

Australian Energy Market Commission

RULE DETERMINATION

NATIONAL ELECTRICITY AMENDMENT (UPDATING SHORT TERM PASA) RULE 2022

Australian Energy Market Operator

5 MAY 2022

INQUIRIES

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ABOUT THE AEMC

The AEMC reports to the Energy Ministers' Meeting (formerly the Council of Australian Governments Energy Council). We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the Energy Ministers' Meeting.

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SUMMARY

- 1 The Australian Energy Market Commission (AEMC or Commission) has made a final rule to amend the National Electricity Rules (NER) in relation to the short-term projected assessment of system adequacy (ST PASA). ST PASA is the tool that the Australian Energy Market Operator (AEMO) uses to forecast reliability and security conditions up to seven days ahead of real time. The final rule is in response to a rule change request submitted by AEMO, and is consistent with AEMO’s rule change request. The final rule provides AEMO with flexibility to update ST PASA so that it remains fit for purpose as the market develops, and reduces the cost and time associated with these updates.

Key features of the final rule

- 2 The final rule provides a specific objective for ST PASA, and introduces principles that are linked to the objective to guide AEMO as it administers ST PASA (see Figure 1). This framework will enable AEMO and market participants to work together to decide on the appropriate information to be included in ST PASA.

Figure 1: Overview of principles-based approach to ST PASA

<p>Objective The PASA is a comprehensive program of information collection, analysis and disclosure of medium term and short term power system security and reliability of supply prospects so that registered participants are properly informed to enable them to make decisions about supply, demand and outages of transmission networks in respect to period of up to 2 years in advance (or up to three years in advance, where specified).</p>				
<p>Inputs</p> <p>AEMO must prepare inputs to meet the objective.</p>	<p>Information requirements</p> <p>AEMO may outline in the ST PASA procedures any additional information to be submitted by participants to meet the PASA objective.</p> <p>AEMO must consider the costs and benefits of requiring extra information from participants.</p>	<p>Information publication</p> <p>AEMO must prepare and publish information to meet the objective.</p>	<p>Transparency</p> <p>AEMO must develop, maintain and publish a procedure describing the ST PASA process, including:</p> <ul style="list-style-type: none"> • Inputs • Outputs • Information requirements • Processes and methodologies. 	<p>Consultation</p> <p>AEMO must comply with the <i>Rules consultation procedures</i> when updating the ST PASA procedures, except for minor or administrative changes.</p>

Source: AEMC

Note: A full description of the more preferable final rule can be found in section 2.4.

- 3 In addition to the introduction of the principles-based framework for ST PASA, the final rule also:

- specifies that AEMO must publish forecasts of:¹

¹ Note that further changes will be made to clauses 3.7.3(h)(1) and (2) following the commencement of the *Integrating Energy Storage Systems into the NEM* (IESS) rule change. These changes will include bi-directional units, a new participant category created in the IESS rule change.

- available capacity of individual scheduled generating plant and wholesale demand response units
- PASA availability for individual scheduled generating units, scheduled loads, scheduled network service providers and wholesale demand response units
- specifies that ST PASA covers each 30-minute period (or such shorter period as determined by AEMO) in at least the seven trading days from and including the day of publication
- makes changes to the definition of energy constraint and PASA availability.

4 The final rule is consistent with AEMO’s rule change request but differs from the request by:

- providing AEMO with additional discretion to administer ST PASA
- balances this additional discretion with principles to guide the use of the discretion and greater industry consultation requirements.

5 There are no substantive policy changes in the final determination and rule from the draft rule. However the Commission has made some minor clarifying changes to address issues raised in submissions. The Commission has clarified the timeframes over which ST PASA is published and has made amendments to incorporate changes made in the *Integrating Energy Storage Systems into the NEM* rule change. The Commission has also provided further clarification and explanation on key issues raised in submissions to the draft determination.

6 The Commission has also changed the implementation date from quarter 3 2023 in the draft rule to 31 July 2025 in the final rule. This change is based on advice from AEMO that following a more detailed assessment, there are a number of complex issues that require additional time to implement the final rule. In addition, the final rule obligates AEMO to publish the ST PASA procedures by 30 April 2025, giving participants three months to comply with the procedures before the rule commences on 31 July 2025.

Benefits of the more preferable rule

7 The Commission has made a rule that will facilitate the ongoing effectiveness of ST PASA as the market continues to change. The key benefits of the final rule are that it:

- **Promotes reliability and security at lowest cost** by providing AEMO more flexibility to update the inputs used, the information required from participants and the information published in ST PASA. The changes:
 - improve the ability of AEMO to assess reliability and security conditions in the NEM as the market develops, by enabling AEMO to work with market participants to decide on the relevant information to include in ST PASA
 - improve the information provided to market participants by specifying that AEMO must publish availability and PASA availability information at a DUID level, as well as enabling AEMO to include additional information following consultation with stakeholders. This will better inform the market of generation availability, and allow market participants to make better decisions regarding scheduling planned maintenance and expected reliability and security conditions.

- **Minimises administrative compliance requirements and costs** by improving the flexibility of AEMO to respond to changes in the market and removing unnecessary steps that may be required to make changes to ST PASA. The final rule also requires AEMO to thoroughly consult with market participants when making changes to ST PASA and to balance the benefits and costs of requiring more information from participants. The final rule improves transparency of AEMO processes compared to the current arrangements by strengthening the reporting requirements on AEMO.
- **Promotes efficient facilitation of broader reform program** by linking information requirements and publication to the objective for PASA which clearly references power system security. The final rule enables AEMO to adjust ST PASA to incorporate future changes to the system security regulatory framework.

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1 AEMO'S RULE CHANGE REQUEST

This section provides a brief overview of the rule change request submitted by the Australian Energy Market Operator (AEMO). For a more detailed description of the rule change request, including the current arrangements and relevant background, please refer to the consultation paper and draft determination.²

1.1 The rule change request

On 29 June 2021, AEMO made a request to the Australian Energy Market Commission (AEMC or Commission) to make a rule regarding the short-term projected assessment of system adequacy (ST PASA).³

In the rule change request, AEMO raised a number of issues with the existing framework for ST PASA in the NER, including:⁴

- the NER is overly prescriptive and limits flexibility to make changes that may be beneficial to the market
- the NER is inconsistent with what AEMO does in practice
- the NER contains definitions that are no longer fit for purpose.

AEMO sought to resolve the issues raised in the rule change request by proposing a rule change to:

- Introduce a principles-based framework in clause 3.7.3 of the NER to provide more flexibility to AEMO and market participants to update ST PASA.
- Combine the PD PASA and ST PASA processes and refer to them collectively as ST PASA, to improve the transparency and governance of the PD PASA process.
- Require the publication of generator availability information on a DUID (per unit) level to provide more transparency to market participants about the future state of the market.
- Alter the definitions of PASA availability and energy constraint to provide more relevant information to the market.

² AEMC, *Updating Short Term PASA*, consultation paper, 26 August 2021. AEMC, *Updating Short Term PASA*, draft determination, 2 December 2021.

³ AEMC, *Updating Short Term PASA*, rule change request, 29 June 2021, pp. 2-9.

⁴ AEMC, *Updating Short Term PASA*, rule change request, 29 June 2021, pp. 7-9.

2 FINAL RULE DETERMINATION

2.1 The rule making process

The rule making process has been:

- 26 August 2021: The Commission published a consultation paper identifying specific issues for consultation.⁵
- 23 September 2021: The Commission received 15 submissions to the consultation paper.
- 2 December 2021: The Commission published a draft rule and draft determination, which responded to issues raised in the submissions to the consultation paper.⁶
- 10 February 2022: The Commission received 11 submissions to the draft determination.

The Commission considered all issues raised by stakeholders in submissions. Issues raised in submissions are discussed and responded to throughout this final rule determination. Issues that are not discussed in the body of this document have been summarised and responded to in Appendix A.

