

17 October 2019

Mr Charles Popple

Chair

Reliability Panel

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Submission on-line: AEMC Ref - REL0070

Dear Mr Popple

Generator compliance template review 2019 – AEMO Submission

AEMO welcomes the opportunity to contribute to the Reliability Panel's (Panel) review of the template for generator compliance programs for 2019.

Overall, we support the Reliability Panel's draft recommendations on revisions to this template.

The National Electricity Market (NEM) is undergoing fundamental transformation from the previous decade, characterised by the influx of new technology, decentralisation of generation, the gradual withdrawal of ageing large coal-fired plants and changing risk profile. AEMO therefore believes it is important to highlight some issues and propose further recommendations for the template that would contribute to a more robust and fit-for-purpose technical compliance framework overall. These recommendations are relevant to:

- Compliance with performance standards for generators;
- Compliance with performance requirements for Network Service Providers (NSPs);
- The ability of AEMO to meet power system obligations;
- The efficient dispatch of generating units; and
- Good electricity industry practice.

With regard to the draft report's first recommendation, and specifically compliance testing associated with S5.2.5.5 of the National Electricity Rules, AEMO believes generators should include in their compliance programs a requirement to:

- Validate performance for any large disturbance (that has occurred naturally); and
- Provide details and analysis including any model updates to AEMO within 3 months of that disturbance occurring.

This is particularly important in the case of power electronics interfaced plants because commissioning tests generally involve small perturbations that are unlikely to initiate and test performance of control systems that activate only during large disturbances.

AEMO is also of the view that generators need to adopt a practice of regularly updating the model information provided to AEMO, to ensure it fully and accurately reflects all firmware upgrades, site-specific settings changes and related other matters.

Complete, accurate and up to date models are essential for AEMO and NSPs for reasons including:

- To allow for the impact on power system security of any actual or potential technical non-compliance to be fully assessed and appropriately addressed by all concerned;
- To ensure generators are not adversely affected by transfer limits that may be too conservative or optimistic.

Given the importance of plant models, where they are missing, incomplete or out of date, the affected generators are urged to procure and provide them to AEMO (and the relevant NSP as the case may be) at the earliest opportunity to avoid inaccurate representation of the power system.

In the context of clause 5.3.9 of the Rules, AEMO welcomes the draft recommendations which provides for additional guidance under the template as to the treatment of changes in firmware or software associated with digital control and protection systems. It is also important to highlight that under S5.2.2 of the Rules, control or protection system settings that are necessary to comply with performance standards cannot be applied without the approval of the relevant NSP, and AEMO if involving advisory matters under clause 5.3.4A(c) of the Rules.

Although the Rules currently do not appear to include obligations to involve NSPs in the development and execution of generator compliance programs, AEMO believes generators should coordinate any compliance test that has the potential to create system security impacts with AEMO and the relevant NSP. Moreover, for consistency and for transparency across the NEM, the AEMC and Reliability Panel should consider:

- The development of a template for NSPs relating to their compliance program obligation under clause 5.7.4 of the Rules; and
- The need for registered performance standards and compliance program for any physical plant such as synchronous condensers, which are controlled or operated by NSPs and may affect power system security or the performance standards of generators. AEMO has identified network plant standards as an area requiring review, and in 2020 will be assessing the need for a Rule change.

Finally, noting the self-reporting regime established under clause 4.15 of the Rules, compliance monitoring by the Australian Energy Regulator (AER) is also a key element in promoting high

standards of compliance and good industry practice. In this context, we believe it would be timely for the AER to resume its technical compliance auditing program for generators and TNSPs¹ and, where appropriate, assist with potential compliance issues by seeking and assessing relevant information, including records setting out results of performance monitoring conducted².

AEMO welcomes the opportunity to discuss our submission further with the Panel if needed.

Should you have any questions on the matters raised in our submission, please contact Kevin Ly via email (kevin.ly@aemo.com.au).

Yours sincerely



Peter Geers

Chief Strategy and Markets Officer

¹ Last conducted as respectively reported in the AER Quarterly Compliance Reports for July-September 2016 and April-June 2014.

² Under clause 4.15(d) of the Rules.