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The Reliability Panel
Australian Energy Market Commission
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By online submission

Dear Mr Henderson

Review of the Reliability and Emergency Reserve Trader (RERT) – REL0041

AEMO welcomes the opportunity to assist the Reliability Panel (Panel) in its review of the Reliability and Emergency Reserve Trader (RERT) and its nominal sunset of 30 June 2012.

While AEMO has not expressed a view on whether the RERT should be retained, the following information is provided to inform the review of AEMO's:

- Experience with the RERT
- Key challenges in operating the RERT
- Opportunities to improve the RERT

If you would like to discuss any matters raised in this submission, please contact Ross Gillett on 02 9239 9114 or email ross.gillett@aemo.com.au.

Yours sincerely



Terry Grimwade
Executive General Manager, Market Performance

AEMO Submission to the Review of the Reliability and Emergency Reserve Trader (RERT) Issues Paper

Role of the RERT

AEMO is responsible for operating the national electricity market (NEM) to achieve the power system security and reliability standards. Where the market fails to respond to investment signals for additional generation capacity, the National Electricity Rules (NER) allow AEMO to intervene in the market and procure the additional capacity necessary to meet these standards.¹ AEMO may do this by contracting for reserves through its RERT mechanism, including the use of services provided by members of the RERT panel. Where time permits, AEMO would contract for reserves through a full and open tender process.

The RERT is primarily designed to address small and short-term levels of reserve shortfall. The NER only permits AEMO to contract for reserves within nine months of identifying a reserve shortfall², which is too short a time to attract investment in significant new generation and confines AEMO to contracting smaller increments of reserve from existing generation capacity or demand-side reductions.

Evolution of the RERT

The Reliability Panel (Panel) has previously reviewed and extended the reliability safety net. The most recent major re-design occurred in October 2009 when the RERT panel was introduced.

The RERT was designed with an expiry date in the NER (the subject of the current review) because there was a view that, in the long term, the energy-only market should be sufficient to attract the required levels of new generation capacity without the need for market intervention.

For more information, refer to Appendix 1 for a brief chronology of the evolution of the reliability safety net.

AEMO's Experience with the RERT

Since the start of the NEM the RERT has been exercised twice:

¹ In accordance with clause 3.20.2 of the NER.

² In accordance with clause 3.20.3(d) of the NER.

- From 30 January 2005 to 4 March 2005 (33 days), NEMMCO contracted for 84 MW of additional reserves for the South Australian and Victorian regions based on its forecasts in mid-to-late 2004 which showed a potential shortfall of 195 MW, at a total cost of approximately \$1.035 M
- From 15 January 2006 to 10 March 2006 (54 days), NEMMCO contracted for 375 MW of additional reserves for the South Australian and Victorian regions arising from delays in the commissioning of Basslink interconnector and the Laverton North power station, at a total cost of approximately \$4.4 M

In both cases NEMMCO entered into reserve contracts that would provide payments for making the reserves available over the relevant period (availability charges) and payments for the reserves actually used (enablement and usage charges). However the contracted reserves were not used in either case as conditions were more favourable than originally forecast, hence the total costs stated above only reflect availability charges and are likely to have been higher if the reserves were used.

Since its introduction in October 2009 the RERT mechanism has yet to be exercised by AEMO, and only one participant has joined the RERT panel.

Under the RERT there are no payments made to parties appointed to the RERT panel unless AEMO enters into a reserve contract, and if this is a short-notice reserve contract³ then payments are only for reserves actually used.

Key Challenges in Operating the RERT

AEMO faces some key challenges in operating the RERT in accordance with the RERT Principles and RERT Guidelines, including:

- **Consultation with Jurisdictions:** the need to consult on whether to contract for reserves, the maximum price for accepting reserve offers, and the allocation of reserve contract costs between jurisdictions
- **Standardisation of Reserve Offers:** the difficulty in creating a “one size fits all” reserve offer for demand-side providers (DSPs) through standard terms and conditions in a reserve contract, given the complexity of delivering demand-side reductions across multiple sites

³ A contract with a RERT panel member that is entered into with 3 hours’ to 7 days’ notice.

- **Reserve Tenders:** the complexity, lengthiness and cost of the reserve tendering and contracting processes for long and medium-notice situations⁴, including the potential for rolling tenders
- **Evaluation of Reserve Offers:** the complexity and length of time involved in evaluating reserve offers for technical, legal and commercial compliance
- **Optimal Use of Contracted Reserves:** the complexity and uncertainty involved in determining the least-cost use of contracted reserves to address a forecast reserve shortfall, particularly where unscheduled reserves are delivered by demand-side reductions that are subject to energy and time-related constraints such as:
 - Pre-activation and activation lead-times
 - Minimum and maximum activation times
 - Minimum off-time between activations
 - Maximum number of activations per period
- **Avoidance of Double-Dipping:** the difficulties ensuring that reserves contracted to AEMO via the short-notice RERT panel (particularly those in the form of demand-side reductions) would not have otherwise been available to (and paid for by) the market, given those services are also acquired by retailers and network service providers
- **RERT Panel:** the need for periodic recruitment and appointment of members to the RERT panel

AEMO's costs in exercising the RERT are material. Based on the last two occasions that the Reserve Trader was exercised⁵, AEMO estimates costs of around \$70,000 per RERT tender process.