2.2 Rule making test

2.2.1 Achieving the NEO

Under 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 national electricity objective (NEO).⁷ This is the decision making framework that the Commission must apply.

The NEO is:⁸

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.

2.2.2 Making a more preferable rule

Under s. 91A of the NEL, the Commission may make a rule that is different (including materially different) to a proposed rule (a more preferable rule) if it is satisfied that, having regard to the issue or issues raised in the rule change request, the more preferable rule will or is likely to better contribute to the achievement of the NEO.

In this instance, the Commission has made a more preferable rule. The reasons are summarised below in Section 2.4.

⁵ AEMC, *Updating Short Term PASA*, consultation paper, 26 August 2021.

⁶ AEMC, *Updating Short Term PASA*, draft determination, 2 December 2021.

⁷ Section 88 of the NEL.

⁸ Section 7 of the NEL.

2.3 The Commission's final rule and final rule determination

Further information on the legal requirements for making this final rule determination is set out in Appendix B.

2.3.1 Detailed description of the final rule

The Commission's final rule determination is to make a more preferable final rule. The key feature of the final rule is to introduce an objective and principles-based framework in the NER for ST PASA.

Specifically, the more preferable final rule directly links ST PASA to the objective for PASA in clause 3.7.1(b), and introduces principles that are explicitly linked to the objective to guide AEMO as it administers ST PASA.⁹ The objective for PASA under clause 3.7.1(b) is:

The PASA is a comprehensive program of information collection, analysis and disclosure of medium term and short term system security and reliability of supply prospects so that Registered Participants are properly informed to enable them to make decisions about supply, demand and outages of transmission networks in respect of periods up to 2 years in advance (or up to 3 years, where specified).

AEMO is required to develop and publish the ST PASA procedures, which describe:¹⁰

- how AEMO will prepare inputs for ST PASA
- the information AEMO will publish to meet the ST PASA objective
- the processes and methodologies AEMO will apply to produce the ST PASA information
- the period to be covered by the short term PASA if it is different to a 30-minute period
- any additional information to be submitted by each relevant participant.

AEMO will have discretion to consult with participants on the inputs that it uses in the ST PASA, the information that AEMO may require from participants to meet the objective, the information it publishes in the ST PASA and its processes and methodologies for administering the ST PASA. AEMO must consider the benefits and costs of collecting the relevant information from Registered Participants.¹¹ AEMO must comply with the *Rules consultation procedures* when developing and amending the ST PASA procedures, except for minor or administrative changes.¹² The Commission expects that AEMO will consult with the AEMC and the AER during this process.

The final rule specifies that AEMO must publish, among other things, forecasts of:¹³

- available capacity of individual scheduled generating plant and wholesale demand response units; and

⁹ See clauses 3.7.3(g)(4), 3.7.3(h)(3) and 3.7.3(k) in the final rule.

¹⁰ See clause 3.7.3(c) in the final rule.

¹¹ See clause 3.7.3(c)(5) in the final rule.

¹² See clause 3.7.3(d) and (e) in the final rule.

¹³ See clause 3.7.3(k)(2) and (3) in the final rule.

- PASA availability for individual scheduled generating units, scheduled loads, scheduled network service providers and wholesale demand response units.

The final rule specifies that ST PASA covers at least the seven trading days from and including the day of publication, combining PD PASA and ST PASA.¹⁴

The final rule enables AEMO to publish the short-term PASA with a granularity of less than 30 minutes. This will provide AEMO with flexibility to adjust the granularity of ST PASA if it is appropriate to do so.¹⁵

Under the final rule, the changes to ST PASA will be implemented by 31 July 2025. The final rule includes a transitional arrangement that obligates AEMO to publish the ST PASA procedures by 30 April 2025, three months before the commencement of the final rule.

The final rule also includes a transitional arrangement that allows AEMO to begin consulting on the ST PASA procedures as defined in the new rules two weeks following the publication of the final rule.

2.3.2 Changes from the draft determination

Overall, the more preferable final rule is similar to the more preferable draft rule. The amendments that have been made in the final rule are:

- Amending clause 3.7.3(b) to clarify that the time period covered by ST PASA is not reduced under the final rule.
- Amending clauses 3.8.4(c)(3), 3.8.4(d)(2), 3.8.6(b) and 3.8.7(m) in the NER to incorporate the updated definition of energy constraint.
- Amending clauses 3.7.3(g)(2), 3.7.3(h)(1), 3.7.3(h)(2), 3.7.3(k)(2), 3.7.3(k)(3), 3.7.3(k)(4) and 3.8.6(g2) in the draft determination to incorporate changes made in the *Integrating Energy Storage Systems into the NEM* rule change.
- Amending clause 3.7.3(h)(5)(v) to bring forward changes made to that provision in the new clause 3.7.3 to the commencement of the *Integrating Energy Storage Systems into the NEM* rule change.
- The implementation date has changed from quarter three 2023 in the draft rule to 31 July 2025 in the final rule.

2.3.3 How the final rule addresses the assessment criteria

Having regard to the issues raised in the rule change request and during consultation, the Commission is satisfied that the more preferable final rule is likely to better contribute to the achievement of the NEO. The final rule:

- **Promotes reliability and security at lowest cost** by providing AEMO more flexibility to update the inputs used, the information required from participants and the information published in ST PASA. The changes:

¹⁴ See clause 3.7.3(b) in the final rule.

¹⁵ See clause 3.7.3(b) in the final rule.

- improve the ability of AEMO to assess reliability and security conditions in the NEM as the market develops, by enabling AEMO to work with market participants to decide on the relevant information to include in ST PASA
- improve the information provided to market participants by specifying that AEMO must publish availability and PASA availability information at a DUID level, as well as enabling AEMO to include additional information following consultation with stakeholders. This will better inform the market of generation availability, and allow market participants to make better informed decisions regarding scheduling planned maintenance and expected reliability and security conditions.
- **Minimises administrative compliance requirements and costs** by improving the flexibility of AEMO to respond to changes in the market and removing unnecessary steps that may be required to make changes to ST PASA. The final rule also requires AEMO to thoroughly consult with market participants when making changes to ST PASA and to balance the benefits and costs of requiring more information from participants. The final rule improves transparency of AEMO processes compared to the current arrangements by strengthening the reporting requirements on AEMO.
- **Promotes efficient facilitation of broader reform program** by linking information requirements and publication to the objective for PASA under clause 3.7.1 which clearly references power system security. The final rule enables AEMO to adjust ST PASA to incorporate future changes to the system security regulatory framework.

3 PRINCIPLES-BASED APPROACH TO ST PASA

This chapter discusses stakeholder feedback and presents the Commission’s analysis and conclusions regarding AEMO’s proposal to introduce a principles-based approach to ST PASA in the NER.

3.1 Rule change request and draft determination

AEMO proposed that a principles-based approach to ST PASA in the NER would better allow ST PASA to remain fit for purpose in a changing environment. In its rule change, AEMO raised a number of issues with the current framework in the NER. These issues included:

- that there are prescribed elements of ST PASA that are no longer useful, creating ambiguity
- that the existing framework limits AEMO’s flexibility to make improvements to ST PASA over time.

More detail, including AEMO’s reasoning, can be found in Section 3.1 of the draft determination for this rule change.¹⁶

In the draft determination, the Commission considered that the benefits of introducing a principles-based approach to ST PASA in the NER outweigh the disadvantages.¹⁷ The Commission considered that a principles-based approach would most effectively enable AEMO to keep ST PASA fit for purpose as the market develops.

3.2 Analysis and conclusions on issues from the draft determination.

Stakeholders were generally supportive of the proposed principles-based approach to ST PASA.¹⁸

Some stakeholders suggested changes to specific elements of the principles-based approach. These are outlined below.

3.2.1 Consultation requirements

Stakeholder views on draft determination.

