



AEMC – AEMO Collaboration on Framework for System Security in the National Electricity Market

Introduction

The Australian Energy Market Commission (AEMC) and the Australian Energy Market Operator (AEMO) will work together to address challenges in the National Electricity Market (NEM) that are increasing with the shift from synchronous generation to non-synchronous and intermittent generation. Each market agency will, within the scope of their respective roles, bring expertise to bear to address the related technical, regulatory and market framework challenges that arise.

Context

The electricity industry in Australia is undergoing change as conventional, centrally dispatched and synchronous generation is displaced in the generation mix by intermittent, non-synchronous generation including a growing proportion of distributed generation. This is creating challenges in maintaining power system security in the NEM.

AEMO, through its Future Power System Security Program and Power System Issues Technical Advisory Group (PSITAG) has undertaken extensive work to identify and prioritise these challenges and has been working to better understand and quantify the likely impacts. Potential technical solutions to the challenges are also being identified.

The AEMC is commencing its System Security Market Frameworks Review to consider whether NEM market frameworks are suitable to enable the maintenance of a secure power system. Its review will be conducted as part of this collaborative project with AEMO.

The AEMC has received proposed Rule change requests directly related to the subject of this review which it intends to progress concurrently and in coordination with its review. The Reliability Panel may also be commissioned to consider changes to standards.

AEMO is continuing its work and may take immediate action to maintain system security under the current rules. AEMO will also complete its work advising the CoAG Energy Council and may propose Rule changes to the AEMC or broader changes to Ministers as part of that work. While each organisation has its own governance and accountabilities, the AEMC and AEMO will maintain close communication on their individual activities and collaborate, seeking to ensure that these activities deliver a coordinated package of measures to maintain future power system security.

Objectives

- The AEMC and AEMO will report to the CoAG Energy Council and publish recommendations on changes required to the regulatory framework to meet the power system security challenges in the NEM caused by increasing levels of non-synchronous generation. The relative reduction in traditional, synchronous generation in the NEM, especially under some circumstances or in particular periods of time, leads to a weaker power system with low inertia.

- This may include recommendations for rule change requests, proposed refinements to frequency standards, revisions to technical standards and system standards, or other changes to the regulatory framework.
- Where appropriate, the AEMC and AEMO may proceed to implement recommendations and changes under existing processes and procedures. Any potential policy changes or proposed changes to law would be referred to the CoAG Energy Council.
- The initial focus will be on issues related to:
 - frequency control and lower levels of inertia during normal operation of the power system, such as a high rate of change of frequency, and a shortage of frequency control ancillary services; and
 - the emergence of areas of the power system that will be weak, that is have low fault levels.
- Many of these issues only become critical when a region is at risk of becoming islanded from the rest of the network. However the primary focus of the review will not be mechanisms for preventing this islanding occurring.
- Any proposed solutions will include:
 - identification of the reasons for the proposed change and likely impacts on the power system, the NEM and consumers; and
 - a description of pathways to implementation, including timing, possible interim stages and any necessary changes to the National Electricity Law or Rules.
- The output will include reports to the COAG Energy Council highlighting actions taken including, where relevant, rule changes and technical changes made and recommendations for further action where required.

AEMC-AEMO Collaboration

- Each organisation will work under its own governance framework to deliver on its respective obligations.
- The AEMC and AEMO will jointly work to develop proposals and recommendations, and report to the COAG Energy Council.
- Collaboration between the AEMC and AEMO will be undertaken in a manner consistent with the terms of their existing Memorandum of Understanding.
- The AEMC and AEMO will undertake consultation with external stakeholders as part of the joint project.

Processes

For the coordination of all related activities:

- The AEMC and AEMO will each nominate a responsible officer and hold regular coordination meetings throughout the period.
- The forward work programs of the AEMC and AEMO will be discussed and coordinated where that would be appropriate.
- The AEMC will publish an approach paper for its System Security Market Frameworks Review (the Terms of Reference for which are attached) as a basis for initial stakeholder consultation. AEMO will complete the internal and consultant packages of work in progress and provide results to the project.

- The AEMC and AEMO will agree further stakeholder engagement, including forums and meetings as required.
- A progress update will be provided to the CoAG Energy Council prior to its meeting in December 2016.
- A Reference Group comprising senior representatives of the AEMC, AEMO, the AER and the Senior Committee of Officials will be established by the AEMC to provide high level input on related system security matters. The AEMC will be responsible for organising and running this Reference Group.

Technical Working Group

- The AEMC, in consultation with AEMO will establish a technical working group to provide advice to the AEMC and AEMO work. In addition to the AEMC and AEMO, the technical working group shall include representation from:
 - the AER;
 - transmission network businesses;
 - distribution network businesses;
 - conventional generation;
 - renewable generation;
 - retailers;
 - energy service providers; and
 - consumers.

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