

Reliability Panel AEMC

## FINAL REPORT

# Energy Adequacy Assessment Projection

21 February 2013

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## **About the AEMC**

The Council of Australian Governments (COAG), through its then Ministerial Council on Energy (MCE), established the Australian Energy Market Commission (AEMC) in July 2005. In June 2011, COAG established the Standing Council on Energy and Resources (SCER) to replace the MCE. The AEMC has two main functions. We make and amend the national electricity, gas and energy retail rules, and we conduct independent reviews of the energy markets for the SCER.

## **About the AEMC Reliability Panel (Panel)**

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

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## Foreword

The National Electricity Rules (NER) requires the Reliability Panel (Panel) to undertake a review of the Energy Adequacy Assessment Projection (EAAP) provisions by March 2013. The EAAP is an information mechanism that provides analysis on the impact of energy constraints. The EAAP was developed at a time when drought conditions were having a significant impact on energy availability in the National Electricity Market (NEM). As these drought conditions have eased, this has ended up being an opportune time for conducting this review.

One of the main issues raised we considered in the draft report was whether the EAAP should be published less frequently than the current three-monthly cycle now that the droughts have passed. Although the generators that made submissions to the review considered it was of value to continue the EAAP, they thought it was no longer as important to have three-monthly updates. These generators considered that annual reports may be sufficient and AEMO could publish additional reports at its discretion if market conditions required.

We considered the proposal put forward by these generators. Weighing up the potential costs and benefits, our finding is to maintain the current three-monthly reporting cycle. Factors that were taken into consideration include that reducing the reporting cycle may increase the risk of energy constraints not being identified on a timely basis. Based on information provided by generators and AEMO, the current requirements for carrying out the EAAP functions do not appear to be overly burdensome. AEMO also advised that there are plans to upgrade the interface used by generators for the EAAP process that will further reduce the efforts required by generators. In addition, we noted the EAAP is the only source of energy constraint information and has been utilised by AEMO in other processes to manage reserve levels and carry out market forecasts. This final decision is consistent with our draft findings.

Overall, the Panel considers that the EAAP provisions have been operating well and notes that the submissions from stakeholders did not raise any other material concerns. As a result, we are not recommending any changes to the EAAP arrangements under the NER.

I am pleased to present this final report setting out the Panel's findings and considerations. I thank all the stakeholders that have participated in this review process.

Neville Henderson  
Chairman, AEMC Reliability Panel  
Commissioner, AEMC

## **Reliability Panel members**

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# 1 Introduction

Under the National Electricity Rules (NER) the Australian Energy Market Operator (AEMO) is required to publish the Energy Adequacy Assessment Projection (EAAP) on a quarterly basis. The NER also requires the Reliability Panel (Panel) to undertake a review of the rules that set out the EAAP obligations, which the Panel is now conducting. This chapter provides an introduction and background to the Panel's review and this report.

## 1.1 The EAAP

The EAAP is an information mechanism that provides analysis on the impact of energy constraints in the National Electricity Market (NEM). It examines a two year outlook of the ability of generation in the NEM to meet demand in the presence of generator energy constraints. The EAAP operates in a similar manner to the capacity projection assessments of the medium term Projected Assessment of System Adequacy (MT PASA) however the EAAP considers energy instead of capacity constraints.

AEMO is responsible for preparing and publishing the EAAP. The NER sets out the specific requirements for the EAAP including the underlying purpose and principles that apply. AEMO is also required to establish a set of guidelines to assist with the administration of the EAAP. The guidelines were developed and published by AEMO in 2009.<sup>1</sup> For the purpose of preparing the EAAP, scheduled generators are required under the NER to provide information to AEMO on a quarterly basis.

## 1.2 Development and publication of the EAAP

In undertaking the comprehensive reliability review in 2007, the Panel considered the effectiveness of the arrangements that were in place at the time to manage generation input constraints. The Panel recommended that information on energy constraints available to market participants could be improved and that this could be achieved in the form of the EAAP. The EAAP would build upon and extend the work that had been undertaken by AEMO (NEMMCO at the time) for its drought reports.

The Panel proposed a rule change to the Australian Energy Market Commission (AEMC or Commission) to add the EAAP requirements to the NER. The AEMC considered the rule change proposal and determined to make a rule to introduce the EAAP.<sup>2</sup> The AEMC considered that the EAAP would formalise and extend the drought reporting that had been carried out by AEMO as the information provided under those reports were considered useful.

