regional forecast reserve shortfall. As market interventions impose regulatory burden and the associated costs on NEM participants, reducing occurrences of interventions is likely to result in cost saving in the NEM. This cost saving is likely to reduce the costs of providing electricity services to consumers of electricity. This cost reduction is likely to promote efficient operation of electricity services for the long term interests of consumers of electricity with respect to price of supply of electricity, hence contributing towards the achievement of NEO.

The Draft Rule improves the quality of the PASA processes. This is likely to provide participants in the NEM with better quality information relating to reserve outlooks, allowing the participants to make better operational decisions. Other things being

equal, better quality decisions to be made by NEM participants will enhance the reliability and security of supply of electricity in the NEM. This is likely to promote efficient operation of electricity services for the long term interests of consumers of electricity with respect to reliability and security of supply of electricity, hence contributing towards the NEO.

The Commission notes that there are some inconsistencies between the Rules and the PASA processes in practice. Upon close examination, the Commission considers the costs of making changes to the PASA processes in order to comply with the Rules would outweigh the benefits of making changes to the Rules to align them with the PASA processes in practice. The Draft Rule therefore reflects the latter. This negates AEMO's need to make changes to the PASA systems and process, resulting in cost saving which can be passed on to consumers of electricity. The cost saving is likely to promote efficient operation of electricity services for the long term interests of consumers of electricity with respect to price of supply of electricity, hence contributing towards the NEO.

The Draft Rule enhances clarity of the Rules, hence promoting regulatory certainty. Regulatory uncertainty can pose unnecessary risks to participants the NEM. NEM participants are likely to incur unnecessary costs in managing these risks, and these costs would be a factor contributing to inefficiencies in the NEM. Promoting regulatory certainty reduces NEM participants' risks, hence reduces the costs necessary to manage these risks. As discussed earlier, cost saving is likely to promote efficient operation of electricity services for the long term interests of consumers with respect to price of supply of electricity, hence contributing towards the achievement of NEO.

The Draft Rule also promotes good regulatory practice by removing redundant elements from the Rules.

In the Draft Rule, the Commission made some amendments to the Glossary definition for the term "*PASA availability*". The Commission notes that the PASA availability of a physical plant may vary under different ambient weather conditions. The Commission therefore made consequential changes to the proposed definition to incorporate ambient weather dependency in this definition. The Commission also made consequential amendments to clauses 3.7.2(d)(1) and 3.7.3(e)(1) of the proposed Rule to reflect the ambient weather dependency. The Commission seeks comments on this aspect of the Draft Rule.¹

Making a submission or request for a hearing

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 5 pm 22 October 2010.

In accordance with section 101(1a) of the NEL, any interested person or body may request that the Commission hold a hearing in relation to the draft Rule determination.

¹ This is discussed in section 7.3 of the this draft Rule determination document.

Any request for a hearing must be made in writing and must be received by the Commission no later than 16 September 2010.

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1 AEMO's Rule Change Request

1.1 The Rule Change Request

On 29 April 2010, AEMO made a request to the Commission to make a Rule regarding the PASA processes (Rule Change Request).

Short Term PASA (STPASA) is a seven-day half-hourly reserve outlook which AEMO publishes every two hours. MTPASA is a two-year daily peak reserve outlook which AEMO publishes at least once per week. According to AEMO, Registered Participants use this information to make decisions about supply, demand and the scheduling of planned outages in the NEM. AEMO uses this information as a trigger to intervene in the market to address forecast reserve shortfalls.

Under clause 3.7.1 of the Rules, AEMO is responsible for administering the STPASA and MTPASA processes. These are comprised of information collection, analysis, and disclosure of short term and medium term power system security prospects to NEM participants.

The Rule Change Request consists of the following two parts:

- Part 1: Sharing of reserves across regions in the MTPASA process (this is discussed in Section 3 of the Rule Change Request); and
- Part 2: Miscellaneous issues: PASA-related issues AEMO considers to be minor (this is discussed in Section 4 of the Rule Change Request).

The proposed amendments to the Rules are illustrated in Attachment C of the Rule Change Request document.

1.2 Rationale for Rule Change Request

In this Rule Change Request the AEMO is seeking to amend some of the provisions in the Rules relating to the PASA processes.

1.2.1 Part 1: Sharing of reserve across regions in the MTPASA process

The current Rules require inputs and outputs of the MTPASA process to be prepared and published for each separate NEM region. Clause 3.7.2(c)(2) of the Rules requires AEMO to prepare, as an input to the MTPASA, the "reserve requirements of each *region*". Clause 3.7.2(f)(1) of the Rules requires AEMO to publish the forecast load plus required reserve "for each *region*" as an output of MTPASA. The "for each *region*" requirements do not clearly allow the use of dynamic joint regional reserve requirements in the MTPASA process.

In response to recommendations by the Reliability Panel (see section 1.4.1), AEMO is seeking to amend the Rules to allow reserves to be shared across the NEM regions in the MTPASA process.

AEMO submitted that the “proposed Rule change would allow AEMO to use reserve requirements that apply across multiple regions so that MTPASA can more optimally share medium term capacity reserves between those regions in accordance with the Reliability Standard.”² AEMO considers that this would improve the quality of the MTPASA information.

Initially, AEMO intends to fully optimise the South Australian and Victorian reserve requirement for the summer 2010/2011 outlook. AEMO submitted that it also intends to progressively convert the single-region reserve requirements for the other regions into the fully optimised form as those reserve relationships are determined by AEMO.

In this Rule Change Request, AEMO illustrated how the sharing of reserves would result in a lowering of the total reserves across the NEM.

1.2.2 Part 2: Miscellaneous issues

AEMO is also seeking to address a number of issues in the current design of the PASA processes as set out in the Rules. Many of these issues were identified by National Electricity Market Management Company (NEMMCO, now AEMO) in consultation with members of the MTPASA Users Reference Group (MURG). The consultation was undertaken as part of a broad review of the MTPASA and STPASA processes that was completed in March 2009. The review recommended that NEMMCO seeks Rules changes to address these issues (see section 1.4.2 for further discussion).

AEMO considers these issues to be minor. AEMO raised 22 issues relating to the PASA related provisions, and requested changes to the Rules in relation to these issues. These issues are set out in the tables in sections 4.5 to 4.8 of the Rule change request document.

The amendments to the Rules proposed by AEMO are illustrated in Attachment C of the Rule Change Request document.

The Commission also notes that, in addition to the issues raised in sections 4.5 to 4.8 of the Rule Change Request document, additional amendments to the Rules have been proposed in Attachment C of the Rule change request document.

The proposed amendments are discussed further in sections C.1 and C.2 of this draft Rule determination document.

² See Rule change request, page 1.

1.3 Solution proposed in the Rule Change Request

1.3.1 Part 1: Sharing of reserve across regions in the MTPASA process

AEMO proposed to address the issues in Part 1 of the Rule Change Request by making a Rule that seeks to allow the dynamic joint regional reserve requirements as recommended by the Reliability Panel. The Rules currently require AEMO to prepare and/or publish some of the MTPASA inputs and outputs "for each *region*". AEMO is seeking to remove the "for each *region*" requirements in the relevant provisions in Rules.

The proposed amendments are discussed in further details in Appendix B.

It should be noted that AEMO proposed changes to the Rules to allow sharing of reserve across multiple regions for the MTPASA process only. AEMO has not made the same request for the STPASA process.

1.3.2 Part 2: Miscellaneous issues

To address the issues relating to Part 2 of the Rule change request, AEMO proposed to amend the Rules for the following purposes:

- inconsistencies between the Rules and the AEMO's current PASA processes (10 issues);
- incorrect or ambiguously defined terms (5 issues);
- misuse of defined terms (6 issues); and
- duplicate definitions of defined terms (1 issue).

1.4 Relevant Background

1.4.1 Recommendation by the Reliability Panel to use dynamic joint regional reserve requirements

On 21 December 2009, the Reliability Panel recommended that "AEMO considers developing the ability to use dynamic joint regional reserve requirements, where reserves can be shared between regions, as this would improve the quality of the information provided by medium-term PASA [MTPASA]."³ The recommendation was made because there is a range of possible reserve level combinations for Victoria and South Australia that would be expected to deliver equivalent levels of reliability in both regions.⁴

³ AEMC 2009, *Review of the Operational Arrangements for the Reliability Standard: Final Report, Final Report*, 21 December 2009, Sydney, page 28.

⁴ As advised by NEMMCO. Ibid, page 27.

As discussed in section 1.2.1, the current Rules do not clearly provide for the use of dynamic joint regional reserve requirements in the MTPASA process. AEMO therefore made this Rule Change Request to allow sharing of reserve requirements across multiple regions as part of the MTPASA process design.

