

Enhancement to the RERT draft rule

Draft determination on the NEM's strategic reserve, the Reliability and Emergency Reserve Trader, published.

The Commission's draft rule enhances the RERT mechanism so that AEMO can procure reserves when needed, at lowest cost to consumers. The Commission invites consultation on the draft determination; consultation closes on 21 March 2019.

Context — why do we need to change the RERT?

The Reliability and emergency reserve trader (RERT or emergency reserves) is an existing intervention mechanism that allows the Australian Energy Market Operator (AEMO) to contract for emergency reserves such as generation or demand response that are not otherwise available in the market. These emergency reserves (also referred to as “strategic reserves”) are in addition to the “buffer” of reserves that is made available by the market as part of the usual operation of the power system. It is an important part of the regulatory framework that AEMO uses as a safety net at times when the market has not provided enough reserves to meet demand (e.g. during extreme heat events). Importantly, as the RERT is used as a last resort, it helps to avoid larger and more expensive system-wide blackouts from occurring.

Prior to 2017, AEMO had only entered into RERT contracts three times and emergency reserves had never been dispatched. Since 2017, AEMO has used the RERT a number of times, including November 2017, January 2018, and most notably, recently in January 2019. This increase in use of the RERT reflects changing system needs, including: a growing proportion of variable renewable generation, an aging fleet of thermal generation, a tightening supply-demand balance, peakier demand and increasing temperatures. Further, a necessary consequence of using emergency reserves more frequently is that the costs associated with the RERT have increased. Consumers have expressed concerns with the lack of transparency about the procurement and use of emergency reserves and its impact on electricity bills. Therefore, the Commission considers that there is a need to enhance the emergency reserve framework to provide AEMO with the flexibility it needs to meet the operational challenges arising from the transition, while containing the increased costs of doing so.

Not all the changing market dynamics noted above, can be addressed by one part of the market and one regulatory arrangement, the RERT – at the very least it will only help these issues indirectly, at a very high cost. We are working with the other market bodies and stakeholders to help identify issues and targeted, least cost solutions for the challenges the system is facing. Work already underway to assist with reliability outcomes includes the Retailer Reliability Obligation (RRO), which will require companies to hold contracts or invest directly in dispatchable energy to meet peak demand. Once this is in place, the use of the RERT should be materially reduced.

Overview of the draft rule

The Commission has made a draft rule in response to a rule change request from AEMO. The Commission's draft rule is a more preferable rule. The draft rule will allow AEMO to procure reserves for the 2019-20 summer through the new framework.

Specifically, the draft rule enables AEMO to:

- Continue to use emergency reserves as a safety net if the market fails to provide the high levels of reliability implied by the reliability standard.
- Purchase emergency reserves 12 months (instead of the current nine months) ahead of a projected shortfall - consistent with the high level design of the RRO.
- Have the flexibility to procure emergency reserves to meet extreme weather events.
- Have flexibility on exactly how many emergency reserves to purchase once it has identified a need.
- Dispatch emergency reserves when the market runs out of reserves, i.e. by using operational triggers (i.e. LOR2s - lack of reserves declarations).
- Dispatch emergency reserves to address extreme weather events.
- If it has already procured emergency reserves, dispatch these for power system security if practicable
- Standardise RERT products to reduce complexity of the procurement process.
- Recover RERT dispatch costs from those that were consuming at the time, that is, those who contributed to the need for the RERT.
- Contribute to the transparency of the RERT process by providing additional information to market participants and potential RERT providers.
- Enter into emergency reserve contracts with providers so long as providers have not been in the market for the past 12 months and will not be involved in the market while providing emergency reserves.
- Utilise a guide for the purchasing of a RERT contract, which suggests that emergency reserves should not typically exceed a \$/MWh value. This \$/MWh value will be estimated by AEMO and will reflect the avoided cost of load shedding,

Is the reliability standard appropriate?

The RERT is part of the reliability framework in the NEM, with the procurement trigger for the RERT being the reliability standard. The Commission examined the appropriateness of the reliability standard due to concerns raised by AEMO in its rule change request that it may not adequately capture community expectation of how risks now facing a changing power system are managed and how the reliability standard deals with an increasingly peaky system.

The NEM's reliability standard, requires there be sufficient generation and transmission interconnection in a region such that at least 99.998 per cent of forecast total energy demand in a financial year is expected to be supplied. It guides both investment and operational decisions in order to have sufficient capacity in the market, by expressing the level of reliability sought from the NEM's generation and transmission interconnector assets.

The Commission sought advice from both the Reliability Panel and consultants Brattle. It considers that the reliability standard remains appropriate, adequately captures risk management and balances the trade-offs between higher reliability and the costs of providing more reliability, on behalf of consumers. A more conservative reliability standard would be costly for consumers, with little evidence to show that consumers would prefer to pay more for reliability. Not only could it be prohibitively expensive to try to maintain a 100 per cent level of reliability, practically, it is impossible as there will always be the possibility some unlikely combination of events could occur such that there is insufficient supply to meet demand.

