Australian Energy Market Commission

REVIEW

CONSULTATION PAPER

Review of the Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events

Commissioners

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About the AEMC

The Council of Australian Governments, through its Ministerial Council on Energy (MCE), established the Australian Energy Market Commission (AEMC) in July 2005 to be the rule maker for national energy markets. The AEMC is currently responsible for rules and policy advice covering the National Electricity Market and elements of the natural gas markets. We are an independent, national body. Our key responsibilities are to consider rule change proposals, conduct energy market reviews and provide policy advice to the Ministerial Council as requested, or on AEMC initiative.

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Purpose of this Paper

The purpose of this consultation paper is to assist and facilitate stakeholder consultation to the Australian Energy Market Commission's (AEMC) Review of the Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events. The First Interim Report for the Review was provided to the Ministerial Council on Energy (MCE) in May 2009, and the Second Interim Report on 23 December 2009. Both Reports are available on the AEMC website. The Final Report will be provided to the MCE on 31 May 2010. This paper aims to provide stakeholders with:

- a high level summary of the background to the Review and the outcomes of the First and Second Interim Reports; and
- the key areas for consideration for the Review Final Report, and questions that stakeholders are encouraged to consider when preparing their submissions.

1 Background

On 28 April 2009, the AEMC was directed by the MCE to undertake a Review of the Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events.[1] The Review is to, in the context of more frequent extreme weather events (i.e. droughts, heat waves, storms, floods and bushfires):

- examine the current arrangements for maintaining the security and reliability of supply to end users of electricity and assess the capability of those arrangements to maintain adequate, secure and reliable supply;
- provide advice on the effectiveness of, and options for, cost-effective improvements to current security and reliability arrangements; and
- if appropriate, identify any cost-effective changes to the market frameworks that may be available to mitigate the frequency and severity of threats to the security and reliability of the power system.

The MCE Terms of the Reference also required the AEMC to have regard to:

- options that are proportionate;
- the value of stability and predictability in the energy market regime;
- possible benefits or lessons for the broader energy market framework from the any recommendations arising from the Review; and
- other Reviews and Rule change proposals being progressed by the AEMC and/or the Reliability Panel.

[1] http://www.aemc.gov.au/Market-Reviews/Open/Review-of-the-Effectiveness-of-NEM-Security-and-Reliability-Arrangements-in-light-of-Extreme-Weather-Events.html

The Review is to primarily focus advice on the security and reliability performance of the generation and transmission elements of the NEM that are within the national energy market framework. While the MCE Direction invited the Commission to make observations about distribution networks, it noted that matters concerning the reliability and security performance of distribution networks in the NEM (including network planning standards) are determined and monitored by jurisdictional bodies.

The MCE has noted that it does not consider that the Review will result in a fundamental revision of the electricity market design. A copy of the MCE Terms of Reference can be found at www.aemc.gov.au.

Further Reading

There are a range of Reports that are relevant to this Review, and which stakeholders should consider in conjunction with this Consultation Paper. These Reports are available at www.aemc.gov.au and include:

- The AEMC Review of the Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events Report First Interim Report (23 May 2009);
- The AEMC Review of the Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events Report Second Interim Report (18 December 2009);
- Reliability Panel - Reliability Standard and Setting Review - Draft Report (23 December 2009); and
- Reliability Panel - Reliability Standard and Setting Review - Revised ROAM Consulting Report (January 2009).

2 Progress to Date

First Interim Report

The First Interim Report for the Review was provided to the MCE on 29 May 2009[2]. This Report discussed the current arrangements in place to manage security and reliability in the NEM, and the improvements and measures that are being developed to improve the ability of the NEM to withstand extreme weather events in the future. The Report also identified a number of key areas which we considered required further investigation for the Review. These key areas related to demand and forecasting tools and information, market mechanisms, generator and technical standards and financial network incentives.