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<sup>1</sup> The EAAP guidelines are published on AEMO's website.  
<http://www.aemo.com.au/en/Electricity/Market-and-Power-Systems/Development-of-Energy-Adequacy-Assessment-Projection-EAAP-Guidelines-Consultation>

<sup>2</sup> National Electricity Amendment (NEM Reliability Settings: Information Safety Net and Directions) Rule 2008 No. 6.

Additional background information on the Panel's review, the rule change and AEMO's obligations were provided in the issues paper.

### **1.3 Requirement and purpose of the review**

The NER requires the Panel to undertake a review of the operation of the EAAP rule by 31 March 2013.<sup>3</sup> The requirement for such a review was added to the NER as it was considered to be good regulatory practice and would provide the opportunity for the overall governance arrangements of the EAAP to be strengthened.

In July 2012, the AEMC issued terms of reference to the Panel for this review to be undertaken.<sup>4</sup> This review provides the opportunity to ensure that the EAAP has been achieving its intended purpose and that the ongoing cost of producing it does not outweighed the benefits.

Should the Panel conclude that the EAAP provisions should be changed, the Panel will raise a rule change request with the AEMC following the completion of this review.

### **1.4 Review process and consultation**

The Panel initiated this review with the publication of an issues paper in August 2012 to seek stakeholder views on a number of issues. Three submissions were received from: International Power GDF SUEZ Australia (IPRA), Stanwell Corporation (Stanwell) and AEMO. Issues raised in these submissions were considered by the Panel and discussed in the draft report, and also throughout this final report. The Panel published its draft report in November 2012. No submissions were received on the draft report.

A public meeting on the review was held in Sydney in February 2013 and was attended by stakeholders from a variety of organisations.

### **1.5 Structure of the report**

The remainder of this report is structured as follows:

**Chapter 2 Findings** - sets out a summary of the Panel's findings.

**Chapter 3 Analysis of issues** - sets out a detailed analysis of the factors that were considered by the Panel in undertaking this review.

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<sup>3</sup> Clause 3.7C(s) of the NER requires the Panel to undertake a review of the operation of rule 3.7C by no later than the end of the third year after the publication of the first EAAP. As AEMO published the first EAAP on 31 March 2010, the Panel must complete this review by 31 March 2013. This is a 'one-off' review under the NER; however, the AEMC could direct the Panel to undertake further reviews at any time.

<sup>4</sup> The terms of reference is published on the AEMC Reliability Panel website.

**Appendix A Summary of submissions** - provides a summary of the issues raised in submissions received on the issues paper.

## 2 Findings

This chapter sets out the Panel's findings and the factors that were taken into consideration by the Panel during this review.

### 2.1 Overview of the Panel's decision

The Panel has concluded that the current EAAP provisions under the NER are working well and there are no reasons to propose any changes to the current arrangements. In coming to this conclusion, the Panel has considered the potential on-going costs and benefits of producing the EAAP.

The Panel notes that one of the main issues raised in submissions was the frequency with which the EAAP is published. This issue is discussed in this chapter and also in Chapter 3.

In its submission on the issues paper, AEMO noted that the EAAP and the MT PASA processes assess supply capability in the NEM over a similar timeframe, though using different approaches. AEMO considered that the "probabilistic approach used in the EAAP is arguably the more direct and holistic approach to making assessments against the Reliability Standard".<sup>5</sup> Given this, AEMO noted its intention to assess the options available to rationalise the various approaches in use to place more emphasis on the probabilistic method.<sup>6</sup> The Panel notes AEMO's intentions and acknowledges AEMO's continued efforts to review and refine its operations.

### 2.2 Potential benefits and costs of the EAAP

#### *Benefits*

The EAAP was introduced at a time when drought conditions in areas throughout the NEM were having a significant impact on energy availability. It is the only source of information examining energy availability (as opposed to capacity). This information assists AEMO and participants to better manage and respond to projected shortfalls in reserve. AEMO advises that the EAAP processes have also been incorporated into other functions. The Panel notes that the EAAP provides broader benefits to the market through these other functions, which include: processes to make decisions on whether to procure reserve contracts; as the primary tool for assessing power system reliability as a part of assessing eligibility for Anticipatory Certification under the Clean Energy Act 2011; and in producing AEMO's Annual Power System Adequacy Report.<sup>7</sup>

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<sup>5</sup> AEMO, submission on the issues paper (revised), p. 2.

