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Dear Mr Woodward

## COMPREHENSIVE RELIABILITY REVIEW

Macquarie Generation welcomes the opportunity to comment on the AEMC Reliability Panel's *Comprehensive Reliability Review, Interim Report*, released in March 2007.

The submission sets out Macquarie Generation's views on the performance of the NEM, accuracy of demand forecasting and the setting of administered price caps.

### **Performance of the National Electricity Market**

Macquarie Generation anticipates that demand in the national electricity market will continue to grow steadily in future years in line with movements in national economic growth. NEM peak demand and average demand have increased by around 1000 MW and 600 MW a year in recent times. The NEM will need ongoing investment around these levels to sustain the high levels of reliability that customers have enjoyed over the last decade.

Macquarie Generation's submission in response the Reliability Panel's Issues Paper detailed more than 6,000 MW of new generation capacity that investors have commissioned in the period from early 2000 to mid 2006. The new generation includes major new projects and upgrades to existing plant. Transmission network service providers have also invested significantly in interconnection projects, both new transmission lines and upgrades to existing lines, enabling a sharing of reserve plant across NEM regions.

Macquarie Generation is aware of significant new generation investment that is either under construction or at an advanced stage of planning. Macquarie Generation anticipates that investors will commission more than 5,500 MW of new generation in the next 3 to 4 years across all NEM regions (see table below). Apart from the Kogan Creek coal-fired power station, all other new projects are gas-fired generation. Privately owned energy businesses will develop the majority of the new projects.

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<i>Region</i>	<i>Project</i>	<i>Size</i>	<i>Proponent</i>
NSW	Munmorah	600 MW	Delta
NSW	Tomago	500 MW	MacGen
NSW	Uranquinty	450 MW	Babcock & Brown
NSW	Tallawarra	420 MW	Truenergy
VIC	Newport	380 MW	Ecogen
VIC	Bogong	140 MW	AGL
QLD	Spring Gully	1000 MW	Orign
QLD	Kogan Creek	750 MW	CS Energy
QLD	Braemar	600 MW	Origin
QLD	Condamine	140 MW	Qld Gas Company
SA	Hallett	180 MW	AGL
SA	Quarantine	120 MW	Origin
TAS	Georgetown	200 MW	Alinta

The Reliability Panel quotes research undertaken by NEMMCO and the Electricity Supply Industry Planning Council of South Australia as well as modelling that it commissioned from CRA on future reliability levels. All of the modelling showed the current market design is likely to support sufficient new investment to satisfy the reliability standard over the longer term. The modelling was subject to a range of assumptions including that the value of lost load would be maintained at real levels, participants could agree hedge contracts to support the necessary investment and there were no external factors that would distort market signals.

The Reliability Panel has concluded that there are reasons for doubting whether investors will commit to sufficient new generation from 2011 onwards. The Panel cites the uncertainty created by the lack of detail on likely greenhouse policy obligations as a key reason for possible delays leading to reliability problems.

Macquarie Generation agrees that greenhouse policy uncertainty means there it is unlikely there will be significant investment in baseload generation in Australia until the policy environment is clarified. However, there are strong signs that the Commonwealth and State governments will detail their long-term positions on the scope and form of an emissions trading scheme in the next 6 to 18 months.

Macquarie Generation does not support any fundamental change to the NEM market design at this stage of its development. The NEM has performed very well in all regions in delivering high levels of reliability as measured by the actual unserved energy levels. Market responses to emerging water shortages in the NEM over the last 6 months demonstrate that the energy-only market does work to send appropriate pricing signals to existing participants, potential investors and end-use customers. The market is seeing significant new investment in gas-fired generation in response to the higher prices. Existing generators also have a sharper incentive to use existing water reserves more efficiently and to develop alternative sources of water supply.

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The Reliability Panel should only make recommendations for significant change to the market design if the modelling shows the market is not capable of delivering sufficient generation reserves. Market opinion and perceptions should not determine key policy decisions. Regulatory uncertainty about possible fundamental changes to the wholesale market can contribute to investor risks and the deferral of new investment.

### **Value of lost load**

Macquarie Generation does not believe that there is a need to substantially alter the current setting of the value of lost load but would not have a problem with supporting the proposed increase to \$12,500 MWh with ongoing indexation. The value of lost load is a key driver of new investment and while it should not be set at such a high level that it may discourage generators entering into hedging contracts, it should allow for increases through time in the costs of procuring and commissioning new plant.

### **Standing reserve generation**

Macquarie Generation believes that if the forward modelling shows likely problems with reliability there is merit in pursuing the establishment of a permanent reserve capability in the NEM. NEMMCO would procure the reserve through long-term contracts and the capacity would sit outside of the current wholesale market. NEMMCO would only dispatch it when supply shortfalls were imminent and the market was at VOLL, and customers would fund the net costs of scheme. The permanent reserve would replace the existing reserve trader arrangement.

