31 March 2010

Dr John Tamblyn
Australian Energy Market Commission
Level 5
201 Elizabeth Street
Sydney NSW 2000

Dear Dr Tamblyn

EMO0010 – Review of the Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events (Extreme Weather Events Review)

Origin Energy Limited (Origin) welcomes the opportunity to provide a submission to the AEMC's Extreme Weather Events Review.

In summary, we make the following key points in this submission:

- The Review places undue focus and weight on solutions targeting the generation end of the supply chain, particularly given that disturbances on the distribution and transmission networks are the chief causes of supply interruptions during extreme weather events.
- Consequently, options that focus principally on the Market Price Cap (MPC) may not necessarily translate to an increased level of reliability. Given this, Origin does not support the adoption of a 10-year MPC trajectory or different jurisdictional MPCs.
- A holistic review of the entire supply chain is necessary to derive an efficient, proportionate and targeted solution set. Robust analysis and assessment is required to support substantial changes from the existing arrangements.
- In this regard, we do not consider that the AEMC has presented a convincing case for materially changing the current governance arrangements used to determine the reliability parameters. We therefore support a variation of Option 1, which most closely aligns with the current arrangements.
- There are less fundamental changes that can be made to enable the system to respond more efficiently to extreme weather events. This includes improvements to information, like the Electricity Statement of Opportunities (ESOO).

In addition to these comments, we have a general concern that the AEMC's Final Report to the MCE will conclude on matters that the market has not had an opportunity to review and consider. This includes ROAM Consulting's modelling results measuring the price-reliability trade-off. We would urge the AEMC to incorporate an additional consultation stage to ensure a transparent and well-informed decision-making process.

If you have any question or would like to discuss this submission please call me on (02) 8345 5250 or Hannah Cole on (02) 8345 5500.

Yours sincerely,

Tim O'Grady
Head of Public Policy
Corporate Affairs

Origin (LGC) (Aust) Pty Limited ABN 73 000 000 331 •
Telephone 02 8345 5500 • Facsimile 02 9252 8622 • www.originenergy.com.au

Extreme Weather Events Review – Consultation paper

Questions on Second Interim Report

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?*

   The incentive regimes across the supply chain interact with one another. To facilitate efficient investment and decision-making across the different sectors, these incentives need to work together. Inefficiencies at one point in the supply chain can increase pressure on other elements, resulting in less efficient decision-making across the market.

   For the Final Report, the AEMC noted its intention to take a holistic approach to consider whether investment across the energy supply chain is balanced and efficient to optimise reliability for end use customers. This is important to ensure each element of the supply chain carries an appropriate proportion of the responsibility. We support the AEMC's approach to extend its thinking beyond the analysis as presented in the Second Interim Report.

   A more comprehensive approach is important because the Review to date has focused on the reliability parameters targeting the generation end of the supply chain. The positions in the Second Interim Report appear to ignore the available evidence that identifies the distribution and transmission networks as the main points of failure during extreme weather events. Placing undue weight on the generation sector to deliver reliable outcomes (particularly by adjusting the MPC) may not necessarily translate down the supply chain and is unlikely to assist in reducing the frequency of customer supply interruptions.

   In addition, if the focus was on driving generation investment, the level of MPC is not the most important investment driver. We explain the reasons why and elaborate on what the main investment drivers are in our submission to the Reliability Panel's Review of the Reliability Standard and Settings – Draft Report (Origin Reliability Panel submission).[1] These additional investment signals are the key reason for the NEM delivering timely and efficient generation investment and, in turn, reliable supply.

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

   When developing a mechanism to set the MPC, there is a careful balance between providing certainty and having sufficient flexibility to respond to changes in market conditions in a timely manner. The reason why the AEMC proposes a 10-year trajectory seems to be to provide a greater level of certainty relative to the current arrangements where, in theory, the MPC level may change every two years.

   Origin does not support the introduction of a 10-year MPC trajectory. The problems associated with using and modelling such a trajectory can actually detract from the perceived certainty benefit. A trajectory requires modelling assumptions about demand growth, fuel costs and capital and other costs. These can be highly uncertain and unpredictable even a few years out. As a result, an accurate or reliable trajectory is unlikely.