<sup>6</sup> *ibid*

<sup>7</sup> AEMO, submission on the issues paper, p. 1.

From advice provided by AEMO, the Panel understands that utilising the EAAP outputs has resulted in cost savings for the market by providing AEMO with a more accurate measure of potential unserved energy.

### **Costs**

The ongoing costs of the EAAP include:

- **costs to generators** - these include costs associated with undertaking modelling and analysis, and preparing data inputs to provide to AEMO; and
- **costs to AEMO** - these include costs associated with preparing data inputs, carrying out the reporting functions and reviewing reports prior to publication.

The Panel understands that the EAAP processes are largely automated. IPRA and Stanwell, who made submissions on the issues paper, indicated that it requires approximately one hour each quarter to provide inputs for the EAAP.<sup>8</sup> This does not include time that may be required by generators to undertake modelling and analysis.

AEMO advises that it plans to implement system upgrades within the next year to improve the ease with which generators provide inputs for the EAAP.<sup>9</sup>

As the NER requires, in addition to information provided by generators specifically for the EAAP, AEMO also uses information it has obtained from other registered participants as inputs to the EAAP process. Such other information includes, for example, information on the capability of the transmission network provided by transmission network service providers. However, as the information provided by these other registered participants are to be provided to AEMO under the PASA provisions in any case, the Panel considers that the EAAP provisions do not impose any additional costs on other registered participants.<sup>10</sup>

## **2.3 Analysis of benefits and costs**

Overall the Panel considers that the EAAP plays an important role by providing information on energy availability. AEMO's ability to use the EAAP outputs to assist with other processes also enhances the potential of the EAAP to provide benefits to the NEM. At this stage the Panel has not sought to specifically quantify the potential benefits. However, the Panel considers that the potential benefits will outweigh the ongoing costs of producing the EAAP because:

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<sup>8</sup> Information provided to the Panel at its request.

<sup>9</sup> AEMO, submission on the issues paper, p. 4.

<sup>10</sup> Clause 3.7.1(c) of the NER, in relation to the provisions for PASA, provides for AEMO to collect information from all scheduled generators, market customers, transmission network service providers and market network service providers. Clause 3.7C(b)(6) then provides that, in preparing the EAAP, AEMO is to take into account, where relevant, information it has received under clause 3.7.1 (and clause 3.7.2) of the NER.

- generators do not need to spend a material amount of time to prepare inputs for the EAAP and the time required could further reduce following planned AEMO system upgrades;
- although the generators may need to undertake some modelling and analysis of energy constraints in relation to preparing EAAP inputs, these modelling and analysis would likely be undertaken by businesses in any case; and
- AEMO's processes are largely automated and already incorporated into routine practices.

As raised in submissions on the issues paper, the Panel notes that currently the market is not experiencing the same level of energy availability constraint compared to when the EAAP was first introduced. Given this, IPRA and Stanwell suggested that the EAAP should be published less frequently in order to reduce the regulatory burden faced by participants. IPRA and Stanwell suggested that the frequency of the EAAP be reduced from three months to twelve months but AEMO should be allowed to publish additional EAAPs at its discretion if conditions changed.

The Panel has considered the suggestion to reduce the frequency of EAAP publications but has decided not to change the requirement for the EAAP to be published every three months. This decision was based on the overall consideration that the potential benefits of the EAAP are likely to outweigh the costs as well as other specific factors. Further discussion on this issue is outlined in Chapter 3 below.

## **2.4 National electricity objective**

The Panel has considered the national electricity objective in carrying out this review. The national electricity objective is to:

“promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to-

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system.”

The Panel considers that maintaining the three-monthly publication of the EAAP is consistent with the NEO and promotes the interests of consumers of electricity. The EAAP is a tool that may be used to manage risks in energy supply, contributing to more efficient operation and use of electricity services with respect to the overall supply of electricity. That is, the EAAP helps with improving the management of energy availability which benefits consumers by reducing the risks of electricity curtailment. Additionally the Panel considered that moving away from the current three-monthly publishing cycle could impose costs on AEMO but reduce the amount of information that would be regularly available to the market. This outcome would

not be in the interest of consumers. Additional discussion on the options considered and their costs and benefits is set out in Chapter 3.

