15 December 2021

Level 22
530 Collins Street
Melbourne VIC 3000

Postal Address:
GPO Box 2008
Melbourne VIC 3001

T 1300 858724
F 03 9609 8080

Ms Anna Collyer
Chair
Australian Energy Market Commission
Level 15, 60 Castlereagh Street
Sydney NSW 2000

Dear Ms Collyer,

RE: Rule Change Request – Establishing reason codes and recall times within Medium Term Projected Assessment of System Adequacy

The National Electricity Market (NEM) is rapidly transitioning to a lower-emissions generation profile, characterised by higher levels of near zero marginal cost variable renewable generation. This transition brings uncertainties and therefore challenges in maintaining system security and reliability. For example, understanding what role ageing thermal generators will play as more pressure is exerted on existing generators to retire.

Recognising such uncertainties and challenges, the Energy Security Board's (ESB) Post 2025 Market Design final recommendations to Energy Ministers identified mechanisms to deliver enhanced transparency of future generator availability. The ESB noted such mechanisms will support the orderly exit of thermal plants as they retire from the system, with improved information to market participants, jurisdictions, and other policy makers.[1] In October 2021, National Cabinet endorsed the final package of reforms as agreed by the Energy National Cabinet Reform Committee (ENCRC) in September 2021.[2]

In line with the ESB's final recommendations and National Cabinet's decision AEMO requests the AEMC consider the attached proposal to amend the National Electricity Rules (NER). The proposed rule amends clause 3.7.1 and 3.7.2 of the NER and relevant definitions providing for the reporting of a unit's status through reason codes, and associated recall times when triggered through a reason code, via AEMO's Medium-Term Projected Assessment of System Adequacy (MT PASA).

The proposed rule places a new requirement on AEMO to publish the unit's status and period in which the plant can be made available to improve the transparency of information available to

[1] Energy Security Board. Post 2025 Market Design Final Advice to Energy Ministers Part A 27 July 2021. Available here <https://esb-post2025-market-design.aemc.gov.au/32572/1629944958-post-2025-market-design-final-advice-to-energy-ministers-part-a.pdf> Last accessed 13 October 2021.

[2] Department of Industry, Science, Energy and Resources. Post-2025 market design. Available here: <https://www.energy.gov.au/government-priorities/energy-ministers/priorities/national-electricity-market-reforms/post-2025-market-design> Last accessed 03 November 2021.

market participants, jurisdictions, and market bodies. This information will allow for improved operational, market and investment decisions by all stakeholders.

Should you wish to discuss any of the matters raised in this submission, please contact Kevin Ly, on kevin.ly@aemo.com.au.

Yours sincerely

Violette Mouchaileh

Executive General Manager, Reform Delivery

cc:

Attachment A: Establishing reason codes and recall times within Medium Term Projected Assessment of System Adequacy

ATTCHMENT A: ESTABLISHING REASON CODES AND RECALL TIMES WITHIN MEDIUM-TERM PROJECTED ASSESSMENT OF SYSTEM ADEQUACY

1. Relevant Background

1.1. Energy Security Board Post-2025 Market Design Final Advice to Energy Ministers

As part of its consideration of options to bolster exit arrangements and information disclosure by participants, the ESB noted over time that the energy transition will drive further changes to plant operating regimes whereby owners of legacy thermal generation seek to reduce their overheads if low wholesale prices are expected.[3] This could include mothballing of units for prolonged periods of time and/or seasonal shutdowns or cyclical running regimes e.g., weekday/weekend, day/night.[4]

The challenges arising from these changes to plant operating regimes could include:

- Reduction in the number of units made available at specific plants during certain periods of the day or year leading to a potential lack of reserve or essential system services,
- Lack of standardised information around when generators are available to supply, and the lead time required for recall from an outage making it difficult for AEMO to effectively plan and operate the system,
- Increased complexity for the Australian Energy Regulator (AER) in assessing compliance under the current notice of closure arrangements,
- Limitations on the ability of participants to use MT PASA reporting for coordinating participant maintenance schedules, and
- Weakened investment signals for potential replacement plant if it is unclear why existing units are unavailable.

In light of these potential changes to operating regimes and their challenges, the ESB's final recommendations included amendments to obligations on generators when submitting their availabilities to generate for inclusion in AEMO's Medium-Term Projected Assessment of System Adequacy (MT PASA). Specifically, the ESB noted the following recommendations[5]:

- Establishing the reporting of a unit's status through reason codes via MT PASA in accordance with IEEE Std 762-2006 Definitions for use in reporting electric generating unit

[3] Energy Security Board. Post 2025 Market Design Options – A paper for consultation Part A. Available here <https://esb-post2025-market-design.aemc.gov.au/32572/1619564199-part-a-p2025-march-paper-esb-final-for-publication-30-april-2021.pdf> Last accessed 13 October 2021.