1.4.2 Review of PASA-related Rules by AEMO

In July 2008, at the request of Registered Participants, NEMMCO (now AEMO) commenced a review of the design and documentation of the MTPASA process including the Rules provisions underpinning its design and operation. The review was subsequently broadened to include the STPASA process.⁵

In March 2009, NEMMCO (now AEMO) completed its review of the PASA-related Rules in consultation with the MURG.⁶

According to AEMO, "[t]he review revealed that while the PASA processes had undergone a number of improvements over time, the related NER [Rules] provisions have not been developed further than the minimum National Electricity Code requirements that existed at the start of the NEM."⁷

AEMO also advised that "[b]roadly, the review revealed a number of inconsistencies between the NER's [Rules'] requirements and the PASA processes which required consideration of whether the NER [Rules] or the process should change. Overall, the review determined that the current PASA processes were consistent with accepted market practice and met market requirements. As such, the review recommended that NEMMCO seek Rule changes to improve their transparency and consistency with the PASA processes."⁸

AEMO made this Rule Change Request in response to the outcome of this review.

In the Rule Change Request, AEMO advised that the MURG have agreed in principle with the proposed Rule changes.⁹

1.5 Commencement of Rule making process

On 3 June 2010, the Commission published a notice under section 95 of the NEL advising of its intention to commence the Rule making 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 2 July 2010.

⁵ See Rule change request, page 5.

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

⁹ AEMO also advised that "since then AEMO has developed the Rule change proposal further".

The Commission received one submission on the Rule Change Request as part of the first round of consultation. The submission is available on the AEMC website¹⁰. A summary of the issues raised in the submission and the Commission's response to each issue is contained in Appendix A.

1.6 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 22 October 2010.

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 16 September.

Submissions and requests for a hearing should quote project number "ERC0107" 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

¹⁰ www.aemc.gov.au

2 Draft Rule determination

2.1 Commission's draft Rule 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 proposed Rule by AEMO¹¹.

The Commission's reasons for making this draft Rule determination are set out in section 3.1

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. The Draft Rule is different from the proposed Rule by the AEMO. Its key features are described in section 3.2.

The Commission's reasons for making this draft Rule determination are set out in section 2.4.

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;¹²
- submission 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 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 section 34 of the NEL as it relates to:

¹¹ 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.

¹² Under section 33 of the NEL the AEMC must have regard to any relevant MCE statement of policy principles in making a Rule.

- the operation of the NEM (as the PASA processes are a tool used to assess the expected supply and demand of electricity, which are elements of the operation of the NEM);
- the operation of the national electricity system for the purposes of the safety, security and reliability of that system (as the PASA is a “comprehensive programme of information collection, analysis, and disclosure of medium term and short term power system security prospects”¹³); and
- the activities of persons (including Registered participants) participating in the NEM or involved in the operation of the national electricity system (as the PASA encompasses information relating to demand of supply of electricity which relate to activities of persons participating in the NEM).

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.

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, having regard to any relevant MCE Statement of Policy Principles, the Commission considers that the relevant aspect of the NEO is promoting efficient operation of electricity services for the long term interests of consumers of electricity with respect to price and reliability and security of supply of electricity.¹⁴

The Commission is satisfied that the Draft Rule will, or is likely to, contribute to the achievement of the NEO.

As discussed in section 5.3.1, the Draft Rule is likely to reduce AEMO's need to intervene in the NEM, resulting in cost saving which can be passed on to consumers of electricity. This is likely to promote efficient operating of electricity services for the long term interests of consumers of electricity with respect to price of supply of electricity, hence contributing towards the achievement of NEO.

¹³ See clause 3.7.1(b) of the Rules.

¹⁴ Under section 88(2), for the purposes of section 88(1) the Commission 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.

As discussed more fully in section 5.3.2, the Draft Rule improves the quality of the PASA processes. This is likely to provide participants in the NEM with better quality information relating to reserve outlooks, allowing the participants to make better operational decisions. Other things being equal, better quality decisions to be made by NEM participants will enhance the reliability and security of supply of electricity in the NEM. This is likely to promote efficient operation of electricity services for the long term interests of consumers of electricity with respect to reliability and security of supply of electricity, hence contributing towards the NEO.

The Commission notes that there are some inconsistencies between the Rules and the PASA processes in practice. Upon close examination, the Commission considers the costs of making changes to the PASA processes in order to comply with the Rules would outweigh the benefits of making changes to the Rules to align with the PASA processes in practice. The Draft Rule therefore reflects the latter. This negates AEMO's need to make changes to the PASA systems and process, resulting in cost saving which can be passed on to consumers of electricity. The cost saving is likely to promote efficient operation of electricity services for the long term interests of consumers of electricity with respect to price of supply of electricity, hence contributing towards the NEO.

As discussed in section 7, the Draft Rule enhances clarity of the Rules, hence promoting regulatory certainty.

Regulatory uncertainty can pose unnecessary risks to participants in the NEM. NEM participants are likely to incur unnecessary costs in managing these risks, and these costs would be a factor contributing to inefficiencies in the NEM. Promoting regulatory certainty reduces NEM participants' risks, and hence reduces the costs necessary to manage these risks. The cost saving can be passed on to the consumers of electricity. This is likely to promote efficient operation of electricity services for the long term interests of consumers with respect to price of supply of electricity, hence contributing towards the achievement of NEO.

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 is unlikely to have an impact on AEMO's performance of this function.

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 should be made. Its analysis of the proposed Rule is also set out below.

3.1 Assessment of issues

3.1.1 Part 1 of the Rule Change Request

AEMO notes that there is an approximately linear trade-off between the South Australian reserve requirement and the Victorian reserve requirement.¹⁵ This reserve relationship would allow reserve requirements to be shared across the two regions while still meeting the Reliability Standard as determined by the Reliability Panel.¹⁶

AEMO considers that its obligation under clauses 3.7.2(c)(2) and 3.7.2(f)(1) of the Rules to prepare and publish the reserve requirements "of each region" restricts AEMO to only formulating single-region reserve requirements for input to MTPASA. This prevents AEMO from sharing reserve requirements across multiple NEM regions in the MTPASA process, which in turn prevents the MTPASA from determining a more optimal allocation of capacity reserves between regions. This limits the usefulness of the MTPASA information in determining reserve shortfalls.

The Commission agrees that sharing of reserve requirements across NEM regions in the MTPASA process will promote efficiency in the NEM (see discussion in section 5.3.1). In order to unambiguously allow sharing of reserve across NEM regions, the draft Rule removes the "of each region" requirements in the relevant provisions of the Rules.

3.1.2 Part 2 of the Rule Change Request

As discussed in section 1.4.2 of this document, AEMO has completed a review of the PASA processes in consultation with the MURG. AEMO made this Rule Change Request in response to the outcome of this review.

AEMO raised 22 issues relating to the PASA provisions. The Commission has reviewed these issues and agrees that they can be addressed by making changes to the Rules. These are discussed further in Appendix C of this draft Rule determination document.

¹⁵ This is illustrated in Figure 1 of the Rule Change Request.

¹⁶ The Reliability Standard is expressed in term of unserved energy (USE). See Appendix D of the Comprehensive Reliability Review,
<http://www.aemc.gov.au/Market-Reviews/Completed/Comprehensive-Reliability-Review.html>.

3.2 Draft Rule

The Draft Rule proposed by AEMO, in terms of its policy intent, has been adopted by the Commission. The Commission has made some amendments to the Draft Rule to provide further clarification in the Rules and the spot market operations timetable¹⁷.

Key features of the Draft Rule are as follows:

- allowing sharing of reserve requirements across NEM regions in the MTPASA;
- making changes to the PASA processes in the Rules to improve their quality.¹⁸ This is discussed in section 5.3.2;
- making changes to the PASA processes in the Rules to improve their efficiencies.¹⁹ This is discussed under section 6;
- making other minor changes as discussed in Appendix C of this draft Rule determination document; and
- making a transitional Rule to improve clarity of the spot market operations timetable²⁰ (See Issue 4 in section C.1); and
- the draft Rule incorporates ambient temperature dependency in the definition of "*PASA availability*" and relevant clauses. This is discussed further in section 7.3.

¹⁷ This timetable is defined under clause 3.4.3 of the Rules.

¹⁸ The changes also align the Rules with the PASA processes in practice.

¹⁹ The changes also align the Rules with the PASA processes in practice.

²⁰ This timetable is defined under clause 3.4.3 of the Rules.

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 (as explained in Chapter 2).

In assessing any Rule Change Request against the NEL criteria the first step is to consider the counterfactual arrangements against which the Rule change is being compared. In the present case the counterfactual arrangements are the environment that would exist if the proposed Rule were not made.

