



Reliability frameworks review - interim report

AEMC invites submissions on interim report on the reliability framework

The Australian Energy Market Commission (AEMC) has published its preliminary analysis and views on the reliability framework in our interim report. We are seeking stakeholder comments and views on these matters.

Context for the Review

Over the past eighteen months, events including load shedding in South Australia and New South Wales, pre-emptive action and announcements from governments, recommendations from the Finkel Panel review, and forecasts from AEMO's Electricity Statement of Opportunities have led to a greater focus on reliability in the National Electricity Market (NEM).

Given these developments, as well as other drivers of change, such as a changing generation mix and greater opportunities for demand-side participation, the Commission initiated a review in July 2017 to assess whether the current market and regulatory frameworks for reliability are appropriate.

This interim report provides an update on the Commission's progress to date, and discusses some of the Commission's preliminary analysis and views. It has been prepared to facilitate further consultation and feedback from stakeholders.

The Commission's preliminary views

The interim report assesses the following areas of the reliability framework, highlights issues raised by stakeholders and discusses the Commission's preliminary views in relation to the following areas:

- **Key concepts of dispatchability and flexibility:** Dispatchability and flexibility are already valued and rewarded in the existing contract, spot, and ancillary services markets, and in a way that reflects their inherent characteristics. For example, more flexible generating units are able to respond quickly to high prices in the market, and so get rewarded by earning higher revenues. However, we need to further consider whether the existing signals are "accurate" or "precise" enough to fully reflect these concepts. Conclusions on this question will lead to a better understanding of how a definition of 'dispatchability' could be created.
- **Forecasting and information processes:** Forecasts and information provision to the market are the foundation of the reliability framework. As the electricity system evolves, it is likely there could be increased errors in forecasting. For example, a higher penetration of variable renewable generation, combined with more extreme weather days, will make it harder to forecast output from these resources. Increased errors may result in increased risks for participants (for example, when to be available or to rebid) and make it more difficult for AEMO to operate the system in tight supply conditions. It will likely be worthwhile to explore whether there are ways these variances can be better managed through the forecasting process or, alternatively, whether there are ways to rely less on forecasts.

Reliable supply in the NEM is supported by the inherent and symmetrical incentive for buyers and sellers to enter into contracts to have more certainty over costs and revenue over time.