[4] Ibid.

[5] Energy Security Board. Post 2025 Market Design Final Advice to Energy Ministers Part B 27 July 2021. Available here <https://www.datocms-assets.com/32572/1629945809-post-2025-market-design-final-advice-to-energy-ministers-part-b.pdf> Last accessed 13 October 2021.

reliability, availability and productivity (IEEE Std 762-2006)[6], tailored to a domestic context, or equivalent, and

- Establishing the reporting of recall times via MT PASA when triggered through a reason code.

These changes were considered to provide greater transparency around when generators are available to supply, and the lead time required for recall from an outage. Further, the ESB noted this information may also be used by the AER as part of its existing monitoring functions and could inform its assessment of compliance under the current notice of closure arrangements.[7]

Stakeholders were generally supportive of the concept of increased information provision in relation to orderly exit.[8] However, many submissions to the ESB noted that additional provisions targeting mothballing and/or seasonal shutdowns could easily become onerous and a barrier to efficient operational decisions by diminishing the flexibility of participants to operate their plant in response to prevailing market dynamics.[9] Recognising these concerns the ESB noted the concept of enhancements to increased information provision targeting mothballing and/or should[10]:

- ensure any changes are sufficiently flexible to adapt to a changing environment,
- establish where possible simple, automated, and transparent means of collecting and reporting participant information, and
- avoid undue regulatory burden on participants, market bodies and jurisdictions.

The ESB considered the changes to MT PASA proposed satisfied the above criteria and that the potential benefits were likely to outweigh the additional costs and regulatory burden associated with amending AEMO and participant systems and processes as shown in Table 1.

Table 1. Recommended reform options – High Level Benefits and Costs

Recommendation	Benefits	Costs
Establish the reporting of a unit status through	• Implemented with minimal changes to NER	• Requires clear definitions of individual reason codes

[6] IEEE Std 762-2006 aims to standardise standardises terminology and indexes for reporting electric generating unit reliability, availability, and productivity performance measures. As a result, IEEE Std 762-2006 provides a methodology for the interpretation and reporting of electric generating unit performance data from various systems and to facilitate comparisons among different systems.
Available here < https://standards.ieee.org/standard/762-2006.html>

[7] Energy Security Board. Post 2025 Market Design Final Advice to Energy Ministers Part B 27 July 2021. Available here <https://www.datocms-assets.com/32572/1629945809-post-2025-market-design-final-advice-to-energy-ministers-part-b.pdf> Last accessed 13 October 2021.

[8] Ibid.

[9] Ibid.

[10] Ibid.

Recommendation	Benefits	Costs
reason codes via MT PASA	• Simple, automated, and transparent means of collecting and reporting participant information • Clear compliance obligations for participants to update immediately once decisions to change unit availability are made • International precedent for use of IEEE Std 762-2006, tailored to a domestic context • Improve information to support the AER's monitoring functions and compliance assessment	• Requires scheduled generators to submit reason codes • Additional reporting by AEMO (if not automated) • Updates required to AEMO procedures and guidelines • Anticipated low/medium implementation and ongoing costs for AEMO/participants
Establish the reporting of recall times via MT PASA when triggered through reason code	• Implemented with minimal changes to NER • Provides more granular information to all stakeholders including how existing participants availability may change if units are recalled • Avoids automated publishing of additional reliability runs, however provides for greater flexibility in modelling sensitivity analysis of real-world outcomes • Allows for submission of a range of recall times, capturing a variety of operational cases • Improve information to support the AER's monitoring functions and compliance assessment	• As above

Source: Energy Security Board. Post 2025 Market Design Final Advice to Energy Ministers Part B 27 July 2021

1.2. National Cabinet and Energy National Cabinet Reform Committee agreement and endorsement

In October 2021, the National Cabinet endorsed the final package of reforms presented by the ESB as agreed by the Energy National Cabinet Reform Committee (ENCRC) in September 2021.[11] Specifically, in response to the ESB's recommendations to amend MT PASA, the National Cabinet decision:

[11] Department of Industry, Science, Energy and Resources. Post-2025 market design. Available here: <https://www.energy.gov.au/government-priorities/energy-ministers/priorities/national-electricity-market-reforms/post-2025-market-design> Last accessed 03 November 2021.

