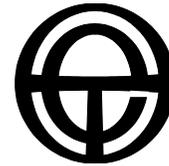


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SUBMISSION
to

**Improved RERT Flexibility and Short-notice
Reserve Contracts**

Rule change proposal

17 September 2009

For further information contact:

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Improved RERT Flexibility and Short-notice Reserve Contracts Rule change proposal

Total Environment Centre (TEC) welcomes the opportunity for input to this Rule change proposal.

Proposed operation of the RERT

TEC agrees that it is appropriate for reserve contracts to be used for system security events where practicable. The AEMC has recognised that these reserves may be procured from either generation or demand-side participation. However, it should also be recognised that, to date, demand side response (DSR) in the provision of reserve has been very limited, and this remains an outstanding problem in urgent need of addressing within the overall design of the RERT, and indeed the National Electricity Market (NEM) in general.

In the significant expansion of the timeframes under which AEMO can procure reserves, it is critical that this does not further exclude small and medium sized DSR providers. The reduced notice given to DSR providers favours large end users with reserve capability, as these users typically have the resources that allow for quick response. Smaller DSR providers, on the other hand, would require cost-prohibitive additional technology systems to provide reserve at short notice, and these added requirements should be taken into consideration in the RERT amendments. While this technology can be purchased by DSR aggregators and small end users, such investments are not viable unless there is confidence about reliable and ongoing revenues.

The proposed RERT amendments will favour large DSR providers (i.e. 10MW or more) who, through the ability to contract directly with AEMO through the RERT, will likely cease to dispatch their DSR via their Retailer in order to claim the maximum possible price available under the RERT. Conversely, DSR aggregators, who must contract with end users in order to provide 10MW or more of reserve, will continue to be disadvantaged by the inevitable treatment that favours supply options.

A standing reserve that awards ongoing contracts for the potential and actual provision of DSR capacity would best encourage demand-side provision of reserve, with the corresponding benefits of reduced infrastructure costs, enhanced security and reliability, and reduced carbon pollution and carbon costs. As it stands, reserve capacity provided by DSR is not recognised for the reliability support it provides in the existing energy-only NEM. According to the recent McLennan Magasanik Associates (MMA) report prepared for TEC, this means:

...current NEM reliability standards support the installation of surplus generating capacity with virtually no economic demand side response leading to excessive development of peaking plant. This is inefficient as the costs incurred in installing surplus capacity are likely to be substantially in excess of any demand withdrawal to

meet the infrequent extreme peak demands or coincident outages of large power generation units at times of high demand.¹

In the Western Australia Wholesale Electricity Market, a payment is made for the provision of reserve capacity. Similarly, Appendix A provides details of the reserve trader programs of Texas and California. Simple, cost-effective mechanisms clearly exist for reserve capacity to be provided by DSR, provided there is reasonable compensation for the service. It is time the AEMC and AEMO recognised the lost opportunities of not harnessing this potential, and acted to rectify the situation.

RERT panel

TEC recommends that the AEMC and Australian Energy Market Operator take steps to ensure the presence of small and medium sized DSR providers on the proposed RERT Panel, so as to encourage greater uptake by these underrepresented parties.

Future revision of the RERT

TEC supports the AEMC's proposal for some formalised load shedding management (LSM) arrangement, as discussed in the AEMC *Review of Energy Market Frameworks in Light of Climate Change Policies*. Direct load shedding arrangements with large end users have the potential to significantly ease network constraints during critical peak periods, and there needs to be permanent contracts with major users and DSR aggregators and providers, to secure ongoing capacity that is in place well ahead of the seasons of peak use, but which can be rapidly deployed. Any formalised LSM scheme must seek to encourage much greater participation from the demand side through ongoing payments, particularly among small and medium sized providers. A LSM scheme should be examined well before the June 2012 sunset of the RERT.

RERT guidelines

TEC believes it is appropriately transparent for AEMO's reserve contracting process under the RERT to be contained in the RERT guidelines, to be published by the Reliability Panel.

¹ MMA. 2009. *Role of the NEM in responding to climate change policies*. Source: http://www.tec.org.au/index.php?option=com_docman&task=doc_download&gid=345&Itemid=360.

APPENDIX A

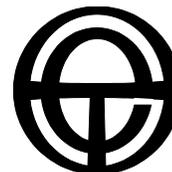
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20 October 2008

John Tamblyn
Australian Energy Market Commission
submissions@aemc.gov.au

Dear Mr Tamblyn,

Re: Reliability and Emergency Reserve Trader

Total Environment Centre (TEC) is concerned about the current design of the Reliability and Emergency Reserve Trader (RERT) and the associated guidelines. There has been a massive oversight and hence a missed opportunity to establish a standing reserve based on demand side response (DSR). This concept was raised by NERA during the AEMC's Demand Side Participation Review and was considered directly in relation to the RERT, but was inappropriately rejected. It may not be possible to revisit the idea at this stage of the RERT Review, but should be considered within the AEMC's other reviews of Demand Side Participation and the Climate Change Review.

The NERA report¹ did argue against a DSR standing reserve, but recommended a staged approach, which would include annual invitations to provide reserve capacity. They suggested that where necessary these providers could be invited to quote for provision of reserve; then capacity would be contracted on the basis of the quotes. Even this mild recommendation seems to have been rejected by the AEMC.