However, the Commission recognises that how the reliability standard is operationalised may need to change. The changing characteristics of the generation fleet and the increase in extreme weather events make the power system less stable, more volatile and difficult to operate. This in and of itself does not suggest that the reliability standard is no longer appropriate but does mean that the way the power system is operated to meet the standard may need to change. The Commission considers that the draft rule will provide both market participants and AEMO the flexibility needed to accommodate this. AEMO - as is appropriate for the system operator - has flexibility and discretion as to how the reliability standard is incorporated in its day-to-day operations, particularly through its modelling and forecasting of the risk to the power system.

Reasons for the draft rule

The Commission's draft rule promotes reliability of the power system at lowest cost to consumers. It allows AEMO to procure emergency reserves from outside the market that can be used as a last resort in order to minimise the chances of load shedding for consumers. This promotes the likelihood that consumers will experience a reliable supply. However, the draft rule also seeks to balance the trade-offs of a more reliable system, with the costs associated with reliability. The draft rule does this by clearly linking the procurement decision to the reliability standard. The reliability standard is reviewed by the Reliability Panel, which seeks to strike a balance between having enough generation capacity to cover almost all scenarios, and keeping costs as low as possible for consumers.

In addition, the draft rule seeks to increase the number of reserve providers available to AEMO by increasing the procurement lead time to 12 months. This will also give AEMO a longer period of time to enter into reserve contracts, which should reduce the costs associated with emergency reserves. This needs to be balanced against the potential the longer lead time has to increase market distortions, and so the draft rule strengthens the out-of-market provisions, as well as introducing a \$/MWh guide for purchasing RERT. These changes should also minimise costs for consumers associated with emergency reserves.

The draft rule addresses stakeholder concerns around the transparency of the RERT framework by building on existing reporting requirements to introduce new and enhanced requirements so that all interested parties have access to clear, timely and meaningful information to help them manage operational and investment decisions.

Implementation

Prior to the final rule commencing, two key documents will need to be revised:

1. The Reliability Panel will need to update its RERT guidelines.
2. Once the Panel has updated its guidelines, AEMO will need to update its RERT procedures.

Therefore, the transition arrangements in the draft rule require:

- The Panel to publish its updated RERT guidelines by 27 June 2019.
- AEMO to publish its RERT procedures by 31 October 2019.

This will allow AEMO to procure reserves for the 2019-20 summer through the new framework.

Next steps

The AEMC invites stakeholders to make submissions on the draft determination by **21 March 2019**.

The final determination will be published on **2 May 2019**.

Background — the reliability framework

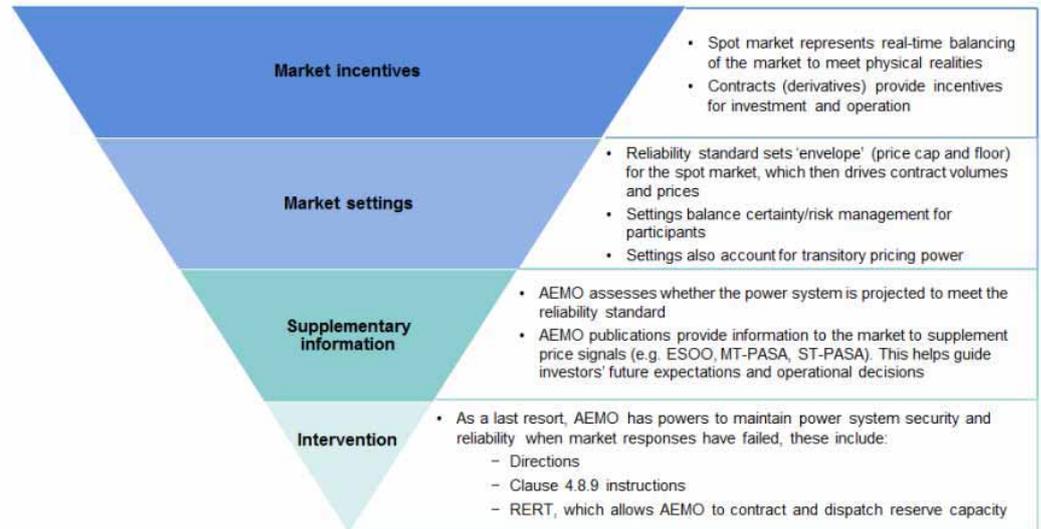
Wholesale reliability is about having sufficient physical capacity in the system, through generation and demand response, to supply customers with the energy they demand. A reliable power system therefore requires adequate investment and disinvestment as well as appropriate operational decisions, so that supply and demand are in balance at any particular point in time.

The National Electricity Rules (NER) contains the reliability standard for the National Electricity Market (NEM), currently at 0.002 per cent expected unserved energy (USE). The reliability standard is set every four years following a review by the Reliability Panel, which comprises experts from large energy users, consumer groups, generators, network businesses, retailers and AEMO. The reliability standard represents a trade-off between the prices paid for electricity and the cost of not having energy when it is needed: increasing levels of reliability involves increased costs.

As system operator, AEMO operates the system to meet the reliability standard, through its

forecasting and operational processes. If it projects that there are not enough market reserves to meet the reliability standard (or in the short term, to target zero unserved energy), it will inform the market and seek a market response. If a market response is insufficient or not forthcoming, AEMO may then procure emergency reserves, as a last resort. AEMO also has the power to intervene in the market through directions and clause 4.8.9 instructions.

Figure 1: Current framework with escalating series of interventions



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