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31 March 2010

Dr John Tamblyn  
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Australian Energy Market Commission  
PO Box A2449  
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Dear Commissioners,

**Re: Consultation Paper – Review of Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events**

**Introduction**

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The National Generators Forum (NGF) welcomes the opportunity to make a submission in response to the AEMC's Review of Effectiveness of NEM Security and Reliability Arrangements in light of Extreme Weather Events (the Review) Consultation Paper released on 2 March 2010 and the associated First Interim Report of 29 May 2009 and Second Interim Report of 18 December 2009.

The purpose of our submission is to respond to the range of matters raised by the AEMC in the Consultation Paper and in the earlier Second Interim Report and to express caution with regards to some of the proposals raised by the AEMC in those documents, which we suggest have not been subject to rigorous analysis or adequate consultation.

Our positions on these matters are informed by our experience as National Electricity Market (NEM) participants with an ongoing interest in the development and governance of the NEM. While this submission raises a number of concerns, we continue to support the AEMC's ongoing work in this and related areas.

**Organisation Information**

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The NGF directly represents the major power generators in the NEM. The installed capacity of the members is 44,384 MW as of 2008, with an asset value of about \$40 billion. Annual sales are over 180,000 GWh, having a value of about \$6,835 million. This represents over 95% of the total Australian market.

NGF members are publicly and privately owned businesses which generate electricity for sale and trade under the National Electricity Rules (NER), and whose generating capacity is at least 300 MW. The Chief Executives of these businesses form the Board of National Generators Forum Ltd.

The purpose of the NGF is to be the respected market generator industry body recognised for excellence in influencing the development of Australian energy markets.

## **Discussion**

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The Consultation Paper addressed the following key areas:

- whole of power system security and reliability;
- 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.

We address each of these issues in turn.

### **Whole of power system security and reliability**

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The AEMC raised two general issues being:

- 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; and
- the impact of modifying the reliability standard at one stage of the supply chain on investment at other stages of the supply chain.

The NGF suggests that the AEMC consider the following points when completing its Final Report:

- changes in the regulated sector can have profound effects on the investment climate for the generation sector;
- interaction of the regulated sector and the unregulated sector emphasises regulatory risks for private investors;
- inefficiencies in one segment of the supply chain can increase pressure on other sectors within the supply chain;
- efficiency drivers differ across the supply chain and this may impact participant performance; and
- differing standards across and within regions, which may represent least cost decisions, need to be better understood and managed.

The interrelationship between the different aspects of the supply chain is not necessarily clear cut. However, there exists a wide scope for decisions in one part of the power system to undermine outcomes in another. This is particularly the case with respect to the interaction of the regulated and unregulated sectors.

The investments made by NGF members are generally on a different time scale and need to meet different criteria than investments within the distribution and, to a lesser extent, the transmission network. Additionally, the source of funds creates an increased susceptibility to regulatory risk that can undermine investment incentives in the NEM.

On this basis, we believe not enough attention has been given to the effect regulatory transmission and distribution investment decisions have on the investment climate for generation. Generation, underpinned by retail competition, is at the sharp end of competition and efficiency gains in the sector and is a key driver of supply chain reliability. However, that impetus to invest and produce efficient outcomes is hampered if regulated investment in transmission, and to a lesser extent distribution, does not create the appropriate investment climate for generation.

First, there is a view that cost pressures and reliability impacts in one sector can have impacts on other sectors both directly, through access to markets, and indirectly through increased pressure to reduce costs to make up for underperforming elements of the supply chain and stakeholder interest leading to possible distortionary interventions. Therefore, the NGF is supportive of efficient expenditure in the distribution and transmission sectors as well as improved performance.

The second issue to consider is whether having differing transmission and distribution standards across the jurisdictions is appropriate. It is appropriate to suggest that a single set of standards would make it easier for all regulatory bodies and market participants to make decisions that balance the relevant segments of supply; however, implementing a single set of standards may not be the most cost-effective solution. This is because jurisdictions have different reliability standards and it is likely to be costly to align these standards and specific investments may be uneconomic in jurisdictions where the cost of the standardised reliability exceeds customer value and expectations.

Third, if standardisation is not justifiable then consistent management and application of the differing standards in transmission and distribution is at least necessary to support investment in the generation sector and operational decisions across regions. For instance, the level of reliability in one sector can affect other sectors in the supply chain where poor network reliability in a region can limit a generator's ability to access the market. While standards may differ, in different regions and parts of the network, consistent management and maintenance to the documented standard is required to ensure certainty at the time of connection to a network and beyond. Members expressed these concerns for both transmission and distribution networks.

Finally, the NGF's concern around reliability of networks, particular transmission, extends to investment in assets and augmentations. As identified in the Second Interim Report, in order to deliver an improvement in reliability from the generation sector (and support efficient generation investment), "it is likely that reliability of the transmission sector would also need to be improved" (Second Interim Report, p.15). We suggest this should be read to mean, not only consistent management of those assets to existing standards, but ensuring forward investment supports new generation investment and meets the needs of existing generators.

However, as it currently stands the incentives for distribution and transmission networks to meet clearly defined service standards and the capacity for regulatory investment to take account of the generation investment climate is mixed.

## Reliability Standard and Settings

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The AEMC raised the following issues:

- Market Price Cap (MPC) in the context of extreme weather;
- investment certainty from the MPC;
- wider implications of raising the MPC; and
- differences in jurisdictional expectations.

The NGF discusses these issues below and makes the following key points. The NGF:

- finds it difficult to justify raising the MPC on the basis that extreme weather events are likely to undermine generator returns;
- agrees that steps can be taken to improve investment certainty around the setting and forward trajectory of the MPC but that the use of a 10-year trajectory raises a number of modelling and implementation challenges they may ultimately undermine its viability;
- has significant concerns regarding any proposal to introduce differing reliability settings in different regions and suggest that such proposals undermine the confidence of market participants in the market's operation and governance (and we do not believe the AEMC has appropriately articulated the negative implications of this idea); and
- remains comfortable with the reliability standard of 0.002% unserved energy measured by a ten-year moving average.

### *Reliability settings in the context of extreme weather and wider market risks*

The NGF has some concerns with the development of recommendations concerning possible levels of MPC including the AEMC's potential reliance on as yet unseen ROAM Consulting modelling. As we have not had an opportunity to review this work, and given the assumptions used by ROAM will ultimately determine modelling outcomes, we find it difficult to support any changes to MPC as a consequence of any assumed expectations surrounding extreme weather events in coming years.

Additionally, the NGF previously raised a number of wider markets concerns regarding changes to MPC in its response to the Reliability Panel's Reliability Standard and Settings Review. These included:

- transmission congestion risk;
- generation risk – physical generation failures;
- creditworthiness of the National Electricity Market;
- market competition; and
- retail barriers to entry.

Given the AEMC has not expressed a perspective on market risks in the context of the interaction of the MPC and extreme weather events, the NGF is apprehensive about the Final Report advancing recommendations “on the level of MPC required to meet reliability in the context of more required frequent extreme whether (sic) events in the future” (Consultation Paper, p. 7). Ideally, any analysis would be subject to further consultation with industry participants.

Additionally, it is not immediately apparent how any Final Report recommendations on the level of MPC required to meet assumed extreme weather events will be progressed. Also, to what extent these potential recommendations would subvert the established rule-making processes and bring the MCE into debates concerning actual Reliability Settings—which we suggest is not constructive—remains unclear.

With this in mind, we share the view, in part, that the current process for establishing reliability settings creates uncertainty given the level of political interest and given the proposed regularity of reviews with unexpected outcomes.

