

Our Ref: 14419848
Contact Officer: Chris Ridings
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Date: 7 October 2022

Mr Michael Gatt
EGM - Operations
Australian Energy Market Operator
GPO Box 2008
Melbourne VIC 3001

Dear Mr Gatt,

General Power System Risk Review Approach Consultation

The Australian Energy Regulator (**AER**) welcomes the opportunity to comment on the approach consultation for the 2023 General Power System Risk Review (**GPSRR**). This work aims to understand emerging risks to the power system, prioritise those risks, and develop the most efficient solutions to those risks. A rigorous approach to the GPSRR is therefore vital to maintaining system security at least cost to consumers.

Risk Matrix

The Approach Paper sets out the criteria for identifying priority risks which will be addressed by the GPSRR. This identification process takes into account an assessment by Network Service Providers on the likelihood and consequence of an event/contingency to produce a risk rating from a risk matrix.

We acknowledge that this stage of the process is intended to act as a filter for determining which specific issues need to be addressed through the GPSRR. As such, we consider that the basic risk matrix approach is likely sufficient for that purpose.

However, we consider that any evaluation process that is intended to guide decision making on options for investment or intervention would need to take a more detailed approach to risk quantification. An example of this approach is the risk-cost assessment methodology described in the AER's *Industry practice application note for asset replacement planning*.¹ This publication details a methodology to estimate the expected risk cost that is consistent with the NEO and good industry practice. The AER would be happy to work with AEMO to assist in applying such an approach to general power system risk quantification.

Identification of issues

The AER consider that further clarification of the issues identified in the Approach Paper is required, in particular those related to the effectiveness of underfrequency load shedding schemes. Any risk assessment will not be effective unless the problems to be avoided or solved are well understood. We consider that, while the Paper sets out potential risks, it falls short of describing the consequences of those risks occurring.

For example, the AER acknowledges that the increased penetration of inverter-based resources in the form of Distributed Photovoltaics (**DPV**) has led to increased importance in

¹ AER, Industry practice application note - Asset replacement planning, January 2019, p. 39

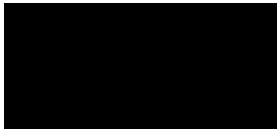
<https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/industry-practice-application-note-for-asset-replacement-planning>

understanding the behaviour of these resources under various system conditions. We also acknowledge that many of the National Electricity Rules clauses governing emergency schemes, such as underfrequency load shedding, were designed prior to this penetration of DPV and as such may no longer be fit for purpose. However, we consider that the current work only goes so far as to identify a potential cause of an issue, without identifying that issue itself. For instance, Phase 1 of the under-frequency load shedding review in Victoria² was released in August 2021. We consider that at least Phase 2 of the study would need to be completed before any further steps were taken. This would provide increased clarity around system risks, allow more effective prioritising of risks, and ensure that the cost of any solution is commensurate to the risk posed to system security.

Without this rigour, we are concerned that any solutions proposed through the GPSRR may be either inefficient, or not fit for purpose as our understanding of the power system evolves. Therefore, we consider that the actual issues need further exploration and clarification to make sure that any solutions are in line with the National Electricity Objective in the interests of consumers.

We thank AEMO for the opportunity to submit on this process. If you have any questions about our submission, please contact Chris Ridings on [REDACTED].

Yours sincerely,



Stephanie Jolly
(A/g) Executive General Manager, Consumers, Policy & Markets Division
Australian Energy Regulator

² <https://aemo.com.au/initiatives/major-programs/nem-distributed-energy-resources-der-program/operations/adapting-and-managing-under-frequency-load-shedding-at-times-of-low-demand>