



Generator technical performance standards

Commencement of consultation

The AEMC has commenced the first stage of consultation on a proposal by AEMO to change the technical requirements for equipment connecting to the power system, and the negotiating framework to set those requirements

The rule change request

On 11 August 2017, the Australian Energy Market Operator (AEMO) submitted a rule change request to the AEMC seeking changes to the access standards for generating systems in the National Electricity Rules (NER) and changes to the negotiating framework that translates those access standards into the standard of performance required of the physical equipment that makes up and connects to the power system.

Background

Equipment that makes up and connects to the power system must perform to certain levels of technical capability to help AEMO maintain the power system in a secure and safe operating state and manage the risk of major supply disruptions.

The levels of performance for equipment connecting to the power system are set out in *performance standards* for each connection and are reached through a negotiating framework set out in the NER. Under this framework:

- *access standards* in the NER define the range of the technical requirements for the operation of equipment when negotiating the connection of generators, market network service providers and certain end use customers. This rule change request relates primarily to the *access standards* that apply to generators
- for each technical requirement defined by the access standards a connection applicant must either meet the *automatic access standard*, in which case the equipment would not be denied access because of that technical requirement, or negotiate a standard of performance with the local network service provider (and AEMO for access standards that are AEMO advisory matters) that is at or above the *minimum access standard* and below the *automatic access standard*
- equipment that does not at least meet the *minimum access standard* will be denied access because of that technical requirement

Issues raised and changes proposed to address them

AEMO consider that the current access standard settings in the NER and the negotiating framework to set performance standards are not adequate to ensure the ongoing security of an evolving power system. AEMO also consider that the security of the power system may be impacted if the connection applications currently before them, as well as those applications expected to be made in the near future, are processed on the basis of the current access standards and negotiating framework.

To address these issues, AEMO proposes:

- amending or introducing a number of access standards for connecting generators, including those relating to voltage control and reactive power provision, disturbance ride through, system strength, active power control and remote monitoring and control
- amending the process for negotiating performance standards, and
- implementing transitional arrangements applying the changes to any performance standards agreed on or after 11 August 2017.

Context of this rule change proposal

The electricity industry in Australia is undergoing a fundamental transformation. The last decade has seen a rapid rise in the penetration of new generation technologies, such as wind and solar farms. In the past, these technologies accounted for only a small fraction of total electricity supply. Now they are a critical part of our power system, and their significance is continuing to grow. Changes the NER are required to keep pace with this transition and maintain the security of the power system.

This rule change project forms part of the AEMC's broader work program focused on the security of the power system, made up of the System security market frameworks review and five related rule change proposals. These projects have focused on the management of frequency and of system strength in a power system with reduced levels of synchronous generation.

This rule change request also covers part of recommendation 2.1 made by the Finkel Panel in its review into the future security of the National Electricity Market to "review and update the connection standards in the NER in their entirety". This rule change request relates to the connection standards for generators, and not for other equipment such as market network service providers and certain large customers.

Consultation and next steps

A consultation paper has been prepared to facilitate stakeholder comment on the issues raised by the rule change request. Stakeholders' submissions will inform the Commission's assessment. This assessment will consider how to set performance standards for equipment connecting to the power system at a level and in a manner that maintains system security (as part of a broader suite of system security tools) at the lowest cost to consumers in the long term.

We invite stakeholders to provide written submissions on the consultation paper by **31 October 2017**.

The Commission will also be holding stakeholder workshops to facilitate input on the issues and potential solutions in this rule change. Further information on these workshops will be provided as assessment of the rule change progresses.

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