The draft rule required AEMO to follow the *Rules consultation procedures* when making or amending the ST PASA procedures.¹⁹

Market participants supported requiring AEMO to comply with the full *Rules consultation procedures* for the ST PASA procedures.²⁰

¹⁶ AEMC, *Updating Short Term PASA*, draft determination, December 2021, pp. 10-11.

¹⁷ AEMC, *Updating Short Term PASA*, draft determination, December 2021, pp. 14-19

¹⁸ Submissions to the draft determination: AEMO, p. 1; Australian Energy Council, p. 1; Shell Energy, p. 1; Origin Energy, p. 1; AGL, p. 1.

¹⁹ See clause 3.7.3(d) in the draft rule.

²⁰ Submissions to the draft determination: CS Energy, p. 3; Snowy Hydro, p. 1; Australian Energy Council, p. 1; Origin, p. 1; AGL, p. 1.

EnergyAustralia noted that the Rules could recognise that the matters identified by stakeholders during consultation on the procedures should be given due consideration by AEMO.²¹

Some stakeholders made reference to the ongoing *Improving consultation procedures in the Rules* rule change, in which AEMO has requested that the Rules consultation procedures be based largely on the existing requirements applicable to AER consultations on economic regulatory guidelines for transmission and distribution. For example:²²

- Iberdrola has suggested that while this rule change is ongoing, the AEMC cannot use the existing consultation procedures as an argument for this rule change.²³
- AGL noted that this rule change may effect the ST PASA procedures, and noted that additional safeguards are necessary to preserve the two-stage consultation requirement.²⁴
- Snowy Hydro noted that it did not agree with any proposal to reduce formal consultation opportunities for market participants and other stakeholders to comment on changes to subordinate instruments.²⁵

AEMO considered that a full rules consultation procedure is not required in all cases, particularly for relatively small changes.²⁶ AEMO suggested that the NER should still allow for a single stage consultation process, but that:

- AEMO would be required to publish a notice identifying that it is proposing ST PASA procedure changes as a single-stage consultation process; and
- AEMO would be required to conduct that consultation in accordance with the full *Rules consultation procedures* on receiving a request from a consulted participant within 10 days of the notice.

AEMO supported the full *Rules consultation procedure* applying to the first iteration of the ST PASA procedures.

Commission's analysis and conclusion.

The Commission's final position is to maintain the position from the draft determination that the *Rules consultation procedures* apply to the ST PASA procedures. The Commission considers this will facilitate the appropriate level of consultation between AEMO and participants for the ST PASA procedures. In particular:

- For the initial consultation process, this is the full two-stage process that is currently set out in the *Rules consultation procedures*.

21 Submission to the draft determination: EnergyAustralia, p. 2.

22 AEMC, *Improving consultation procedures in the Rules*, rule change request, p. 2.

23 Submission to the draft determination: Iberdrola Australia, p. 2.

24 Submission to the draft determination: AGL, p. 1.

25 Submission to the draft determination: Snowy Hydro, pp. 1-2.

26 Submission to the draft determination: AEMO, pp. 4-5.

- Any changes made to the Rules consultation procedures in the *Improving consultation procedures in the Rules* rule change apply to subsequent updates to the ST PASA procedures.

The Commission noted in the draft determination that the *Rules consultation procedures* incorporate a two-stage process ensuring that participants are able to effectively engage with AEMO regarding any proposed changes to ST PASA.²⁷ The Commission, AEMO and market participants all agree that the initial consultation on the ST PASA procedures must follow the full, two-stage process set out in the current *Rules consultation procedures*. AEMO has also indicated that it will be conducting additional consultation with stakeholders to develop the ST PASA procedures.

The Commission considers that in relation to subsequent changes to the ST PASA procedures there may be certain circumstances where it is beneficial to use a different consultation process. For example, AEMO may suggest a non-controversial change that has support from stakeholders in another process, such as a rule change. However, the *Improving consultation procedures in the Rules* rule change is currently being considered by the Commission and is specifically addressing this issue. The Commission considers that this rule change is best placed to determine the appropriate form of the *Rules consultation procedures* that will apply to subsequent changes to ST PASA, as well as other AEMO and Australian Energy Regulator (AER) procedures moving forward.

BOX 1: IMPROVING CONSULTATION PROCEDURES IN THE RULES RULE CHANGE

On 7 January 2021, AEMO submitted a rule change request to improve consultation procedures in the NER. As part of this rule change, AEMO has requested that the *Rules Consultation procedures* be a single-stage process by default. In an addendum to the rule change request, AEMO suggested that a set of criteria could be applied to determine the level of consultation required. These criteria are:

- the nature of the proposal and its impact on persons impacted by it
- the regulatory requirements and inter-dependencies applicable to the proposal
- the urgency of resolving the issues to be addressed by the proposal
- the extent of any prior consultation undertaken with affected persons by the consulting party or in another regulatory process
- the complexity of the associated issues and the potential for alternative options to address them.

In the consultation paper, the AEMC has asked participants to consider the appropriate approach to consultation under the *Rules consultation procedures*.

Source: AEMC, *Improving consultation procedures in the Rules*, <https://www.aemc.gov.au/rule-changes/improving-consultation-procedures-rules>

²⁷ AEMC, *Updating Short Term PASA*, draft determination, 2 December 2021, pp. 18-19.

3.2.2

Consideration of costs and benefits

Stakeholder views on draft determination

The draft rule required AEMO to have regard to the costs and benefits of collecting any additional relevant information from participants that is necessary to implement the PASA objective.²⁸

Snowy Hydro noted that a major concern is that AEMO could make changes requiring significant provision of information that could be a burden on market participants.²⁹

Shell Energy noted that it is supportive of requiring AEMO to consider the costs and benefits of any information collected. It suggested that these principles could be extended to a formal cost-benefit analysis before any proposal is made to request additional information.³⁰

AEMO considered that the specification that AEMO must consider the costs and benefits of requiring additional information is unnecessary. This is because AEMO is already bound by the NEO, which inherently requires AEMO to assess the costs and benefits of any proposed changes to ST PASA.³¹

Commission's analysis and conclusion.

The Commission considers that under the objective and principles-based approach it is appropriate to provide guidance to AEMO in applying the NEO. The final rule therefore retains the principle that AEMO must consider the costs and benefits to participants of any new information that is collected.³²

The Commission considers that guidance in relation to applying the NEO is a key part of best practice principles-based rule making. When making this principles-based rule, the AEMC is enabling AEMO to make decisions where the appropriate solution is not specified. When the AEMC undertakes such a task, such as in a rule change, it follows specific guidance in relation to interpreting the NEO.³³ The AEMC also sets out a range of assessment criteria (e.g. principles) to inform stakeholders about the key areas of the NEO that apply to the particular rule change in question. Given that the ongoing costs to market participants is a key consideration in relation to ST PASA, the Commission considers that it is appropriate to specifically draw out this element of the NEO for AEMO to consider during consultation with stakeholders.

The Commission also notes that such guidance is both standard and best practice in principles-based rule changes. Box 2 provides a number of examples of such approaches.

28 See clause 3.7.3(c)(5) in the draft rule.

29 Submission to the draft determination: Snowy Hydro, p. 1.

30 Submission to the draft determination: Shell Energy, p. 1-2.

31 Submission to the draft determination: AEMO, pp. 5-6.

32 AEMC, *Updating Short Term PASA*, draft determination, 2 December 2021, p. 18.

33 AEMC, *Applying the energy market objectives*, https://www.aemc.gov.au/sites/default/files/2019-07/Applying%20the%20Energy%20market%20objectives_4.pdf

BOX 2: PRINCIPLES-BASED RULE MAKING

When making a rule, the Commission will consider the level of prescription that is necessary. The level of prescription can range between:

- principles-based, where objectives are specified in the Rule, and regulated entities are able to choose how they meet the objectives
- prescriptive, where the manner or means of obtaining the objectives are specified in the Rule.