2 http://www.aemc.gov.au/Market-Reviews/Open/Review-of-the-Effectiveness-of-NEM-Security-and-Reliability-Arrangements-in-light-of-Extreme-Weather-Events.html

Second Interim Report

Following consideration of the First Interim Report, the MCE revised the existing Terms of Reference for the Review and sought a Second Interim Report on specific matters relating to the NEM reliability standard and settings[3]. This Report was provided to the MCE on 18 December 2009.[4]

The revised MCE Direction specifically required an examination of reliability forecasting, the reliability standard, and the key reliability settings. These relate specifically to the adequacy of installed generation and the inter-regional transmission network (that part of the transmission network that transports generation between regions). Therefore the advice in the Second Interim Report focussed on the generation sector in the NEM. The revised MCE Direction specifically requested information and advice on the following:

- the existing NEM reliability forecasting methodologies and outcomes;
- modelling projections of the price-reliability trade-offs of a phased increase in the NEM Market Price Cap (MPC) to a number of specified levels;
- the interpretation of the NEM reliability standard in the past and its appropriate interpretation and specification into the future;
- the feasibility of mechanisms for recognising differences in jurisdictional expectations regarding the price-reliability trade-off and delivery outcomes consistent with those expectations; and
- the appropriate roles of the MCE, the AEMC, AEMO and the Reliability Panel in policy decision-making on reliability standards and settings.

Review Final Report

The Review Final Report will present the third stage of the Commission's advice to the MCE. The Final Report will provide advice across the range of issues that have been identified to date in the Review and recommend any further changes that could be made to the existing energy market frameworks to deliver cost-effective improvements to reliability in the long term. Our recommendations will be informed by stakeholder consultation to the Review and particularly the key issues identified in this Paper. The key areas which are likely to be the focus of the Final Report are discussed below.

3 Issues for consideration

This chapter provides an overview and update of the current advice and issues identified for the Review. We outline this advice and issues across the following key areas:

- Whole of power system security and reliability;

3 The term "reliability settings" generally refers collectively to the market price cap, market floor price and the cumulative price threshold.

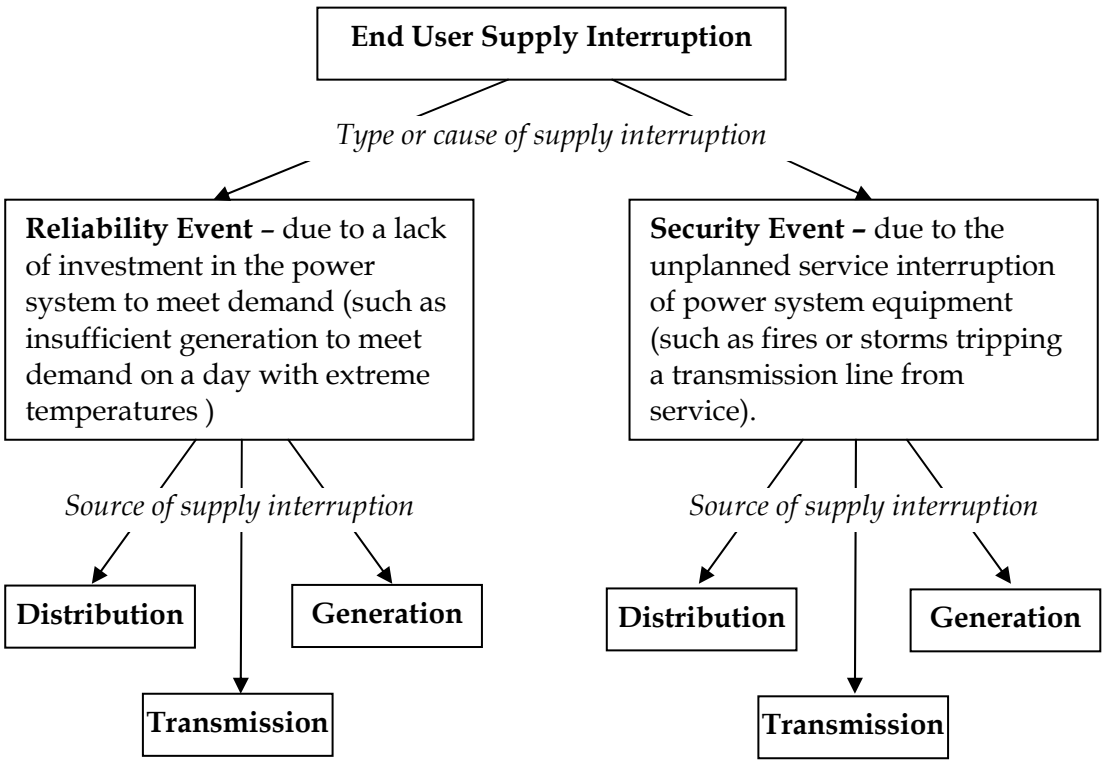
4 http://www.aemc.gov.au/Market-Reviews/Open/Review-of-the-Effectiveness-of-NEM-Security-and-Reliability-Arrangements-in-light-of-Extreme-Weather-Events.html