### 3 Analysis of issues

This chapter discusses the specific issues raised in submissions on the issues paper and the Panel's considerations.

#### 3.1 Frequency of reporting

##### *Current provisions*

The NER includes a set of EAAP principles, which are set out under clause 3.7C(b), to guide the application of the EAAP requirements. One of these principles requires that AEMO must publish the EAAP every three months.<sup>11</sup>

##### *Stakeholder submissions*

In submissions on the issues paper, IPRA and Stanwell suggested that the EAAP could be published on an annual, rather than quarterly, basis given that energy constraint risks were currently reduced. To provide flexibility in the process, it was further suggested that AEMO could publish reports at other intervals at its own discretion or at the request of stakeholders.<sup>12</sup> Stanwell noted that this "would ensure that the frequency of reports could be increased in the event that AEMO identifies a real or potential energy constraint, and would enable AEMO to respond quickly to changes in energy constraints in the market".<sup>13</sup>

AEMO considered that the currently quarterly publication of the EAAP was suitable.<sup>14</sup>

##### *Panel's considerations*

The Panel agrees that, at the moment, energy is less constrained. However, the Panel does not agree that the reporting frequency of the EAAP should be reduced. In arriving at this conclusion, the potential advantages and disadvantages of amending the reporting frequency of the EAAP, and providing additional discretion to AEMO, were considered.

The Panel assessed the option where the reporting frequency of three months was removed from the NER and either replaced by a 'minimum reporting frequency of twelve months' in the NER or the NER could require AEMO to set out a minimum reporting frequency in its EAAP guidelines after consultation with stakeholders. The NER could then be further amended to provide for AEMO to publish additional EAAPs as required outside the minimum reporting frequency. This option could offer a number of advantages and disadvantages.

Advantages of reducing the reporting frequency:

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11 Clause 3.7C(b)(2) of the NER.

12 IPRA, submission on the issues paper, pp. 1-2; Stanwell, submission on the issues paper, pp. 1-2.

13 Stanwell, submission on the issues paper, pp. 1-2.

- **Flexibility** - AEMO and stakeholders would be provided with more flexibility regarding the frequency of EAAP publications. If AEMO were required to set out the minimum reporting frequency in its EAAP guidelines, future changes to the reporting frequency can be made more quickly.
- **Regulatory burden** - if the reporting frequency were reduced, it could reduce the regulatory burden faced by participants (although the materiality of the reduction may not be material, as discussed below).

Disadvantages of reducing the reporting frequency:

- **Untimely identification of constraints** - if the reporting frequency was reduced, there could be an increased risk of not identifying energy constraints in a timely manner.
- **Loss of expertise** - if the reporting functions were not carried out on a regular basis, there could be an overall loss of staff's skills and expertise. Each EAAP run could be more resource intensive compared to the current arrangements as more time could be required for staff to re-learn functions. More time may also be required to review data inputs if changes in conditions over a longer period were to be captured.
- **Increased AEMO requirements** - it may be difficult for AEMO to assess whether additional EAAP runs would be required. AEMO would be required to regularly review market conditions and potentially implement new procedures and processes, which would result in additional resources being expended by AEMO.
- **Implementation costs** - should AEMO be required to consult with stakeholders to incorporate a minimum reporting frequency into its EAAP guidelines, implementation costs to carry out this consultation would be incurred.

Although reducing the reporting frequency of the EAAP could provide some advantages, these advantages would not be outweighed by the potential disadvantages. On balance, the Panel considers that the current three-monthly reporting frequency should be maintained for the following reasons:

- **Identifying constraints on a timely basis** - the current regular reporting cycle increases the likelihood that any changes in conditions and/or operational decisions by generators are promptly captured. That is, reducing the reporting frequency could increase the risk that an energy constraint was not identified on a timely basis. Some incidents that may affect energy availability could also occur quickly. Maintaining the current reporting cycle better allows the EAAP to capture these events. Also, if regular analysis was not undertaken, there is a question of whether the requirement for ad hoc reporting could be identified in time.

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14 AEMO, submission on the issues paper, p. 4.

