



Implementing a general power system risk review

The AEMC has made a draft more preferable rule aimed at better identifying emerging risks to the security of the power system.

In its black system event review, the Australian Energy Market Commission (AEMC or Commission) recommended expanding existing frameworks to enhance prompt identification by the Australian Energy Market Operator (AEMO) of risks to system security from all sources through the implementation of a general power system risk review (GPSRR). The GPSRR would be a front-end risk identification process to inform risk management actions undertaken through other processes.

The Commission's draft rule

The draft rule seeks to implement a broader review — called the 'general power system risk review' — to replace the current power system frequency risk review (PSFRR).

In relation to the scope of the GPSRR, the draft rule would require AEMO to consider on a prioritised basis:

- non-credible contingency events, the occurrence of which AEMO expects would be likely to involve uncontrolled increases or decreases in frequency, alone or in combination, leading to cascading outages, or major supply disruptions, and
- other events and conditions (including contingency events) the occurrence of which AEMO expects, alone or in combination, would be likely to lead to cascading outages, or major supply disruptions.

In relation to the risks identified, the draft rule would require AEMO to review current arrangements and identify options for future management of these events and conditions. The draft rule would allow flexibility for AEMO to prioritise certain risks over others when undertaking the GPSRR. AEMO would not be required to identify or undertake a detailed assessment of all conceivable risks.

In relation to the process for the GPSRR, the draft rule would require AEMO to:

- undertake the GPSRR no less than annually
- consult with, and take into account the views of, relevant transmission and distribution network service providers (NSPs) in the conduct of the GPSRR, and
- publish and consult on an approach paper at the commencement of the review specifying priorities in the events and conditions to be assessed, the approach and methodologies in assessing each risk, information inputs and assumptions used, and approach to interacting with NSPs.

The draft rule would also require NSPs to co-operate with AEMO in the conduct of the GPSRR and provide to AEMO all information and assistance reasonably requested by AEMO.

In relation to the coordination and integration of planning processes, the draft rule would require:

- NSPs to:
 - take into account the outcomes from the recent GPSRR in their annual planning reviews
 - assess the interactions between emergency frequency control schemes or emergency controls; and settings of protection systems or control systems of plant connected to their respective networks and consider whether they are fit for purpose for the future operation of the network

- AEMO to consider and have regard to the outcomes of the GPSRR in conducting the Integrated System Plan.

A more preferable draft rule

The Commission has determined to make a more preferable draft rule that varies from the proposed rule. The more preferable draft rule would retain the current framework in the NER whereby AEMO must consider non-credible contingency events the occurrence of which AEMO expects, alone or in combination, would be likely to involve uncontrolled increases or decreases in frequency leading to cascading outages, or major supply disruptions. It would also introduce a new requirement for AEMO to consider all events and conditions (including contingency events) for all other risks that AEMO considers could lead to cascading outages and major supply disruptions.

Benefits of the Commission's draft rule

The Commission considers that the draft rule would contribute to the achievement of the National Electricity Objective (NEO) with respect to the efficient operation and use of electricity services in the long-term interests of consumers of electricity with respect to the safety and security of the national electricity system. The Commission considers that with this change the draft rule would better:

- maintain the delineation between the existing protected event framework that is designed for management of frequency risks arising from non-credible contingency events, and the assessment of risks associated with all other events and conditions (including contingency events)
- recognise the existing arrangements that allow AEMO to manage frequency risks associated with credible contingency events through the frequency control ancillary services (FCAS) markets.

The Commission is of the view that the need for a comprehensive risk review is now greater than ever, given the changing generation mix that impacts the power system risk and resilience profile.

The rule change request

In its black system event (BSE) review the Commission recommended expanding existing frameworks to enhance prompt identification by AEMO of risks to system security from all sources through the implementation of a GPSRR. The GPSRR would be a front-end risk identification process to inform risk management actions undertaken through other processes.

Following the BSE review, the Council of Australian Governments (COAG) Energy Council submitted a rule change request on 26 May 2020 to implement this recommendation. The COAG Energy Council considers there are a range of shortcomings with the existing PSFRR given the changing power system risk and resilience profile. The COAG Energy Council is of the view that there is a need to broaden the scope of the existing PSFRR beyond frequency, to become a more frequent and holistic GPSRR process for effectively identifying a range of emerging risks to the power system. In particular, the COAG Energy Council seeks to amend the rules in order:

- for the GPSRR to consider all events and conditions (including contingency events as defined in the NER) the occurrence of which AEMO expects, alone or in combination, would be likely to lead to cascading outages, or major supply disruptions
- to enhance the breadth of the sources of risk considered in the GPSRR to include a wider range of sources of risk beyond frequency
- to deepen the review to formally include distribution network service providers
- to increase the speed and frequency of the review process, and
- to integrate the review with other AEMO and NSP planning processes.

Consultation on draft determination

The Commission invites submissions on the draft more preferable rule and draft rule determination by **18 March 2021**.

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