#### *Investment certainty from the MPC*

Some NGF members feel uncomfortable with supporting a 10-year trajectory given the possibility it locks in unnecessary rises or provides for undue rigidity going forward. However, at a general level we agree that the current process does create some uncertainty. While that does not necessarily justify abandoning the current process, it does support the development of tools or processes to increase investor certainty. Notionally, a 10-year MPC trajectory does this (and may readily mitigate any unease experienced by the current two-yearly Reliability Panel reviews).

The issues for the AEMC to consider in developing the Final Report are the status and form of the 10-year trajectory. The trajectory could be informative or written into the National Electricity Rules (NER) as specific prices; however, being written into the NER increases certainty but it at the expense of being responsive to market developments. The opposite is true of a trajectory which provides only an indication of possible rises. An alternative option is that a trajectory, if used as a formal tool to set future changes, could lock in a range of values over time without specific settings. This could help participants manage risk within the limits of the 10-year trajectory range outside of which change would not be permissible in any given period.

However, the AEMC should not underestimate the problems associated with using a 10-year trajectory and the difficulties in modelling such a trajectory. Developing demand growth, fuel costs, capital and other costs assumptions for the purpose of modelling and implementing a 10-year trajectory will be particularly challenging. The likelihood that the trajectory modelled would be accurate appears remote. Therefore, the need for iterative updates would appear necessary, which again creates uncertainty for market participants particularly if the trajectory had formal status.

Additionally, it is important to note that the link between MPC and new generation investment is not a simple dynamic. The push for a 10-year trajectory and the expectation that it will lead to longer-sighted investments is not without significant doubt.

#### *Differences in jurisdictional expectations*

We note that within the Second Interim Report the AEMC identified the possibility of establishing separate reliability settings for each region. While we note (but do not necessarily agree with) the narrow economic efficiencies cited in that report, we support the conclusion that overall this outcome is economically inefficient. We believe the proposal undermines the viability of the NEM and politicises reliability settings in an unacceptable manner. On this basis, we are strongly opposed to separate reliability settings for each region and encourage the AEMC to more clearly set out its inappropriateness and the significant concern expressed by market participants.

On a practical level, we also believe such a proposal would be near impossible to implement without significantly redesigning other aspects of market operations. For example, it raises concerns about the co-optimisation of ancillary services, which AEMO can currently procure from any region to satisfy NEM-wide requirements. This would seem implausible under a scenario where reliability settings differed. Secondly, there are some system security issues that need to be considered particularly where a generator was faced with the choice of bidding in one unit over another. In this instance, the generator would generally favour the higher priced region possibly to the detriment of system-wide outcomes and at a higher cost. This suggests that market outcomes under certain scenarios may not promote the National Electricity Objective (NEO).

## *Reliability Standard*

In regards to the reliability standard, we remain comfortable with the 0.002% measure of unserved energy as generally appropriate for a future with or without additional extreme weather events, noting that the measure has served consumers generally well during past extreme weather events.

We experienced some difficulty in reconciling the practice of aiming to achieve the reliability standard of no more than 0.002% in each year with the practice of measuring reliability standard performance over a ten-year period. We are concerned that the proposed changes to an annual measure may facilitate inappropriate consideration of unserved energy.

A change from a ten-year moving average to an annual measure alone may give rise to increased emphasis on breaches of the reliability standard as compared with the ten-year period, when in actual fact the overall performance of the NEM in terms of reliability may have been maintained. In this regard, it is not clear why an annual assessment (which in extreme circumstances may lead to further analysis as is the case with the current review) in the context of a ten-year and/or five-year rolling average would not better inform the AEMC, Reliability Panel, market participants, jurisdictions and consumers.

The AEMC position that: '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' (Second Interim Report, p.33) is not supported with any evidence. On the contrary, the mere existence of this review suggests current governance arrangements are capable of assessing extreme reliability outcomes in the context of a 10-year moving average analysis as they evolve.

Nevertheless, we do agree that where additional information can be readily provided to inform policy makers and market participants it is appropriate to do so. We also agree with the AEMC proposal that additional information in this area will facilitate the early identification and resolution of problems concerning reliability where appropriate. However, as discussed later in this submission, as it concerns reliability forecasting and information, we express a cautious approach to the use of information to justify action or suggest a failure in the operation of the NEM.

The AEMC may want to consider new methods to improve the market's understanding of unserved energy. For instance, an effective way of establishing context could be to use elements of statistical process control, namely the control interval technique. Based on the variability of unserved energy, a control interval could be set and provided that the recorded unserved energy measure was within the control interval, no action would be necessary. This could provide a valuable and transparent heuristic when dealing with annual measurements of unserved energy.

The specific comment regarding an increase in the MPC to represent the value customers place on reliability is unsettling. This implies the use of a figure like that previously developed by VENCORP in Victoria, which calculated the value of customer reliability at \$55,000/MWh. While some stakeholders favour a large increase in MPC (on the assumption it will drive significant generation investment and increase reliability), those arguments do not consider that the bulk of supply interruptions are due to limitations within the distribution system; therefore improving distribution and transmission performance would deliver greater value compared to increasing the MPC (or Reliability Standard).

### *Additional comments of capacity in the generation sector*

The NGF is concerned about comments regarding a lack of capacity in the generation sector. These comments do not appear to take account of analysis that shows, on many occasions, additional generation capacity is available at time of peak demand but transmission limitations prevent its dispatch. In this regard, the ongoing focus on the MPC and its link to new investment by some parties (a link that is not by any means clear cut) ignores other more relevant limitations and failings in the supply chain.

For instance, the trip of Basslink is often blamed as the cause for load shedding in Victoria on the 29<sup>th</sup> of January 2009. In reality, NEMMCO issued LOR3 notices for Victoria and South Australia and initiated load shedding in these states as from 12:40 and 13:50 respectively, Basslink did not trip until 14:03 on that day. It is also worth noting that prior to load shedding in Victoria, the NEMMCO published Victorian system demand had reached 10,496 MW whereas the VENCORP published maximum supportable demand for the Victorian transmission system as detailed in the VENCORP 2008 APR (Sect 2.2.7, p.32) was 10,400 MW. A check of 5 minute dispatch data versus reported availability for Victorian generators and interconnector limits to Victoria indicates surplus capacity of 378 MW at the time load shedding was initiated by NEMMCO.

The NGF raises concerns that load shedding in Victoria on the 29<sup>th</sup> of January 2009 was due to the lack of ability of the Victoria transmission system to support demand rather than lack of generation capability, therefore increasing the MPC to encourage new generation installation before this event would not have prevented the load shedding that occurred.

### **Technical standards and issues**

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The AEMC raised the issue of technical standards in the context of extreme weather events. While the NGF remains supportive of a comprehensive technical standards review, and has previously expressed disappointment at the delay in the proposed review, it is not immediately apparent how technical standards and extreme weather events interact.

A number of NGF members are of the view that generator technical standards have minimal impact on reliability performance and, in fact, are more relevant to matters of quality of supply and security. Additionally, measures against cascading generator failure have not raised any significant concerns during the operation of the NEM and such events are often driven by non-generator failures.

Therefore, given the limited time and technical complexity, we support the AEMC's position that consideration of extreme weather implications of technical standards may be best left to the wider technical standards review.

At a general level, the NGF notes that a reliable NEM should be able to accommodate a range of technical specifications. Any general push to make more onerous the already complex standards could have the effect of reducing, not enhancing, available capacity. On this basis, the NGF supports existing commitments to grandfather technical requirements reflective of the time of individual plant connection.

## Governance arrangements

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The AEMC's analysis of the governance arrangements concerning the establishment of the Reliability Standard and Settings is timely and allows participants an opportunity to review the strength of the current arrangements.

In the Second Interim Report, the AEMC provided three options. These three options, as understood by the NGF, have been set out below. We identify the significant changes from the status quo and discuss the key issues with each option. Before discussing the options, it is worth noting that the AEMC seems to have ignored the potential to improve the current method, or that the status quo is appropriate (indeed, the use in some form of an information only 10-year trajectory and/or an MCE Statement of Policy Principles may be the only steps needed to strengthen the existing process for reliability parameters decisions).