- **Regulatory burden / Resource requirements** - although it is of merit in principle to consider ways of reducing the regulatory burden faced by participants, reducing the frequency of publishing the EAAP may not materially reduce the regulatory burden faced by AEMO and generators. There could be a loss of expertise, resulting in each EAAP run being more resource intensive. Although AEMO would save some resources associated with producing and checking reports for publication, the amount of effort to prepare inputs may increase due to there being more information between EAAP runs to prepare. In any case, the EAAP processes have now been in place for some time and are largely automated. The current requirements also do not appear to be unnecessarily burdensome. Efforts required by generators may also reduce further after the implementation of planned AEMO system upgrades.
- **Purpose of the EAAP** - the EAAP is the only source of energy constraint forecast and analysis. AEMO also uses the EAAP in a number of other processes such as to assist with assessing reserve levels. The benefits provided by the EAAP in these areas appear to be proportional to the costs of producing these reports.

### 3.2 Future reviews of the EAAP

#### *Current provisions*

As outlined in section 1.3 above, the NER requires the Panel to undertake a one-off review of the operation of the EAAP. There are no requirements for other reviews to be undertaken on an on-going basis.

#### *Stakeholder submissions*

AEMO submitted that due to the dynamic nature of the energy industry, the EAAP provisions may require to be reviewed from time to time.<sup>15</sup>

#### *Panel's considerations*

The Panel agrees that there may be merit in undertaking future reviews of the EAAP. Given that the AEMC may direct the Panel to undertake a review at any time, the Panel will request the AEMC provide terms of reference for any future reviews as required. A rule change to introduce a requirement for regular reviews does not seem warranted at this time.

### 3.3 Non-material amendment to the NER

#### *Current provisions*

Clause 3.7C(b)(6)(B) sets out that the EAAP must take into account any relevant matters considered by AEMO in carrying out the Annual National Transmission

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<sup>15</sup> AEMO, submission on the issues paper, p. 5.

Statement (ANTS). However, the ANTS requirements were superceded by the National Transmission Network Development Plan (NTNDP) in 2009.

### *Stakeholder submissions*

AEMO supported the inclusion of appropriate and more up-to-date references in the NER.<sup>16</sup>

### *Panel's considerations*

As the ANTS provisions have been deleted from the NER and no longer apply, the Panel considers it is appropriate to change the reference under clause 3.7C(b)(6)(B).

Clause 5.6.5(c) about the ANTS review outlined the matters that were to be taken into consideration by NEMMCO as part of the ANTS review.<sup>17</sup> These matters included, among other things, the location of current national transmission flow paths, current capacities, constraints and congestion points; the forecast of the quantity of electricity which is expected to flow; projected capabilities of the existing transmission network; and relevant intra-jurisdictional developments.

The Panel considers the equivalent clause under the NTNDP provisions is clause 5.6A.2(b) (which is to be renumbered to 5.20.2(b) under ERC0131) as this clause outlines the matters that must be considered by AEMO in preparing the NTNDP.<sup>18</sup> These matters include, among other things, the quantity of electricity and constraints on the national transmission flow paths, forecasts of the quantity of electricity, projected capabilities of the national transmission grid; and relevant intra-jurisdictional developments. This clause provides for similar concepts, replacing and improving clause 5.6.5(c) which has been deleted.

It is proposed that clause 3.7C(b)(6)(B) is amended to:

“[The EAAP must take into account:] where relevant, the matters AEMO considers in, and for the purpose of, clause ~~5.6.5(c) in carrying out the ANTS review~~ 5.20.2(b) in preparing the NTNDP;”

Under the National Electricity Law (NEL), the AEMC may make 'non-material' changes to the NER without a rule change request.<sup>19</sup> The Panel considers this amendment would be non-material because:

- it is correcting an oversight; updating a reference to a clause that had been deleted; and

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<sup>16</sup> AEMO, submission on the issues paper, p. 4.

<sup>17</sup> See clause 5.6.5(c) in NER version 29, or any earlier versions.

<sup>18</sup> The AEMC rule change ERC0131 was on the distribution network planning and expansion framework. Under this rule change, various new provisions will be introduced to Chapter 5 of the NER. To provide overall clarity, a number of existing clauses are being renumbered and reorganised. Details of the rule change and the final rule are on the AEMC website [www.aemc.gov.au](http://www.aemc.gov.au).

<sup>19</sup> NEL s91(2)(b).

- the replacement reference is clearly comparable and analogous to the original clause.

The Panel will request that the AEMC include this change in its next set of minor amendments, which are made on a periodic basis. The AEMC as a matter of course will consult on any minor amendments but, if you have any comments about whether this change is non-material, the Panel welcomes any comments as a part of this review.