When the AEMC chooses to make a principles-based rule, it delegates the responsibility to make specific decisions to the regulated entity. When doing this, it is appropriate to provide guidance to enable the decision maker to conduct a similar assessment process to the one undertaken by the AEMC when making a rule.

The AEMC has applied this approach in a number of cases, including but not limited to:

- The *Bill contents and billing requirements* rule change, where the AER must take into account the costs of compliance by retailers with the billing guideline, and whether the requirements in the billing guidelines are effective and proportionate to the expected benefits that result from achieving the relevant part of the bill objective.
- The *Distribution network pricing arrangements* rule change, where NSPs must have regard to the costs and benefits associated with calculating, implementing and applying the proposed method for determining the long run marginal cost to consumers.
- The *Improving demand side participation information provided to AEMO by registered participants* rule change, where AEMO must have regard to registered participants' reasonable costs of efficient compliance with the guidelines compared to the likely benefits of the use of that information by AEMO in forecasting load for the purposes of the exercise of its functions under the NER.

Source: AEMC

3.2.3

AEMO discretion

Stakeholder views on the draft determination

The draft rule provided AEMO with discretion regarding:³⁴

- the inputs it must prepare for ST PASA
- additional information that must be submitted by market participants for ST PASA, subject to the costs and benefits of collecting the information
- the information it must publish in ST PASA
- the granularity of the ST PASA forecast.

EnergyAustralia noted that clause 3.7.3(k) of the draft rule should provide AEMO with discretion to publish additional data in line with the objective. It further considered that this

³⁴ See clauses 3.7.3(b), (g), (h) and (k) in the draft rule.

clause should require AEMO to publish critical input assumptions in line with the objective, and explicitly state fuel availability and technical outages as examples.³⁵

AEMO noted that it did not request the discretion to:³⁶

- Change the ST PASA reporting resolution to shorter than 30 minutes.
 - AEMO noted that this would likely result in significant costs to participants, and would require extensive consultation.
- Require additional information from participants.
 - AEMO noted that this may raise issues regarding sensitive or confidential information, and asked for clarification on the exercise of this discretion.

Shell Energy noted that provisions in the rules could be added to guide AEMO's consideration of commercially sensitive market information.³⁷

Commission's analysis and conclusions.

In the final rule, the Commission has provided AEMO with the discretion to require participants to submit additional information to ST PASA, subject to that information meeting the PASA objective.³⁸ The Commission considers that this discretion is appropriate as AEMO will not be limited from making any future changes to ST PASA that may require new or different information from market participants.

This discretion will enable AEMO to work with participants during the consultation on the ST PASA procedures to determine the relevance of specific changes to the information collected and published in ST PASA, such as the requests made by EnergyAustralia to include information about how semi-scheduled plant availability assumptions are made.

The Commission notes that there may be situations where AEMO may request information that a market participant considers is commercially sensitive. The Commission considers that the framework set out in Division 6 of the National Electricity Law provides appropriate guidance for AEMO to deal with situations that may involve protected information.³⁹ Specifically, sections 54F, 54FA and 54H provide guidance regarding how AEMO should deal with claims of protected information. The approaches set out in these sections include using non-identifying information, aggregating the information or authorising disclosure if the detriment to that party does not outweigh the public benefit.⁴⁰

The final rule enables participants to work with AEMO during consultation on the ST PASA procedures to include any additional information that may be beneficial for the market. The Commission considers that AEMO will be able to use the processes outlined above to act upon any requests made by participants.

35 Submission to the draft determination: EnergyAustralia, pp. 1-2.

36 Submission to the draft determination: AEMO, pp. 3-4.

37 Submission to the draft determination: Shell Energy, pp. 1-2.

38 See clause 3.7.3 (c)(5) in the final rule.

39 See Division 6 of the National Electricity Law.

40 In relation to the authorised disclosure under section 54H, the Commission considers that the notice process can be undertaken at the time of the procedures being made.

3.2.4

Other issues

Definition of system adequacy.

Stakeholder views on the draft determination.

CS Energy reiterated that its support for a principles-based approach included the caveat that ST PASA needed to be linked to a definition of system adequacy.⁴¹ System adequacy is used to make reference to the inclusion of information related to power system security parameters, including but not limited to:

- inertia
- reactive power
- system strength.

CS Energy noted that this is particularly important given the transformation of the power system, with the market experiencing greater system security challenges. It further stated that mechanisms for valuing and procuring essential system services are currently under development to address the missing market issue. This point was also supported by the AEC.⁴²

Commission's analysis and conclusion.

The Commission considers that a definition of system adequacy is aimed at ensuring that information about power system security conditions is included in ST PASA. The Commission agrees that system security information is becoming increasingly important as the market transitions away from traditional operating conditions. However, the Commission considers that the final rule addresses the issues raised by CS Energy without needing to formally define system adequacy.

Firstly, ST PASA already includes some information relating to system security. AEMO has indicated that the ST PASA model currently incorporates voltage constraints as part of the constraint set. Furthermore, clause 3.7.3(h)(5)(i) requires AEMO to identify and quantify any projected violations of power system security in ST PASA.

Secondly, the objective for PASA in clause 3.7.1(b) states that, among other things, PASA is a comprehensive program of information collection, analysis and disclosure of medium term and short term power system security prospects. The Commission considers that this objective captures the main thrust of the proposed definition of system adequacy. The Commission also notes that as part of the ST PASA replacement project, AEMO has indicated that one key focus of the project is to provide information regarding inertia and system strength issues.⁴³

Finally, there are also a number of projects that either have been completed, are underway or are expected to be undertaken that address the important issue of ensuring that the

41 Submission to the draft determination: CS Energy, pp 1-2.

42 Submission to the draft determination: AEC, p. 1.

43 AEMO, *ST PASA Replacement Project - Industry update (Nov 21)*, November 2021, p. 25

system remains secure as higher penetrations of non-synchronous generation come online. These include, but are not limited to:

- the *Efficient management of system strength on the power system* rule change which delivered an evolved framework for system strength in investment timeframes in the NEM.⁴⁴
- the *Operational security mechanism* rule change which is considering options for the scheduling and provision of essential system services to ensure the power system remains secure.⁴⁵

The Commission considers that the final rule enables AEMO to make any necessary or appropriate changes to ST PASA to reflect the ongoing development of the regulatory framework relating to system security.

As noted in section 3.2.3 above, the final rule enables participants to work with AEMO during consultation on the ST PASA procedures to include any additional information, including information relating to system security, that may be beneficial for the market.

Transparency of forecasting accuracy.

Stakeholder views on the draft determination.

Shell Energy proposed the inclusion of reporting requirements for AEMO that would see it regularly review the accuracy of ST PASA forecasts during any declared Lack of Reserve (LOR) period.⁴⁶

Commission's analysis and conclusion.

The Commission agrees that transparency around pre-dispatch and ST PASA forecast accuracy is important in the market. However, the Commission does not consider it is necessary to make changes to the final rule to provide this transparency. Transparency will be provided through the combination of the information already being available and the final rule obligating AEMO to consult on, and publish information on, the processes and methodologies used to produce the ST PASA information.

As part of the existing LOR reporting framework set out in clause 4.8.4B of the NER, the information requested by Shell energy is already made publicly available. The LOR framework quarterly reports currently provide:⁴⁷

- a record of all LOR conditions declared in the relevant quarter
- information regarding:
 - the time at which the declaration was issued and the period it was issued for
 - the reserve requirement as set under the reserve level declaration guidelines (RLDG)

44 AEMC, *Efficient management of system strength on the power system*, <https://www.aemc.gov.au/rule-changes/efficient-management-system-strength-power-system>.