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

- the impacts of the Draft Rule on the quality of the PASA processes;
- the impacts of the Draft Rule on clarity of the Rules and regulatory certainty; and
- the impacts of the Draft Rule on efficiency of the PASA processes.

The Commission has focussed on this set of issues because:

- The PASA is a tool widely used to inform NEM participants of medium term and short term power system security prospects. This information is used by NEM participants to make decisions about supply, demand and outages of transmission network. Improved quality of the PASA processes is likely to result in improved quality of PASA output information. This will give better information to NEM participants which is likely to allow them to make better operational decisions. The quality of decisions to be made by the NEM participants is likely to have impacts on the power system reliability and security in the NEM.
- AEMO uses the PASA output information to intervene in the NEM to address forecast reserve shortfall. Improved quality of the PASA processes is likely to improve the PASA output information which allows AEMO to make better decisions relating to intervening the NEM. The quality of decisions to be made by AEMO is likely to have impacts on the power system reliability and security in the NEM.
- Lack of Rules clarity can pose unnecessary risks to participants the NEM. NEM participants are likely to incur unnecessary costs in managing these risks, and these costs would be a factor contributing to inefficiencies in the NEM. Clarity of the Rules is likely to promote regulatory certainty which would reduce NEM participants' risks, hence promoting efficiency in the NEM.
- Economic efficiency is a concept central to the NEO. In particular, the Commission has considered as to whether or not the Draft Rule promotes

productive efficiency by allowing the PASA processes to operate on a least cost basis.

The Commission has also considered the impacts of the Draft Rule on good regulatory practice.

Some of the amendments proposed by AEMO were to align the Rules with the PASA processes in practice. “Aligning with the practice” itself is not a sufficient ground to accept the proposed amendments in the Draft Rule. Rather, the Commission has assessed the proposed amendments against the Rule making test.

5 Impacts of the draft Rule on the quality of the PASA processes

5.1 AEMO's view

In Part 1 of the Rule Change Request, AEMO proposed amendments to the Rules to allow sharing of reserve across multiple NEM regions in the MTPASA process. AEMO proposed this change because there is an approximately linear trade-off relationship between the South Australian reserve requirement and the Victorian reserve requirement.²¹

The Rules currently require AEMO to prepare and publish the reserve requirements for MTPASA "of each *region*". This prevents AEMO from using reserve requirements that can be sourced from multiple regions where reserve requirements are able to be traded-off.

AEMO submitted that the proposed Rule would allow "a more optimal sourcing of Victorian versus South Australian capacity reserves" which will "lower the overall reserve requirement for the two regions". AEMO also submitted that this "would avoid the over-estimation of reserve shortfalls and potentially avert the need for AEMO to resort to reserve trading or directions".

If the Rule is made, AEMO intends to fully optimise the South Australian and Victorian reserve requirement for the summer 2010/2011 outlook. AEMO also intends to progressively convert the single-region reserve requirements for the other regions into the fully optimised form as those reserve relationships are determined by AEMO.

In Part 2 of the Rule Change Request, AEMO raised 22 miscellaneous issues relating to PASA provisions in the Rules. AEMO proposed amendments to the Rules to address these issues.

5.2 Stakeholder views

Hydro Tasmania expressed support for both Parts 1 and 2 of the Rule Change Request.

In particular, Hydro Tasmania "supports the recommendation to allow the use of dynamic joint regional reserve requirements in the MTPASA process".

Hydro Tasmania also supports "permitting AEMO to use both scheduled generation and semi-scheduled generation to meet a reserve requirement" as proposed by AEMO in Part 2 of the Rule Change Request.²²

²¹ This trade-off relationship is illustrated in Figure 1 of page 3 of the Rule Change Request.

²² AEMO proposed this arrangement under Issue 18 (see section C.1).

5.3 Conclusion

5.3.1 Part 1 of the Rule Change Request

Part 1 of the Rule Change Request allows sharing of reserves across multiple NEM regions in the MTPASA process. This is likely to promote efficiency in the NEM.

As the current Rules do not clearly allow sharing of reserves across multiple NEM regions in the MTPASA process, it would not accurately inform AEMO that a forecast reserve shortfall in one region could be offset by reserve surplus from another. This potential inaccuracy in projected reserve shortfall information can lead to AEMO unnecessarily intervening in a NEM region.

Allowing sharing of reserve across NEM regions in the MTPASA process is likely to improve the accuracy of the reserve shortfall projection, hence reducing the need for the unnecessary intervention by AEMO.

The Commission considers a market intervention is likely to impose regulatory burdens and the associated costs on NEM participants. Unnecessary market intervention therefore means imposing unnecessary cost burdens on NEM participants.

By reducing AEMO's needs for intervention in the NEM, other things being equal, the Draft Rule is likely to result in cost saving in the NEM. The cost saving can be passed on to consumers of electricity.

The Draft Rule therefore reflects Part 1 of the Rule Change Request.

The Commission notes that the Draft Rule will allow AEMO to optimise the reserve requirement across Victoria and South Australia for the 2010/2011 summer. The Draft Rule also provides the flexibility to allow optimisation of reserves across other NEM regions in the future.

AEMO's Rule Change Request did not propose to modify the sharing of reserve in the STPASA process. The Draft Rule therefore makes no change in this regard. However, the Commission considers there may be benefits to the introduction of reserve sharing in the STPASA process and notes that this may be the subject of a future Rule change request.

5.3.2 Part 2 of the Rule Change Request

The Commission considers some of the proposed amendments in Part 2 of the Rule Change Request are likely to improve the quality of the PASA processes. The relevant proposed amendments are as follows:

- the proposed Rule requires AEMO to make PASA and PASA-related information to all Registered Participants, rather than to only a certain classes of Registered Participants (Issue 1);

- the proposed Rule requires AEMO to use 10% probability of exceedance (POE) load forecasts in the PASA processes (Issue 6);
- the proposed Rule aligns the time period covered by “*medium term capacity reserve*” (an MTPASA output) with that for the MTPASA (Issue 12);
- the proposed Rule aligns the time period covered by “*short term capacity reserve*” (an STPASA output) with that for the STPASA (Issue 15);
- the proposed Rule requires generators to submit to AEMO information relating to generating capacity (rather than surplus generating capacity) as part of the PASA processes (Issue 13 and Request ID B5); and
- the proposed Rule allows generation from semi-scheduled generating unit to meet the reserve requirement for the STPASA process. (Issue ID 18).

The above amendments are discussed in further details in Appendix C of this document.

Improved quality of the PASA processes is likely to provide participants in the NEM with better quality information relating to reserve outlooks. This will allow the participants to make better operational decisions. Other things being equal, improved quality of decisions to be made by NEM participants is likely to enhance power system reliability and security in the NEM.

6 Impacts of Draft Rule on efficiency of the PASA processes

In Part 2 of the Rule change request, AEMO proposed amendments to the Rules as follows:

- removing the needs for AEMO to prepare and publish some of the PASA outputs "for the total *power system*", as these requirements are considered to be redundant (Issue 8);
- requiring AEMO to publish energy information in the MTPASA process weekly, rather than daily as required under the current Rules (Issue 9); and
- requiring AEMO to publish energy information in the STPASA process daily, rather than half-hourly as required under the current Rules (Issue 9).

These proposed amendments, and the Commission's analysis on them, are discussed further in Appendix C of this draft Rule determination document.

These amendments were proposed to align the Rules with the PASA processes in practice.

The current Rules provisions relating to the proposed amendments above impose more onerous burdens on AEMO, compared to the PASA processes in practice. The Commission accepts that requiring AEMO to make changes to the PASA systems and procedures in order to comply with these Rules provision is unlikely to bring any benefits to the NEM. The Draft Rule therefore aligns the Rules with the PASA processes as proposed.

The Draft Rule negates AEMO's need to make changes to the PASA systems and process, resulting in cost saving which can be passed on to consumers of electricity.

7 Impacts of the Draft Rule on clarity of the Rules

7.1 AEMO's view

As discussed earlier, AEMO proposed amendments to the Rules to address 22 miscellaneous issues in Part 2 of the Rule Change Request. Discussions relating to these amendments are contained in sections 4.5 to 4.8 of the Rule Change Request. These amendments are also discussed in section C.1 of this draft Rule determination document.

AEMO has also proposed additional amendments to the Rules which are not discussed under sections 4.5 to 4.8 of the Rule Change Request. These proposed amendments are illustrated in Appendix C of the Rule Change Request and discussed in section C.2 of this draft Rule determination document.

Most of the amendments were proposed to improve clarity of the Rules.