### **3.4 Other issues**

The issues paper sought comments on other aspects of the operation of the EAAP. These included questions on the purpose of the EAAP; the EAAP principles; the administration of the EAAP; the Generator Energy Limitation Framework; and the EAAP guidelines.

Other than the specific issues discussed throughout this report, stakeholders did not raise any material concerns on the other aspects of the EAAP provisions. The Panel's general observations are that the EAAP processes have been operating well, where reports have been published on a three-monthly basis and in accordance with the EAAP guidelines. For these reasons, the Panel does not consider any other aspect of the EAAP provisions need to be changed or updated at this time.

## Abbreviations

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
ANTS	Annual National Transmission Statement
Commission	See AEMC
EAAP	Energy Adequacy Assessment Projection
IPRA	International Power GDF SUEZ Australia
MT PASA	medium term Projected Assessment of System Adequacy
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Rules
NTNDP	National Transmission Network Development Plan
Panel	Reliability Panel
Stanwell	Stanwell Corporation

## A Summary of submissions

The consultation on the issues paper closed on 28 September 2012 and three submissions were received from: IPRA; Stanwell and AEMO. The consultation on the draft report closed on 21 December 2012 and no submissions were received.

Issues raised in the submissions on the issues paper are summarised below.

### Summary of submissions received on the issues paper

Stakeholder	Issue	Panel response
<b>Purpose of the EAAP</b>		
IPRA (p. 1)	When the EAAP was first established Australia was experiencing severe drought conditions which imposed energy limits on many generators. With the drought conditions having now passed, the EAAP information is not as important to IPRA in day to day operations as it was previously.	Comments are noted.
Stanwell (p. 1)	It is five years since the introduction of the EAAP and energy supply conditions have changed. The current market does not exhibit a level of energy constraint that could negatively impact on system reliability, and has not done so since the period of drought a number of years ago.	Comments are noted.
AEMO (p. 3)	AEMO believes the current EAAP meets the purpose set out in the NER however the EAAP can be expanded to provide more useful information. The EAAP is already used for other purposes than originally intended. AEMO believes that the EAAP has the potential to deliver further benefits by introducing suitable improvements enabling it to include scenarios that suit future requirements of the NEM.	Comments are noted.

Stakeholder	Issue	Panel response
AEMO (p. 1)	The EAAP has evolved into more than an analysis of the risk of drought upon energy availability in the NEM. It is AEMO's most frequent routine forecast of expected unserved energy derived through probabilistic simulation.	Comments are noted. The Panel also notes that, although drought conditions have eased, the EAAP does provide other information and benefits.
AEMO (p. 1)	<p>Following its introduction, the EAAP has been incorporated into the following processes:</p> <ul style="list-style-type: none"> <li>• To assist with the determination of the existence of reserve shortfalls before making decisions on procurement of reserve contracts under Reliability and Emergency Reserve Trader provisions;</li> <li>• Primary tool for assessing power system reliability as a part of assessing eligibility for Anticipatory Certification under the Clean Energy Act 2011;</li> <li>• Annual Power System Adequacy report.</li> </ul>	The Panel acknowledges the broader uses of the EAAP and the potential benefits that this could provide by acting as an additional tool for AEMO to manage reserves and develop forecasts.
AEMO (pp. 1-2)	<p>There are other opportunities to deliver more value to the NEM, by enhancing the EAAP system as required, to determine energy adequacy under additional scenarios such as:</p> <ul style="list-style-type: none"> <li>• Carbon pricing/clean energy policy related scenarios such as the retirement of generation with higher levels of pollution;</li> <li>• Impacts of the entry of significant levels of renewable technologies into the NEM;</li> <li>• Incorporating the energy limitations arising from the failures of gas supply infrastructure.</li> </ul>	Comments are noted.
<b>EAAP principles</b>		