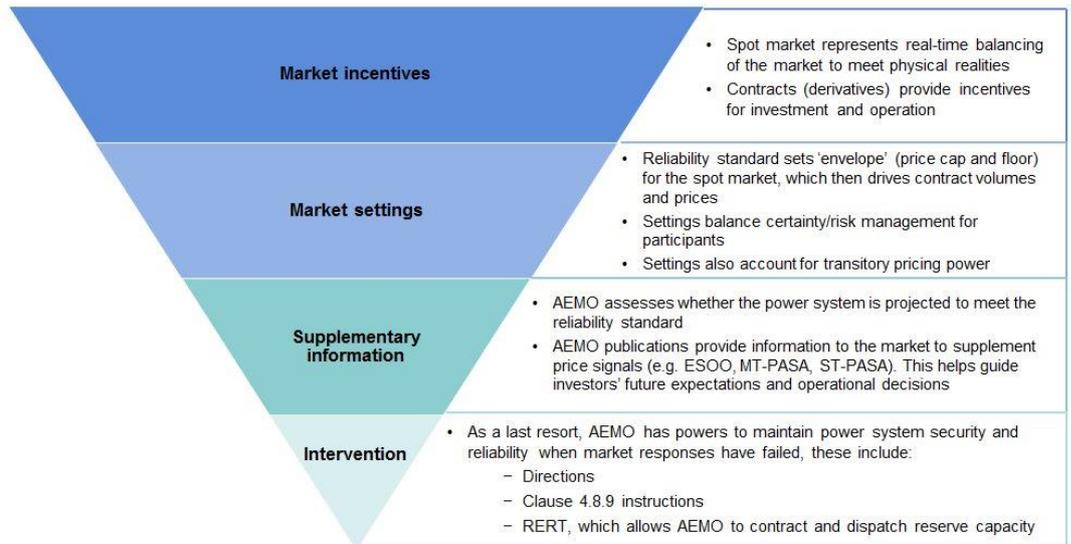
- **Market-based aspect of reliability, that is, the contract market:** Reliable supply in the NEM is supported by the inherent and symmetrical incentive for buyers and sellers to agree contracts to have more certainty over costs and revenue over time. Alternatively, participants can invest in both retail and generation assets (vertical integration) to manage their risks. Contract markets also support reliability by informing participant investment and operational decisions. It is not evident the level of trading in the contract market should be cause for concern. However, information on the contract market, important for good investment and operational decisions, is not widely available. The Commission is therefore pleased the Australian Financial Markets Association is restarting its survey of the turnover of over-the-counter contracts.
- The following Finkel Panel recommendations:
 - **Strategic reserve:** Some form of a safety net, such as a limited and targeted ability for a system operator to pay a premium for capacity that is not otherwise being traded in the market, is appropriate in the event that the market is expected to fail to meet the reliability standard. Stakeholder views on the limitations with the existing Reliability and Emergency Reserve Trader (RERT) will be an important input for developing a balanced solution for reserves.
 - **Wholesale demand response:** Demand response refers to changes in consumption in response to signals to do so. It is hard to determine how much demand response is available in the wholesale market at values below the market price cap, since it is not highly visible. If there is wholesale demand response that is currently being underutilised, then there are opportunities for new and existing parties to capture this value. However, it can be difficult for third parties to capture the value associated with wholesale demand response under the current framework, for example, where each customer can only have one party responsible for its consumption at its meter. We are considering how best we can address such issues.
 - **Day-ahead markets:** Despite not having a formalised day-ahead market, the NEM has features that play a similar role, for example, pre-dispatch supported by a liquid financial derivatives market. It is not clear what issues, and their materiality, a day-ahead market would solve in the NEM. Understanding both is crucial for identifying the best solution. Our analysis suggests that development of day-ahead markets in the US required the introduction of complementary reforms (such as nodal pricing and firm transmission rights) to achieve the intended outcome of such a market design. Reforms of this nature take a considerable amount of time and resources to implement, and there may be more immediate actions that could be done to assist in the NEM.

Background: What is the reliability framework in the NEM?

A reliable power system has an adequate amount of capacity (both generation and demand response) to meet consumer needs. This involves longer-term considerations such as having the right amount of investment, as well as shorter-term considerations such as making appropriate operational decisions, to make sure an adequate supply is available at a particular point in time to meet demand. To deliver a reliable supply, the level of supply needs to include a buffer, known as reserves, so that supply is greater than expected demand. This allows demand and supply to balance, even in the face of unexpected changes.

Reliability is delivered in the NEM through efficient investment, retirement and operational decisions that are underpinned by various market structures. This is why the reliability framework in the NEM is referred to as being primarily market-based. The framework is however supplemented by a series of mechanisms that allow the system operator to intervene in the market in specific circumstances (see diagram below).

Market-based delivery of reliability with escalating set of interventions



The reliability framework in the NEM is primarily market-based supplemented by a series of mechanisms that allow the system operator to intervene in the market in specific circumstances

The reliability standard, a key feature of the reliability framework, plays an important role in guiding AEMO in its role as system operator. It is AEMO's responsibility to incorporate the reliability standard in the day-to-day operations of the market.

A reliable supply to consumers also requires a secure power system and reliable networks. This Review does not address security (that is, the technical performance of the power system itself) or network reliability as they are addressed through different frameworks. In particular, the Commission is considering system security issues through its System security work program.

Consultation and next steps

Submissions to this interim report are due on **6 February 2018**, a date chosen so we can meet the COAG Energy Council's timeframes for its implementation plan of the *Independent Review into the Future Security of the National Electricity Market*.

Stakeholders will also have an opportunity to comment on a directions paper which is due in March. The final report including recommended actions will be published in mid-2018.

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