7.2 Stakeholder views

Hydro Tasmania expressed support for these minor changes proposed by AEMO because they believe "in comparison with the existing Rules process, they [the proposed minor changes] will provide better clarity for the PASA processes."

7.3 Conclusion

The Commission agrees that the relevant proposed changes in Part 2 improve clarity of the Rules. The Commission's analysis of these proposed amendments are discussed in sections C.1 and C.2 of this draft Rule determination document.

To provide further clarification to the relevant provisions of the Rules, the Commission has also made some consequential amendments. These are discussed in section C.3 of this document.

The Commission considers Rules clarity promotes regulatory certainty.

The Commission has also made a transitional Rule to require AEMO to make changes to the spot market operations timetable²³. This is discussed further under Issue 4 of section C.1 of this document.

In the Draft Rule, the Commission made some amendments to the Glossary definition for the term "*PASA availability*" (Amendment ID C17 of section C.3). The Commission notes that the PASA availability of a physical plant may vary under different ambient weather conditions.²⁴ The Commission therefore made consequential changes to the

²³ This timetable is defined under clause 3.4.3 of the Rules.

²⁴ In the review "Review of the Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events", the AEMC notes that AEMO is taking action to improve "procedures

proposed definition to incorporate the ambient weather dependency in this definition. The Commission also made consequential amendments in clauses 3.7.2(d)(1) and 3.7.3(e)(1) of the proposed Rule to reflect the ambient weather dependency. The Commission seeks comments on this aspect of the Draft Rule.

for requiring participants to update equipment availability when extreme temperatures are forecast". See the AEMC's website.

Abbreviations

AEMC or Commission	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
MCE	Ministerial Council on Energy
MTPASA	Medium Term PASA
MURG	MTPASA Users Reference Group
NEL	National Electricity Law
NEM	National Electricity Market
NEMMCO	National Electricity Market Management Company
NEO	national electricity objective
PASA	Projected Assessment of System Adequacy
POE	probability of exceedance
STPASA	Short Term PASA
USE	unserved energy

A Summary of issues raised in submissions

Stakeholder	Issue	AEMC Response
Hydro Tasmania	Hydro Tasmania supports the recommendation to allow the use of dynamic joint regional reserve requirements in the MTPASA process.	The Commission agrees with Hydro Tasmania. This is discussed further in section 5.3.1.
Hydro Tasmania	Hydro Tasmania supports the several minor changes proposed by AEMO, because they believe that, "in comparison with the existing Rules process, [the proposed changes] will provide better clarity for the PASA processes." Hydro Tasmania also agrees that lack of Rules clarity can pose unnecessary risks to participants in the NEM.	The Commission's agrees that the proposed Rule improves Rules clarity. This is discussed in section 7.3.

B Discussion of proposed Rule for Part 1 of the Rule change request

As discussed in section 1.2.1, the current Rules do not allow AEMO to use dynamic joint regional reserve requirements in the MTPASA process. AEMO is seeking to amend the Rules to allow it to use dynamic joint regional reserve requirements in the MTPASA process by:

- removing the "for each *region*" requirement in clause 3.7.2(c)(2) of the Rules.²⁵ Under the proposed Rule, AEMO will be required to prepare the "*reserve* requirements [which are an MTPASA input] in accordance with the *medium term capacity reserve standards*", but not necessary for each region. This provides AEMO with the flexibility to prepare the reserve reflecting dynamic joint regional reserve requirements as recommended by the Reliability Panel.
- removing AEMO's obligation to prepare and publish the "*reserve*" as part of load forecasts (which are outputs of the MTPASA under clause 3.7.2(f)(1) of the Rules).²⁶ In lieu of the requirements to prepare and publish the reserve as part of the load forecasts, AEMO is seeking to introduce a new clause 3.7.2(f)(1A) in the Rules. This new proposed clause (if implemented) will require AEMO to prepare and publish, as a separate output item from the forecast load, the reserve requirements in accordance with the medium term capacity reserve standards, but not necessary for each region. This provides AEMO with the flexibility to prepare and publish the reserve (as an output to MTPASA) reflecting dynamic joint regional reserve requirements as recommended by the Reliability Panel.
- removing the "for each *region*" requirement relating to the preparation and publication of the forecast load under clause 3.7.2(f)(1) of the Rules. This will provide AEMO with the flexibility to prepare and publish forecast loads for the MTPASA as required but not necessarily for each separate NEM region.

AEMO considers the proposed Rule will "allow AEMO to use reserve requirements that apply across multiple regions so that MTPASA can more optimally share medium term capacity reserves between those regions in accordance with the Reliability Standard."²⁷ AEMO considers that this would improve the quality of the MTPASA information.

The Rule is proposed in response to a recommendation by the Reliability Panel (see section 1.4.1).

²⁵ This is proposed to be achieved by deleting the phrase "of each *region*" from clause 3.7.2(c)(2) of the Rules.

²⁶ This is proposed to be achieved by deleting the phrase "plus required [scheduled] *reserve*" from clause 3.7.2(f)(1) of the Rules. Note that the word "scheduled" was deleted from version 27 onwards.

²⁷ See Rule change request, page 1.

C Summary of policy positions relating to Part 2 of the Rule change request

Note: this Appendix should be read in conjunction with the Rule Change Request document.

C.1 The AEMC's determination on Part 2 of the proposed Rule amendments

The table in this section sets out the AEMC's determination on Part 2 of the proposed Rule amendments. These proposed amendments are discussed in sections 4.5 to 4.8 of the Rule change request document.

Issue ID	Proposed policy position	Affected clauses	AEMC's determination and the reasons
1	PASA information should not be only used for maintaining "power system security", but also for maintaining "reliability of supply".	<ul style="list-style-type: none">• 3.7.1(b);• 3.7.1 (c)(1)(iv);• 3.7.1 (c)(3)(ii);• 3.7.1 (d); and• 3.7.3(f).	<p>The AEMC agrees with the proposed policy position.</p> <p>AEMO uses PASA information as a trigger to intervene in the NEM to address forecast reserve shortfalls. This would assist the NEM in meeting the reliability standards as determined by the Reliability Panel. The Commission therefore accepts that PASA information is used to maintain reliability of electricity supply.</p> <p>By clarifying that the PASA information is also used for maintaining "reliability of supply" in the NEM, the Draft Rule improves Rules clarity, hence reduces regulatory uncertainty.</p>
2	PASA and PASA related information (including the congestion information resource) should be made available to all Registered Participants, rather than to a certain groups of Registered Participants.	<ul style="list-style-type: none">• 3.7.1(b);• 3.7.1(c)(3)(i);	<p>The AEMC agrees with the proposed policy position because:</p> <ul style="list-style-type: none">• there is no reason to withhold the information

Issue ID	Proposed policy position	Affected clauses	AEMC's determination and the reasons
		<ul style="list-style-type: none"> • 3.7.1 (d); • 3.7.2(b); • 3.7.2 (g); • 3.7.3(c); • 3.7.3 (j); • 3.7A(a); • 3.7A (g); and • 3.7A (k)(5). 	<p>from the other Registered Participants;</p> <ul style="list-style-type: none"> • Registered Participants are likely to find the information useful. <p>By making PASA and PASA related information accessible to a wider range of NEM participants, the Draft Rule enables the NEM to become better informed, hence improves information certainty in the NEM.</p> <p>This allows NEM participants to better respond to market conditions, hence improves the reliability of electricity supply.</p>
3	AEMO should “ <i>publish</i> ” PASA information, rather than “issue” PASA information.	3.7.2(a) and 3.7.3(a).	<p>The AEMC agrees with the proposed policy position. This is because “<i>publish</i>” is a defined term. Use of a defined term improves Rule clarity.</p> <p>Improving Rules clarity reduces regulatory uncertainty.</p>
4	The period covered by MTPASA is not clearly stated in clause 3.7.2(a) of the Rules. The Rules should be amended to reflect that the MTPASA information is published every Tuesday and covers the period from the following Sunday for a further 24 months.	3.7.2(a)	<ul style="list-style-type: none"> • The AEMC agrees with the proposed policy position. The Draft Rule aligns the Rules with AEMO practice. This practice is an established convention accepted by NEM participants. The AEMC sees no reason to vary this practice. • The period covered by MTPASA, however, is not clearly reflected in the spot market

Issue ID	Proposed policy position	Affected clauses	AEMC's determination and the reasons
			<p>operations timetable (defined under clause 3.4.3 of the Rules). The AEMC therefore makes a transitional Rule to require AEMO to make changes to the timetable to reflect the MTPASA publication schedule.</p> <p>The Draft Rule improves clarity in the Rules and spot market operations timetable²⁸. This reduces regulatory uncertainty.</p>
5	<ul style="list-style-type: none"> MTPASA inputs set out in clauses 3.7.2(c)(1)(i), 3.7.2(c)(1)(ii) and 3.7.2(c)(1)(iii) should be collectively called “forecast load information”, rather than “forecast load”. It should be clarified that the “forecast load information” is required for every NEM region as an MTPASA input.²⁹ 	3.7.2(c)(1)	<p>The AEMC agrees with the proposed policy positions because:</p> <ul style="list-style-type: none"> “forecast load information” is a more accurate description the MTPASA inputs set out in this clause; the information “for each region” is a necessary input for the MTPASA process in order to give meaningful MTPASA output results. <p>The Draft Rules improves Rules clarity hence reduces regulatory uncertainty.</p> <p>By improving accuracy of MTPASA input specification, the Draft Rule improves quality of the MTPASA process. This is likely to improve the quality of MTPASA output.</p>

²⁸ This timetable is defined under clause 3.4.3 of the Rules.