Macquarie Generation would support the approximate regional mix and scale of plant modelled by the Reliability Panel – about 700 MW of gas fired plant spread across most regions at a cost of about \$50 million per annum.

The permanent reserve capacity would provide a level of assurance to policy makers and customers that a safety net was in place to assist during extreme events. While the permanent reserve would not guarantee high levels of reliability by itself, it would complement the energy-only market and the relatively high VoLL in delivering high levels of reliability into the future. A standing reserve trader is preferred to the reserve trader mechanism as it delivers a certain and reliable level of reserve capacity that sits permanently outside of the wholesale market providing a form of insurance for all customers.

### **Demand forecasting**

Macquarie Generation supports the proposal to require NEMMCO to report to the Reliability Panel each year on the accuracy of its Statement of Opportunity demand forecasts and to detail any improvements that NEMMCO has made to the process of preparing those forecasts.

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Macquarie Generation's response to the Panel's Issues Paper detailed the ongoing overestimation of summer and winter peak demand forecasts in most regions over the previous 6 years. This trend has continued over summer 2006-2007 – the actual peak demand was below the 90 per cent probability of exceedance (PoE) forecast in every NEM region and more than 3,700 MW below the 90 per cent PoE forecast for the entire NEM.

<i>Summer 2006-07</i>	<i>Forecast 10% PoE MW</i>	<i>Forecast 90% PoE MW</i>	<i>Actual peak demand, MW</i>
NSW	14,750	13,050	12,663
VIC	10,234	8,981	8,886
QLD	9,675	8,818	8,378
SA	3,441	2,922	2,854
TAS	1,456	1,422	1,388
NEM	36,253	35,481	31,715

Macquarie Generation can see no change in the pattern of bias towards conservative estimates of demand in recent years despite the commissioning of a review by NEMMCO.

Unrealistic projections of future demand would lead the Reliability Panel to assess that a need existed for new generation earlier than it is practically required. This in turn could influence policy makers to impose costly market interventions in an attempt to correct perceived failings of the NEM.

The over-estimation of demand can also create direct costs for the market if it unnecessarily triggers the operation of the reserve trader mechanism or if it results in NEMMCO directing generators to defer necessary maintenance work when sufficient reserves were available to meet likely demand levels.

NEMMCO sources its demand forecasts from TNSPs, which are reviewed by jurisdictional coordinators in some regions. If the conservative pattern of demand forecasting continues, the Reliability Panel should investigate more fundamental changes to the estimation process. The Panel should consider changes that would give NEMMCO full responsibility for all of the steps in preparing the forecasts. Removing TNSPs from the process would minimise some of the institutional bias towards estimates that overstate the risks of supply shortfalls.

### **Administered price caps**

The current administered price caps are set at \$50 MWh for offpeak periods and \$100 MWh for peak periods for trading intervals requiring administered prices under the cumulative price threshold arrangements.

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Macquarie Generation is concerned that the price caps are set too low to directly reward peaking plant that the market is likely to need following a period of tight supply conditions that would have triggered the price caps. The current arrangements do allow for plant with costs higher than the caps to be compensated but only after a review and assessment of claims involving the AEMC and independent advisors. All retailers are obliged to fund the cost of the compensation but are not able to hedge this cost against the spot price given the capping arrangements.

Macquarie Generation believes that administered price caps of \$100 MWh offpeak and \$300 MWh peak would provide a more realistic level of caps that would cover the actual dispatch costs of peaking plant needed during a CPT period. This would minimise the need for NEMMCO to direct generators to dispatch, avoid the need for costly and time-consuming reviews of compensation claims and minimise possible hedging losses for all retailers.

### **Summary**

Macquarie Generation supports the Reliability Panel's recommendation to retain the current unserved energy target at the existing level. The measure offers a simple, outcome-based target which the Panel can use to assess past and prospective reliability levels.

Macquarie Generation considers that the current market design has delivered high levels of reliability since market start. Modelling of future levels of reliability indicates that the market is capable of outperforming the unserved energy target into the future. Macquarie Generation would support incremental changes to the current arrangements in the form of real increases in the level of the value of lost load and the possible introduction of a permanent reserve trader as these changes are consistent with the existing basic design of the NEM.

Macquarie Generation considers that improving the process for forecasting demand in the NEM would reduce the likelihood of unwarranted market intervention.

Macquarie Generation does not believe that the Panel has offered sufficient evidence or analysis to support the view that the market will not deliver adequate new generation investment. Before agreeing to any significant change, participants would require more detailed analysis of the need for new reliability mechanisms and greater detail on the possible implementation, operation and funding of the various options canvassed in the report.

Yours faithfully



18/5/2007

RUSSELL SKELTON  
MANAGER/MARKETING AND TRADING

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