### *Option 1*

MCE Statement of Policy Principles would form a backdrop to regular Reliability Panel reviews. Following the conclusion of each review the Reliability Panel would make recommendations to the AEMC regarding possible changes to the Reliability Settings and the Reliability Standard. The Reliability Panel would be responsible for lodging a rule change with the AEMC to give effect to those recommendations. In making a rule change, the AEMC would have regard to the MCE Statement of Policy Principles and wider submissions.

### *Option 1 key changes*

- MCE Statement of Policy Principles
- Reliability Panel no longer sets Reliability Standard
- Timeframes for periodic reviews by Reliability Panel not defined.
- Reliability Standard and Settings set out in the NER.

The MCE Statement of Policy Principles creates some unease amongst NGF members. However, in this context it can be used, in the correct format, as an appropriate outline of community expectations. The appropriate format would not include actual proposed Reliability Settings, but general high-level guidance on community expectations.

To move to a process where the MCE recommends specific settings would be disruptive to the order of the current rule-making process and would require State and Commonwealth Government departments to undertake detailed analysis and modelling which they are not equipped to undertake and which would not be undertaken in the transparent and independent manner expected by market participants. Furthermore, it would politicise the process for establishing the Reliability Standard and Settings beyond the status quo.

The NGF remains comfortable with the Reliability Panel establishing the Reliability Standard. The only benefit of aligning the process for the Reliability Settings and the Reliability Standard, via a Reliability Panel rule change proposal, is the limited appeal of administrative consistency. While we can see the appeal for the AEMC, we would be resistant to such a move should our concerns regarding the MCE Statement of Policy Principles not be addressed.

## *Option 2*

MCE Statement of Policy Principles would form a backdrop to a MCE directed review conducted by the AEMC. Following the conclusion of one of these regular reviews the AEMC would make recommendations to the MCE. If the MCE accepted the AEMC recommendations the MCE would submit a rule change to the AEMC. In making a rule change the AEMC would have regard to the MCE Statement of Policy Principles and wider submissions including from the Reliability Panel.

### *Option 2 key changes*

- MCE Statement of Policy Principles.
- Reliability Panel no longer sets Reliability Standard.
- AEMC reviews directed by MCE.
- Timeframes for periodic reviews by AEMC not defined.
- Reliability Standard and Settings set out in the NER.

As previously discussed the MCE Statement of Policy Principles creates some unease amongst NGF members. In the context of option 2, NGF members are not comfortable with the MCE's multiple roles, which require the MCE to provide such a statement, initiate an AEMC review and submit a rule change.

Firstly, the MCE, like other parties, already has the capacity to submit a rule change to the AEMC on the Reliability Settings. The MCE can also make a submission to the Reliability Panel on the Reliability Standard and Settings Review. Reluctance to do so should not necessarily be read as failure of the current process for making reliability parameter decisions.

Second, the NGF considers the interplay between the MCE Statement of Policy Principles, an MCE directed AEMC review, and MCE-initiated rule change as problematic and undermining the independence and integrity of the process. This is because the Reliability Panel does not play a fundamental role in developing reliability parameter recommendations in this model. Should the MCE wish to be the body that decides when to initiate a rule change process (post-review) then we believe that the Reliability Panel should have a key role in recommending Reliability Standard and Settings changes to the MCE, either directly or through the AEMC. This will ensure a greater level of scrutiny.

The Reliability Panel is made up of representatives from across the industry and stakeholder groups with significant industry expertise. Involving the Reliability Panel explicitly would provide us with greater confidence that our highly technical and commercial concerns will be understood in developing reliability parameter recommendations. We do not consider this a conflict of interest given the wide range of perspectives on the Reliability Panel. We are confident that a process driven by elected officials and AEMC staff can only benefit from the expertise and diversity of the Reliability Panel.

Finally, the politicisation of the process for establishing the reliability parameters is an ongoing concern for NGF members. We consider this option may move us towards a position where political pressure or untested ideas generated within government departments may override economic efficiency and the NEO. In this regard, we do not see an advantage of this model to be transparency as suggested by the AEMC.

### *Option 3*

MCE Statement of Policy Principles (or another mechanism) would form a backdrop to reviews conducted by the AEMC in accordance with an undefined process in the National Electricity Law (NEL) or NER. In undertaking a review the AEMC would have regard to the MCE Statement of Policy Principles and wider submissions including from the Reliability Panel. Following the conclusion of one of these regular reviews, the AEMC would make recommendations in accordance with an undefined process set out in the NEL or NER.

#### *Option 3 key changes*

- MCE Statement of Policy Principles or other undefined mechanism.
- Reliability Panel no longer sets Reliability Standard.
- AEMC reviews directed by undefined process in NEL or NER.
- Timeframes for periodic reviews by AEMC not defined.
- Reliability Standard and Settings set out in a schedule.

As previously discussed, the MCE Statement of Policy Principles creates some unease amongst NGF members. This unease can only be exacerbated in light of an undefined mechanism in which the MCE expresses its guidance on the customer value of reliability.

As previously expressed, the NGF is concerned about removing the Reliability Panel from reliability parameter decisions. The AEMC has not provided adequate justification for such a recommendation. We are not aware of any market participants or stakeholders who have suggested the Reliability Panel is conflicted and therefore would ask the AEMC to explain its comments. We also do not consider that any change that further removes industry from the decision-making process can be considered transparent.

Given the process is undefined, it is difficult to reconcile the advantages outlined by the AEMC. However, given the potential impact of reliability parameter changes on market participants and the investment climate, we are pleased that the AEMC is conscious of the concerns of market participants and agrees with the outlined disadvantage of this option that: 'there could be a perception that the AEMC has undue responsibility for making important policy and market performance settings' (Second Interim Report, p.59).

#### *Placing the Reliability Standard and Settings in the NER or a schedule*

The rationale for placing the Reliability Standard and Settings in, or not in, the NER appears flawed. It should be of little consequence whether the Reliability Standard and Settings are set out in the NER or a schedule if the process for determining those settings is: is robust; is not subject to external political interference; is conducted in accordance with the NEO; and appropriately weights stakeholder submissions and customer needs and provides justifiable evidence based outcomes.

Therefore, while it is true to suggest that locating reliability parameters in the NER means they may be subject to more frequent requests for change. This does not suggest the parameters will be subject to more changes if the rule-making process is robust.

Additionally, the NGF does not believe that frequent requests for change have been a feature of the current process to date. As seen during the recent Reliability Panel Reliability Standard and Settings Review, market participants and customers are, on balance, particularly conservative about reliability parameter changes, perhaps even more so compared to other interested parties. In addition, the AEMC has the power to reject a rule change proposal that it considers is misconceived. Hence, the AEMC statement appears misguided and if developed further it will need the support of further evidence.

#### *Has the AEMC made the case for change?*

After reviewing the AEMC's proposed options, the NGF believes option 1 is the least concerning when compared with option 2 and option 3, which we strongly oppose (we consider option 3 the least worse of the latter two). Nevertheless, our support for option 1 reflects our general comfort with the status quo. On this basis, we have a strong preference to retain the status quo.

Furthermore, we do not believe the AEMC has demonstrated a convincing case for change or identified any significant improvements to market governance arrangements over the status quo that would result from implementing any of options 1, 2 or 3. This is especially the case as it relates to the AEMC's unsupported criticism of the Reliability Panel; a body comprised of representatives from across the industry whose balanced membership helps mitigate the risks of conflict of interests in its recommendations on Reliability Standard and Settings.