45 AEMC, *Operational security mechanism*, <https://www.aemc.gov.au/rule-changes/operational-security-mechanism>.

46 Submission to the draft determination: Shell Energy, p. 2.

47 AEMO, *NEM Lack of Reserve Framework Quarterly Reports*, <https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/system-operations/power-system-operation/nem-lack-of-reserve-framework-quarterly-reports>

- the forecast available reserves at the time of the LOR being declared.

AEMO also publishes the results of all ST PASA and dispatch runs, which enables participants and AEMO to compare the forecast conditions to the conditions that actually occurred in the market in real time.⁴⁸

The final rule obligates AEMO to develop and publish the ST PASA procedures, which include, among other things, the processes or methodologies AEMO will apply to produce the ST PASA information. The Commission expects that demand forecasting methodologies will be included in the information that is published. These procedures will also be consulted on with participants under the full *Rules consultation procedures*. Further to this, AEMO has indicated additional workshops will be undertaken prior to the formal consultation process, with one of the key topics focusing on demand forecasting, uncertainty margins and confidence levels. The Commission therefore considers that the final rule, as well as the upcoming consultation process being undertaken by AEMO, will provide transparency regarding the processes undertaken to produce the demand forecasts in ST PASA.

AEMO has also noted that it will be updating and consulting on the RLDG, as well as the Reliability Standard Implementation Guidelines (RSIG) as part of the ST PASA replacement project. The Commission considers that any changes to the LOR and RERT reporting that are required following the introduction of the new ST PASA system should seek to enable improvement of forecasting accuracy over time.

Risk of reliability at all costs approach.

Stakeholder views on the draft determination.

Iberdrola Australia argued that relaxations within the NER to allow AEMO to meet the ST PASA objective via a principles-based approach will afford AEMO greater flexibility to adjust methodologies around the ST PASA formulation through time. It was concerned that the relaxation will allow AEMO greater license to operate the market in an inefficient manner if system reliability is prioritised at all costs. Iberdrola suggested that AEMO should not be expected to make determinations around what is or isn't in the long-term interests of consumers, which would be effectively imposed on AEMO by moving away from clear NER requirements as they exist now. It suggested that an independent oversight function should be granted to the Reliability Panel to provide certainty to AEMO that its decisions are consistent with the expectations of consumers and the broader industry.⁴⁹

Commission's analysis and conclusion.

The Commission's position is that any risks associated with the LOR and RERT frameworks can be mitigated by the final rule and the existing frameworks in the NER.⁵⁰ AEMO has noted that as part of the consultation on the ST PASA replacement project, any changes to the LOR framework will be part of consultation with participants.

48 AEMO, *MMS Data Model Report*, https://visualisations.aemo.com.au/aemo/di-help/Content/Data_Model/MMS_Data_Model_Report_51.pdf

49 Submission to the draft determination: Iberdrola Australia, pp. 1-2.

50 AEMC, *Updating Short Term PASA*, draft determination, pp. 18, 38-39.

4 COMBINATION OF PD PASA AND ST PASA

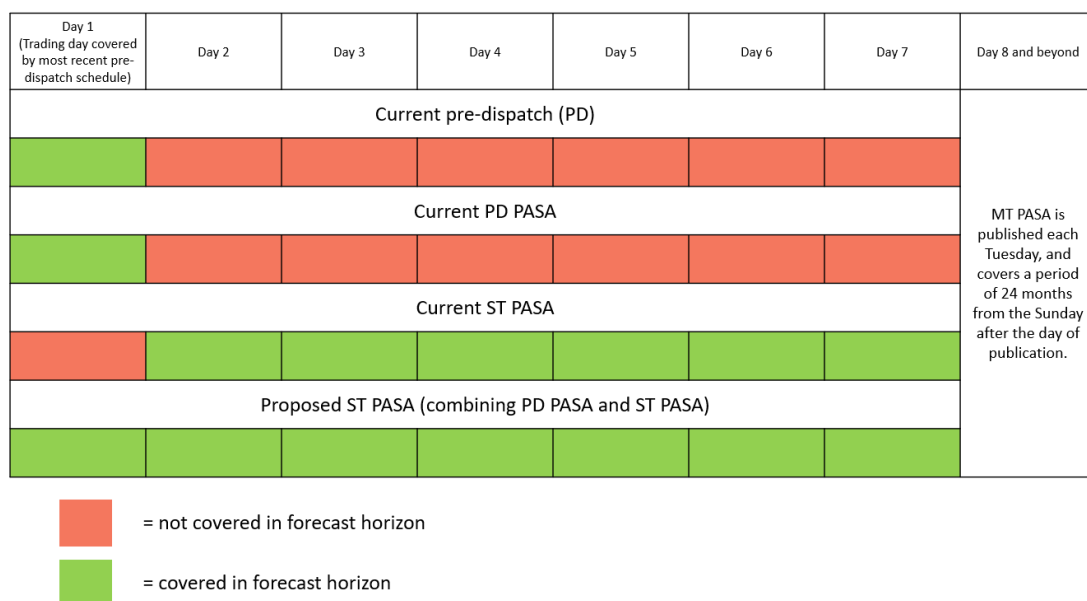
This chapter discusses stakeholder feedback and presents the Commission’s analysis and conclusions regarding AEMO’s proposal to specify that ST PASA covers the next seven days. In effect, ST PASA would subsume and include the PD PASA forecast horizon.

4.1 Rule change and draft determination

In its rule change request, AEMO noted that, in practice, it publishes PD PASA in addition to ST PASA.⁵¹ As shown in Figure 4.1, PD PASA covers the pre-dispatch horizon. PD PASA and ST PASA collectively cover a seven-day period.

The key difference between pre-dispatch and PD PASA is that they are run using different models and incorporate some different information. Pre-dispatch includes information about prices, whereas PD PASA does not.⁵²

Figure 4.1: AEMO’s proposed changes to the ST PASA timeframes



Source: AEMC

Note: Clause 3.7.2 of the NER governs the MT PASA process. Clause 3.7.2(a) states that the medium term PASA covers the 24-month period (or, in the case of sub-paragraphs (d)(1)(i) and (f)(5) the 36-month period), commencing from the Sunday after the day of publication with daily resolution. The Spot Market Operations Timetable specifies that MT PASA is published each Tuesday. This means that in practice, the ST PASA will overlap with the information in the MT PASA for between one and six days between MT PASA publications.

The Commission considered in the draft determination that there are a number of benefits associated with combining PD PASA and ST PASA.⁵³ These benefits include:

51 AEMC, *Updating Short Term PASA*, rule change request, 29 June 2021, p. 8.

52 Under clause 3.8.20 of the NER, AEMO must run pre-dispatch with the resolution of one 30-minute period.

53 AEMC, *Updating Short Term PASA*, draft determination, 2 December 2021, p.21.

- removing inconsistency between what AEMO publishes in practice and what is in the rules
- improving transparency and governance of the PD PASA process.

The Commission's draft decision was to combine PD PASA and ST PASA.

4.2 Stakeholder views on the draft determination

Stakeholders had mixed views regarding the draft decision to combine PD PASA and ST PASA.

Origin Energy supported combining PD PASA and ST PASA for a seven-day outlook.⁵⁴

Shell Energy noted that the combination of PD PASA and ST PASA potentially introduces onerous requirements on participants and may limit the amount of information available to the market.⁵⁵ It noted that the combination of PD PASA and ST PASA:

- may result in the need for five-minute availability data to be provided for a full seven-day period
- may lead to a small decrease in the extent of the timeframe covered by PD PASA and ST PASA individually.

CS Energy noted its concern about the cumulative detrimental impact on market participants from the proposed changes to PD PASA and ST PASA frequency.⁵⁶ CS Energy noted:

- as the market transformation continues, the currency and frequency of publication of ST PASA information will become even more important
- further consultation with users of PD PASA and ST PASA is required to ensure that there is no loss of market information or the utility of that information from the proposed approach to ST PASA.