- Reliability standard and settings;
- Technical standards and issues;
- Governance arrangements for policy decision making on the reliability standard and settings; and
- Demand and capacity forecasting and information.

3.1 Whole of power system security and reliability

The MCE Terms of Reference for this Review required the AEMC to "examine the current arrangements for maintaining the security and reliability of supply to end users of electricity …".[5] Whilst the revised MCE Terms of Reference specifically focused our attention for the Second Interim Report on the reliability of the generation sector, for the Review Final Report we will be analysing whole of power system security and reliability and the interactions between the different stages of the electricity supply chain (i.e. generation, transmission and distribution).

Supply interruptions to end users can be categorised based on the type or cause of the interruption, and the source of the interruption, as shown below[6].



5 http://www.aemc.gov.au/Market-Reviews/Open/Review-of-the-Effectiveness-of-NEM-Security-and-Reliability-Arrangements-in-light-of-Extreme-Weather-Events.html

6 Further discussion of whole of system power reliability and reliability verses security events is given Chapter 2 of the Review Second Interim Report, pp. 12-17.

It is important to differentiate between reliability and security events because the approaches to mitigating each is quite different. Reliability events can be mitigated through measures such as refining investment signals (including those for demand side participation), modifying investment regimes, improving supply and demand forecasts. Whereas security events can be mitigated through technical and performance standards, and through compliance. Due to the difference in mitigation measures, we are only dealing with reliability issues in this section of the consultation paper. Security issues are considered in Section 3.3.

Reliable supply of electricity to end users is dependent on the adequacy of investment in all stages of the supply chain. For example, end-users would not fully benefit from a surplus in generation if there was insufficient network capacity to deliver the generation to those end users.

The nature of supply interruption varies depending on the source of the interruption. For example, a supply interruption originating in the generation or transmission sectors is likely to occur less frequently than supply interruptions originating in distribution. However, when such interruptions occur they are likely to impact a much larger number of end-users and would thus have a much larger economic impact on a state. Supply interruptions originating in the distribution sector occur more frequently, but generally only impact a small number of customers. The economic impact of supply interruptions originating in the distribution sector is generally small on a case by case basis, but the accumulative impact over a year can be greater than that of transmission and generation.

Investment for reliability in all stages of the electricity supply chain is driven by reliability standards. Currently, the reliability standards that apply in each stage of the supply chain are established independently of each other, and therefore there are no explicit linkages between each stage to ensure investment across the electricity supply chain provides optimal reliability for end-users. Despite there being no linkage between reliability standards, the investment regimes for each stage of the supply chain do interact to some extent (such as in the way that generation is taken into account in transmission planning). There is also a degree of substitutability between each stage of the supply chain (e.g. the need for a transmission augmentation could be addressed through the location of a new generator).

We consider that there are two key issues that require further analysis and will be discussed in the Review Final Report. Firstly, the inter-relationships between the investment regimes for each stage of the electricity supply chain, and the possible mechanisms that may improve consistency or linkages to enable end user reliability to be supplied more efficiently. Secondly, the impact of modifying the reliability standard at one stage of the supply chain on investment at other stages of the supply chain. For example, what modifications to network reliability standards would be required for a change in the reliability standard for generation to have its desired impact on end user reliability.

Question

1. Do you have any observations in relation to the interaction between the investment regimes (for reliability) between each stage of the electricity supply chain.

3.2 Reliability Standard and settings

The revised MCE Terms of Reference required us to examine the existing NEM reliability standard and settings to advise whether these mechanisms are appropriate to deliver reliable and secure electricity supply in the context of more frequent extreme weather events in the future. The key issues the MCE is specifically seeking advice on are:

- the modelling projections of the price–reliability trade-offs of raising the MPC to deliver reliability in the NEM;
- the feasibility of mechanisms to recognise differences in jurisdictional expectations regarding the price reliability trade-off; and
- the appropriate specification and interpretation required of the NEM reliability standard required in the future.

