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The Chairman  
Reliability Panel  
Australian Energy Market Commission  
P O Box H166  
Australia Square NSW 1215

By email: [panel@aemc.gov.au](mailto:panel@aemc.gov.au)

Dear Mr Woodward

**RE: COMPREHENSIVE RELIABILITY REVIEW-INTERIM REPORT**

Please find attached the National Generators Forum (NGF) submission in response to the Comprehensive Reliability Review Interim Report.

The NGF thanks the panel for the opportunity to provide comments to the review. The NGF provided an extended submission to the issues paper in June 2006 and this submission should be read in concert with that.

Please contact the undersigned if you have any questions in relation to the contents of this submission.

Yours faithfully

John Boshier  
Executive Director

## **NGF Submission to Reliability Panel Comprehensive Reliability Review Interim Report**

The NGF's Responses to the interim report have been listed against "Matters For Consultation" as set out in Chapter 8 of the interim report.

### **8.1 Reliability performance to date**

The NGF welcomes the panel's view that reliability settings and outcomes have performed adequately to date.

Whilst the NGF accepts that the lack of dispatch of reserve trader contracts in 2004 and 2005 does not necessarily mean that the intervention was unnecessary to achieve reliability standards, the NGF has had a long-standing concern that the operationalisation of the standard has had a conservative bias<sup>1</sup>, one of which is extreme demand forecasting. It is possible that improved operationalisation could have avoided this intervention, and the NGF welcomes the panel's suggestions in relation to improving the quality of demand forecasting. These issues are discussed further in 8.5 below.

The NGF rejects the panel's suggestion that the settings should be intentionally biased to counteract the possibility of construction delays, or indeed any perceived systematic error in the inputs to reserve calculation. Instead, these errors should be dealt with directly at their cause, e.g. the commissioning date for new developments should be carefully assessed and monitored throughout the reserve forecasting process. Any such "safety margin" applied to reserves would be arbitrary and unsupported by evidence.

### **8.2 Reliability Settings**

1. The NGF is pleased that the panel concurs with its view, as articulated in its issues paper submission supported by MMA economic modelling, that the current form and level of USE of 0.002% is appropriate and should be retained. This value reflects a reasonable estimate of the economic value of reliability to customers. The panel's useful international comparisons demonstrate that it is not, as has been claimed, "at the lower end<sup>2</sup> of international standards".
2. As per its first submission, the NGF strongly supports exclusion of exogenous events from the objectives of reliability setting to avoid confusing load interruptions that are not avoidable through greater reliability reserves, such as security events and industrial action. In this regard, the panel could provide some clear classification guidelines. For example, Oren (2000) classified:

*Security* as the "ability of the system to withstand sudden disturbances" and

*Adequacy* as the "ability of the system to supply the aggregate electric power and energy requirements of the consumers at all times"

The NGF supports the 10 year look-back for historical analysis and agrees there is

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<sup>1</sup> NGF submission to CRR issues paper pg 13 & 14, and ROAM report appendix 2

<sup>2</sup> i.e. less conservative

no linkage to looking forward. Following the clearer classification, the panel should now exclude 2000 industrial events and the January 2007 transmission event from its compilation of historical unserved energy.

3. The NGF interprets the recommendation to target 0.002% USE annually NEM-wide and within each region as consistent with current practice. On this basis, the NGF concurs. We note some confusion regarding the meaning of regional allocation, which needs a clarification that it should not be applied sub-regionally and further explanation on how to respond to possible regional change if a region is subdivided or if the region contains only a minor amount of load.
4. NGF believes that the reliability standard, which has been unchanged for 9 years and re-endorsed through this review has proven robust and need not be reviewed for a longer period than 3 years, possibly 5 or more. It is unlikely that customer's value of reliability will change significantly in 3 years.
5. The NGF is pleased that the panel has chosen to reject confusing the simple reliability standard with hybrid forms. As noted in its earlier submission, the NGF does not support the mandated preparation of forecasts of frequency, duration and depth as they do not provide additional economic value and distract from the economic simplicity of the output based objective.
6. The NGF opposes any provision for jurisdictional variations to the standard. There is one national market and there should be an agreed national reliability objective. To have different reliability standards would imply that different settings (i.e. VoLL) or market designs would be required, which would clearly run counter to the intentions of the national market. It would also be problematic to implement, as reliability modelling involves inter-regional transfers of reserve, which would allow a higher standard region to "scavenge" reserve from others.

