

Sydney

5 September 2006

Dr John Tamblyn  
Chairman  
Australian Energy Market Commission  
PO Box H166  
Australia Square NSW 1215

Dear John

I refer to your request for an assessment of the likely need for an intervention (direction) by NEMMCO as a result of Snowy Hydro advising that they may run the operating level of the Geehi storage at a low level (ie 25% instead of 80% of capacity).

Assumptions:

- NEMMCO is only able to intervene on the basis of anticipated reserve levels being insufficient. (NEMMCO is currently reviewing the required reserve levels for each region and is yet to provide advice to the Reliability Panel for any proposed changes to the reserve levels).
- Laverton North Power Station is available in mid November (this is the latest advice from the project proponent).
- Other plant outages as per the existing MT PASA.

The latest MT PASA analysis (5 September 2006) using the above assumptions and for a 1 in 10 year hot summer has identified three weeks with short reserve level forecasts in Victoria and South Australia, where energy shortfalls in Murray would have an impact:

23 Jan 2007 - 60MW reserve shortfall for Vic + SA

7 Feb 2007 - 170MW reserve shortfall for Vic + SA

22 Feb 2007 - 40MW reserve shortfall for Vic + SA

There are also reserve shortfalls in NSW and Queensland in these same periods.

The likelihood of all three of these weeks extending a 1 in 10 year hot summer demand is very low. The probability of a reserve shortfall occurring at all in the summer period is less than 10%.

Note: A shortage of reserve does not mean that load will be shed but that if this reserve level was maintained over the long term then load shedding would exceed the 0.002% un-served energy (USE) standard set by the reliability panel. Similarly even if there is excess reserve then this does not guarantee that load will not be shed, as failures and high demands could

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occur that require load shedding - but over the long term load shedding should result in less than 0.002% USE.

With low Geehi water storage levels the Murray side of the Snowy scheme may be limited in its capacity to generate. The Geehi storage has three ways to be filled: inflows, water diversion from Eucumbene, and pumping from Jindabyne. NEMMCO understands that the design of the scheme was to allow:

- Jindabyne pumps to supply water to Geehi to enable about up to 27,000MWh of generation per week from Murray.
- Eucumbene water diversion to supply about 66,000MWh of Murray generation per week with 20% levels in both Eucumbene and Geehi.

Although it is understood that these two sources of water into Geehi are not simply additive due to hydraulic effects, this together with the energy from 25% of Geehi remaining storage (ie a residual storage of about 4,000MWh of Murray generation) is expected to be a similar weekly energy limit as modeled in the above MT PASA analysis.

Thus NEMMCO does not consider it likely that there would be a significant degradation in reserves as a result of the operation of Geehi at about 25% capacity. In addition if NEMMCO, being aware of the intention to run Geehi at low levels and seeing a reserve shortfall approaching Victoria and South Australia with about three days notice, then NEMMCO will contact Snowy Hydro to discuss in more detail, the energy limitations at Snowy for the upcoming week(s). If NEMMCO assesses that any of the low reserve conditions can be relieved by relaxing some of the energy limitations advised by Snowy, then NEMMCO will have further discussions with Snowy Hydro to understand the options and then request or if necessary direct Snowy Hydro to increase the Murray station energy reserves. In addition NEMMCO would also assess what other generation capacity limitations or outages by other Participants exist that could be directed to be available. Currently in Victoria there is one generator with a planned outage in late January and another in February. These outages are subject to change.

If directed, Snowy Hydro would be expected to rearrange their proposed running regime to provide more energy on the day(s) as required. This could be by rearranging the energy proposed to be utilised in earlier periods from Murray or, if not already fully utilised, to alter water diversion arrangements including pumping.

However for a sudden reduction in reserves due to say plant failure, industrial action etc. then depending on the extent of the supply shortfall the low Geehi levels may limit the ability of Murray to generate. Depending on the availability of supply from Tumut and NSW, the requirement from Murray could be as low as 600MW (out of a capacity of 1500MW) to fully utilise the Snowy to Victoria interconnector (at 1900MW from Snowy to Victoria and a limit of about 1300MW from Tumut to Murray). While possible it is considered that additional load shedding as a result of low Geehi levels to be a low likelihood event.

Thus with the opportunity to direct if necessary to meet a foreseeable reserve shortfall NEMMCO does not see any significant deterioration in reliability to Victoria and South Australia.

In terms of the increased likelihood of a NEMMCO direction to establish increased energy reserves to Murray there are many uncertain factors:

- availability of supply from NSW and Tumut
- likely extent of any reserve shortfall and the prior notice of the shortfall
- Snowy to Victoria interconnector capability
- the prior use of Murray and the Geehi storage level at the time

A probability figure cannot be developed without detailed modelling but would it would be expected to be a low likelihood event.

In summary NEMMCO does not consider it likely that there would be a significant degradation in reserves for 2006/07 as a result of the operation of Geehi at about 25% capacity.

Yours sincerely

  
**Brian Spalding**  
Chief Operating Officer