

Reliability frameworks review

AEMC commences consultation on reliability frameworks

The Australian Energy Market Commission (AEMC) invites stakeholder submissions on a review into the regulatory and market frameworks that underpin reliability in the National Electricity Market (NEM).

Background

A reliable power system is one which has enough generation, demand-side and network capacity to supply customers. Reliability implies that there is a high likelihood of consumer demand being met or conversely, a low likelihood of load shedding.

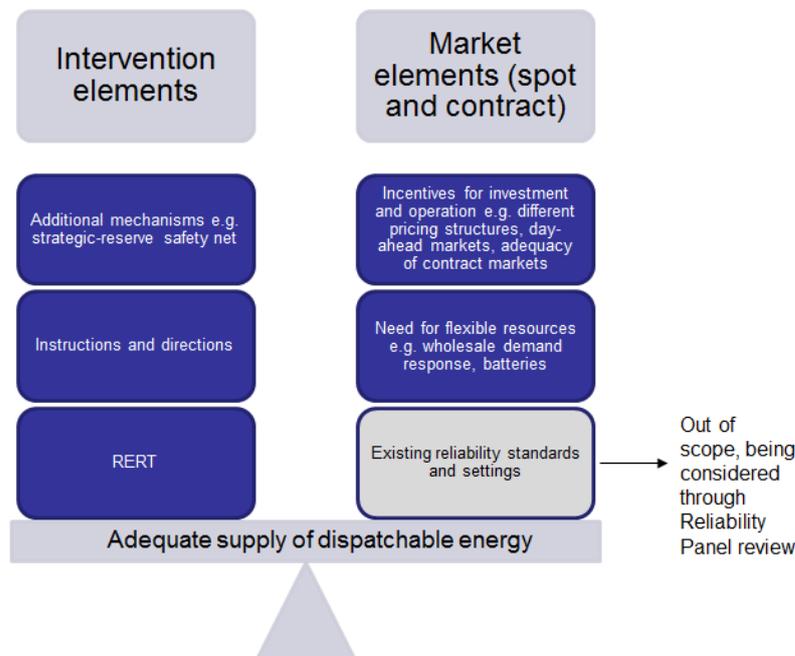
Over the past year, load shedding events on low reserve days this past summer, pre-emptive action and announcements from jurisdictional governments, and recommendations made by the Finkel Panel in the *Independent Review into the Future Security of the National Electricity Market* have led to a greater focus on reliability in the NEM.

At the same time, the NEM is changing at a rapid pace on both the demand and the supply side. On the demand side, falling technology costs and the uptake of distributed energy resources are changing how consumers interact with the energy sector. On the supply side, on-going trends such as the retirement of thermal generation and increasing penetration of variable, renewable generation are having implications for the NEM, and reliability.

The AEMC considers it is timely to assess whether the current market and regulatory frameworks for reliability are able to deliver a reliable supply to consumers. It therefore initiated a review into the market and regulatory frameworks.

The Review is considering what changes to existing regulatory and market frameworks are necessary to provide an adequate amount of dispatchable capacity in the NEM to meet the reliability standard. This involves longer-term considerations such as having the right amount of investment, as well as short-term operational considerations to make sure an adequate supply is available at a particular point in time. Figure 1 summarises the scope of the Review.

Figure 1: Scope of the Review



Scope of the issues paper

To commence public consultation on this project, the AEMC has published an issues paper to facilitate consultation on the key issues that may be affecting reliability in the NEM. The issues paper explains the existing features of the reliability framework.

The regulatory framework for reliability in the NEM can be described as market based, but with intervention mechanisms that AEMO can use if the market fails to deliver reliability.

Market aspects

Reliability in the NEM is underpinned by investment, retirement and operational decisions made by market participants in response to price signals and incentives offered by the spot and contract market. The contract market has been an integral part of the NEM market design since its inception and makes a major contribution to reliability. Participants make decisions based on a number of aspects, including expectations of future spot prices provided by the contract market, as well as some aspects external to the market such as the existence or not of a stable emissions policy. Such decisions drive reliability in the NEM both in the short- and long-term.

Intervention aspects

Should the market fail to provide adequate supplies of dispatchable energy through the above processes, AEMO may use the following intervention mechanisms to make sure that the system stays reliable:

- the Reliability and Emergency Reserve Trader (RERT), which allows AEMO to contract for additional reserves
- directions, for example, AEMO directing a generator to increase output
- clause 4.8.9 instruction, for example, AEMO instructing a transmission network service provider to shed customer load.

Finkel Panel recommendations

The issues paper also discusses a number of recommendations from the Finkel Panel that are within the scope of the Review, such as:

- the recommendation of a Generator Reliability Obligation
- the need for a strategic reserve to act as a safety net in exceptional circumstances or replacement to the existing reliability and emergency reserve trader mechanism
- the suitability of a 'day-ahead' market
- a mechanism that facilitates efficient demand response in the wholesale energy market.

Consultation

The issues paper sets out the above scope, and asks questions on potential issues associated with each of these aspects, which will be examined in more detail as the Review progresses.

The Commission invites stakeholder submissions on the potential issues raised. Submissions should be received by 19 September 2017.

Collaboration

The Commission has also set up a Reference Group to provide high-level input into the review and is also setting up a Technical Working Group to provide technical advice.

Australian Energy Market Operator (AEMO) is currently working on a number of pieces of work that relate to this Review, including advice to the Commonwealth Government around the adequacy of dispatchable generation in the NEM. These pieces of advice will further inform the assessment of the issues, as well as potential solutions. The Commission will work closely with AEMO on these solutions.

The Review will also take into account any learnings from existing initiatives such as the demand response pilot program being trailed by the Australian Renewable Energy Agency (ARENA) and AEMO, and any other trials ARENA and AEMO may undertake through their MOU that are relevant to reliability.

Next steps and process

The Commission will provide a progress report, incorporating stakeholder feedback, to the COAG Energy Council in December 2017.

The Commission will also hold several reference group and technical working group meetings between now and December 2017 to serve as input into the progress report.

The Commission also has received one rule change from AEMO related to reliability in the NEM (*Declaration of Lack of Reserve conditions rule change request*), with a consultation paper on that rule change also published on 22 August 2017. The AEMC is also expecting further rule changes related to reliability shortly. The Review will be progressed concurrently and in coordination with the assessment of these rule change requests.

Background: What is reliability?

A reliable power system is one which has enough generation, demand-side and network capacity to supply customers. That is, a system where there is a high likelihood of consumer demand being met. This requires a number of elements: efficient investment, retirement and operational decisions by market participants (both supply and demand-side) resulting in an adequate supply of dispatchable capacity, a reliable transmission network, a reliable distribution network and a secure system.

This review is focussing on the efficient investment, retirement and operational decisions by market participants.

Reliability is distinct from system security. A secure system is one that is able to operate within defined technical limits, even if there is an incident such as the loss of a major transmission line or large generator. The Commission is considering system security through its *System security work program*, which is further detailed on our website.

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