"Agreed the ESB's recommendation, with the Australian Energy Market Operator (AEMO) to notify jurisdictions if a change in generator availability results in a breach of that jurisdiction's adopted reliability standard. Energy Ministers asked that the ESB prepare the rule change for submission to the AEMC in collaboration with Energy Senior Officials."[12]

Section 2 below outlines AEMO's proposed rule change request In line with the ESB's final recommendations and National Cabinet's decision including how participants would be required to submit a reason code and recall time through the existing MT PASA process and how this information may then be utilised.

1.3. AEMC Rule Change ERC0270: Improving transparency and extending duration of MT PASA

The MT PASA process was the subject of a recent AEMC rule change[13] which has led to improvements in the transparency of the MT PASA process itself, reductions in the asymmetry of generation availability information in the market, and the extensions to the period generation availability is published from two to three years. As part of this rule change process, the concepts of having generators provide an explanation as to why a generating unit is unavailable, as well as provide a 'recall time' when submitting an outage were proposed separately. These proposals were submitted later in the process and in response to the AEMC's draft determination. At the time of making its final determination the AEMC decided against making the proposed changes on the basis:

- The proposed changes were out of scope of the intent of the rule change request and would not provide greater transparency to the market of the MT PASA process, or its inputs and outputs; and
- There had been limited or no formal engagement on the issues due to the timing of them being raised. Also, at the time it was unclear what information generators would need to provide, and the expectations and cost of compliance.

In making its final determination the AEMC accepted:

- The provision of a 'submission reason' for planned outages may be useful information for AEMO to know and operate the system, and considers AEMO could systematically request this information from generators on a voluntary basis;[14] and

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[12] Department of Industry, Science, Energy and Resources. Summary of the final reform package and corresponding Energy Security Board recommendations. Available here: < https://www.energy.gov.au/sites/default/files/2021-10/Summary%20of%20the%20final%20reform%20package%20and%20corresponding%20Energy%20Security%20Board%20recommendations0.pdf> Last accessed 03 November 2021.

[13] AEMC. Rule Change: Improving transparency and extending duration of MT PASA. Last Accessed 21 October 2021. Available here: <https://www.aemc.gov.au/rule-changes/improving-transparency-and-extending-duration-mt-pasa>

[14] Ibid.

- The provision of a 'recall time ' for each planned outage may be useful for AEMO to know and operate the system and considers AEMO could request this information from generators on a voluntary basis.[15]

Despite the AEMC's final determination in early 2020, AEMO considers there to have been enough change in the market since to warrant re-examination of the role reason codes and recall times may play in the provision of information to market participants, market bodies and jurisdictions. For example, since early 2020 Yallourn Power Station, Mount Piper and Eraring Power Stations have all announced earlier than expected retirement dates while a unit at Torrens Island Power Station was mothballed in October 2021 with a return to service period of 6 months. In other instances, AEMO have identified a reduction in the average number of units made available at specific plants during certain periods of the year. It is anticipated that there may be further changes to operating regimes of other thermal generators in the short term as they look to compete with more economically competitive variable renewable energy (VRE) coming into the market.

1.4. AEMC Rule Change ERC0332: Updating Short Term (ST) PASA rule change

On 28 June 2021, AEMO submitted to the AEMC a rule change[16] request seeking amendment to the NER (clause 3.7.3) to:

- introduce a principles-based approach in clause 3.7.3 of the NER, with the intention of removing unnecessary prescription and non-essential detail from the NER and placing it in AEMO procedures;
- amend the ST PASA timeframe to reflect current practices;
- publish generator availability information on a per unit, or dispatchable unit identifier (DUID) level; and
- amend the definition of PASA availability.

Consistent with this rule change proposal, AEMO proposes the same amendments to the definition of *PASA availability* under the NER.[17] For reference, AEMO's updating ST PASA rule change proposed to delete the reference to the 24-hour notice period and instead provides that relevant participants should specify the capacity that can be made available within a given recall period in accordance with the Reliability Standard Implementation Guideline (RSIG).

Since the PASA availability concept is used in both ST PASA and MT PASA, AEMO's intention is to separately define the recall period for ST PASA and MT PASA in the RSIG. While this will remain at up to 24 hours for the purposes of MT PASA reporting and assessments, in line with the ESB recommendation AEMO will seek to publish additional information in relation to unit

[15] Ibid.