   As a consequence, frequent updates would be necessary as new information becomes available. This can create more uncertainty for the market, detracting from the

[1] Submission available: http://www.aemc.gov.au/Media/docs/Origin%20-%20received%2024%20February%202010-9ef999fc-f678-4519-8b0c-b8cc43a610d2-0.pdf.

benefits of having a longer term MPC outlook. Constant changes can increase the operating risks for market participants, particularly if the MPC revisions increase the cap level. We elaborate on these risks in the Origin Reliability Panel submission.

We do not consider a 10-year trajectory for the MPC strikes the most efficient balance between certainty and flexibility for the market.

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

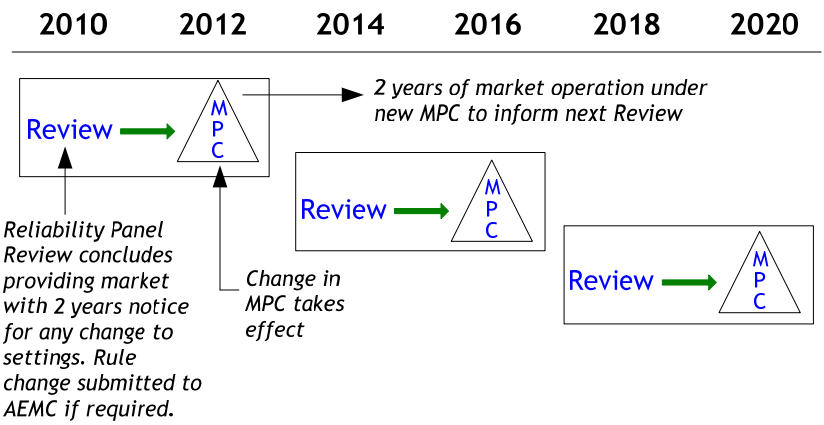
Less frequent MPC review may strike a better balance between flexibility and certainty compared to the current arrangements (and a 10-year trajectory). We propose that the regular MPC Reliability Panel Settings and Standard review changes from every two years to every four years.

Two year reviews have an intrinsic flaw: the Reliability Panel must provide two years notice to the market before changing the MPC. This means that a change to the MPC will not have occurred before a decision on the next change must be made. For example, a proposed change to the MPC from $12,500/MWh to $16,000/ MWh in 2012 is currently being considered, while the market impacts of the former (an increase from $10,000/MWh announced two years ago) have yet to be evaluated.

Less frequent reviews provide investors with greater certainty compared to biennial reviews. Four year reviews with a two-year notice period for change enables the market to respond to a change and makes available to the Reliability Panel information on behavioural changes and market responses following a previously announced MPC change.

Less frequent reviews do not preclude the Reliability Panel from conducting a review early should market conditions change, nor prevent the AEMC from requesting the Reliability Panel from commencing an earlier review if warranted. This does not necessarily upset the balance between providing the market certainty and having flexibility; an early review is likely to be on an exception basis, as opposed to a regular feature.

Figure 1: Example of timing with four year reviews



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?*

   Participants can face greater levels of market risk in a market with increasing MPCs. We refer to the Origin Reliability Panel submission, which discusses both the existing incentives for new generation investment and the wider non-reliability (market) consequences resulting from increases in the MPC.[2] An environment with more frequent extreme weather events will make these consequences more pronounced, particularly the level of price volatility and its related implications.

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

   Current reliability standard and extreme weather events

   Origin has previously expressed support for the current form of the reliability standard. For example, we do not consider that the reliability standard should cover "acts of god", which can include some extreme weather events.

   The current reliability standard is designed to ensure a minimum level of generation investment to manage a designated level of unserved energy (USE). It does not reflect the reliability of the transmission or distribution networks, which is an issue when considering extreme weather events.

   Therefore, changing the current reliability standard is unlikely to deliver a "whole of supply chain" solution in the context of more frequent extreme weather events. This is an important point because changing the current reliability standard (and a consequential change to the MPC) is designed to trigger more generation investment. However, as discussed above, more generation capacity is unlikely to address the problem. The main source of supply interruption during extreme weather events is at the distribution and transmission end of the supply chain.

   If policy makers believe it is important to have a standard that accounts for more extreme weather events, then the appropriate standard (or standards) needs to encompass the different elements of the supply chain and the role they each play in delivering reliable supply in those conditions. Any proposed change would need to be subject to an assessment against the National Electricity Objective (NEO).

   Differences in jurisdictional expectations for reliability

   Applying different MPCs that reflect differing jurisdictional expectations for reliability under extreme weather events is inefficient and ineffective.