4.3 Analysis and final decision

The Commission considers that, on balance, new information provided by stakeholders opposing the draft determination to specify that ST PASA covers the next seven days (effectively combining PD PASA and ST PASA) does not warrant a significant change in the draft decision.

The final rule obligates AEMO to consult with participants using the *Rules consultation procedures* regarding the information that is published in ST PASA.⁵⁷ This process will enable stakeholders to work with AEMO to decide on information that is valuable to the market in the ST PASA timeframe. This will address the risk that any information currently made available to the market will no longer be published.

The Commission understands that information for ST PASA is already provided by participants in five-minute intervals. This change was made during the implementation of five-minute

⁵⁴ Submission to the draft determination: Origin Energy, p. 1.

⁵⁵ Submission to the draft determination: Shell Energy, p. 2.

⁵⁶ Submission to the draft determination: CS Energy, pp. 2-3.

⁵⁷ See clause 3.7.3 (d) in the final rule.

settlement.⁵⁸ Participants have indicated to the AEMC that bids are still effectively submitted in 30-minute blocks, with the same availability being entered for every five-minute interval in the 30-minute block. As noted in Chapter 3.2.3, AEMO has stated that it has no present intent to change the ST PASA reporting resolution for the ST PASA procedures.⁵⁹

The final rule makes no changes to the existing NER in relation to timing of publication of ST PASA. Under the current NER:

- Clause 3.7.3 (a) states that ST PASA must be published at least daily by AEMO.
- PD PASA is not currently included in the NER.

AEMO has indicated to the AEMC that it does not intend to significantly change the publication time of ST PASA compared to the status quo. AEMO has indicated that the specific timing will need to be considered throughout the ST PASA redevelopment project.

The Commission has made a minor change to clause 3.7.3(b) in the draft rule. This change is to clarify that the combined PD PASA and ST PASA will cover the same forecasting horizon as these processes do under the status quo. Clause 3.7.3 (b) specifies that ST PASA covers each 30-minute period (or such shorter period as determined by AEMO) at least the seven trading days from and including the day of publication.⁶⁰ The result of this change is illustrated in figure 4.2.

Figure 4.2: Clarification of ST PASA timeframes



Source: Evolution Energy Advisory on behalf of AEMO.

Note: The draft rule did not intend to alter the timeframes of ST PASA. This has been clarified in the final rule.

58 AEMO, 5MS Procedures Working Group, 2. Dispatch and Systems Focus Group, p. 15, <https://aemo.com.au/en/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/5ms-procedures-working-group-pwg>

59 Submission to the draft determination: AEMO, p. 4.

60 See clause 3.7.3 (b) in the final rule.

5 PUBLICATION OF DUID INFORMATION

This chapter discusses stakeholder feedback and presents the Commission’s analysis and conclusions regarding AEMO’s proposal to publish forecasts of:

- available capacity for individual scheduled generating plant and wholesale demand response units; and
- PASA availability for individual scheduled generating units, scheduled loads, scheduled network services and wholesale demand response units.

5.1 Rule change request and draft determination

The current rules specify that AEMO must publish aggregate generating unit availability and PASA availability for each region.⁶¹ AEMO raised a number of issues with these arrangements, including:⁶²

- information asymmetry between participants with large generation portfolios and participants with small generation portfolios
- issues regarding generator availability and power system security
- inefficient scheduling decisions made by participants.

To address these issues, AEMO has proposed that the Rules include a requirement to publish generator availability information on a DUID, or per unit level. AEMO noted that providing all market participants with this information is likely to improve the decision-making of smaller market participants with respect to the scheduling of outages.⁶³

AEMO suggested that the provision of this information may have benefits in relation to power system security.⁶⁴ AEMO stated that:

- Due to increasing penetration of VRE generation in the NEM, there are increasing risks to power system security relating to inertia and system strength shortfalls. These risks are sometimes heightened during planned network outages.
- Management of these issues requires either certain individual units, a combination of certain synchronous generating units or other synchronous plant to be in service during the planned network outage.
- Transparency of generating unit availability will allow network service providers (NSP) to better coordinate their outages with other market participants.

In the draft determination, the Commission considered that there were a number of benefits associated with publishing this information.⁶⁵ These include:

- improved transparency regarding the technology types that make up the availability forecast in ST PASA

61 See clause 3.7.3(h) of the NER.

62 AEMC, *Updating Short Term PASA*, rule change request, 29 June 2021, p. 8.

63 AEMC, *Updating Short Term PASA*, rule change request, 29 June 2021, p. 8.

64 AEMC, *Updating Short Term PASA*, rule change request, 29 June 2021, p. 8.

65 AEMC, *Updating Short Term PASA*, draft determination, 2 December 2021, pp. 25-26.

- improved transparency of the treatment of energy constrained resources in the availability forecast
- improved transparency regarding the potential impact of constraints on market conditions
- improved scheduling of outages between participants and transmission network service providers (TNSP)
- reducing the information asymmetry between participants with large generation portfolios and participants with smaller generation portfolios.

The Commission also noted that there were some costs and risks associated with publishing this information.⁶⁶ The publication of this information may increase the possibility of collusion between generators due to increased transparency of availability information. It may also create a greater risk of a generator exploiting a position of market power due to greater visibility of the actions of competing generators.

In the draft determination, the Commission considered that the benefits of publishing this information would outweigh the potential costs and risks.⁶⁷

5.2 Stakeholder views on the draft determination

Stakeholders were mostly supportive of publishing generator availability information on a per unit, or DUID level.⁶⁸

Iberdrola Australia argued that there are limited benefits to publishing this information, relative to the potential risks to competition in the NEM. Iberdrola concurred with the AER's submission to the consultation paper that increased near real-time insight into the merit order/market curve will provide greatest benefit to those with market power. It suggested that the AEMC needed to consider both short-term and long-term pricing impacts on competition in the market.⁶⁹

5.3 Analysis and final decision

The Commission considers that, on balance, the information raised by Iberdrola does not warrant a change to the draft decision. While there may be some risks associated with increased market power, based on the analysis in the draft determination the Commission continues to consider that these risks do not outweigh the benefits of additional transparency being provided to the market.⁷⁰

The Commission's final rule remains the same as the draft rule, which is for AEMO to publish:⁷¹

66 AEMC, *Updating Short Term PASA*, draft determination, 2 December 2021, p. 26.

67 AEMC, *Updating Short Term PASA*, draft determination, 2 December 2021, p. 27.

68 Submissions to the draft determination: CS Energy, p. 3; Shell Energy, p. 2; Australian Energy Council, p. 1; Hydro Tasmania, p. 1; Origin Energy, p. 1.

69 Submission to the draft determination: Iberdrola Australia, pp. 2-3.

70 AEMC, *Updating Short Term PASA*, draft determination, pp. 25-27

71 See clause 3.7.3(k)(2) and (3) in the final rule. Note that further changes will be made to clauses 3.7.3(h)(1) and (2) following the commencement of the *Integrating Energy Storage Systems into the NEM* (IESS) rule change. These changes will include bi-directional units, a new participant category created in the IESS rule change.

- available capacity for individual scheduled generating plant and wholesale demand response units; and
- PASA availability for individual scheduled generating units, scheduled loads, scheduled network services and wholesale demand response units.

6 CHANGING DEFINITIONS OF PASA AVAILABILITY AND ENERGY CONSTRAINT

This chapter discusses stakeholder feedback and presents the Commission’s analysis and conclusions regarding AEMO’s proposal to change the definitions of PASA availability and energy constraint in the NER.

6.1 Rule change and draft determination

AEMO has proposed to make some consequential changes to two definitions in the NER as part of this rule change request.⁷² The proposed changes aim to better align the definitions with the principles-based approach to ST PASA by removing unnecessary prescription in the NER and allowing for the provision of relevant information to the market.

Energy constraint

The current definition of energy constraint in the NER is

A limitation on the ability of a generating unit or group of generating units to generate active power due to the restrictions in the availability of fuel or other necessary expendable resources such as, but not limited to, gas, coal, or water for operating turbines or cooling.