²⁹ However, under the proposed Rule and Draft Rule, information relating to load forecast as outputs of MTPASA is not required for all NEM regions (see Appendix B).

Issue ID	Proposed policy position	Affected clauses	AEMC's determination and the reasons
6(i)	10% POE peak load forecast should serve as MTPASA input and outputs, but this is not reflected in the Rules.	<ul style="list-style-type: none"> • 3.7.2(c)(1)(i); • 3.7.2(f)(1); • 3.7.2(f)(2); and • 3.7.2(f)(3). 	<p>The AEMC agrees with the proposed policy position because:</p> <ul style="list-style-type: none"> • the 10% POE load forecasts are likely to be useful in informing NEM participants in making their operational decisions. Including the 10% POE load forecasts information is therefore likely to improve usefulness of the MTPASA outputs; • including the 10% POE load forecasts as an MTPASA input will promote consistency between the PASA-related Rules provisions and clause 4.9.1(e)³⁰ of the Rules. Such consistency will allow the outcomes of the PASA processes to be meaningfully compared to those of the load forecasting operation. This is likely to improve the quality of the PASA processes. <p>The Draft Rule improves the quality of MTPASA output.</p>
6(ii)	The “peak load” (an MTPASA input), should be prepared by AEMO in daily resolution. This is not clear in the Rules.	3.7.2(c)(1)(i)	<p>The Draft Rule clarifies that the “peak load” should be prepared in daily resolution. This improves clarity of the Rules.</p> <p>The Rules require MTPASA to be provided in daily resolution. Peak load forecast in daily resolution is a necessary condition to produce</p>

³⁰ This clause sets out that, as part of AEMO’s load forecasting operation, “[a] 10% probability of exceedance of load forecast must be adopted for the purposes of determination of *short term capacity reserve* and *medium term capacity reserve* requirements under the *power system security and reliability standards*.”

Issue ID	Proposed policy position	Affected clauses	AEMC's determination and the reasons
			<p>the MTPASA in daily resolution.</p> <p>Improving Rules clarity reduces regulatory uncertainty.</p>
6(iii)	10% POE half-hourly load should serve as an STPASA input. This is not reflected in the Rules.	3.7.3(d)(1)(i)	<p>The AEMC agrees with the proposed policy position because 10% POE half-hourly load forecasts are likely to be useful in informing NEM participants in making their operational decisions. Including the 10% POE load forecasts information is therefore likely to improve usefulness of the STPASA outputs. This improves the quality of STPASA output.</p> <p>For same reason discussed under Issue 6(i), the proposed policy position allows outcomes of the PASA processes to be meaningfully compared to those of the load forecasting operation. This is likely to improve the quality of the PASA processes.</p>
7	Clause 3.7.2(c)(2) of the Rules requires AEMO to prepare, as an input to PASA, the “reserve requirements of each <i>region</i> determined in accordance with the <i>medium term capacity reserve standards</i> set out in the <i>power system security and reliability standards</i> ”. The phrase “set out in the <i>power system security and reliability standards</i> ” is redundant.	3.7.2(c)(2)	<p>The AEMC agrees with the proposed policy position. This is because it is clear from the definition of the term “<i>medium term capacity reserve standard</i>” (in the Glossary) that the standard is set out as part of the “<i>power system security and reliability standards</i>”, and there is no need to repeat this in clause 3.7.2(c)(2) in the Rules.</p> <p>Removing redundant elements in the Rules is a good regulatory practice.</p>

Issue ID	Proposed policy position	Affected clauses	AEMC's determination and the reasons
8(i)	<p>STPASA outputs AEMO is required to prepare and publish include:</p> <ul style="list-style-type: none"> • outputs relating to forecast loads under clause 3.7.3(h)(1) of the Rules; and • outputs relating to “most probably <i>energy consumption</i>” under clause 3.7.3(h)(3) of the Rules. <p>The Rules require AEMO to prepare and publish the above outputs “for each <i>region</i>” and “for the total power system”.</p> <p>AEMO considers the requirements to prepare and publish the above STPASA outputs for the total power system “would not materially benefit the market and is unnecessary”.</p> <p>AEMO proposed that the “for the total power system” requirements be deleted from the Rules.</p>	<ul style="list-style-type: none"> • 3.7.3(h)(1); and • 3.7.3(h)(3). 	<p>Despite the Rules requirements, AEMO currently prepares and publishes the STPASA outputs for each region, but not for the total power system.</p> <p>The AEMC agrees with AEMO that Registered Participants could readily calculate the “total power system” information by adding all the relevant information for each region. Preparing and publishing the STPASA outputs by AEMO for the total power system is therefore redundant and is unlikely to add information that is of value to NEM participants.</p> <p>Removing redundant element in the STPASA process from the Rules will negate the need for AEMO to unnecessarily modify its STPASA system and procedure. This is likely to result in cost saving in the NEM.</p>
8(ii)	<p>Clause 3.7.2(f)(1) sets out some of the MTPASA outputs AEMO is required to prepare and publish. These outputs relate to load forecasts information. This clause of the Rules requires that AEMO prepares the outputs “for each <i>region</i>” and “for the total power system”.</p> <p>AEMO considers the requirements to prepare and publish the above MTPASA outputs for the total power system “would not materially benefit the market and is unnecessary”.</p> <p>AEMO proposed that the “for the total power system” requirements be deleted from the Rules.</p>	<ul style="list-style-type: none"> • 3.7.2(f)(1); and • 3.7.2(f)(4). 	<p>For the same reason discussed under Issue 8(i), the AEMC accepts the proposed policy position.</p>
9(i)	Clause 3.7.2(f)(4) requires AEMO to prepare and publish, as an	3.7.2(f)(4)	AEMO currently publishes the energy

Issue ID	Proposed policy position	Affected clauses	AEMC's determination and the reasons
	<p>MTPASA output, the “forecasts of the most probable <i>energy</i> consumption for each <i>region</i>”. The Rules require this output to be prepared and published in daily resolution.</p> <p>AEMO proposed to change the resolution to weekly.</p>		<p>information weekly for the MTPASA process. There is no evidence suggesting that publishing this information daily will bring any benefits to the NEM.</p> <p>Making changes to require this information to be published daily to meet the Rules requirement will incur unnecessary costs.</p> <p>The AEMC therefore determines to maintain the current practice. This is reflected in the Draft Rule.</p>
9(ii)	<p>As a result of the determination on Issue 9(i), the timing resolution specified in 3.7.2(f) (that is, daily) no longer holds true for all MTPASA outputs set out in the sub-clauses.</p> <p>AEMO proposed to add the phrase “(or as otherwise defined)” between the words “day” and “covered” in clause 3.7.2(f). This was proposed to clarify that the timing resolution specified in 3.7.2(f) does not apply to clause 3.7.2(f)(4).</p>	3.7.2(f)	<p>The AEMC agrees with the proposed policy position. However, to further improve Rules clarity, the Draft Rule inserted the phrase “(unless specified otherwise in clauses 3.7.2(f)(1) to 3.7.2(f)(6))” in lieu of “(or as otherwise defined)”.</p> <p>The AEMC considers the Draft Rule improves Rules clarity.</p>
9(iii)	<p>Clause 3.7.3(h)(3) of the Rules requires AEMO to prepare and publish, as an STPASA output, the “forecasts of the most probable <i>energy</i> consumption for each <i>region</i>”. The Rules require this output to be prepared and published in trading interval resolution.</p> <p>AEMO propose to change the resolution to daily.</p>	3.7.3(h)(3)	<p>AEMO currently publishes the energy information daily for the STPASA process. There is no evidence suggesting that publishing this information in half-hourly resolution will bring any benefits to the NEM.</p> <p>Making changes to require this information to be published half-hourly to meet the Rules requirement will incur unnecessary costs.</p> <p>The AEMC therefore determines to maintain the</p>