   The AEMC's Second Interim Report is confusing on its discussion on this policy. In one section, the Second Interim Report states there are economically efficient outcomes under the proposal; in other sections, it provides a contrary view by commenting there may be "implications for economic efficiency".[3] These include a negative impact on operational efficiency and that it would increase regulatory complexity. It is difficult to see what economically efficient outcomes could arise under the NEO given these adverse effects: the Second Interim Report does not elaborate.

   Different regional MPCs also move the NEM away from a single interconnected market with a common set of investment incentives. It introduces greater levels of regulatory risk and distorts investment timing and location incentives. It adds

[2] Ibid.
[3] AEMC 2009, *Review of the Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events*, Second Interim Report, Sydney, p.41.

administrative complexity, such as the increased probability of load shedding as a result of managing counter-priced flows between regions with different MPCs.

For example, the AEMC proposes that the efficient solution to manage counter-priced flows is to stop or "clamp" interconnector flows to zero MW. This may result in load shedding in the region with the lower-priced MPC when there is capacity available in a higher-priced MPC. The AEMC presented that sourcing capacity from the higher priced region would result in customers in the importing region paying more than their value of reliability (e.g. MPC); the importing region's customers would fund the counter-priced flows. This, the AEMC concluded, would be economically inefficient.

However, in order to stop these counter-priced flows, AEMO would need to intervene in market dispatch. This action would reinstate in the market a discretionary AEMO operational intervention. The AEMC previously determined this type of intervention was inefficient under the current market design due to the uncertainty for participants as to the timing of the intervention and the consequential pricing implications.[4] This type of mechanism unnecessarily adds additional administrative and operational complexity to the NEM.

For all these reasons, the AEMC needs to state more explicitly in its Final Report that this poor economic policy should not be pursued further.

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

   A key outcome for any such review is to develop a consistent framework for setting and measuring technical and performance standards across the NEM. An important part of that is continuing to liaise with the MCE to improve the probability of industry-supported recommendations being considered, then adopted and implemented in a timely fashion. For example, the MCE is yet to respond to the AEMC's Final Report on the recommended nationally consistent framework for transmission reliability standards, provided to the MCE in September 2008.[5]

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?*

   An MCE statement of policy principles can provide high level guidance for the AEMC when assessing a Rule change proposal to change the reliability standard or settings. It is important, however, that the Statement is not too prescriptive to the point where it introduces a level of sovereign risk for investors and market participants. We agree with the AEMC that the MCE can provide such direction irrespective of the approach adopted going forward for determining the level of the NEM's reliability settings.

   The MCE should not be in the position of proposing the level of the reliability settings, however, as in Option 2. It is not appropriate for the MCE to be involved in the detailed workings of the market. There is also the risk that decisions would not be made in a timely manner; MCE decision-making processes can take substantial time, particularly on technical market operation issues.

[4] For an explanation of the problems with this intervention, see: http://www.aemc.gov.au/Electricity/Rule-changes/Completed/Management-of-negative-settlement-residues-in-the-Snowy-Region.html

[5] http://www.aemc.gov.au/Market-Reviews/Completed/Transmission-Reliability-Standards-Review.html

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?*

The Second Interim Report stated a need to change from the existing energy market framework governance arrangements. The AEMC put forward that a single decision-making body should be responsible for setting all the reliability parameters, including the Reliability Standard and Settings. The proposed approach for the AEMC to make these decisions was to reduce the complexity of the existing processes and ensure alignment between the standards and settings.

Case for change

The Second Interim Report does not provide a convincing case to move away substantially from the current arrangements. In particular, the conclusions are not accompanied by sound evidence or reasoning supporting the proposed Option 3.

For example, one of the "disadvantages" listed for Option 1 is that reliability parameters set out in the NER are open to more frequent review as any person may lodge a Rule change request and amend them at any time. This can create investment uncertainty.

To date, no one has proposed a change to these parameters outside the existing Reliability Panel Review processes. It is difficult to see how this could change assuming a robust review process is periodically undertaken. In addition, the AEMC has the ability under the National Electricity Law not to accept a Rule change request that is "misconceived". If a Rule change proposal appeared to be circumventing the established review process for individual gain, then the AEMC could determine to reject the request.

One reason for having Rules and a process for changing them is to provide a statutory instrument that can evolve as the market develops. There are a number of processes and settings currently set out in the NER that may be subject to a Rule change proposal. There does not appear to be a convincing case as to why these particular reliability parameters should be isolated, subject to a separate determination process.