#### **Reliability Forecasting and Information**

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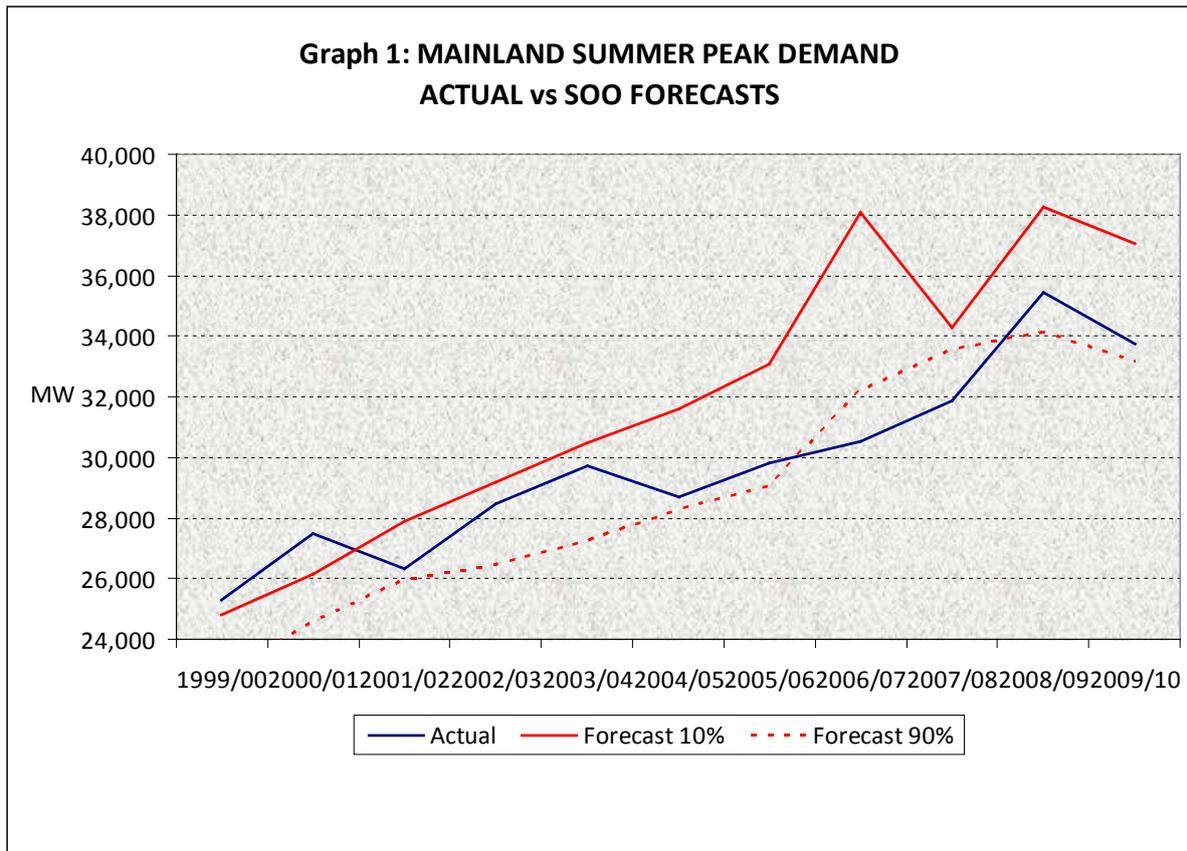
In the Second Interim Report, there was some commentary on the reliance placed on reliability forecasting methods. While it is true market participants and investors use reliability forecasting for various decisions, the reliance upon those numbers diminishes in longer timeframes. The Second Interim Report notes this, stating that the Electricity Statement of Opportunities (ESOO) is but one consideration in the timing of new investment. In this regard, the ESOO should not be considered a trigger for new investment or market intervention but a useful information tool.

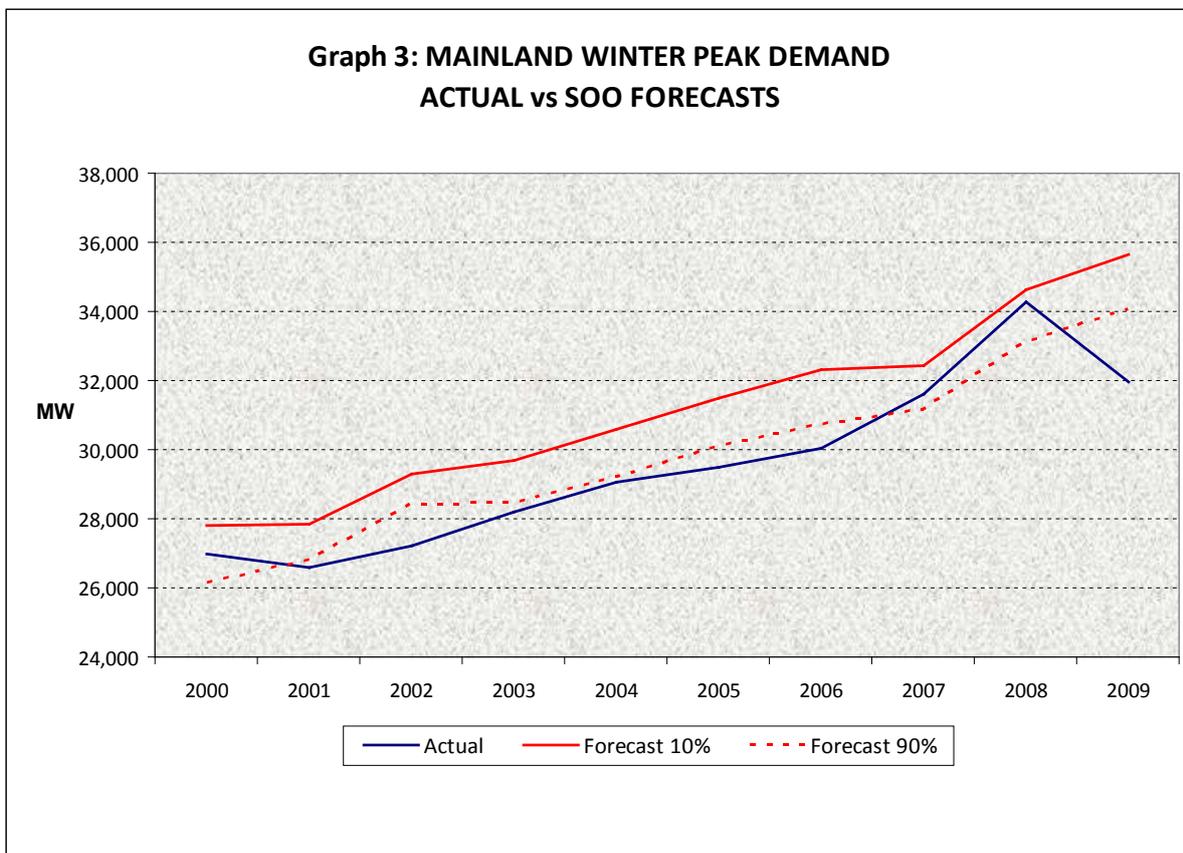
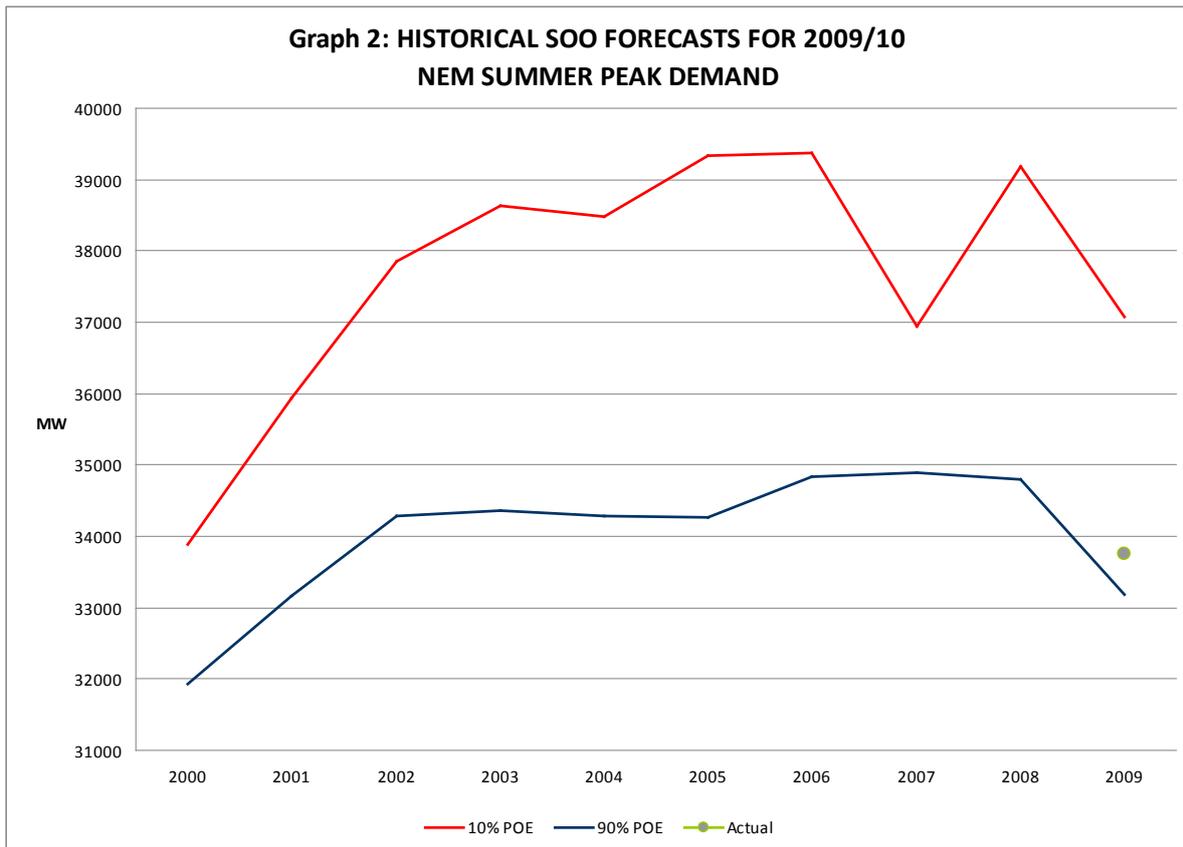
To explain why forecasts are not immediate investment triggers, we have undertaken a historical analysis of ESOO peak demand expectations compared to actual demand levels. Our findings show that these forecasts are overly conservative and can trigger concern over supply shortfalls unnecessarily despite evidence that the market continues to deliver new investment (excluding privately funded base-load generation). We present our analysis in the graphs below. The NGF is happy to explain these graphs in further detail at the AEMC's convenience.