3.2.1 Reliability settings

The current NEM framework for reliability in the generation sector places significant emphasis on prices in the spot market as the primary signal for investment. Currently, the spot price (or derivative of the spot price through contracting) is the primary income to a generator and provides price signals for the timing, form and location (on a regional basis) of investment in new generation. Similarly, the spot price also provides price signals for investments in demand side initiatives.

The level of the MPC, the market floor price and the cumulative price threshold (CPT) arrangements define the spot price envelope within which the wholesale spot market seeks to provide sufficient resources (demand side and supply side) to meet demand. The MPC is currently set at $10,000, but will rise to $12,500 on 1 July 2010.[7] The MPC has been set to achieve the reliability standard of 0.002% Unserved Energy (USE). The relationship between the MPC and the reliability standard is further discussed in Chapter 2 of the Review Second Interim Report.

Modelling projections of price-reliability trade-offs

To inform our advice to the MCE of the modelling price-reliability trade-offs of raising the level of MPC, we engaged ROAM Consulting to perform detailed modelling analysis of the relevant trade-offs[8]. ROAM has since advised the AEMC that it has identified an error in its modelling work and thus requires additional work to review its analysis and results. As a result of issues with the ROAM modelling, we have commissioned an independent expert to undertake a thorough review of ROAM's modelling framework to ensure confidence in the final modelling results. We intend to provide the modelling results performed by ROAM, with its supporting report , to the MCE in the Review Final Report.

7 The AEMC's final Rule determination in relation to this increase in the MPC is located on the AEMC website: www.aemc.gov.au

8 This engagement was concurrent with that of the Reliability Panel's engagement of ROAM to undertake market modelling for their biennial Review of the reliability settings. See www.aemc.gov.au

There are a number of key considerations when considering the price-reliability trade-offs of raising the level of MPC, such as the assumptions made with respect to extreme weather, the setting of the MPC, and the wider implications to the NEM of raising the MPC to specified levels. Each of these are discussed further below.

MPC in the context of extreme weather

The MPC requirement under a scenario in which the incidence of extreme weather increases is heavily dependent on what assumptions are made in relation to extreme weather. Under a scenario in which the frequency of extreme temperature and demand days increases, then it is possible that a lower MPC than would otherwise be required would deliver sufficient generation to meet the reliability standard. This is because there would be more opportunities for the marginal generator to run, and as such a lower pool price would be required to enable that generator to recover its investment costs. However under a scenario in which extreme weather resulted in peakier demand (i.e. higher but less frequent extreme demand days), then it is likely that a higher MPC would be required relative to the status quo as the marginal generator would have less opportunities to run and earn pool revenue to recover its investment costs.

Investment certainty from the MPC

The MPC is currently reviewed and potentially amended every two years. This provides investors in long term assets little certainty of future revenue. For the Final Report we are looking at providing investors greater certainty through the provision of an MPC 10-year trajectory. This would provide investors with clearer guidance as to the likely level of MPC in the future, whilst maintaining sufficient flexibility to allow the MPC to be changed out of step with trajectory should conditions warrant such a change. We will also be reviewing the need to review the MPC every two years, and whether there could be merit in lengthening this interval.

Wider implications to the NEM of raising the MPC

Whilst raising the MPC may deliver generator revenue potential, a higher MPC may result in a range of wider non-reliability impacts to the NEM. For example, a significantly higher MPC may have implications for market participation risk such as increased spot market prudential requirements. Other implications may include potential impacts on market power, inter-regional trade, regulatory certainty or the behaviour of market participants. For the Review Final Report we will be considering these issues in developing our advice and recommendations on the level of MPC required to meet reliability in the context of more frequent extreme whether events in the future.

Differences in jurisdictional expectations

The current market design values reliability equally in all regions. This principle determines the policy and operational frameworks used to deliver, as near as technically possible, the desired consistent reliability outcomes. For example, this

principle determines that there will be a sharing of load reductions across regions in times of shortage in one region.