Issue ID	Proposed policy position	Affected clauses	AEMC's determination and the reasons
			current practice. This is reflected in the Draft Rule.
9(iv)	<p>As a result of the determination on Issue 9(iii), the timing resolution specified in 3.7.3(h) (that is, half-hourly) no longer holds true for all STPASA outputs set out in the sub-clauses.</p> <p>AEMO proposed to add the phrase “(or as otherwise defined)” between the words “<i>trading interval</i>” and “in” in clause 3.7.2(h). This was proposed to clarify that the timing resolution specified in 3.7.2(h) does not apply to clause 3.7.2(h)(3).</p>	3.7.3(h)	<p>The AEMC agrees with the proposed policy position. However, to further improve Rules clarity, the Draft Rule inserted the phrase “(unless specified otherwise in clauses 3.7.3(h)(1) to 3.7.3(h)(5))” in lieu of “(or as otherwise defined)”.</p> <p>The AEMC considers the Draft Rule improves Rules clarity.</p>
10	<p>Clause 3.7.3(e)(3) requires Scheduled Generators to submit scheduled generating unit synchronisation and de-synchronisation times for slow start generating units as an input to STPASA. Since the NEM’s start, these inputs have been inferred from the unit availability information provided under clauses 3.7.3(e)(1) and 3.7.3(e)(2). Hence, the requirement in clause 3.7.3(e)(3) requiring Scheduled Generators to submit scheduled generating unit synchronisation and de-synchronisation times is superfluous for AEMO’s operational purposes.</p> <p>AEMO considers that this requirement should be deleted from the Rules.</p>	3.7.3(e)(3)	<p>The Commission agrees that clause 3.7.3(e)(3) is redundant and should be removed.</p> <p>Removing redundant provisions is a good regulatory practice.</p>
11	<p>AEMO considers the Glossary definition for the term “<i>PASA availability</i>” is not clear.</p> <p>Under this definition, the physical plant capability is considered to be PASA available if it can be made available within 24 hours. It is not clear as to when this 24 hours period applies from.</p> <p>AEMO proposed to clarify that physical plant capability is</p>	Glossary definition of “ <i>PASA availability</i> ”	<p>The AEMC agrees with the proposed policy position because it is likely to improve Rules clarity.</p> <p>The wording of this definition is amended to provide further clarity (see C17 below).</p> <p>Improved Rules clarity reduces regulatory</p>

Issue ID	Proposed policy position	Affected clauses	AEMC's determination and the reasons
	considered to be PASA available if it can be “made available in that period given 24 hours’ notice of a requirement that the relevant <i>scheduled generating unit, scheduled load or scheduled network service</i> be made available.”		uncertainty. The AEMC also seeks comments in relation to this definition. This is discussed further in section 7.3.
12	<p>The Glossary definition for “<i>medium term capacity reserve</i>” incorrectly implies that a medium term capacity reserve (which is an MTPASA output) is only determined and reported over the period between 7 days and 12 weeks. AEMO submitted that this is not the case in practice. In addition, the reporting period for the medium term capacity reserve is inconsistent with the reporting period for MTPASA as set out in clause 3.7.2(a) of the Rules.</p> <p>AEMO proposed to change the Rule to align the reporting period for “<i>medium term capacity reserve</i>” with that for MTPASA.</p>	Glossary definition for “ <i>medium term capacity reserve</i> ”	<p>The AEMC agrees with the proposed policy position. This is because the reporting periods for “<i>medium term reserve capacity</i>” and MTPASA should be consistent with each other in order to produce meaningful MTPASA output results.</p> <p>This policy position is reflected in the Draft Rule. The Draft Rule improves the quality of the MTPASA process.</p> <p>In order to provide further clarification in this definition, the Draft Rule makes some adjustments to the wording of the proposed Rule (C3 below).</p>
13	<p>AEMO submitted that the Glossary definition for “<i>medium term capacity reserve</i>” refers to Generators indicating the amount of “surplus” generating capacity.³¹ According to AEMO, Generators are only able to indicate their available generating capacity, rather than any “surplus” generating capacity. The surplus is calculated by AEMO as part of the PASA process, based on information provided by Generators.</p> <p>AEMO therefore considers that “surplus” should be deleted from</p>	Glossary definition for “ <i>medium term capacity reserve</i> ”	<p>The AEMC agrees that Generators are not in a position to indicate to AEMO their “surplus” capacities as required under this definition in the Rules. This is because Generators would not be informed as to what their forecast loads are.</p> <p>The Draft Rule reflects the proposed policy position. This improves the quality of the MTPASA process.</p>

³¹ The “surplus” is calculated by netting off the load forecast from the generation capacity.

Issue ID	Proposed policy position	Affected clauses	AEMC's determination and the reasons
	this definition.		In order to provide further clarification in this definition, the Draft Rule makes some adjustments to the wording of the proposed Rule. (C3 below).
14	AEMO considers it is not clear in the Glossary definitions for the terms “ <i>medium term capacity reserve</i> ” and “ <i>short term capacity reserve</i> ” that the relevant generating capacity is aggregated for the purposes of the PASA assessment. It should be clarified that these capacities are aggregated.	Glossary definitions for the terms: <ul style="list-style-type: none"> • “<i>medium term capacity reserve</i>”; and • “<i>short term capacity reserve</i>” 	The AEMC agrees with the proposed policy position as it is likely to improve clarity of the Rules. In order to provide further clarification in these definitions, the Draft Rule makes some adjustments to the wording of the proposed definitions. (C3 and C4 below).
15	AEMO submitted that the Glossary definition for “ <i>short term capacity reserve</i> ” refers to half hour periods (rather than “ <i>trading intervals</i> ”) during the next seven days (rather than “ <i>trading days</i> ”). AEMO considers that where an equivalent defined term exists it should be used.	Glossary definition for the term “ <i>short term capacity reserve</i> ”	The Draft Rule amends the Rules by replacing the non-defined term “half-hour” with the defined term “ <i>trading interval</i> ” with. Use of a defined term improves clarity of the Rules. The Draft Rule also replace the term “day” by “ <i>trading day</i> ” as proposed. This will allow the period covered by “ <i>short term capacity reserve</i> ” to more closely match the period covered by STPASA. ³² The period covered by “ <i>short term capacity reserve</i> ” should align with that of STPASA in order to provide a meaningful STPASA output. In order to provide further clarification in this definition, the Draft Rule makes some adjustments to the wording of the proposed

³² The period covered by STPASA is expressed in trading day, see clause 3.7.3(b) of the Rules.

Issue ID	Proposed policy position	Affected clauses	AEMC's determination and the reasons
16	<p>Clause 3.7 of the Rules specifies that AEMO must forecast most probable “power system load” (as an element of PASA inputs or outputs).</p> <p>The defined term “power system” includes the distribution network³³. Therefore, AEMO considers referring to “power system load” incorrectly implies that AEMO should forecast loads (as parts of the PASA processes) which include those supplied by generation that is embedded in the distribution system.</p> <p>This does not align with what AEMO does in practice. AEMO proposed to replace the term “power system load” with “load”.</p>	<ul style="list-style-type: none"> • 3.7.2(f)(1); • 3.7.2(f)(2); • 3.7.2(f)(3); • 3.7.2(f)(5)(i); • 3.7.3(h)(1); • 3.7.3(h)(2); • 3.7.3(h)(4)(i); • 3.7.3(h)(4B)(i); and • 3.7.3(h)(4C)(i). 	<p>definition. (C4 below).</p> <p>The proposed amendments better reflects that demands served by certain generators embedded in the distribution network are excluded for the purpose of PASA analysis.</p> <p>These demands are excluded because it would be impractical to accurately quantify the outputs of these generators as the data associated with these generators are generally not available.</p> <p>The proposed Rule improves clarity of the Rules.</p>
17	<p>Clause 3.7.3(b) of the Rules describes the resolution of the STPASA as half hourly rather than using the equivalent defined term “trading interval”.</p> <p>AEMO considers that where an equivalent defined term exists it should be used. This would also be consistent with clause 3.8.20 which describes the pre-dispatch schedule as having a trading interval resolution.</p>	3.7.3(b)	<p>For the same reason discussed in Issue 15, the Commission agrees that defined terms “trading interval” should be used, rather than “half hour”.</p> <p>Use of defined term improves Rules clarity.</p>

³³ Power system is defined in the Rules as the “electricity power system of the *national grid* including associated *generation* and *transmission* and *distribution networks* for the *supply* of electricity, operated as an integrated arrangement.”