Stakeholder	Issue	Panel response
IPRA (p. 1)	IPRA's view is that having established the processes for the EAAP, we should continue performing the EAAP even though its importance is diminished at present.	The Panel agrees that the EAAP should continue to be provided to the market.
Stanwell (p. 1)	Stanwell considers that there is merit in AEMO publishing the EAAP to ensure the market is appropriately informed about potential supply constraints with sufficient lead time to respond.	The Panel agrees that the EAAP should continue to be provided to the market.
IPRA (p. 1)	To ensure that AEMO and industry participants are not wastefully expending resources on less important processes, perhaps the EAAP principles should be changed to enable the publication of the EAAP to be varied in response to the need as assessed by AEMO. For example, given the reduced risk at present, it might be appropriate for the EAAP publication to be extended to every 12 months.	The Panel notes the comments made. Discussion on this issue is outlined in section 3.1.
Stanwell (p. 1)	The requirement for the EAAP needs to be balanced against the costs to AEMO of preparing the EAAP reports on a quarterly basis and the added regulatory burden placed upon participants.	Discussion on this issue is outlined in section 3.1.
Stanwell (pp. 1-2)	Stanwell recommends consideration is given to replacing the quarterly reporting process with an annual report during times where there are no material energy constraints in existence. To ensure there is sufficient flexibility to review the reporting arrangements over time, Stanwell recommends the Rule be amended to reflect that reporting is on an annual basis, or at other more regular intervals at the discretion of AEMO, either at its own discretion or as the result of advice from stakeholders. This would ensure that the frequency of reports could be increased in the event that AEMO identifies a real or potential energy constraint, and would enable AEMO to respond quickly to changes in energy constraints in the market.	Discussion on this issue is outlined in section 3.1.
IPRA (pp. 1-2)	If the publication frequency were to be relaxed, a further option could	Discussion on this issue is outlined in section 3.1.

Stakeholder	Issue	Panel response
	be provided to allow industry participants to request AEMO to publish ad-hoc reports in response to unexpected events or disasters.	
AEMO (p. 3)	AEMO believes the EAAP principles are still relevant. The EAAP principles are flexible. AEMO can include appropriate additional scenarios in the EAAP by amending the EAAP guidelines in consultation with participants.	Comments are noted.
AEMO (p. 3)	The quarterly publication of the EAAP is adequate, providing AEMO the flexibility of updating the EAAP when more up-to-date information is available to AEMO. Depending on the scenarios considered, publication of the EAAP on a less regular basis may be appropriate however the following factors should be given consideration in making this decision: rapid changes in operation issues; extension of the EAAP period studied according to the publication timeframe; maintaining skill levels of AEMO and generator staff.	Comments are noted. Discussion on this issue is outlined in section 3.1.
AEMO (p. 4)	AEMO believes that the quarterly publication of the EAAP is suitable giving updates of the incremental changes of energy adequacy in the NEM on a quarterly basis. The NER allows AEMO to publish the EAAP between quarters if new information becomes available. However, time taken to gather inputs and to run EAAP simulations makes the EAAP publication in between quarters difficult.	Comments are noted.
<b>Administration of the EAAP</b>		
AEMO (p. 4)	AEMO believes that an efficient system is available to exchange inputs and outputs of the EAAP with participants. AEMO has commenced a project to further improve the EAAP system which also includes improvements to the interface used by scheduled generators to submit GELF inputs.	Comments are noted.
AEMO (p. 4)	AEMO believes the provisions in the NER to administer the EAAP	Comments are noted.

Stakeholder	Issue	Panel response
	are efficient.	
<b>Generator Energy Limitation Framework</b>		
Stanwell (p. 2)	If the current quarterly reporting arrangements are to be maintained, Stanwell recommends that reporting by market participants be provided on an exceptions basis. Stanwell does not see the benefit in market participants providing a report each quarter that reiterates information previously provided to AEMO.	The Panel notes that at the moment the resources required by generators to provide EAAP inputs do not seem materially burdensome. Taking into consideration AEMO's planned system upgrades to further improve the interface used by generators for these processes, the Panel considers that existing provisions under the NER are adequate.
<b>EAAP Guidelines</b>		
AEMO (p. 4)	The factors that AEMO must include in the EAAP Guidelines are clear and sufficient. AEMO is not proposing any other areas to be included in the EAAP Guidelines.	Comments are noted.
<b>Future Panel reviews of the EAAP</b>		
AEMO (p. 5)	AEMO believes the dynamic nature of the energy industry will require review of the EAAP provisions from time to time.	Discussion on this issue is outlined in section 3.2.
<b>Other issues</b>		
AEMO (p. 4)	AEMO supports inclusion of updated and more appropriate references in the NER (such as replacing references to the Annual National Transmission Statement (ANTS) review, which has been replaced by the National Transmission Network Development Plan (NTNDP)).	Discussion on this issue is outlined in section 3.3.