In the Second Interim Report we provided advice on the feasibility of mechanisms for recognising differences in jurisdictional expectations regarding the price-reliability trade offs. We considered that adopting different MPCs in each region to reflect differences in jurisdictional expectations regarding the price/reliability trade-offs would arguably be feasible. Provided the MPC for a region is consistent with the value that customers collectively place on supply continuity, then the resultant levels of investment in supply and demand side capacity in that region and thus regional specific supply reliability could be economically efficient, i.e. economically efficient because supply continuity is provided up to the level at which it is valued.

However, we indicated that there may be implications for economic efficiency on a NEM-wide basis, from such an approach. We also noted that the implementation of mechanisms to recognise regional differences in the value of reliability would be a fundamental change to the current market design. Such an arrangement would have implications for how load shedding is shared between regions, and for the management of negative settlement residue[9].

We have not undertaken a full economic assessment of the concept of adopting different MPCs in each region, but we consider that implementing jurisdictional specific arrangements into a national market design would create significant implementation challenges. For the Final Report, we intend to recommend whether there would be merit in specifying a detailed implementation design which can be modelled and assessed against the National Electricity Objective.

3.2.2 The NEM Reliability Standard

The reliability standard is a measure of the maximum amount of energy that can be at risk of not being delivered to consumers due to a lack of available capacity[10]. The objective of the standard (and the assigned level of reliability under the standard) is to deliver an expectation of reliability that reflects the value that customers place on reliability. The current approach specifies that value in terms of the targeted quantum of USE (supply interruption) and applies a derived MPC that is set at a level sufficient to incentivise the investment and operational behaviour needed to deliver the expected reliability outcome[11].

In the Second Interim Report we discussed how the NEM reliability standard has been interpreted to date, and the appropriate specification and interpretation of the standard required in the future. We considered the current specification of the reliability standard is generally appropriate for a future in which extreme weather is

9 A detailed discussion of is provided further in Chapter 4.3 of the Review's Second Interim Report, pp. 53-56 http://www.aemc.gov.au/Market-Reviews/Open/Review-of-the-Effectiveness-of-NEM-Security-and-Reliability-Arrangements-in-light-of-Extreme-Weather-Events.html

10 The reliability standard applies to generation and inter-regional transmission, and does not include intra-regional transmission or distribution.

11 A detailed discussion of the specification and interpretation of the Reliability Standard is provided in Chapter 4.1 and 4.2 of the Review's Second Interim Report.

more likely. We identified, however, some key issues that should be considered with respect to the future form, level and scope of the reliability standard. Firstly, we considered that measuring the reliability standard as a rolling average over 10 years is inappropriate in the context of more extreme whether events. The reliability standard has been targeted to be achieved every year, but compliance with the standard has been measured over the long term (a ten-year moving average of actual reliability outcomes has been measured against the reliability standard). The practice to date of measuring the reliability performance against the standard over 10 years could potentially result in delays in responding to causes of reliability degradation including from an increased incidence of extreme weather.

We also considered there may be scope to provide better information on the frequency and duration of supply interruptions to better inform policy makers and market institutions of how supply interruptions are impacting end-users. Currently, the NEM's USE standard provides no information about the frequency of supply interruptions nor about the depth of any single interruption. The USE standard also does not capture the difference in the actual experiences of consumers in different regions. For example, in a region where the demand profile is very peaky (e.g. air-conditioning use increases dramatically on occasional very hot days), the entire allowance of unserved energy (the whole 0.002%) could be experienced in a single hot day. Alternatively, in a region where the demand profile is quite flat (e.g. air-conditioning use is minimal or fairly constant because temperatures are consistently high), shortfalls in supply are likely to be less severe but may be more frequent. We expect that additional information in this area would also facilitate early identification of problems and the need for improvements to the current mechanisms available for delivering reliability.

The level of the reliability standard should balance the cost of electricity supply and the value that customers place on reliability. Therefore, an alternative to specifying the reliability standard would be to set the MPC at a level that reflects the value of customer reliability. Under such an arrangement it would be expected that capacity would be attached to the market that just meets the value customers place on reliability. Consequently we are also considering the implications of these arrangements for the Final Report.

Questions

2. Do you consider setting the MPC as a ten year trajectory as more appropriate to provide investment certainty in the future?