Issue ID	Proposed policy position	Affected clauses	AEMC's determination and the reasons
18	<p>Clause 3.7.3(h)(1) of the Rules requires AEMO to prepare and publish, as a STPASA output, "forecasts of the most probable power system load plus required scheduled reserve adjusted to make allowance for scheduled load, for each region and for the total power system".</p> <p>The current Rules imply that generation from semi-scheduled generating units are not used to meet the reserve requirement for the STPASA process.³⁴</p> <p>AEMO is seeking to amend this clause of the Rules to require it to use reserve including that relates to semi-scheduled generating units in the STPASA process. AEMO is seeking to amend this clause of the Rules because generation of semi-scheduled generating units represents "a significant and growing portion of the total NEM generation". This was proposed to be achieved by replacing the term "scheduled reserve" with "reserve" in clause 3.7.3(h)(1) of the Rules.</p>	3.7.3(h)(1)	<p>Given that generation of semi-scheduled generating units represents "a significant and growing portion of the total NEM generation", including the reserves from semi-scheduled generating units in the STPASA outputs is likely to more accurately represent the supply-demand outlook of the NEM. This will improve the quality of the PASA output.</p> <p>This is reflected in the Draft Rule. The Draft Rule improves the quality of the STPASA process.</p>
19	<p>Clause 3.7.3(d)(1) of the Rules refers to forecast load (as a STPASA input) being adjusted in accordance with "<i>dispatch offers</i>" for scheduled loads. This is an error because scheduled load does not submit "<i>dispatch offers</i>", but "<i>dispatch bids</i>".</p> <p>To rectify this error, AEMO proposed to replace the term "<i>dispatch offers</i>" with "<i>dispatch bids</i>" in clause 3.7.3(d)(1) of the Rules.</p>	3.7.3(d)(1)	<p>The AEMC agrees that a scheduled load does not submit "<i>dispatch offers</i>", but "<i>dispatch bids</i>", to AEMO. Usage of "<i>dispatch offers</i>" in this clause is likely to be an error.³⁵</p> <p>The error would have caused ambiguity in the Rules. Removal of this error is likely to improve clarity of the Rules hence promote regulatory</p>

³⁴ "Schedule reserve" is defined in the Rules as "[t]he amount of surplus or unused capacity: (a) of *scheduled generating units*; (b) of *scheduled network services*; or (c) arising out of the ability to reduce *scheduled loads*", and does not include the amount of surplus or unused capacity of semi-scheduled generating units.

³⁵ The Rules define "*dispatch offers*" as a "*generation dispatch offer* or a *network dispatch offer*". The Rules also define "*dispatch bids*" as "[a] notice submitted by a *Market Participant* to AEMO relating to the *dispatch* of a *scheduled load* in accordance with clause 3.8.7".

Issue ID	Proposed policy position	Affected clauses	AEMC's determination and the reasons
			certainty.
20	<p>Clause 4.9.1(a)(3) refers to the defined term “peak load” without italicising these words. <i>“Peak load”</i> is a defined term, and not italicising it may lead to imprecise interpretations of the clauses that contain it.</p> <p>AEMO proposed to italicise the term “peak load” in clause 4.9.1(a)(3) of the Rules.</p>	4.9.1(a)(3)	<p>The AEMC agrees that non-italicisation of the term is an oversight, and the meaning of this term should be that as defined in the Glossary of the Rules.</p> <p>The AEMC considers rectifying this oversight will improve clarity of the Rules.</p>
21	<p>Clause 3.7.2(c)(2) refers to the defined term “reserve” without italicising it. <i>“Reserve”</i> is a defined term, and not italicising it may lead to imprecise interpretations of the clauses that contain it.</p> <p>AEMO proposed to italicise the term “reserve” in clause 3.7.2(c)(2) of the Rules.</p>	3.7.2(c)(2)	<p>The AEMC agrees that non-italicisation of the term is an oversight, and the meaning of this term should be that as defined in the Glossary of the Rules.</p> <p>The AEMC considers rectifying this oversight will improve clarity of the Rules.</p>
22	<p>The Glossary definitions for “medium-term PASA” and “short-term PASA” duplicate the definitions given in clauses 3.7.2 and 3.7.3, respectively.</p> <p>AEMO considers that this duplication is unnecessary and should be removed.</p>	<p>Glossary definitions for:</p> <ul style="list-style-type: none"> • “medium-term PASA”; and • “short-term PASA”. 	<p>The Commission agrees that the definitions in the Glossary duplicate the definitions given in clauses 3.7.2 and 3.7.3.</p> <p>Eliminating duplications ensures that the terms are correctly defined. Correctly defined terms promote clarity in the Rules.</p> <p>The AEMC also adjusted the wording of the proposed definitions to improve their clarity (see C8 and C9 below).</p>

C.2 Additional proposed Rules amendments (not discussed in sections 4.5 to 4.8 of the Rule change request document)

The Commission notes that AEMO has proposed some amendments in the Rules without the accompanying discussions (in sections 4.5 to 4.8 of the Rule Change Request document). These proposed amendments are illustrated in Attachment C of the Rule Change Request document.

These proposed amendments, and the Commission's determinations for these amendments, are set out in the following table.

Amendment ID	Proposed policy position	AEMC's determination and the reasons
B1	Inserting the phrase “for each <i>region</i> ” in clause 3.7.3(d)(1)	<p>This proposed amendment clarifies that STPASA input “forecast <i>load</i>” is to be prepared for each of the NEM region. The AEMC agrees that forecast load for each region is a necessary input for STPASA.</p> <p>The proposed Rule improves clarity of the Rules.</p>
B2	Replacing the term “ <i>profile</i> ” by “ <i>load</i> ” in clause 3.7.3(d)(1)(i).	<p>The AEMC considers the term “<i>load</i>” is a more accurate description of this STPASA input, compared to the term “<i>profile</i>”³⁶. In addition, use of the term “<i>load</i>” is consistent with other provisions of the Rules relating to PASA.</p> <p>This is reflected in the Draft Rule. The Draft Rule improves Rules clarity.</p>
B3	Replacing the term “anticipated <i>network constraints</i> ” by “forecast <i>network constraints</i> ” in clause 3.7.3(d)(3).	<p>The AEMC considers the term “forecast <i>network constraints</i>” is a more technically precise term to describe this STPASA input, compared to the term “anticipated <i>network constraints</i>”. Use of a more technically precise term is likely to improve Rules clarity.</p>
B4	Replacing the term “load demand” by “peak <i>load</i> ” in the Glossary definition for “medium term capacity reserve”.	<p>The AEMC considers use of the defined term “peak <i>load</i>” provides a more precise description of this definition, compared to using the non-defined</p>

³⁶ The Glossary definition of “*profile*” relates to “energy data or costs”. Usage of the word “*profile*” can incorrectly imply that there is a cost component in the STPASA process.

Amendment ID	Proposed policy position	AEMC's determination and the reasons
		term “load demand”. This is reflected in the Draft Rule. The Draft Rule improves Rules clarity.
B5	Deletion of the phrase “surplus or unused” in the Glossary definition for “ <i>short term capacity reserve</i> ”.	For the same reason applying to Issue 13, the Draft Rule deletes the phrase “surplus or unused” as proposed.
B6	Replace the term “current forecast demand” by “forecast <i>load</i> ” in the definition for “ <i>short term capacity reserve</i> ”.	The AEMC considers the word “current” is redundant and therefore determines to delete it from the Rules as proposed. The AEMC also considers the use of the term “ <i>load</i> ” provides a more precise description of this definition, compared to using the non-defined term “demand”. In addition, use of the term “ <i>load</i> ” is consistent with other provisions of the Rules relating to PASA. This is reflected in the Draft Rule. The Draft Rule improves Rules clarity.
B7	Editorial amendments.	The AEMC made some editorial changes to the Rules as proposed by AEMO. Making the editorial changes improves clarity of the Rules.

C.3 Consequential Rule change

The Commission has also made some consequential changes to the Rules. These changes are summarised below.