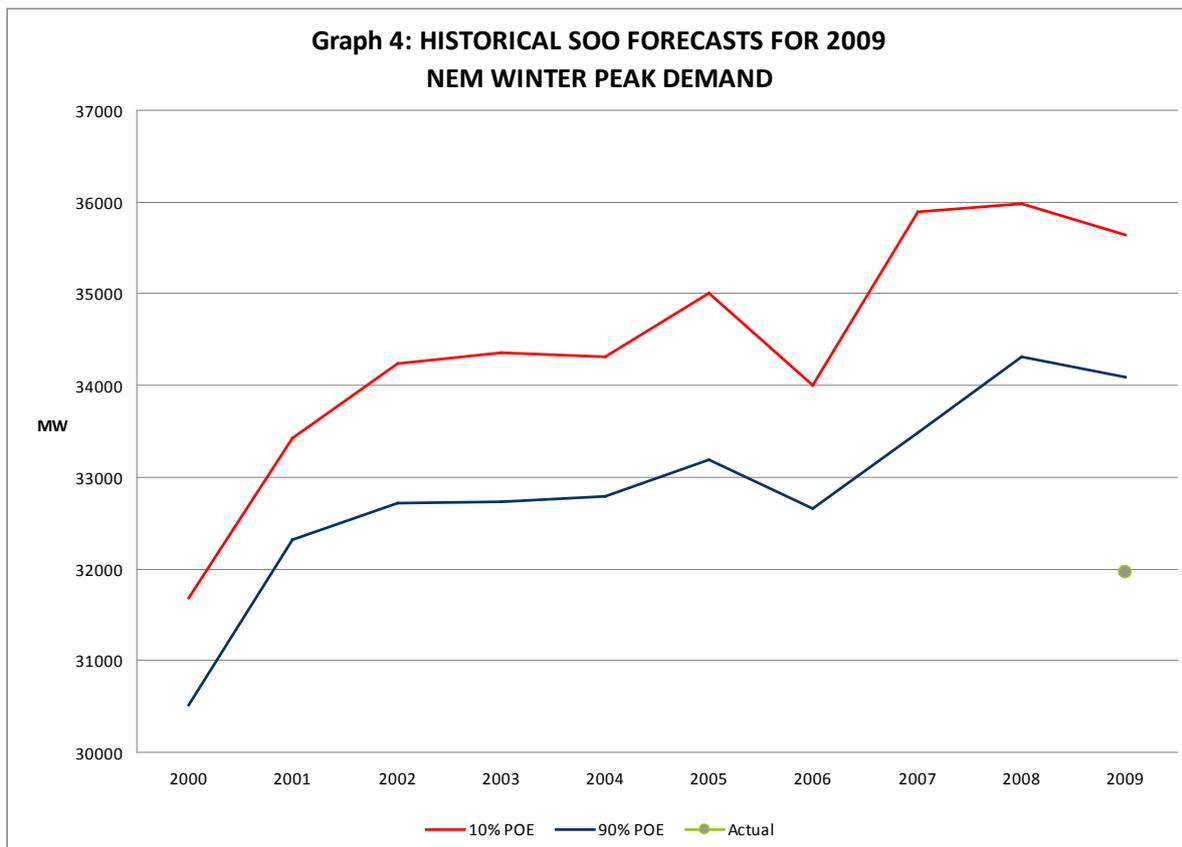
Graphs 1 and 3 below compare the forecast 10% and forecast 90% peak demands in summer and winter, respectively, across the NEM against actual outcomes. In each of these graphs, the ESOO forecast used is from the ESOO issued for the year immediately prior to the nominated year. For instance, the 1999/00 year forecast has been taken from the 1990 ESOO. The 2007/08 forecast is drawn from the 2007 and so on for the intervening years. Similar graphs for the Victorian, South Australia, Queensland and New South Wales regions form Attachment A.

Both graph 1 and graph 3 suggest that ESOO forecasts can be quite conservative at times. This is particularly evident in the years where actual outcomes are below both 90% and 10% forecasts. Notably, in a number of instances, this was not the case in the initial year forecasts.

Alternatively, graphs 2 and 4 chart 10 years of historical SOO and ESOO forecasts for a single year. These are from actual demand outcomes and the NEMMCO SOO issued in 2000 to the AEMO ESOO issued in 2009 for the summer 2009/10 and the winter 2009 peak demand. The graphs chart how the SOO peak demand forecasts for that year have varied considerably over the intervening 10 years, often with considerable step changes in forecasts between consecutive years. Graph 2 provides an actual outcome that is close to the 90%, POE forecast with a 4000MW gap between 90% and 10%. Graph 4 provides for an actual outcome that is 2000MW below the 90% POE forecast and around 3750MW below 10%. These graphs are illustrated below whereas similar graphs for the Victorian, South Australia, Queensland and New South Wales regions form Attachment B.







As the graphs show, there is significant variance between forecast and actual. In some instances, the differences are more than marginally out; for instance, recent Queensland peak demand and previous winter forecasts in South Australia. The aim of this exercise is not to criticise the ESOO as we continue to consider the ESOO as a useful information tool. We do question, however, the weight placed on these forecasts to determine future low reserve conditions.