Our first submission included economic analysis by MMA that noted the economically optimal level of unserved energy did vary in the NEM due to variations in jurisdictional load shedding priorities. The NGF did not, however, support varying targets in the NEM because it would not be sensible to try to counter-act the effects of sub-optimal shedding policies with conservative standards. The standards should presume that the policies are optimal.

### **8.3 Outlook for reliability in the future**

The NGF agrees that the basic format of the energy-only market appears able to allow the market to sustain investment to meet the reliability standard in the absence of external influences. That submission however strongly noted the challenges created by disturbances outside of the normal market mechanism. We are therefore pleased that the panel has appropriately recognised the potential for these influences to lead to a lower level of investment than would have been assumed.

The NGF has not yet formed a position with respect to whether a major change to the reliability settings (i.e. VoLL/CPT) or a change to the energy-only design is necessary. The NGF is undertaking a major project of research on the sustainability of the market design in the presence of expected major changes in the external environment,

particularly in relation to climate change policy, that will inform this view. This is expected to be available to the reliability panel by the end of 2007 and we wish to provide that to the panel when it becomes available.

#### **8.4 Securing reliability in the future: draft alternatives**

The NGF has articulated its concerns regarding investment towards the reliability standards given the perceptions regarding market distortions. With the information to hand at this time, the need for a radical departure from an energy-only market is not broadly held in the NGF, although that view will be informed by our investigations to be held through 2007.

So that the market can take an informed view on whether a departure should be made, the panel should attempt to quantitatively establish the impact of policies and regulation (such as greenhouse, retail price controls and mixed government/private ownership) on market reliability and sustainability. Having established the challenges to investment, it should then clearly articulate the success criteria for any proposed market alternatives. Alternatives could then be assessed against those criteria.

Whilst awaiting the research discussed above, the NGF has not formed a view as to what alternatives need to be progressed. Members note a range of possibilities regarding what they believe regarding the types of price caps and market design would support the reliability standard. These could be summarised as:

1. A substantively unchanged VoLL and energy-only market design with may be adequate to support the reliability standard;
2. The current market design with a significant CPT and VoLL increase (e.g. \$20-\$30,000) may be necessary to confidently support the reliability standard.
3. An alternative market design may be necessary to support the reliability standard. Some members have suggested alternatives in their own submissions, none of which are identical to that proposed by the interim report "Reliability/Capacity Options Paper". These members would prefer that their own designs, other designs promoted overseas and the design promoted by the paper were more fully explored before a decision is taken.

The following are consensus views of the NGF with respect to the specific proposals with the information to hand:

##### *Alternative 3A (Reliability Ancillary Service)*

The NGF is unable to form a clear view on this option with the material to hand. Some areas that need fuller explanation are:

- What volume of RAS would NEMMCO be expected to procure;
- Would those volumes be set on a national or regional basis, and would a "global" RAS market be operated as occurs with FCAS.
- How would it interact/co-optimize with the energy market, especially in the presence of regional volume constraints?;

- How would generators within a binding transmission constraint be managed?;
- How would it interact with providers of FCAS raise services?;
- How and who exactly funds the RAS?;
- Would a hedge market be feasible between the funders and sellers of RAS?<sup>3</sup>;
- How would the 5/30 anomaly as it applies to the energy market affect providers of RAS?;
- What form of delivery assurance would there be, i.e. verification that a RAS provider could provide short-term energy response?;
- What price caps would apply?