Amendment ID	Issues	Affected clauses	AEMC's consequential amendments and the reasons
C1	<p>Clause 3.7.2(f) requires AEMO to prepare and publish MTPASA outputs. These outputs are set out in clauses 3.7.2(f)(1) to 3.7.2(f)(6).</p> <p>The MTPASA output set out in clause 3.7.2(f)(5) is ambiguous and inconsistent with the MTPASA process in practice.</p>	3.7.2(f)(5)	The AEMC redrafted the wording of clause 3.7.2(f)(5) in order to improve clarity of the Rules.
C2	<p>Clause 3.7.3(f) requires AEMO to prepare and publish STPASA outputs. These outputs are set out in clauses 3.7.3(h)(1) to 3.7.3(h)(5).</p> <p>The STPASA output set out in clause 3.7.3(h)(4) is ambiguous and inconsistent with the STPASA process in practice.</p>	3.7.3(h)(4)	The AEMC redrafted the wording of clause 3.7.3(h)(4) in order to improve clarity of the Rules to reflect the STPASA process in practice.
C3	The AEMC considers the proposed Glossary definition for “ <i>medium term capacity reserve</i> ” is ambiguous.	Glossary definition for “ <i>medium term capacity reserve</i> ”.	<p>The AEMC redrafted the definition in order to improve clarity of the Rules.</p> <p>This Glossary definition in the Draft Rule incorporates the policy positions discussed under Issues 12, 13 and 14 above.</p>
C4	The AEMC considers the proposed Glossary definition for “ <i>short term capacity reserve</i> ” is ambiguous.	Glossary definition for “ <i>short term capacity reserve</i> ”.	<p>The AEMC redrafted the definition in order to improve clarity of the Rules.</p> <p>This Glossary definition in the Draft Rule incorporates the policy positions discussed under Issues 14 and 15 above.</p>
C5	The term “ <i>energy consumption</i> ” in clause 3.7.2(f)(4) of the proposed Rule incorrectly implies that it refers to energy net of network losses and generator auxiliary loads.	3.7.2(f)(4)	The AEMC deleted the term “consumption” from clause 3.7.2(f)(4). This improves clarity of the Rules to reflect the MTPASA process in practice.

Amendment ID	Issues	Affected clauses	AEMC's consequential amendments and the reasons
C6	Clause 3.7.2(c)(1)(i) requires AEMO to prepare “daily energy” as an MTPASA output. This is inconsistent with the proposed Rule amendment under Issue 9(i) above.	3.7.2(c)(1)(i)	The AEMC deleted the reference to “daily energy” in clause 3.7.2(c)(1)(i). This improves clarity of the Rules to reflect the MTPASA process in practice. This also improve consistency with the Rules.
C7	Clauses 3.7.3(h)(4B)(i) and 3.7.3(h)(4C)(i) of the proposed Rule contain the phrase “peak load referred to in clause 3.7.3(h)(1)”. However, there is no reference to “peak load” in clause 3.7.3(h)(1).	3.7.3(h)(4B)(i) and 3.7.3(h)(4C)(i)	The AEMC consider these to be typographical errors in the proposed Rule. The AEMC deleted the term “peak” from these clauses of the proposed Rule. This improves clarity of the Rules.
C8	The Glossary definition of “medium term PASA” is ambiguous.	Glossary definition of “medium term PASA”	The AEMC redrafted the definition in order to improve clarity of the Rules. This definition incorporates the policy decision discussed under Issue 22.
C9	The Glossary definition of “short term PASA” is ambiguous.	Glossary definition of “short term PASA”	The AEMC redrafted the definition in order to improve clarity of the Rules. This definition incorporates the policy decision discussed under Issue 22.
C10	The forecast loads referred to in clause 3.7.2(f)(1) do not include the allowances made under clause 3.7.2(f)(2) ³⁷ . This is not made clear in the proposed Rule.	3.7.2(f)(1)	The AEMC amended this clause to improve Rules clarity. If this amendment is not made, an interpretation of clause 3.7.2(f)(3) may lead to double-counting.

³⁷ This relates to the allowances made for those forecast loads served by generation from non-scheduled generating units.

Amendment ID	Issues	Affected clauses	AEMC's consequential amendments and the reasons
C11	<p>As a result of C2 above, the Draft Rule added clauses 3.7.3(h)(4AA) and 3.7.3(h)(4AB) to the Rules.</p> <p>Consequently, references to these new clauses should be added to clauses 3.7.3(h)(4C)(ii) and 3.7.3(h)(4B)(ii).</p>	3.7.3(h)(4B)(ii) and 3.7.3(h)(4C)(ii)	The AEMC amended these clauses to improve Rules clarity.
C12	The term “energy consumption” in clause 3.7.3(h)(3) of the proposed Rule incorrectly implies that it refers to energy net of network losses and generator auxiliary loads.	3.7.3(h)(3)	The AEMC deleted the term “consumption” from clause 3.7.2(f)(4). This improves clarity of the Rules to reflect the MTPASA process in practice.
C13	The STPASA outputs referred to in clauses 3.7.3(h)(1) ³⁸ , (2) ³⁹ , (3) ⁴⁰ , (4) ⁴¹ , (4AA) ⁴² , (4AB) ⁴³ and (4A) ⁴⁴ do not include the allowances referred to in 3.7.3(4B) ⁴⁵ . This is not made clear in the proposed Rule.	3.7.3(h)(1), (2), (3), (4), (4AA), (4AB) and (4A).	<p>The AEMC amended these clauses to improve Rule clarity.</p> <p>If this amendment is not made, interpretation of clause 3.7.2(h)(4C) may lead to double-counting.</p>
C14	The term “region” in clause 3.7.3(h)(4A) is not italicised.	3.7.3(h)(4A)	The AEMC considers that non-italicisation of the term is an oversight, and the meaning of this term should

³⁸ This relates to “forecasts of the most probable *load* plus *reserve* requirement”.

³⁹ This relates to “forecasts of *load* for each *region* with 10% and 90% probability of exceedance”.

⁴⁰ This relates to forecast of energy for each region and trading day.

⁴¹ This relates to “aggregate *generating unit* availability for each *region*”. This clause in the propose Rule was consequentially amended in the Draft Rule (under C2 above).

⁴² This relates to “aggregate capacity for each *region* that can be *generated* continuously”. This clause was consequentially added to the Draft Rule (under C2 above).

⁴³ This relates to “aggregate capacity for each *region* that cannot be *generated* continuously at the full offered availability of the *scheduled generating units* due to specified daily *energy constraints*”. This clause was consequentially added to the Draft Rule (under C2 above).

⁴⁴ This relates to “aggregate *generating unit PASA availability* for each *region*”.

⁴⁵ This relates to “the aggregated MW allowance (if any) made by AEMO for generation from *non-scheduled generating systems*”. The allowances are made for elements of the STPASA outputs set out in clauses 3.7.3(h)(1), (2), (3), (4), (4AA), (4AB) and (4A).

Amendment ID	Issues	Affected clauses	AEMC's consequential amendments and the reasons
			<p>be that as defined in the Glossary of the Rules.</p> <p>The AEMC considers rectifying this oversight will improve clarity of the Rules.</p>
C15	For same reason discussed under Issue 5 above, the term “forecast load” in clause 3.7.3(d)(1) should also be replaced with “forecast load information”.	3.7.3(d)(1)	The AEMC made the consequential change to improve Rules clarity.
C16	Clause 3.7.3(h)(1) can clarify that the “reserve requirement” should be determined in accordance with clause 3.7.3(d)(2).	3.7.3(h)(1)	<p>This Draft Rule consequentially amends clause 3.7.3(h)(1) to clarify that the reserve requirement should be determined in accordance with clause 3.7.3(d)(2). This clause requires the reserve requirements to be prepared in accordance with the short term capacity reserve standards.</p> <p>This improves Rules clarity.</p>
C17	The AEMC considers the proposed Glossary definition for “PASA availability” is ambiguous.	Glossary definition for “PASA availability”. Clauses 3.7.2(d)(1) and 3.7.3(e)(1).	<p>This Glossary definition in the Draft Rule incorporates the policy positions discussed under Issue 11 above.</p> <p>The Draft Rule clarifies that a physical plant capability is considered to be PASA available if it can be made available given 24 hours’ notice or less.</p> <p>The Commission also made consequential amendments to the proposed Rule. This is discussed further in section 7.3.</p>
C18	It should be clarified that clause 3.7.2(c) sets out the “MTPASA inputs”, rather than “PASA input”.	3.7.2(c)	The AEMC makes a consequential change to improve Rules clarity.

Amendment ID	Issues	Affected clauses	AEMC's consequential amendments and the reasons
C19	The Glossary definition for the term " <i>medium term PASA inputs</i> " do not exist.	Glossary definition for " <i>medium term PASA inputs</i> ".	The AEMC considers this to be an oversight and added this definition to improve Rules clarity.
C20	The Glossary definition for the term " <i>short term PASA inputs</i> " do not exist.	Glossary definition for " <i>short term PASA inputs</i> ".	The AEMC considers this to be an oversight and added this definition to improve Rules clarity.
C21	Replacing the term " <i>anticipated scheduled load</i> " with " <i>forecast scheduled load</i> " in clause 3.7.2(c)(1)(i)	3.7.2(c)(1)(i)	The AEMC considers the term "forecast" is a more technically precise term, compared to the term "anticipated". Use of a more technically precise term is likely to improve Rules clarity.
C22	Editorial amendments.		The AEMC made some editorial changes to the Rules as required. Making the editorial changes improves clarity of the Rules.