Implications of having no RERT

Without a RERT, AEMO's options to address a reserve shortfall in the absence of a market response would be limited to:

- If available, using network control ancillary services, but only to the extent that the reserve shortfall is affected by a network limitation that can be relieved by such services

⁴ That is, situations where there is at least 7 days' notice of the projected reserve shortfall.

⁵ These costs exclude additional administrative costs that would have been incurred if the contracted reserves were used or if additional rolling tenders were required.

- Directing to Registered Participants regarding its scheduled plant or market generating units⁶ or, as a last resort,
- Giving instructions to Registered Participants regarding any other action⁷, including instructions for involuntary load shedding in appropriate circumstances

Potential Opportunities to Improve the RERT

If the Panel decides to retain the RERT, AEMO considers that there are opportunities to streamline the existing processes and encourage greater participation by non-market participants such as DSPs by improving and making greater use of the RERT panel, as follows:

- **Relaxation of Double-Dipping Checks for Short-Notice Reserves:** As a condition of appointment to the RERT panel, a DSP must consent to allow AEMO to verify with the relevant retailers that the end-use customers that comprise their reserve offer are not otherwise contracted. DSPs consider this information disclosure is a major deterrent to joining the RERT panel, because it reveals commercially sensitive information to a potential competitor, who could use the acquired information to approach those customers. Relaxing or removing this double-dipping check should be considered, particularly for providers of short-notice reserves, given that:
 - Those providers receive no availability payments to set aside reserves for exclusive use by AEMO
 - There are reserve shortfall situations where it is apparent to AEMO that no demand-side response is, or will be, required by the other contracting party, such as during administered pricing periods where the market price signal is dampened and there is little incentive for a retailer to use that service
- **Payment of Establishment Costs:** A DSP must incur, as a condition of entering into a reserve contract, costs in establishing and proving its offered reserves. Again, as the RERT panel arrangement does not provide for any payments for short-notice reserves unless used, DSPs might be reluctant to participate in the RERT panel. In order to encourage participation in the RERT panel, AEMO considers that reserve providers should be compensated for prudent and demonstrable costs incurred in establishing and proving their reserves

⁶ In accordance with section 116 of the National Electricity Law (NEL) and clause 4.8.9 of the NER.

⁷ Ibid.

- **Abolition of the Full Tender Process:** The RERT Guidelines require AEMO to conduct a full tender process when there is more than ten weeks' notice of a projected reserve shortfall.⁸ The tender process is complex, lengthy and relatively costly, and consideration should be given to streamlining the reserve contracting arrangements by removing this requirement so that all reserve contracting is conducted via the pre-arranged RERT panel

In summary, AEMO does not have any particular view on the retention of the RERT, however if it is retained, we consider that the above improvements might improve the efficiency of the RERT processes and encourage greater participation by non-market reserve providers in entering into reserve contracts.

⁸ Section 6 of the RERT Guidelines, found at: <http://www.aemc.gov.au/Market-Reviews/Completed/Consultation-on-the-Amended-RERT-Guidelines.html>.

APPENDIX 1: EVOLUTION OF THE RELIABILITY SAFETY NET

Date	Event	Changes
Dec 1998	NEM commencement	Reserve Trader introduced
Jun 2000	Code Change: Capacity Mechanisms http://www.neca.com.au/TheCodeea64.html?CategoryID=34&SubCategoryID=85&ItemID=577	<ul style="list-style-type: none"> Reserve Trader provisions extended until 30 June 2003 Replace force majeure trigger with CPT trigger for administered price period
Jul 2000	Code Change: VoLL, capacity mechanisms and removal of the zero price floor http://www.neca.com.au/TheCodef400.html?CategoryID=34&SubCategoryID=85&ItemID=720	<ul style="list-style-type: none"> Annual VoLL review by 30 Apr, with 2 years' notice of changes VoLL increased from \$5,000 to \$10,000 per MWh from 1 April 2002
Dec 2002	Code Change: Safety net provisions and reserve contracting http://www.neca.com.au/TheCode38cf.html?CategoryID=34&SubCategoryID=169&ItemID=1129	Derogation to widen the scope of Reserve Trader provisions to allow more extensive demand-side involvement through non-scheduled reserve contracts
Jul 2003	Code Change: Extension of reserve trader sunset http://www.neca.com.au/TheCodea3fc.html?CategoryID=34&SubCategoryID=85&ItemID=1300	Reserve Trader provisions extended until 30 June 2005
May 2005	Code Change: Extension of reserve trader sunset http://www.neca.com.au/TheCode8840.html?CategoryID=34&SubCategoryID=85&ItemID=1511	Reserve Trader provisions extended until 30 June 2006
Sep 2005	Guidelines for intervention by NEMMCO for reliability amended http://www.aemc.gov.au/Market-Reviews/Completed/Revised-guidelines-for-intervention-by-NEMMCO-for-reliability.html	<ul style="list-style-type: none"> Cost-effective reserve contracting Ensuring eligibility of demand-side tenders Allow reserve contracting up to six months ahead of projected shortfall
May 2006	Rule Change: Reliability Safety Net Extension http://www.aemc.gov.au/Electricity/Rule-changes/Completed/Reliability-Safety-Net-Extension.html	Reserve Trader provisions extended until 30 June 2008