[16] AEMC. Rule Change: Updating Short Term PASA. Last Accessed 21 October 2021. Available here: <https://www.aemc.gov.au/rule-changes/updating-short-term-pasa>

[17] Note, AEMO has made one minor grammatical change to the definition of PASA Availability from that proposed as part of the ST PASA rule change request.

recall times when triggered through the submission of a reason code as part of the broader MT PASA process.

2. Description of the proposed rule change request

The proposed rule amends clause 3.7.1 and 3.7.2 of the NER and relevant definitions providing for the reporting of a unit's status through reason codes, and associated recall times when triggered through a reason code, via AEMO's MT PASA.

The Projected Assessment of System Adequacy (PASA) is AEMO's principal method of forecasting the adequacy of the power system to stay within the reliability standard over the next 24 months. The MT PASA covers 24 months from the Sunday after the day of publication with a daily resolution. MT PASA assesses the adequacy of expected electricity supply to meet demand across the two-year horizon through regular assessment of any projected failure to meet the reliability standard.

In order to complete these adequacy assessments, and for transparency of generator availability information, participants must submit up to date forecasts of availability to AEMO for the next 36 months, commencing from the first Sunday after the latest MT PASA assessment. These forecasts of availability form AEMO's MT PASA DUID Availability report which is published at 3 hourly intervals during each day.

As part of their submission, a participant would be required to identify from a standardised list the relevant reason code matching their availability or not. In addition, for certain reason codes such as "mothballed" in the example given below, a participant would be required to submit a recall time (days, weeks or months) relevant to their reported lack of availability. The submitted reason codes and recall times would be collected and published as part of existing MT PASA DUID availability reporting, and would supplement the forecast availabilities as reported. For clarity, AEMO is not proposing further amendments to the definition of PASA availability (beyond that which has been proposed as part of the Updating ST PASA rule proposal referenced above).[18]

The reason codes and recall times are not proposed to be included in nor alter the modelling approach for the MT PASA assessment[19], but rather to provide participants with improved information transparency to inform their decisions to recall, or plan to recall, units to address any projected reliability shortfalls. If a participant chose to make such a decision, they would then resubmit their MT PASA forecasts of availability to reflect their projected improvement in availability.

As the AEMC has previously noted, having access to this information would enable AEMO to more effectively plan and operate the system, and allow it to undertake historical analysis to understand the reasons for outages, which is not possible with the current level of information

[18] Note, AEMO has made one minor grammatical change to the definition of PASA Availability from that proposed as part of the ST PASA rule change request.

[19] That is, the MT PASA reliability run and MT PASA Loss of Load Probability Run.

provided.[20] Further, it would reduce the burden on AEMO's operational teams through streamlining the collection of such data reducing the need to respond to queries from market participants about recall times.

The figure below highlights how reason codes and recall times may be incorporated in practice leveraging at a high level those codes written into IEEE Std 762-2006 as presented by the ESB. The ESB considered a range of recall times may be accommodated in practice providing participants with sufficient flexibility to reflect their individual operational cases.

Figure 1. Reason code and recall time example

Reason code submitted by participant	Recall time required?	Additional MTPASA reporting?
Active – Available and In Service	Not applicable	No
Active – Reserve Shutdown	**Yes**	**Yes – report recall time**
In active – Planned Outage	Yes (or Not applicable)	Yes – if provided
In active – Unplanned Outage	Yes (or Not applicable)	Yes – if provided
Deactivated – Inactive Reserve	**Yes**	**Yes – report recall time**
Deactivated – Mothballed	**Yes**	**Yes – report recall time**
Deactivated - Retired	Not applicable	No

Source: Energy Security Board. Post 2025 Market Design Final Advice to Energy Ministers Part A 27 July 2021

In amending clause 3.7.1 and 3.7.2, AEMO would be required to further amend its supporting documentation including the RSIG and MT PASA Process Description, and (if necessary) the Electricity Statement of Opportunities (ESOO) & Reliability Forecast guidelines. AEMO proposes development of standardised reason codes and their implementation be captured through these guidelines and not within the body of the NER. AEMO would endeavour to complete its own consultation process allowing for stakeholder feedback on appropriate design and use of reason codes and recall times through the MT PASA process should the final rule be made.