### *Alternative 3B (Continuous Reserve Contracting)*

We recognise that this form of contracting may provide some jurisdictional assurance which may be valuable to the certainty of market investors in terms of avoiding the expectations of some forms of market intervention. The NGF is therefore not opposed, in principle, to the concept of continuous reserve contracting within the current market design subject to the following qualifiers:

- That there is a clear and absolute assurance provided in the rules that under no circumstances may the reserve plant participate in the energy market;
- That the volume procured is moderate, in amounts along the lines described in the paper by example<sup>4</sup>;
- That the volume procured is stable with reviews no more often than, say, 5 years.
- That the terms of the contracting be in the order of at least 10 years.
- That the volume procured is set by the Reliability Panel and not available to jurisdictional variation;
- That the current sporadic reserve trader is discontinued;
- That none of the cost is levied on market generators.

### *Reliability/Capacity Options Model*

This model also requires a more thorough explanation before the NGF can form an adequate response to it. On top of the matters raised for explanation in respect of the reliability ancillary service, there are clearly major transitional issues with such a major shift and we would need clarity of how these matters, such as pre-existing contract positions, would be managed.

### *Availability Payment*

Some NGF members have proposed schemes of this nature in submission to the panel and are disappointed that they have not been assessed. It is not explained why these assessments were not performed.

## **8.5 Other matters**

### *Regional Reserve levels*

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<sup>3</sup> Note that stability of income is critical for investors, and therefore the success of this measure in supporting more supply will be dependent upon an ability to stabilise its returns through a measure like hedging.

<sup>4</sup> Page 63

The NGF opposes the allowance of regional increases to the reserve threshold. Our MMA consultancy report lodged with our earlier submission found that the economic optimal level of unserved energy did vary from place to place, caused primarily by load shedding policies of the jurisdiction. In our view, those policies should be optimised rather than purchasing extra reserve. The Reliability Panel should consider this matter and possibly make recommendations regarding load shedding policy.

As per our first submission, the NGF opposes a variable reserve threshold as incompatible with the national market. In particular, the NGF opposes the setting of reserve thresholds by state jurisdictions-this should only come through the national processes.

### *Reserve Trader*

The NGF believes that the standing reserves option is similar and possibly superior to the sporadic reserve trader and that it is not necessary to have both in place.

### *Demand Forecasting*

The NGF is pleased that the panel has recognised our and other stakeholders' concerns regarding demand forecasting being systematically too conservative. The obligation to report to the panel is therefore welcome.

The NGF is also concerned about the current process of demand forecasts being provided to NEMMCO by TNSP's, that has lead to a lack of accountability and proper assessment of regional demand diversities. The panel's recommendation would be strengthened were NEMMCO to take over the full responsibility for forecasting demand.

### *Distinguishing between short-term and medium-term reserves*

Our 2004 ROAM report provided in our earlier submission made many comments on historical processes of operationalising the reliability standards. The challenges associated with converting a probabilistic unserved energy target into a simple deterministic reserve margin were discussed. The panel's recognition that the reserve margin would not apply equally to all timeframes is consistent with that discussion. The NGF therefore welcomes this recognition and moves to make the process more sophisticated and reflective of the unserved energy criterion intent.

We should also note that that ROAM report discussed the potential for minimising the need for determinism at any point in the process. Indeed, it discusses the possibility of replacing all long<sup>5</sup> and medium-term<sup>6</sup> deterministic reserve forecasting with probabilistically modelled unserved energies. This would resolve many implementation problems of the standard, including the one identified here.

### *CPT*

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<sup>5</sup> i.e. the Statement of Opportunities

<sup>6</sup> i.e. MTPASA

The NGF is disappointed that the panel has not considered its proposal of a physical trigger to administered price and the regime of administered pricing. The 16 January 2007 event has demonstrated the very large and unmanageable risk that transmission system disruption can create in the market and feels that awaiting a financially triggered administered price creates excessive and unnecessary risk for affected generators.

Since that time, the NGF has formed a working group to consider these matters and is likely to propose rule changes to minimise that risk.