Date	Event	Changes
Dec 2007	<p>Comprehensive Reliability Review completed http://www.aemc.gov.au/Market-Reviews/Completed/Comprehensive-Reliability-Review.html</p> <p>Resulted in following Rule Changes:</p> <ul style="list-style-type: none"> • NEM Reliability Settings: Information, Safety Net and Directions • NEM Reliability Settings: VoLL, CPT and Future Reliability Review • Improved RERT Flexibility and Short-notice Reserve Contracts 	<p>Recommended:</p> <ul style="list-style-type: none"> • Adjustments and incremental improvements to the reliability settings & mechanisms • Re-design Reserve Trader to RERT • No sunset on reliability directions • Annual VoLL review replaced by a biennial review of Reliability Standards and Settings, covering Reliability Standard, MPC, CPT & MFP, with 2 years' notice of changes • New EAAP
<p>Jun 2008</p> <p>Nov 2008</p>	<p>Rule Change: NEM Reliability Settings: Information, Safety Net and Directions http://www.aemc.gov.au/Electricity/Rule-changes/Completed/NEM-Reliability-Settings-Information-Safety-Net-and-Directions.html</p> <p>RERT Guidelines introduced http://www.aemc.gov.au/Market-Reviews/Completed/Reliability-and-Emergency-Reserve-Trader-RERT-Guidelines.html</p>	<ul style="list-style-type: none"> • Reserve Trader replaced with RERT, with sunset on 30 June 2012 • Remove sunset on the issue of reliability directions • RERT provides for both demand-side & generation responses <p>RERT allows AEMO to:</p> <ul style="list-style-type: none"> • Reserve contract up to nine (was six) months ahead of projected shortfall • Perform multiple tendering rounds to adjust contracted reserve levels
May 2009	<p>Rule Change: NEM Reliability Settings: VoLL, CPT and Future Reliability Review http://www.aemc.gov.au/Electricity/Rule-changes/Completed/NEM-Reliability-Settings-VoLL-CPT-and-Future-Reliability-Review.html</p>	<ul style="list-style-type: none"> • VoLL renamed to MPC & increased to \$12,500 per MWh from 1 July 2010 • CPT increased to \$187,500 (15 times MPC) from 1 July 2010 • Annual VoLL review replaced by biennial review of Reliability Standards & Settings
<p>Oct 2009</p> <p>Jun 2010</p>	<p>Rule Change: Improved RERT Flexibility and Short-notice Reserve Contracts http://www.aemc.gov.au/Electricity/Rule-changes/Completed/Improved-RERT-Flexibility-and-Short-notice-Reserve-Contracts.html</p> <p>RERT Guidelines amended (Interim)</p>	<p>Allows AEMO to:</p> <ul style="list-style-type: none"> • Provide for long, medium & short-notice reserve contracting • Form a RERT panel • Use reserve contracts during a system security event

Date	Event	Changes
Dec 2009	Review of the Operational Arrangements for the Reliability Standards completed http://www.aemc.gov.au/Market-Reviews/Completed/Review-of-Operationalisation-of-the-Reliability-Standards.html	<ul style="list-style-type: none"> • Recommendations on AEMO's methodology for calculating MRLs • Changes to Guidelines for the Management of Electricity Supply Shortfall events • Changes to clarify the Reliability Standard
Apr 2010	Review of the Reliability Standard and Settings completed http://www.aemc.gov.au/Market-Reviews/Completed/Review-of-the-Reliability-Standard-and-Settings.html	<ul style="list-style-type: none"> • Measure performance against Reliability Standard each year (was over a ten-year moving average) • From 1 July 2012, MPC & CPT increased annually in real terms from \$12,500 per MWh and \$187,500 according to change in Stage 2 (intermediate) Producer Price Index (PPI) • Annual review of whether higher MPC or CPT increases needed, & whether significant changes occurred to economics & mechanism for delivering the Reliability Standard
Jun 2010	RERT Guidelines amended (Final) http://www.aemc.gov.au/Market-Reviews/Completed/Consultation-on-the-Amended-RERT-Guidelines.html	<ul style="list-style-type: none"> • No change from interim