AEMO’s proposed definition of energy constraint is

A limitation on the capability of a scheduled generating unit or scheduled load to produce or consume energy in a specified period at the level that would occur if the limitation was removed.

In the draft determination, the Commission considered that there were a number of issues related to the current definition of energy constraint.⁷³ These include:

- the definition of energy constraint unnecessarily refers to fuel types
- the current definition doesn’t refer to constraints on load when consuming energy.

The Commission’s decision in the draft determination was to change the definition of energy constraint to:⁷⁴

A limitation on the quantity of energy (expressed in MWh) that a scheduled generating unit or scheduled load can produce or consume in a specified period.

The Commission considered that because energy constraint is used in different parts of the NER, with different applicable time periods, it is not appropriate to define a time period in the

⁷² AEMC, *Updating Short Term PASA*, rule change request, 29 June 2021, pp. 23-24.

⁷³ AEMC, *Updating Short Term PASA*, draft determination, 2 December 2021, p. 30.

⁷⁴ AEMC, *Updating Short Term PASA*, draft determination, p. 31.

NER.⁷⁵ Instead, the time period for energy constraints in the context of ST PASA should be specified by AEMO in the ST PASA procedures in consultation with stakeholders. By doing so:

- AEMO will have flexibility to apply energy constraints in the most effective manner regarding ST PASA
- there will be transparency in the ST PASA process, providing participants with certainty about how energy constraints are applied in the ST PASA process.

PASA availability

The current definition of PASA availability is

The physical plant capability (taking ambient weather conditions into account in the manner described in the procedure described under clause 3.7.3(g)) of a scheduled generating unit, scheduled load or scheduled network service available in a particular period, including any physical plant capability that can be made available during that period, on 24 hours' notice.

AEMO's proposed definition of PASA availability is

For a scheduled generating unit, scheduled load or scheduled network service in a given period, its available physical plant capability (taking ambient weather conditions into account) and any additional physical plant capability that can be made available during that period within a given recall period in accordance with the reliability standard implementation guidelines.

For a wholesale demand response unit in a given period, it is the maximum available MW wholesale demand response, including any wholesale demand response that can be made available during that period within a given recall period in accordance with the reliability standard implementation guidelines.

In the draft determination, the Commission considered that the current definition of PASA availability arbitrarily defines the recall period as 24 hours. In doing so, the current definition limits the information available to the market in relation to the recall times of different plant. The Commission considered that the current definition of PASA availability can be improved and that as a result, better reliability outcomes could be achieved.⁷⁶ The Commission's draft decision was therefore to change the definition of PASA availability to:

For a scheduled generating unit, scheduled load or scheduled network service in a given period, its available physical plant capability (taking ambient weather conditions into account) and any additional physical plant capability that can be made available during that period within a given recall period in accordance with the reliability standard implementation guidelines.

For a wholesale demand response unit in a given period, it is the maximum available

⁷⁵ See clauses 3.7.3, 3.7C and 4.4.2B of the NER, respectively.

⁷⁶ AEMC, *Updating Short Term PASA*, draft determination, 2 December 2021, pp. 31-21.

MW wholesale demand response, including any wholesale demand response that can be made available during that period within a given recall period in accordance with the reliability standard implementation guidelines.

6.2 Stakeholder feedback to the draft determination

Energy constraint

Shell Energy noted that the proposed definition of energy constraint is too broad.⁷⁷ Shell has suggested that:

- it introduces a risk that participants may need to provide energy limitation data that may not be able to be calculated for the ST PASA purposes at a highly granular level
- there is no advantage with regards to market information changing from the current trading day based energy limitation framework.

PASA availability

Some stakeholders were supportive of changing the definition of PASA availability.⁷⁸

- Shell noted that it may be beneficial to allow for different specifications in ST PASA and MT PASA.
- Alinta noted that it recommends that AEMO consider whether the existing system that participants use to submit recall times would still be required.

Origin reiterated concerns around the definition of PASA availability leading to onerous and complex requirements being imposed on participants. It does not support introducing a requirement for generators to provide distinct PASA availability for multiple AEMO-determined recall times per trading interval. Origin also noted that returning units to service involves uncertainty, and that this should be factored into any compliance obligations.⁷⁹

Snowy Hydro noted that it does not believe the benefit in knowing the initial recall time for an outage outweighs the associated costs with requiring participants to bid a changing recall time through each trading interval. It suggests that further consultation is needed with participants to redefine the current 24-hour time frame.⁸⁰

6.3 Analysis and final decision

The Commission considers that, on balance, new information provided by stakeholders opposing the draft determination to change the definitions of PASA availability and energy constraint does not warrant a change in the draft decision.

Energy constraint

The more preferable definition of energy constraint is:

⁷⁷ Submission to the draft determination: Shell Energy, pp. 2-3.

⁷⁸ Submissions to the draft determination: Alinta Energy, p. 1; Shell Energy, p. 2.

⁷⁹ Submission to the draft determination: Origin Energy, p. 1.

⁸⁰ Submission to the draft determination: Snowy Hydro, p. 2.

A limitation on the quantity of energy (expressed in MWh) that a scheduled generating unit or scheduled load can produce or consume in a specified period.

As outlined in the draft determination, the Commission considers that it is not appropriate to define time period in which the term energy constraint applies in the definition.⁸¹ The term energy constraint is used throughout the NER and is applied to different time periods. The Commission considers that the time period that applies to energy constraints should be defined in the ST PASA procedures. By doing so:

- AEMO will have flexibility to apply energy constraints in the most effective manner regarding ST PASA
- there will be transparency in the ST PASA process, providing participants with certainty about how energy constraints are applied in the ST PASA process
- any changes to the time period that applies to energy constraints in ST PASA will be subject to the *Rules consultation procedures*.

AEMO has stated that it does not intend to move away from the current daily energy constraint framework in the short-term. It has indicated that this may be appropriate in the future. The Commission's final definition will enable AEMO to make any appropriate changes in consultation with stakeholders.

PASA availability

The more preferable definition of energy constraint is:

For a scheduled generating unit, scheduled load or scheduled network service in a given period, its available physical plant capability (taking ambient weather conditions into account) and any additional physical plant capability that can be made available during that period within a given recall period in accordance with the reliability standard implementation guidelines.

For a wholesale demand response unit in a given period, it is the maximum available MW wholesale demand response, including any wholesale demand response that can be made available during that period within a given recall period in accordance with the reliability standard implementation guidelines.

The Commission considers that this definition will enable more relevant information to be used by AEMO to provide a better indication of likely future market conditions. Instead of a blanket 24-hour recall time, AEMO and market participants will have greater visibility of the actual recall time of plant. The Commission considers that this information will likely improve reliability and security outcomes.

The Commission is aware that there concerns with the specific implementation of this change. This change will be a key focus of AEMO's consultation on the ST PASA procedures. Furthermore, AEMO has indicated that it is not intending to make changes that will place onerous requirements on participants.

⁸¹ AEMC, *Updating Short Term PASA*, draft determination, p. 31.

7 IMPLEMENTATION

The Commission has changed the commencement date from quarter three 2023 in the draft rule to 31 July 2025 in the final rule.

This change is based on advice from AEMO that following a more detailed assessment, there are a number of complex issues that require additional time to implement the final rule.⁸²

These issues include:

- The complexity in moving from the current regional model to a granular nodal model, and the time associated with vendors providing the necessary products.
- The need to use the same resources on multiple concurrent projects, including the implementation of the *Integrating Energy Storage Systems into the NEM* rule change.
- The need for industry testing at various stages of the project.

Since receiving this information from AEMO (which is published on the Commission's website), the Commission and AEMO have both engaged with stakeholders regarding this change. The Commission notes that no stakeholders have raised issues with the change to the implementation date.