Finally, AEMO note the National Cabinets decision includes a requirement for AEMO to notify jurisdictions if a change in generator availability results in a breach of that jurisdiction's adopted reliability standard. This is consistent with AEMO's current obligations under the NER. For example, in the event AEMO becomes aware of a significant change in generator availability in a manner that materially changes its most recent Electricity Statement of Opportunities (ESOO) clause 3.13.3A(b) of the NER requires AEMO to as soon as practicable, publish information in a descriptive form that is consistent with its ESOO and if appropriate, publish on its website an updated reliability forecast in accordance with the Reliability Forecast Guidelines. Further, AEMO are in regular discussions with jurisdictions on a range of matters including ongoing reliability and security issues. Information gathered through reason codes and recall times may assist in

[20] AEMC. Rule Change Final Determination: Improving transparency and extending duration of MT PASA. Last Accessed 21 October 2021. Available here: <https://www.aemc.gov.au/rule-changes/improving-transparency-and-extending-duration-mt-pasa>

these discussions. For these reasons AEMO do not propose further formal reporting obligations to be drafted into the NER at this time.

3. How the proposed rule contributes to the National Electricity Objective

The rule change request is intended to improve the transparency of generation availability at a time when the NEM is in transition unlike ever before. By improving the transparency, collectively market participants, market bodies and jurisdictions can ensure the right mix of resources are made available when they are needed most. It does so in a manner that provides for flexibility, automation and transparency in approach while minimising the regulatory burden on market participants and market bodies associated with changes in processes and systems.

As a result, the rule change request directly contributes the long-term interests of consumers by ensuring efficient investment in and operation of the power system minimising future reliability, safety or security of supply concerns.

4. Draft Rule

This draft is based on version 165 of the NER.

3.7.1 Administration of PASA

(a) *AEMO* must administer medium term and short term *projected assessment of system adequacy processes* to be known as *PASA*.

(b) 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 of periods up to 2 years in advance (or up to 3 years in advance, where specified).

(c) On a weekly basis *AEMO* must:

(1) collect and analyse information from all *Scheduled Generators*, *Market Customers*, *Transmission Network Service Providers* and *Market Network Service Providers* about their intentions for:

(i) *generation*, *transmission* and *market network service* maintenance scheduling;

(ii) intended *plant* availabilities, unit states and the period in which *plant* can be made available;

(iii) *energy constraints*;

(iv) other *plant* conditions which could materially impact upon *power system security* and reliability of *supply*; and

(v) significant changes to *load* forecasts previously notified to *AEMO*,

for the following 24 months in respect of subparagraphs (i), (iii), (iv) and (v), and for the following 36 months in respect of subparagraph (ii);

(2) prepare the *unconstrained intermittent generation forecasts* for the following 24 months; and

(3) following analysis and assessment of the information referred to in subparagraphs (1) and (2), *publish* information that will inform the *market* regarding forecasts of *supply* and demand.

(d) *AEMO* must use its reasonable endeavours to ensure that it publishes sufficient information to allow the *market* to operate effectively with a minimal amount of intervention by *AEMO*.

3.7.2 Medium term PASA

(a) The *medium term PASA* covers the 24 month period (or, in the case of paragraphs (d)(1)(i), (d)(1A) and (f)(5) the 36 month period), commencing from the Sunday after the *day* of publication with a daily resolution. Every week, *AEMO* must review and *publish* the outputs of the *medium term PASA* in accordance with the *timetable*.

(b) *AEMO* may publish additional updated versions of the *medium term PASA* in the event of changes which, in the judgment of *AEMO*, are materially significant.

(c) The following *medium term PASA inputs* are to be prepared by *AEMO*:

(1) forecast *load* information for each *region* which is:

(i) forecasts of the 10% probability of exceedence daily *peak load*, forecasts of the most probable daily *peak load* and forecasts of the time of the peak, on the basis of past trends, day type and special events, including all forecast *scheduled load* and other *load* except for pumped storage *loads*;

(ii) subsequently to be adjusted by an amount anticipated in the forecast as *scheduled load* by *load* bidders; and

(iii) an indicative half hourly *load* profile for each day type for each *region* for each month of the year;

(2) the capabilities of *generating units* for which formal commitments have been made for construction or installation;

(3) forecast *network constraints* known to *AEMO* at the time;

(4) an *unconstrained intermittent generation forecast* for each *semi-scheduled generating unit* for each *day*.

