



8 May 2020

James Lindley
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Australian Energy Market Operator

Lodged via email: pfr@aemo.com.au

Dear Mr Lindley

AEMO DRAFT PRIMARY FREQUENCY RESPONSE REQUIREMENTS

Origin Energy Limited (Origin) welcomes the opportunity to provide comments on AEMO's draft Primary Frequency Response Requirements (PFRR).

Timelines should be flexible to account for potential compliance issues and the expectations for generators should be clear

Origin considers the timeline for the first tranche of generators (i.e. those > 200 MW) to comply with the PFRR is tight, and that some flexibility is required as both plant operators and AEMO adjust to the new requirements. Additionally, the disruption due to COVID-19 should also be taken into consideration including where travel restrictions limit the movement of critical staff or contractors.

This flexibility should extend to the 10 business days generators will have to respond to any follow up questions after a self-assessment. Delays could occur where a generator is required to contact the Original Equipment Manufacturer (OEM). Given the technical nature of the issues, it is possible the OEM would not be able to provide a complete response within the prescribed timeline. Origin therefore suggests that the PFRR makes allowances for circumstances such as these, which are outside the control of the generators.

To improve clarity, the PFRR should specify that generator self-assessments of capability can be based on historical data such as previous tests or measured response to events, consistent with footnote 4 of Appendix A. Additional guidance on the level of detail that generators need to be provided for self-assessments would also be welcomed.

Definition of droop should reflect generator availability

The formula for droop in the draft PFRR is based on the maximum operating level of the generating system (P_{max}). Defining droop in this way could create issues as a generator may be generating less than its maximum capacity when called upon to respond to frequency deviations. We suggest that the P_{max} in the formula should instead be defined as the availability of the generator at the time of the frequency movement.

Additionally, where part of a generating system has an exemption (e.g. the steam stage of a CCGT), this should be excluded from the P_{max} of the generating system used to calculate the level of droop.

Variations should consider the shape of response from generator

Origin welcome's AEMO's flexibility in providing variations where generators may not be able to meet the specifications laid out by the PFRR. The current drafting of section 7.3 implies that variations are available but doesn't make clear what generators can request as part of their self-assessment.

We suggest that section 7.3 directly specify that variations are available for generator's droop, deadband, along with the speed, range and continuity of response.

We also suggest that the PFRR specify that variations will be available for generators that respond in a nonlinear manner. Some generators can respond in a way that meets the PFRR obligations under most conditions but not do so under other circumstances. For example, some generators may not be able to respond (in either direction) while at their maximum output, but could otherwise satisfy the PFRR.

The PFRR and the self-assessments templates should allow for generators to indicate where they would require variations, even when these variations are not always needed by that generator.

Exemption requests should consider planned upgrades or maintenance

In considering exemption requests, AEMO should take into account pre-existing plans for plant upgrades and maintenance. Some plants may not have current PFR capability in line with the PFRR but do have subsequent plans for upgrades or maintenance that would improve their ability to provide frequency response. These generators should be allowed to receive an exemption up until the time these previously planned upgrades have been made. Bringing forward these works could lead to undue costs and require generators to deviate from their predetermined optimal development/maintenance plans.

There should be a process for generators to inform AEMO of temporarily disabled PFR

The PFRR should lay out the process for generators to inform AEMO of a temporary disabling of frequency response capability. Generators will occasionally need to temporarily remove the capability for testing or maintenance, while still supplying energy.

Should you have any questions or wish to discuss this submission further, please contact Alex Fattal via email alex.fattal@originenergy.com.au or phone, on (02) 9375 5640.

Yours sincerely



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