This is not to suggest the forecasts do not provide an important and early signpost of potential problems. However, they are by no means a justification for market intervention or an actual trigger for possible investment in generation. These forecasts are not robust enough for this purpose and they should not be intended to fulfil this role.

It could be argued that if peak demand were expected to reach the levels forecast, then vertically integrated generators, who have retail exposure, would build to protect their retail position or other investors would seek to capture wealth through building generation assets. However, despite a number of generation building approvals, this has not occurred to the extent that would be expected if this investment was based purely on the demand forecasts contained in the ESOO. This may be because market participants do not share the expectations outlined in the ESOO and are discounting those conservative forecasts. The market is actually responding in a more effective manner than may have been otherwise suggested.

In this regard, it is important to note that there have been repeated instances of highlighting “impending shortfalls” that do not eventuate. This has not been because new generation has been installed but because the forecasts have not accurately predicted actual demand. It is for these reasons the NGF has concerns about Minimum Reserve Levels and their consistency with unserved energy of 0.002%. Again, we reiterate that such forecasts are very useful signposts but they may create unnecessary concern and should not be the basis of hard action by the market operator, for instance as it relates to the Reliability and Emergency Reserve Trader (an interventionist tool which was in part justified on the basis of “impending shortfalls” that again did not eventuate).

There is an element of concern amongst NGF members when highlighting problems with reliability forecasting and information. The NGF supports the preparation of the baseline information for use by interested parties and market participants and supports improvements in data outcomes. The latter is a process we acknowledge AEMO has shown a healthy commitment towards. We are concerned, however, that more onerous obligations may be placed upon market participants based on these forecasts.

Recently, the Productivity Commission highlighted onerous information obligations as a concern in the energy industry. Government entities tend to be information hungry in a manner that is difficult to satisfy. We are therefore opposed to measures that would further burden generators with additional obligations for minimal benefit, as is arguably the case for the Energy Adequacy Assessment Projection process.

We support AEMO in its ongoing commitment to improve data outcomes. However, we feel that greater transparency and improved outcomes could be achieved if the AEMO working groups dealing with significant data and forecasting issues were expanded to include industry representatives. For instance, the Load Forecasting Reference Group only contains AEMO and jurisdictional body representation.

As a general rule, we believe where industry is willing and able to provide expertise (e.g. in load forecasting and similar areas), then those working groups should include industry representatives, subject to compelling reasons to the contrary.

## **Conclusion**

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In relation to whole of power system security and supply, the NGF concludes that changes in the regulated sector can have profound effects on the investment climate for the generation sector. We consider that:

- inefficiencies in one segment of the supply chain can increase pressure on other sectors within the supply chain;
- differing standards across and within regions, which may represent least cost decisions, need to support generation investments. This requires consistent management and operation of those networks to the defined standard, and better investment in those networks to support new investment and the operation of existing generation assets; and
- efficiency drivers differ across the supply chain and this may impact participant performance.

The NGF concludes there is no case to justify implementing differing settings across the jurisdictions and calls upon the AEMC to dismiss this idea outright. Regarding the existing reliability parameters, the NGF:

- remains comfortable with the current Reliability Standard and its measurement over a rolling 10-year period;
- cannot justify increasing the MPC on the basis of assumed future extreme weather events, nor adjusting the MPC outside of the existing Reliability Panel processes; and
- has some notable concerns regarding the use and development of a 10-year trajectory that has any formal status.

The NGF agrees with the AEMC's position that the proposed technical standards review should give consideration to the issues raised during this Review.

Based on the AEMC's analysis, the NGF concludes that there is no or, at best, a weak case for changing the current governance arrangements concerning the establishment of the Reliability Settings and Standard. On this basis, we cannot support the significant changes encapsulated in option 2 and option 3 in particular. We encourage the AEMC to reconsider the validity of any recommendations for change especially in light of the strong industry support for the role and operation of the Reliability Panel and the existing ability of the AEMC to knock back any rule change proposals it considers are misconceived.

The NGF concludes that further work is required to produce consistent and accurate reliability forecasting and information. The NGF remains concerned at the overly conservative history of AEMO demand forecasts. We also restate our view that reliability forecasts provide useful indicators but are not robust enough to justify market intervention or provide market participants with an absolute trigger for new investment.

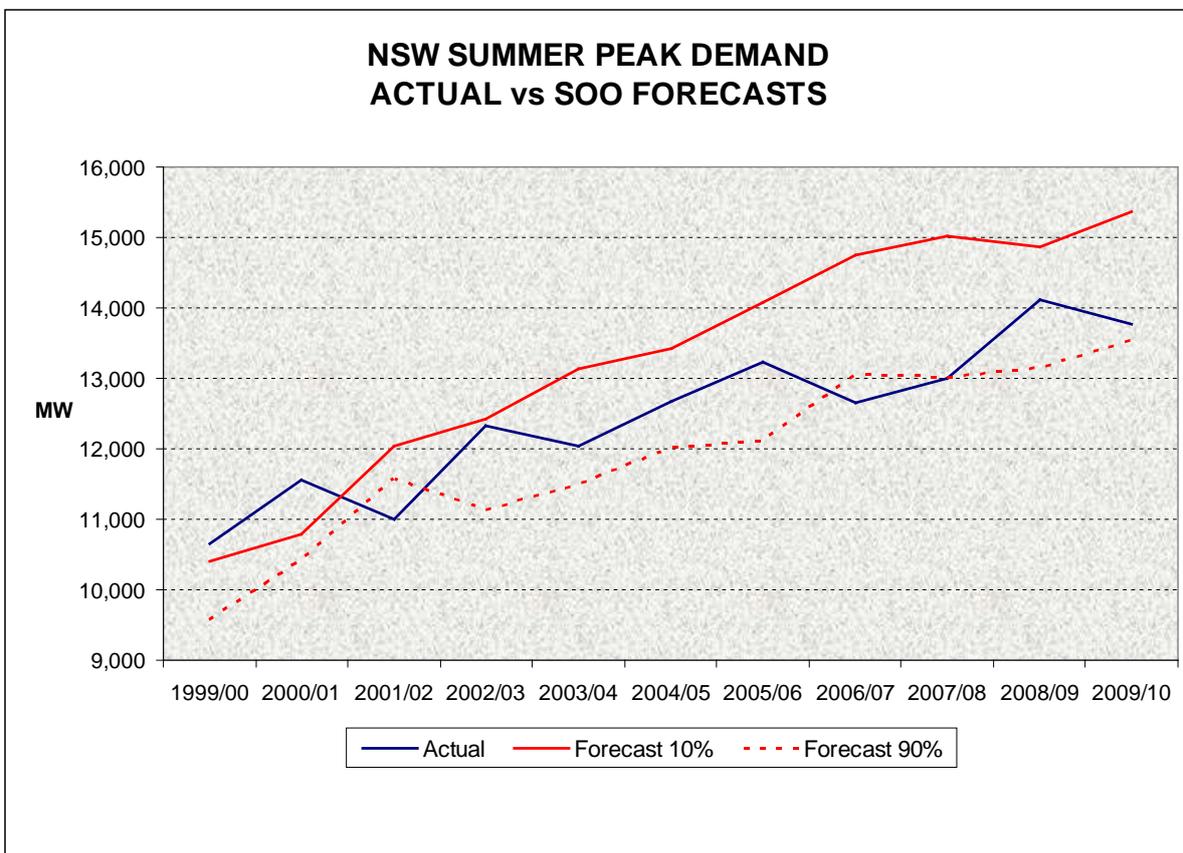
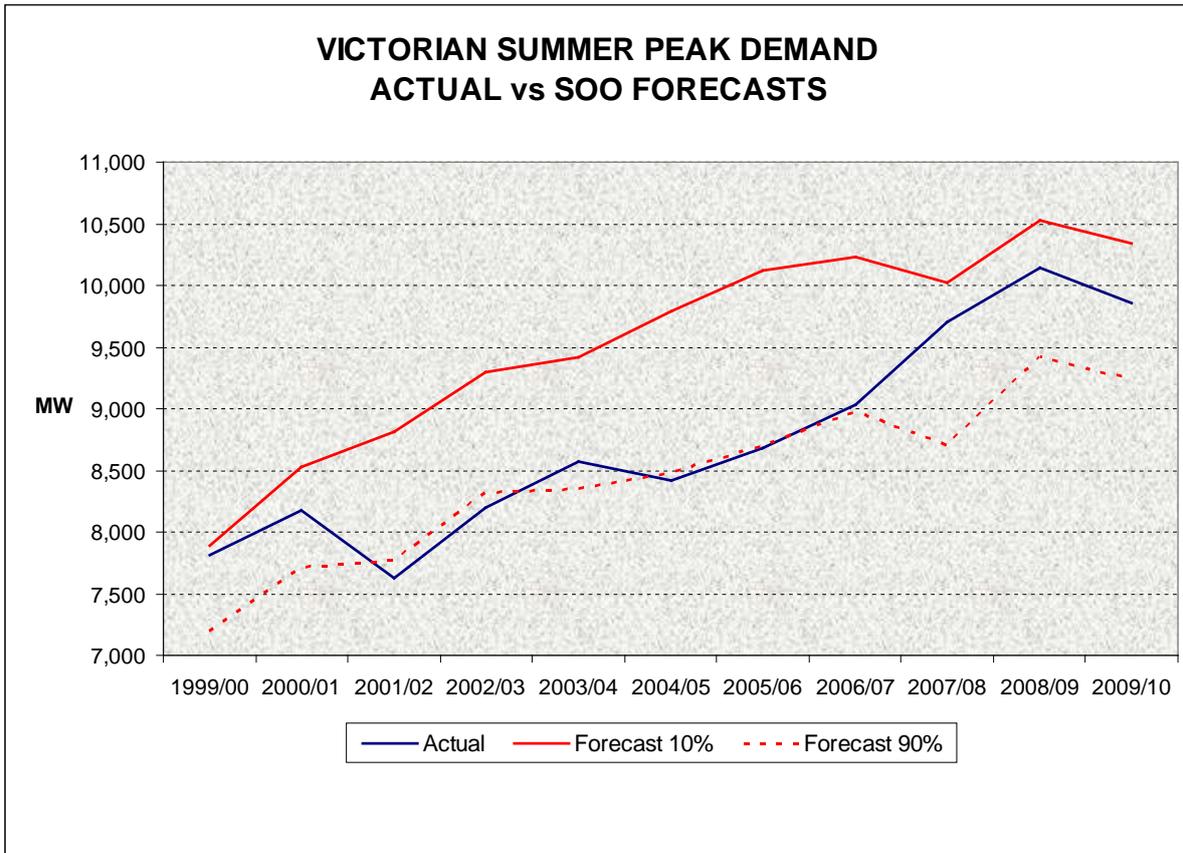
The NGF is pleased to continue to provide advice to the AEMC in the consideration of these issues going forward; however, we conclude, based on the consultation paper, and other recent work, that continual targeting of the generation sector as the primary means of increasing supply-side reliability is not the way to proceed.