(d) The following *medium term PASA inputs* must be submitted by each relevant *Scheduled Generator* or *Market Participant* in accordance with the *timetable* and must represent the *Scheduled Generator's* or *Market Participant's* current intentions and best estimates:

(1) *PASA availability* of each *scheduled generating unit*, *scheduled load* or *scheduled network service* for each *day* taking into account the ambient weather conditions forecast at the time of the 10% probability of exceedence *peak load* (in the manner described in the procedure prepared under paragraph (h)):

(i) for a 36 month period in respect of each *scheduled generating unit*; and

(ii) for a 24 month period in respect of each *scheduled load* or *scheduled network service*;

(1A) in respect of each *scheduled generating unit*, the unit state for each *day*;

(2) weekly *energy constraints* applying to each *scheduled generating unit* or *scheduled load* for a 24 month period.

Note

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(e) *Network Service Providers* must provide to *AEMO* an outline of planned *network outages* in accordance with the *timetable* and provide to *AEMO* any other information on planned *network outages* that is reasonably requested by *AEMO* to assist *AEMO* to meet its obligations under paragraph (f)(6).

Note

This paragraph is classified as a tier 1 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(f) *AEMO* must prepare and *publish* the following information in respect of each *day* (unless otherwise specified in subparagraphs (1) to (6)) covered by the *medium term PASA* in accordance with clause 3.13.4(a):

(1) forecasts of the 10% probability of exceedence *peak load*, and most probable *peak load*, excluding the relevant aggregated MW allowance referred to in subparagraph (2), and adjusted to make allowance for *scheduled load*;

(1A) the maximum and minimum values of the forecasts of the 10% probability of exceedence *peak load* and the forecasts of the most probable *peak load*, prepared by *AEMO* in accordance with paragraph (c)(1);

(2) the aggregated MW allowance (if any) to be made by *AEMO* for *generation* from *non-scheduled generating systems* in each of the forecasts of the 10% probability of exceedence *peak load* and most probable *peak load* referred to in subparagraph (1);

(3) in respect of each of the forecasts of the 10% probability of exceedence *peak load* and most probable *peak load* referred to in subparagraph (1),

a value that is the sum of that forecast and the relevant aggregated MW allowance referred to in subparagraph (2);

(4) forecasts of the most probable weekly *energy* for each *region*;

(5) for a 36 month period:

(i) aggregate *generating unit PASA availability* for each *region;* and

(ii) individual *scheduled generating unit PASA availability* and unit states;

(5A) aggregate capacity for each *region* that can be *generated* continuously, calculated by adding the following categories:

(i) the capacity of *scheduled generating units* in the *region* that are able to operate at the *PASA availability*; and

(ii) the forecast *generation* of *semi-scheduled generating units* in the *region* as provided by the *unconstrained intermittent generation forecasts*;

(5B) aggregate capacity for each *region* that cannot be *generated* continuously at the *PASA availability* of the *scheduled generating units* in the *region* due to specified weekly *energy constraints*;

(5C) the adjusted maximum and minimum aggregate *scheduled generating unit PASA availability* for each *region* following adjustment for the inclusion of *Scheduled Generator* probabilistic forced outage information; and

(6) identification and quantification of:

(i) any projected *violations* of *power system security*;

(ii) any projected failure to meet the *reliability standard* as assessed in accordance with the *reliability standard implementation guidelines*;

(iii) **[Deleted]**

(iv) forecast *interconnector* transfer capabilities and the discrepancy between forecast *interconnector* transfer capabilities and the forecast capacity of the relevant *interconnector* in the absence of *outages* on the relevant *interconnector* only; and

(v) when and where *network constraints* may become binding on the *dispatch* of *generation* or *load*.

(g) For the purpose of paragraph (f) (other than subparagraphs (f)(4) and (f)(6)), *AEMO* must *publish* forecast information in a format consistent with the format of the demand information published under clause 3.13.4(x).

(h) *AEMO* must publish the procedure it uses for preparation of the *medium term PASA*.

Amended definitions

PASA availability

For a *scheduled generating unit*, *scheduled load* or *scheduled network service* in a given period, its available ~~The~~ *physical plant capability* (taking ambient weather conditions into account) ~~in the manner described in the procedure prepared under clause 3.7.2(g)) of a *scheduled generating unit*, *scheduled load* or *scheduled network service* available in a particular period~~, and any additional ~~including any~~ *physical plant capability* that can be made available during that period within a given recall period in accordance with the *reliability standard implementation guidelines*.~~, on 24 hours' notice.~~

For a *wholesale demand response unit* in a given period, its ~~the~~ maximum available MW *wholesale demand response* ~~available in a particular period~~, 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*~~, on 24 hours' notice~~

New definitions

Unit state

Means the reason for a plant's availability or otherwise including the period in which plant can be made available, as specified in the medium term process description