



Generating System Model Guidelines

Stakeholder submissions invited on draft rule

The Australian Energy Market Commission (AEMC) invites submissions on a draft rule that clarifies the scope and level of detail of model data that registered participants are required to submit to the Australian Energy Market Operator (AEMO) and network service providers. Submissions are due by 1 August 2017.

Access to model data enables effective studies of the power system, supporting more efficient planning and operation. As the power system changes, it is important that parties can continue to accurately study the power system. This draft rule expands the existing requirements in the rules for the provision of this model data, in order to support participants' ability to undertake effective power system studies.

Modelling the power system

AEMO and network service providers study the power system in order to be able to plan and operate it. Participants such as generators also undertake these studies when planning their investments and when negotiating connection agreements. Power system studies use models as inputs. These models are mathematical representations of how generators and power system equipment will perform under different conditions.

These models of equipment can differ in terms of their level of details and complexity. Historically, less detailed models were sufficient to support effective power system studies. Furthermore, models were only needed for generating equipment.

Changes in the power system, particularly reductions in system strength, mean that these less detailed models may no longer support effective power system studies in all circumstances. More complex and more detailed models may therefore be needed in some circumstances. Models may also be needed for equipment other than generating equipment, such as network assets or equipment owned by market customers.

Current arrangements for model data provision

The National Electricity Rules (NER) currently set out a framework for the provision of model data information by generators to AEMO and, where relevant, network service providers. When connecting to the grid, generators with a combined nameplate rating of 30 MW or more must provide to AEMO, and the relevant network service providers, model data about the control systems of their generating system.

AEMO or the relevant network service provider can also request a generator to provide an update to this information after the generator is connected if AEMO or the relevant network service provider considers that the information is incomplete, inaccurate or out of date.

In addition, in specific cases, generators are required to provide certain model data to the relevant network service provider and AEMO when proposing to alter a connected generating system, or a generating system for which performance standards have been previously accepted by AEMO.

Under the standing data framework, a registered participant may request from AEMO the encrypted model data previously submitted to AEMO, where that information is reasonably required by the registered participant to carry out their own power system studies.

The draft rule provides a clearer model data provision framework. The draft rule clarifies the scope and level of detail of model data that registered participants are required to submit to AEMO and network service providers.

The draft rule

The draft rule expands the application of the existing model data provision framework to apply to additional types of participants, such as network service providers, ancillary service providers and customers. It also expands this framework to apply to additional equipment such as protection systems and network equipment.

This will enable AEMO and, where relevant, network service providers, to access model data for equipment owned by these participants which is needed for accurate power system studies.

The draft rule also requires AEMO to specify in a set of guidelines the kind of model data that it may request, including:

- what type of model data it will require from different participants
- the model accuracy requirements that are applicable to each type of model provided, and
- the circumstances in which it will require what type of model data.

The draft rule also requires AEMO to have regard to the costs participants will face while complying with the model data provision requirements and to use reasonable endeavours to accept a range of software simulation products and versions.

Additionally, the draft rule requires AEMO to have regard to the sensitivity of highly detailed model data and therefore to set out in its guidelines and data sheets the circumstances in which this model data may be shared with third parties.

Background

AEMO proposed to amend the NER to require generators and other parties to provide it with specific kinds of model data.

The proposed rule from AEMO included amending the NER to:

- broaden the scope and increase the level of detail of model data AEMO may request from participants, including generators, customers and network service providers
- increase the depth of model data AEMO may request from parties tendering for the provision of ancillary services.

AEMO considered that these changes would provide a number of benefits, including more effective and efficient:

- generator connection processes
- power system operation
- network planning processes
- procurement of ancillary services.

Submissions

The draft determination and the draft rule are both available on the AEMC website. Stakeholders are invited to make written submissions in by **1 August 2017**.

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