Please do not hesitate to contact Mr Jamie Lowe, telephone (03) 9612 2236, or myself, telephone (02) 6198 3491, if you have queries in relation to this submission.

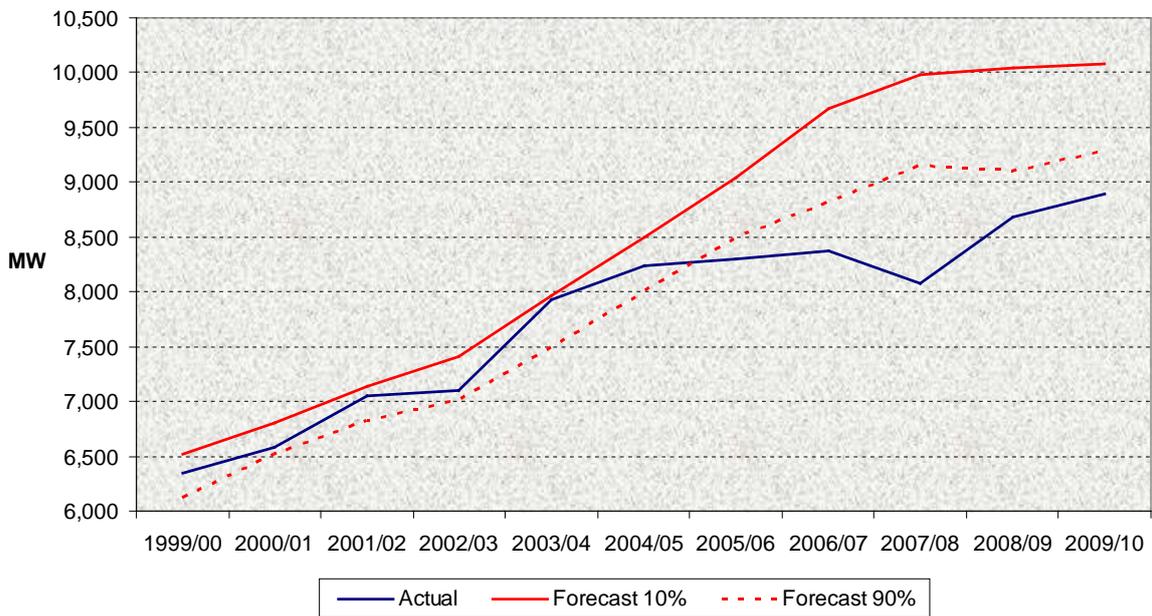
Yours sincerely,



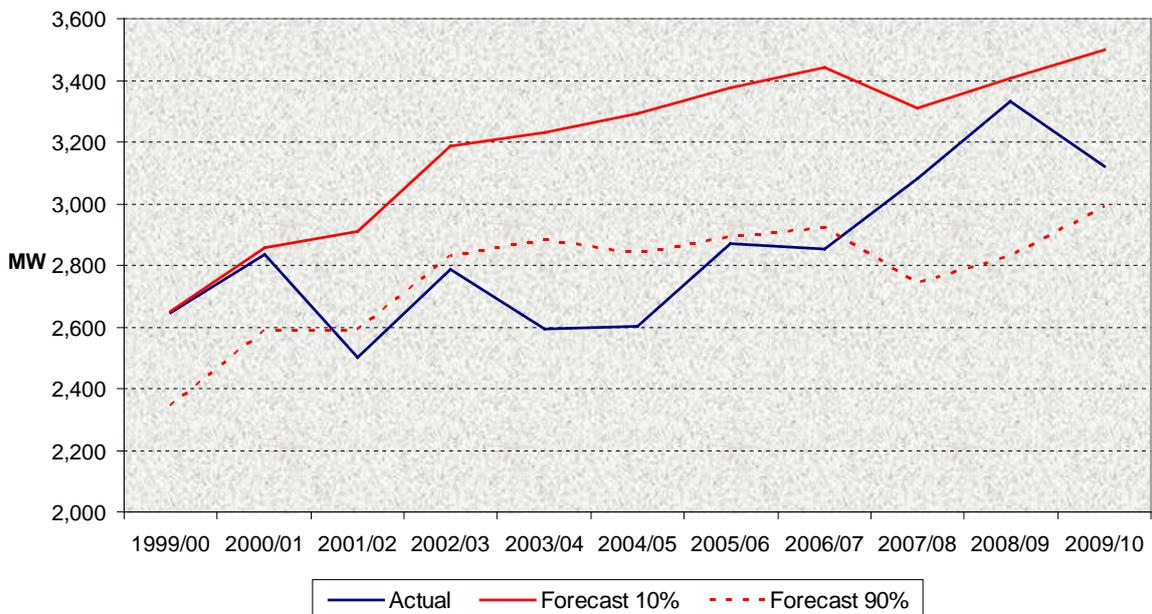
Malcolm Roberts  
Executive Director



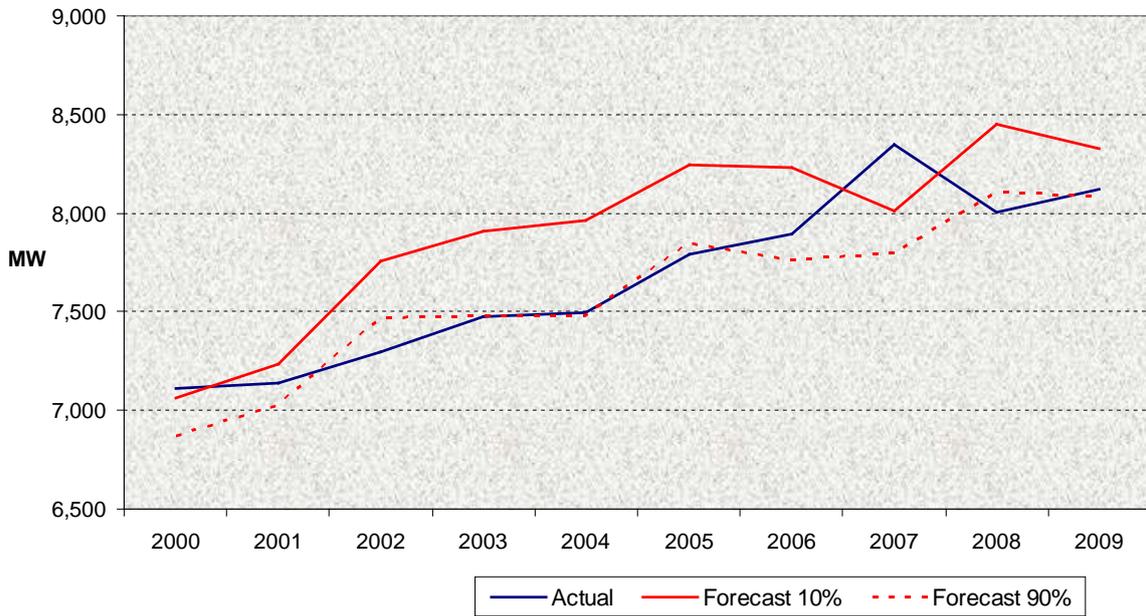
