



3 November 2006

By email: panel@aemc.gov.au

Dear Sir or Madam,

TRUenergy supplementary submission to Comprehensive Reliability Review

Please accept this short submission to a specific matter of concern to the Reliability Panel: *Guidelines for Management of Electricity Supply Shortfall Events*, commonly referred to as the “Sharing the Pain” rule.

This guideline as promulgated by the Panel in 1998 is unintentionally causing NEMMCO to implement an onerous reserve margin for the South Australian region, making it difficult to economically achieve the reliability standard.

A minor adjustment to the guideline would alleviate this whilst still retaining, and possibly furthering, the intent of “Sharing the Pain”.

The panel may choose to consider this submission either within the Comprehensive Reliability Review or separately.

The guideline has been attached for your convenience.

Yours Sincerely,

Ben Skinner
Senior Regulatory Manager, Wholesale Markets

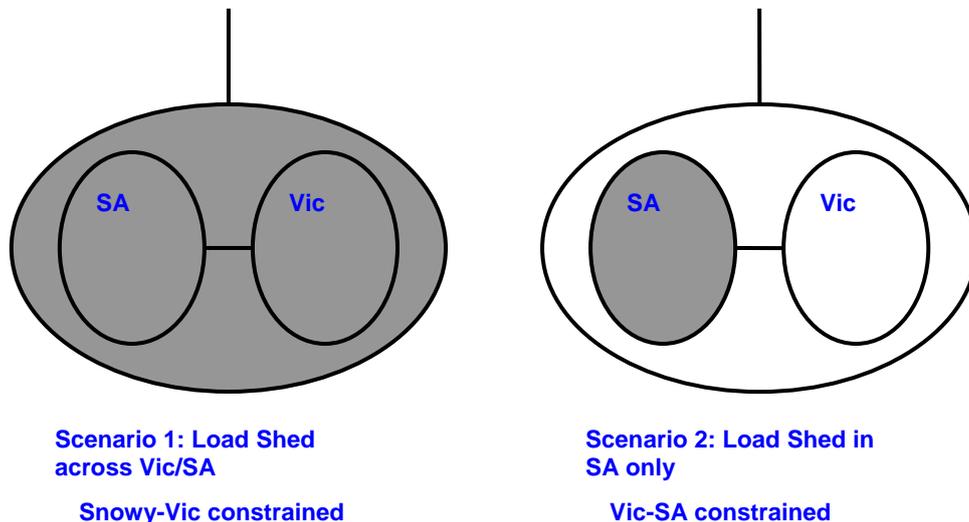
Background

In October 2006 NEMMCO published its new Minimum Reserve Level (MRL) Recalculation. This recalculation benefited from better input data and a more accurate approach than previous calculations. However the new margin for South Australia of - 50MW excluding interconnection support, is more conservative than applied previously and attracted concern as it would appear unachievable within the current market settings.

Attention has been understandably drawn to the accuracy of SA plant forced outage rates, which had been revised downwards following further analysis. These rates have now had substantial scrutiny and unlikely to be materially in error.

Instead attention should be drawn to load shedding equity during multiple region shortfall events. Were this to be managed in a more optimal manner, it would allow the South Australian MRL to be less onerous, whilst not exceeding 0.002% expected unserved energy.

Why SA must have an onerous MRL in the current regime



The MRL monte carlo simulation correctly recognises that South Australian unserved energy accrues primarily from one of the above two scenarios. Alternatively, the situation where Victoria is in shortfall whilst SA is in surplus is extremely rare.

Due to the “sharing the pain” rule, the modeller must allocate unserved energy proportionally in scenario 1, thus both regions accrue a similar percentage. Then when scenario 2 events occur, SA alone collects unserved energy.

However, rule 4.2.7 (c) states that a reliable operating state is achieved when: “in NEMMCO’s reasonable opinion the levels of short term and medium term capacity reserves available to the power system are at least equal to the required levels determined in accordance with the power system security and reliability standards.”

This is interpreted by NEMMCO that it should target to exceed the 0.002% standard in each region of its modelling, and thus SA may not have greater than this level.

This implies that NEMMCO cannot achieve an optimal reserve allocation, and that in keeping SA at 0.002% USE implies Victoria will always need to be modelled as having less than 0.002%. The modeller has to:

- Place an onerous MRL on Vic/SA combined to effectively limit the USE resulting from scenario 1 to well below 0.002%; and/or
- Place an onerous MRL on SA alone to reduce USE resulting from scenario 2 to very small amounts.

This issue is discussed in NEMMCO's MRL documentation:

“ROAM has conducted further simulation studies which attempt to minimise the minimum reserve level in South Australia through consideration of the capacity available in Victoria. This method:

- increases the combined Victoria and South Australia minimum reserve level;
- reduces the South Australian minimum reserve level; and
- delivers the Reliability Standard in South Australia but better than the Reliability Standard in Victoria.”¹

NEMMCO has had to make a trade off between Victorian and South Australian MRL's towards what it considers the most achievable level.

Alternative way to “Share the Pain”

From the modeller's perspective, a more optimal allocation of unserved energy would be to allocate Victoria the majority (if not all) the USE in scenario 1, allowing more scenario 2 events before SA reaches its USE target. This is not a realistic allocation in the presence of the current panel guideline that requires load shedding to be shared on a real-time basis.

However, if the guideline were to aim to “Share the Pain *over time*”, then this approach would be accurate.

This would require NEMMCO keeping a record of the volumes of load shedding it has instructed TNSP's to shed. When an event requires load shedding but is possible to recruit from multiple regions, it would attempt to equalise the amount of shedding over a rolling period of time, say 3 years. The tally of load-shedding would occur off-line, and an up to date priority order provided to NDSC staff.

This would be a truer interpretation of the equity concept implied by “share the pain”, as the burden of shortfall would be more equitably distributed over time, regardless of the actual events experienced. It would increase the chance of actual performance meeting the 0.002% target in all regions.

By allowing a more optimal allocation of MRL, the costs of market intervention should be lowered (whilst still not exceeding an expected 0.002% USE in any region) and therefore furthers the single market objective with respect to the long-term price of electricity.

Suggested change to guidelines

¹ NEMMCO “2006 Minimum Reserve Level Calculation” Pg 5

In the second dot point, after “As far as practical, any reductions must occur” insert “over a 3 year rolling time period”.

Reliability Panel

Guidelines for management of electricity supply shortfall events

If there is a major supply shortfall in the National Electricity Market, NEMMCO must, under with 4.8.9 (b) (2) implement any necessary load involuntary shedding in an equitable manner, in accordance with guidelines established by the Reliability Panel as part of the Power System Security and Reliability Standards.

The Reliability Panel has established the following guidelines for equitable involuntary load shedding in these circumstances.

- if insufficient generation, intra and inter regional network transfer capability is available to allow all demand to be supplied (after taking into account demand side bids in the market), at one or more connection points, in one or more regions, then
- in conjunction with the despatch of generation and demand side capacity through the despatch processes of the market, NEMMCO may as necessary initiate reductions in demand, supplied from those connection points affected by the shortfall. As far as practicable, any reductions must occur in proportion to the aggregate demand of the effective connection points, until the remaining demand can be met, such that the power system remains or returns (as appropriate) initially to a satisfactory operating state and ultimately to a secure operating state, as defined in the Code.
- an effective connection point is a connection point at which continued reduction is effective in reducing the supply shortfall, taking into account network constraints at all times.
- any reductions in demand required under these arrangements must take into account sensitive loads and priority order advised to NEMMCO in accordance with the Code.

National Electricity Code Administrator

September 1998