TEC supported NERA's recommendations in our submission on that report, but we are still not convinced that the concept of a DSR standing reserve has no value. We suggest that both approaches should be followed, that is, the staged approach be adopted as an interim but that the AEMC, together with NEMMCO, continue to investigate the potential for a DSR standing reserve. The investigation should focus on the potential of demand side reserve to contribute to reliability and efficiency while following the principle of optimising demand side participation. This needs to be done in tandem with any investigation of the potential for DM bidding within the wholesale market.

Other models

Other markets have set up reserve trader programs of various kinds, fashioned around the provision of load curtailment by participants registered for the purpose in some permanent fashion within the market. The examples of Texas and California – although there are a number to choose from – are briefly described here.

¹ NERA (2008) *Review of the role of demand side participation in the National Electricity Market*, Draft Report for the AEMC

Texas

The Electric Reliability Council of Texas (ERCOT), which is also an energy only market similar to the NEM, has realised the value of the demand side and implemented programs to encourage DSR from various sources.² The NEM could include any combination of these ERCOT mechanisms within a permanent program as an adjunct to the Reserve Trader.

Of particular interest here is the Load acting as a Resource (LaaR) program, which is used within the ancillary services (AS) markets. It involves signing up customers with interruptible loads to provide operating reserves. Any provider of operating reserves under this program is eligible for a capacity payment, regardless of whether the curtailment occurs. Up to 1,300 MW can be called on through this program.

Another feature of the Texas programs, which is called on after the LaaRs have been exhausted, is the Emergency Interruptible Load Service (EILS). Its main features are:

- Contracts are made with network businesses in this case, who put in bids for contracts; the minimum is for one MW that can be via aggregation
- The contracts may be made for one or more quarterly contract periods, and more than this can be renegotiated
- There is a cost cap on the EILS program
- Each quarterly contract period is capped at 1,000MW
- The contracted “resource” must be able to reduce its load within 10 minutes
- Each resource is only to be called on twice in a contract period
- Each contractor is paid a capacity payment.

California

The “Base Interruptible Program” (BIP) involves participants nominating a base level of electricity necessary to maintain operations that is below their historic average maximum demand. They then receive a monthly payment based on the size of the curtailable portion of their load, in return for committing to reduce to the base level when called upon. Curtailment requests cannot exceed one per day (of up to four hours), ten per month, or a fixed number of hours per year.

The “Demand Bidding Program” provides incentive payments of a fixed rate beyond market price for day-ahead curtailment commitments. When notified of such an event, participants can bid the amount of load they can reduce, and the hours for which they are willing to reduce this load. Bids must cover at least two consecutive hours.

Another feature is the “Demand Reserves Partnership Program”. Participants in the program agree to reduce their electricity load (by curtailment or by operating on-site generation) when notified. This program, like BIP, also has time limits. Participants receive a monthly reservation payment as well as a performance payment for each load curtailment event. Individual customers usually participate via a designated “Demand Reserves Provider.”

Load curtailment in the NEM

The current version of a reserve trader within the NEM is rarely used and overly cumbersome, providing limited potential for rapid response (or reduction of greenhouse gas emissions). Replacing the same mechanism with a permanent program that awards contracts for demand side reserve capacity could be made to work within the NEM model. It would provide a range of functions: to provide reserve; enhance security

² Texas ERCOT PUC Substantive Rule #25.507 (EILS)

and reliability; and deliver significant co-benefits of reduced carbon pollution and carbon costs.

The particular problem for demand side response is that the participant offering the load curtailment does not know in advance what the actual price paid will be at the end of the trading interval, and therefore participants cannot be confident of the value they will get for their curtailment. If there is a monetary incentive, in the form of payment to be in reserve plus a bonus when the reserve is activated, there is greater certainty for potential participants. This certainty is likely to unlock some of the demand side potential that is widely recognised to be untapped at present.

There is currently a very small amount of load curtailment in operation in the NEM, some of which is negotiated via retailer or networks. Prices paid for the curtailed load are based on a retailer's avoided cost, usually when the spot price exceeds the trigger price in a hedge contract, or on the value of network deferral. These are chronically under-utilised and there are virtually no other incentives to seek DSR as an alternative.

For end users, the main disincentive for load curtailment is that they do not get proper remuneration. Presently the end user merely avoids consumption at the market price when they curtail their load.

For the networks, deferral of new investments is disincentivised as it reduces the asset bases from which they can earn revenue. The only active incentives are those being developed under the AER's demand management incentive schemes. The schemes under way do offer some minor incentives – consideration of foregone revenue, “learning by doing” funds and so on – but TEC has argued that these need to go much further to have any real impact.

We therefore strongly urge the AEMC to investigate the potential for load curtailment programs within the NEM in the form of permanent programs to provide standing reserve. There are models in existence which provide the basis for a design for the NEM, possibly using a staged approach to be established in the interim. Development of load curtailment programs is a way in which the NEM could provide the sorely needed boost to DSR as well as a significant contribution to reducing carbon costs and greenhouse emissions.

Yours faithfully,



Jeff Angel
Executive Director