3. Do you consider the current two year reviews of the MPC as appropriate or would less frequent reviews provide greater investment certainty?

4. What do you consider are the wider non-reliability impacts to the NEM of raising the MPC as a mechanism to achieve reliability, in a future of more frequent extreme weather events?

5. Do you consider the current reliability standard as appropriate in the context of more frequent extreme weather events in the future?

3.3 Technical standard and issues

The majority of end user supply interruptions are due to security related events. If the severity and frequency of extreme weather events were to increase, then the ability of the power system to maintain continuous operation would likely degrade. For example more extreme temperature events would result in more degradation of power system capacity, and more storm activity would result in more trips to power system equipment.

For the Final Report we are looking at issues such as whether current technical and performance standards are delivering appropriately robust equipment and whether there are opportunities for better technology to be introduced to the NEM. Accepting that supply interruptions will continue to be a feature of the NEM for the foreseeable future, we will also be looking at the efficiency of returning interrupted power system equipment to service, and how efficiently load shedding takes place.

Given the limited time available to submit the Final Report to the MCE, we do not anticipate providing specific recommendations for this area. For the Final Report we intend to recommend that further work is undertaken to investigate the suitability of the NEM's technical and performance standards in the context of extreme weather (including load shedding). We consider that this would be a separate Review and would encompass the Comprehensive Technical Standards Review committed to by the Reliability Panel[12].

Question

6. Do you have any specific issues which you consider should be reviewed in a review of technical and performance standards in the NEM.

3.4 Governance arrangements – policy decision making on reliability standard and settings

The MCE as part of its revised Terms of Reference requested advice regarding the appropriate governance arrangements for how the NEM reliability standard and settings policy decisions should be structured and managed in the future.

Under the existing framework, there are a number of decisions made by the market institutions relating to reliability in the NEM. Some decisions are of a detailed economic nature and include the: reliability standard; reliability settings (i.e. the MPC, market floor price and the cumulative price threshold). Decisions that set the minimum reserve levels; and the application of the reliability safety net measures such as the Reliability and Emergency Reserve Trader (RERT) are also reliability

12 See http://www.aemc.gov.au/Market-Reviews/Completed/Reliability-Panel-Technical-Standards-Review.html for more details on the Reliability Panel's Comprehensive Technical Standards Review.

decisions but are considered more operational in nature and similar to other decisions made by AEMO on a day to day basis in its capacity as market operators.[13]

In the Second Interim Report we proposed some improvements to the existing arrangements for future NEM reliability policy decision-making. Specifically, we concluded that there should be greater policy input by the MCE (i.e. via a Statement of Policy Principles) regarding the reliability standard, and that the existing policy decision making responsibilities of the relevant market intuitions relating to the reliability standard and settings should be changed.

Historically, higher level policy guidance on community expectations regarding reliability standards has not been part of the governance framework for reliability decisions, in particular decisions on the reliability standard. We considered that the community's expectations of the value and cost of reliable electricity supplies should be a key element of the policy decision framework for the NEM's reliability standard and settings as this is likely to ensure community expectations regarding reliability will be met.

With respect to changes to the existing arrangements, we recommended that the AEMC, informed by advice from the Reliability Panel, should determine the reliability standard, the settings and the administered price cap. We also considered that the existing operational decisions such as the minimum reserve levels should remain with AEMO given its role and function as the market operator.

Currently, the reliability standard is determined by the Reliability Panel, whilst the other reliability settings are determined by the AEMC, on the advice of the Reliability Panel. These NEM reliability parameters should be determined under a consistent process and by a single decision making body. This is particularly important given their economic/market nature, need for a review and variation as a package, and not subject to constant review as they provide important signals for long-term investment in capacity by market participants. Maintaining consistency and allowing for a single decision-maker would reduce complexity of the existing processes, and ensure that appropriate alignment between the reliability standard and the reliability settings. The AEMC has well established, open and transparent processes for decision making which are reflective of the AEMC's obligations under the National Electricity Law (NEL) and the Australian Energy Market Agreement.

We proposed three alternate options of how the AEMC could make reliability parameter decisions, including with high level policy guidance or direction from the MCE on the community's expectations and valuation of reliability relative to cost. A detailed discussion of each option, its advantages and disadvantages is set out in Chapter 4.4 of the Second Interim Report.