Under the final rule, the changes to ST PASA will be implemented by 31 July 2025. The final rule also includes a transitional arrangement that obligates AEMO to publish the ST PASA procedures by 30 April 2025, three months before the commencement of the final rule. This will provide industry time to comply with the ST PASA procedures before they come in to effect.

The final rule also includes a transitional arrangement that allows AEMO to begin consulting on the ST PASA procedures as defined in the new rules two weeks following the publication of the final rule.

Finally, there is a transitional arrangement that changes to clause 3.7.3(h)(5)(v) will commence alongside the *Integrating Energy Storage Systems into the NEM* rule change on 1 July 2024.⁸³ This is because both the ST PASA rule and the *Integrating Energy Storage Systems into the NEM* rule make a change to this clause. Rather than having a change commencing in 2024 and a second, enduring change commencing in 2025, bringing the change to this provision forward to 2024 will reduce overall implementation costs and complexity for AEMO and stakeholders.

⁸² Submission to the draft determination: AEMO (received 14 March 2022), p. 1.

⁸³ See Schedule 2 in the final rule.

ABBREVIATIONS

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Commission	See AEMC
DUID	Dispatchable unit identifier
LOR	Lack of reserves
MT PASA	Medium term projected assessment of system adequacy
NEL	National Electricity Law
NEO	National electricity objective
NSP	Network service provider
PASA	Projected assessment of system adequacy
PD PASA	Pre-dispatch projected assessment of system adequacy
RLDG	Reserve level declaration guidelines
RERT	Reliability and Emergency Reserve Trader
RSIG	Reliability Standard Implementation Guidelines
ST PASA	Short term projected assessment of system adequacy
TNSP	Transmission network service provider

A SUMMARY OF OTHER ISSUES RAISED IN SUBMISSIONS

This appendix sets out the issues raised in the first round of consultation on this rule change request and the AEMC’s response to each issue. If an issue raised in a submission has been discussed in the main body of this document, it has not been included in this table.

Table A.1: Summary of other issues raised in submissions

STAKEHOLDER	ISSUE	AEMC RESPONSE
Snowy Hydro	Need to define what minor or administrative changes are.	Minor or administrative change is a commonly used term that refers to changes such as addressing typographical and formatting errors and other non-material changes. The Commission therefore considers that there is no need to define it in the rules.
Snowy Hydro	The benefits and costs (of publishing DUID availability information) assessment by the Commission makes no mention of the inadequate transparency requirements for non-scheduled customers, who are not required to notify the market of their intentions.	The Commission has previously considered the threshold at which market participants must provide certain information to AEMO. The Commission did not make a rule, deciding that the existing arrangements were sufficient. For more information, see the <i>Non-scheduled generation and load in central dispatch</i> rule change.
Shell Energy	Use of the term Registered Participant may place additional complex requirements on participants that currently have no obligations.	The rule drafting in clause 3.7.3(h) states that each relevant registered participant must submit information to AEMO. The relevant participants are specified in sub-paragraphs (1) and (2).
Shell Energy	Shell would prefer that the Rules require AEMO to conduct a formal cost-benefit analysis prior to making any additional information requests from market participants.	The Commission does not consider that it is appropriate to conduct a formal cost-benefit analysis on every proposed change.
Hydro Tasmania	To ensure maximum visibility and utility for market participants, Hydro Tasmania proposed modifying clause 3.7.3(c) to include publication	The Commission encourages AEMO to publish the SCED mathematical formulation if it is legally able to do so.

STAKEHOLDER	ISSUE	AEMC RESPONSE
	of SCED optimisation, including how any uncertainty margins are calculated.	
EnergyAustralia	Rules recognise that AEMO must give due consideration to issues raised by stakeholders.	Clause 8.9(f) and (j) of the NER states that the consulting party must consider all valid submissions.

B LEGAL REQUIREMENTS UNDER THE NEL

This appendix sets out the relevant legal requirements under the NEL for the AEMC to make this final rule determination.

B.1 Final rule determination

In accordance with s. 102 of the NEL the Commission has made this final rule determination in relation to the rule proposed by AEMO.

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

A copy of the more preferable final rule is attached to and published with this final rule determination. Its key features are described in section 2.4.

B.2 Power to make the rule

The Commission is satisfied that the more preferable final rule falls within the subject matter about which the Commission may make rules. The more preferable final rule falls within s. 34 of the NEL as it relates to the operation of the national electricity market; the operation of the national electricity system for the purposes of safety, security and reliability of that system; and the activities of persons (including Registered Participants) participating in the national electricity market or involved in the operation of the national electricity system. (s. 34(1)(a)(i), (ii) and (iii)). Further, the more preferable final rule falls within the matters set out in Schedule 1 to the NEL as it relates to the operation of generating systems, transmission systems, distribution systems or other facilities.

B.3 Commission's considerations

In assessing the rule change request the Commission considered:

- its powers under the NEL to make the rule
- the rule change request
- submissions received during first round consultation
- the Commission's analysis as to the ways in which the proposed rule will or is likely to, contribute to the NEO.

There is no relevant Ministerial Council on Energy (MCE) statement of policy principles for this rule change request.⁸⁴

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 Australian Energy Market Operator (AEMO)'s declared network functions.⁸⁵ The more preferable final

⁸⁴ Under s. 33 of the NEL the AEMC must have regard to any relevant MCE statement of policy principles in making a rule. The MCE is referenced in the AEMC's governing legislation and is a legally enduring body comprising the Federal, State and Territory Ministers responsible for energy. On 1 July 2011, the MCE was amalgamated with the Ministerial Council on Mineral and Petroleum Resources. The amalgamated council is now called the COAG Energy Council.

⁸⁵ Section 91(8) of the NEL.

rule is compatible with AEMO's declared network functions because it does not affect those functions at all.

B.4 Civil penalties

The Commission cannot create new civil penalty provisions. However, it may recommend to the Energy Ministers Meeting that new or existing provisions of the NER be classified as civil penalty provisions.

The Commission's more preferable final rule replaces clause 3.7.3 and modifies existing civil penalty provisions in three paragraphs within that clause. The new provisions that the Commission is recommending to the Energy Ministers Meeting as civil penalty provisions are paragraphs 3.7.3(h), (i) and (j). The new provisions reflect the content in the civil penalty provisions currently in clause 3.7.3. However, the relevant paragraphs have been simplified to reflect the principles-based approach adopted in the more preferable final rule. Sub-paragraph 3.7.3(h)(3) was also inserted to provide AEMO with more flexibility to update the information requirements in ST PASA over time. As discussed, any additional information would need to be decided on through the Rules consultation procedures.

The Commission considers that the new provisions should be classified as tier one civil penalty provisions as is currently the case with the existing civil penalty provisions in clause 3.7.3. This reflects the very serious nature of a failure to comply with the new provisions whereby power system security and reliability could be at risk. The AEMC consulted with the AER with respect to the proposed classifications for civil penalty provisions to be recommended for the final rule. The AER is supportive of the AEMC's recommendations.

The Commission's more preferable final rule also makes minor amendments to 3.8.4(c)(3) and 3.8.4(d)(2) to reflect the changes to the definition of energy constraints. Clauses 3.8.4(c) and 3.8.4(d) are civil penalty provisions. The substance of these two paragraphs has not been changed as a result of these minor amendments. The Commission considers that clauses 3.8.4(c) and 3.8.4(d) should continue to be classified as civil penalty provisions and therefore does not propose to recommend any change to their classification to the Energy Ministers Meeting.

B.5 Conduct provisions

The Commission cannot create new conduct provisions. However, it may recommend to the Energy Ministers Meeting that new or existing provisions of the NER be classified as conduct provisions.

The final rule does not amend any rules that are currently classified as conduct provisions under the NEL or National Electricity (South Australia) Regulations. The Commission does not propose to recommend to the Energy Ministers Meeting that any of the proposed amendments made by the final rule be classified as conduct provisions.