### QUEENSLAND SUMMER PEAK DEMAND ACTUAL vs SOO FORECASTS



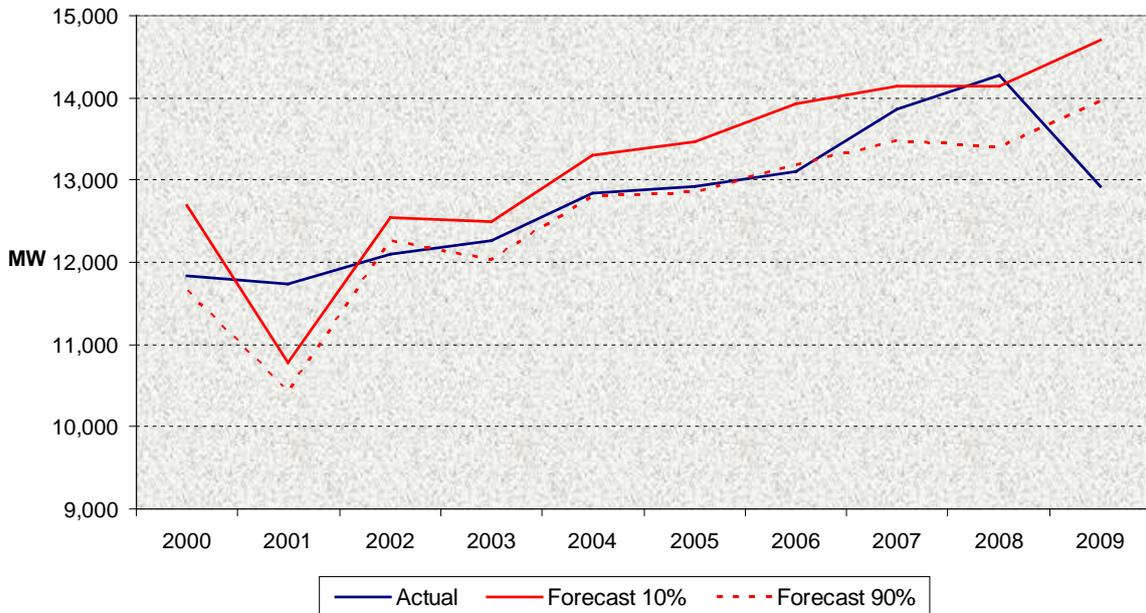
### SOUTH AUSTRALIAN SUMMER PEAK DEMAND ACTUAL vs SOO FORECASTS



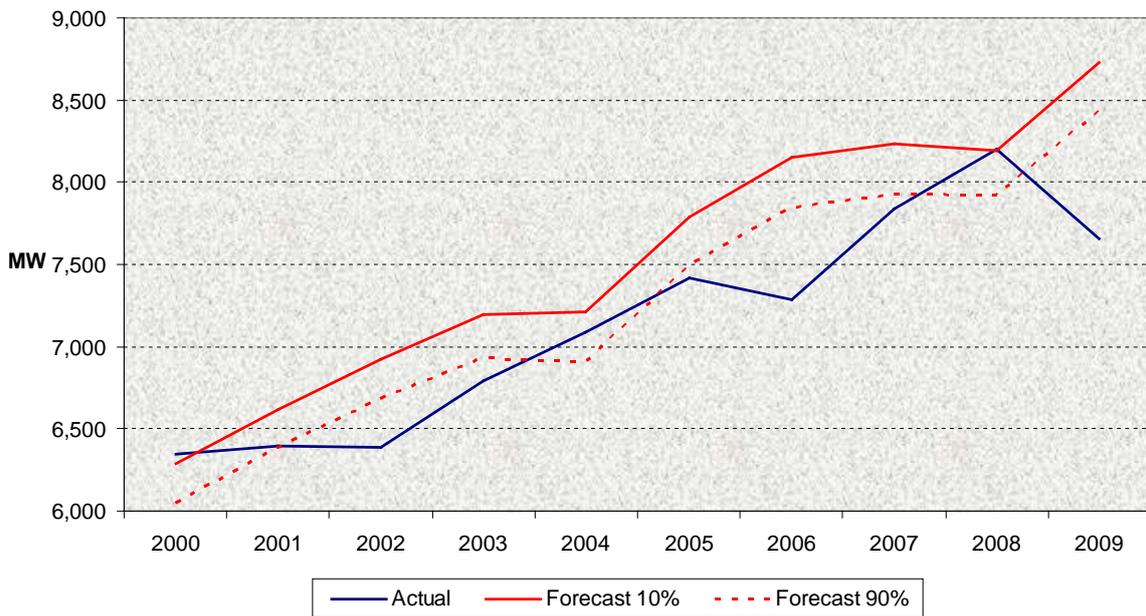
### VICTORIAN WINTER PEAK DEMAND ACTUAL vs SOO FORECASTS



### NSW WINTER PEAK DEMAND ACTUAL vs SOO FORECASTS



### QUEENSLAND WINTER PEAK DEMAND ACTUAL vs SOO FORECASTS



### SOUTH AUSTRALIAN WINTER PEAK DEMAND ACTUAL vs SOO FORECASTS