For the Review Final Report, we intend to further consider the key issues associated with MCE high level policy guidance; including the form and level of policy guidance required. We also intend to further consider the issues and preferred approach with how the AEMC may make the relevant reliability decisions.

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[13] A detailed description of the existing arrangements is given in Chapter 4.4 of the Review's Second Interim Report, pp. 61-65.

Questions

7. Do you consider that it is appropriate for the MCE to provide a statement of policy principles regarding the community's expectations and valuation of reliability? If so, what should be the form and level of that guidance.

8. Do you consider it more appropriate for the AEMC to make NEM reliability parameter decisions given the energy market framework governance arrangements established through the AEMA and the NEL?

3.5 Reliability Forecasting and information

The MCE, in its revised Terms of Reference, requested a comparison of historical NEM reliability forecasts with the outcomes that occurred in the first ten years of the NEM (averages and extremes). In our First Interim Report, we also flagged information as an area for consideration for the Final Report.

In the Second Interim Report, we outlined the existing reserve projections performed by AEMO and provided, where applicable, comparisons of those projections with actual reserve outcomes.[14] We highlighted that whilst the comparisons provide a useful insight to the current tools available, the comparison does not necessarily provide a meaningful assessment of the performance of each of the current projections with respect to achieving their intended purpose. This is because the primary purpose of reserve projections is to elicit a market response to address projected reserve shortfalls (such as investment or rescheduling plant outages). For example, the Electricity Statement of Opportunities (ESOO) is a reserve projection that is prepared annually and provides a ten year reserve projection for both summer and winter maximum demand conditions. A reserve shortfall projected in the ESOO signals an opportunity for investment. It is likely that new investment in generation or demand side management would generally be made before the ESOO reserve shortfall eventuates. Therefore what may appear to be a large error in the comparison, may in fact be a sign that the reserve projections have been effective at delivering a market response.

NEM participants and investors rely on the reliability projections to inform decisions in relation to new investment and the availability of their equipment for service. We consider that the performance of the reserve projections could be better assessed by determining how useful and fit for purpose stakeholders consider the current tools are to inform investment and outage timing decisions. We also consider it worthwhile to determine whether the wider information provided to the market about supply and demand is useful and whether there may be gaps, that, if filled, could improve the NEM's reliability performance.

For the Final Report, we will consider issues raised in submissions and may make recommendations for improved information provisions where justified. We will also be considering the detailed (probabilistic) reserve assessments that AEMO

14 The existing reserve projections provided by AEMO; and comparisons are set out in the Second Interim Report for the Review, Chapter 3.1; pp.19-24 and Appendix B.

undertakes to determine whether the Reliability and Reserve Trader provisions should be invoked[15]. We will be looking at whether there is scope to expand this analysis and that for the Energy Adequacy Assessment Projection, to provide a more comprehensive assessment of the likely reliability outcomes for a period. Such comprehensive studies would provide policy makers, AEMO, and participants more detailed information of likely reserves and the probability of supply interruptions around the period of annual peak demand. This would also enable informed decisions to be made in relation to the mitigation and management of supply interruptions.

Questions

9. Do you consider that the current tools regarding demand and capacity forecasting/information as appropriate and useful in informing investment and outage timing decisions. Please explain your view including reasoning for any suggested improvements.

10. Do you consider that there are any other measures that could be implemented to improve reliability and security in the NEM with respect to more frequent extreme weather events in the future.

3.6 How to make a submission

We invite written submissions from interested parties in response to the Review. Stakeholders are able to lodge a submission via the AEMC website at www.aemc.gov.au or in hardcopy to:

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

or by fax: (02) 8296 7899

The closing date for submission is **31/3/2010**. Submissions sent via mail should reference the following: Company/Organisation name and **Reference No**: **EMO 0010.** Submissions must be on letterhead (if submitted on behalf of an organisation), signed and dated.

Except in circumstances where the submission has also been submitted electronically, upon receipt of the hardcopy submission the Commission will issue a confirmation letter. If this confirmation letter is not received within three business days, it is the submitter's responsibility to ensure successful delivery of the submission has occurred.

15 See pp, 23-24 of the Second Interim Report for more detail.