Option 1 (and the current arrangements) retains the decision-making power with the AEMC through the Rule change process, guided by an MCE Statement of Policy Principles. The Reliability Panel puts forward a Rule change proposal with recommended levels for the reliability parameters. The AEMC then applies the Rule making test and assesses the proposal against the National Electricity Objective. The Rule making process provides the AEMC with the power to make a "preferred Rule". The AEMC could determine another level for the MPC, for example, if it found that to be in the long term interests of consumers.

A key benefit of the current Reliability Panel, is that its decision-making is informed by the extensive industry experience and expertise provided by the cross-section of industry and stakeholder representatives. The balanced make up of the Reliability Panel manages any perceived conflicts of interest and ensures any decisions are subject to rigorous analysis and evaluation. The Reliability Panel provides industry and the market with greater confidence that the highly technical and commercial concerns are understood and accounted for when developing reliability parameter recommendations. Other than Option 1, the Second Interim Report was unclear on the exact role of the Reliability Panel going forward.

Recommended change to governance arrangements

We support Option 1 — a slight variation on the current arrangements — with less frequent reviews. In summary, our preferred approach is to:

- retain in the NER the level of the reliability settings and standards;
- retain regular reviews by the Reliability Panel to determine the reliability setting and standard levels (e.g. MPC) with any proposed changes being set out in a Rule change proposal for AEMC consideration;
- change the frequency of reviews from every two years to every four;
- retain the AEMC as the key decision-making body through the Rule change process; and
- introduce high level policy advice from the MCE through a Statement of Policy Principles.

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.*

Participants and prospective investors rely on AEMO's Electricity Statement of Opportunities (ESOO) for forward energy and demand projections. By identifying future market requirements, the ESOO provides key inputs that inform generator investment options and timing.

Origin understands that AEMO is planning to conduct a review to investigate options to improve short-term demand forecasting. AEMO has also established a Demand Side Participation (DSP) Working Group to identify options for improving the demand-side management forecasts that feed into the ESOO demand forecasts. A new DSP survey, informed by the DSP Working Group, was distributed recently to market participants and network service providers (NSPs). Further improvements to the process are being considered by the DSP Working Group.

The Congestion Information Resource (CIR) is also improving accessibility to information relating to outages and congestion. Stronger incentives on NSPs to time outages for periods when the market values the network less would be beneficial since supply interruptions are more likely driven by issues with those aspects of the supply chain.

More specific comments on the ESOO energy and maximum demand forecasts

- Currently, the demand projections are packaged including: (a) semi-scheduled; and (b) both semi-scheduled and non-scheduled. However, the ESOO does report a forecast that strips out both components. Including forecasts that reflect scheduled generation only would be valuable to the extent that participants have different views to AEMO about the supply outlook for semi-scheduled or non-scheduled generation.
- The ESOO uses forecasts provided by the TNSP Annual Planning Reports (APRs). Each APR forecast includes varying assumptions around energy efficiency (EE) levels. Individual APR documents only refer to the assumed levels of EE at a high level, therefore making it impossible to isolate the EE assumptions. Energy efficiency assumptions pertaining to both energy and demand projections need to be made explicit in both the APRs and the ESOO.

- In addition, the forecasting process could benefit from more transparency and a better link (and consistency) with the individual state-based APRs.

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?

We have made some suggestions that could improve the ability for the power system to respond to more frequent extreme weather events. Most of these suggestions do not require structural or governance changes to the existing arrangements.

- Design parameters of the transmission and distribution system: changes to the design parameters for the networks may improve the ability of the power system to respond or manage extreme weather events. While jurisdictions set reliability standards for each region, there may be scope to review the network planning standards and approaches as well as technical standards (in the associated review) to look at options for improving redundancy or system performance in extreme weather events.

  For example, low voltage distribution fuses are known for "blowing" when the power system gets hot. There may be options available to manage this reoccurring problem. Any proposed change would need to demonstrate cost-effective and efficient market benefits, in the best interests of end users.

- Improved communication with customers during "extreme weather events": communication from AEMO or other industry bodies to customers during extreme weather events could help manage expectations of possible load shedding but also prevent it from occurring. Effective communication could encourage customers to curb their use, where possible, during peak periods to reduce stress on the system during extreme weather events. The approach has been successful in the water sector, educating customers to use water more sparingly during drought conditions. This has resulted in many cases in a change in ongoing consumption behaviour. Better communication with electricity customers may deliver benefits that help use of the existing power system better.