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Submitted electronically: pfr@aemo.com.au

RE: Draft Primary Frequency Response Requirements

About Shell Energy in Australia

Shell Energy is Shell's renewables and energy solutions business in Australia. Shell Energy delivers business energy solutions and innovation across a portfolio of electricity, gas, environmental products and energy productivity for commercial and industrial customers. Our residential energy retailing business Powershop, acquired in 2022, serves more than 185,000 households and small business customers in Australia. The company's generation assets include 662 megawatts of gas-fired peaking power stations in Western Australia and Queensland, supporting the transition to renewables, and the 120 megawatt Gangarri solar energy development in Queensland. Further information about Shell Energy and our operations can be found on our website [here](#).

General Comments

Shell Energy appreciates the changes made by AEMO in the Draft Primary Frequency Response Requirements (PFRR) document in response to stakeholder submissions. We remain supportive of the document being amended to clarify the following areas for market participants.

Section 2.3

To provide additional clarity we suggest that section 2.3 should be amended to accurately reflect the type of dispatch instruction in accordance with the National Electricity Rules (the Rules), as opposed to being left in the ambiguous form of a more generalised "dispatch instruction" term. Each sub clause should be clearly reference to the applicable dispatch instruction in the Rules.

In addition, the current subclause 2.3(b) requires additional clarification to meet the requirements of Rules clause 4.4.2(c1). The current wording of the PFRR suggests that a Rules clause 4.9.3A dispatch instruction for regulation FCAS in isolation requires an affected GS to provide MNBPFRR which Shell Energy considers is an incorrect interpretation of the Rules. Our understanding of the Rules is that an affected GS that receives a clause 4.9.3A dispatch instruction for the provision of regulation FCAS greater than 0 MW, but is not also issued a clause 4.9.2 dispatch instruction for active energy dispatch greater than 0MW, is not required to provide mandatory narrow band primary frequency response (MNBPFRR). This is because clause 4.4.2(c1) is specific to only a clause 4.9.2 dispatch instruction. For a 4.9.3A dispatch instruction in isolation the Affected GS's desired output should be the AGC setpoint. Only where an Affected GS receives both a 4.9.3A dispatch instruction for regulation FCAS and a 4.9.2 dispatch instruction to provide active energy dispatch greater than 0 MW in the same trading interval would the requirement as currently indicated in Section 2.3(b) be correct.

This distinction allows for an energy storage system to continue to provide regulation FCAS when in charging mode without requiring the provision of MNBPFRR.



We also recommend a change, outlined below, to make it clear that intent of the PFR is that a semi-scheduled generator subject to a semi-dispatch interval may exceed its dispatch instruction for the provision of PFR.

We offer the following revised wording for section 2.3 for AEMO's consideration.

*(a) Where an Affected Generator receives a **NER 4.9.2** dispatch instruction in respect of an Affected GS for a quantity of energy greater than 0 MW, the Affected GS' output is to be varied in accordance with the PFR Settings **subject to section 2.2**. If the dispatch instruction is received by AGC, the desired output should be the summation of the AGC setpoint and the PFR Settings as described in section 10.3 of the market ancillary service specification (MASS).*

*(b) Where an Affected Generator receives **both a NER 4.9.3A** dispatch instruction in respect of an Affected GS for a quantity of Regulation FCAS greater than 0 MW **and a clause 4.9.2** dispatch instruction for a quantity of energy greater than 0 MW in respect of an Affected GS, the Affected GS' desired output should be the summation of the AGC setpoint and the PFR Settings **subject to section 2.2** as required by section 10.3 of the MASS.*

*(c) Where an Affected Generator receives a **NER 4.9.3A** dispatch instruction in respect of an Affected GS for a quantity of Regulation FCAS greater than 0 MW, but that Affected GS is not issued a **NER 4.9.2** dispatch instruction to provide energy in the same dispatch trading interval, the Affected GS' desired output should be the AGC setpoint **subject to section 2.2** as required by the MASS.*

*(d) Where an Affected Generator receives a **NER 4.9.3A** dispatch instruction in respect of an Affected GS for a quantity of Contingency FCAS, but that Affected GS is not issued a **4.9.2** dispatch instruction to provide energy in the same dispatch trading interval, the Affected GS must comply with the requirements for the relevant Contingency FCAS, as set out in the MASS.*

*(e) Where an Affected GS is operating in a semi-dispatch interval and a frequency deviation would cause an increase in output **exceeding its NER 4.9.2** dispatch instruction, where possible, the Affected GS' output should be increased to provide PFR.*

Section 4.3

We note AEMO's proposed changes to section 4.3 but consider the revised draft words do not meet the requirements of Rules clause 4.4.2(c1). It is not only when charging that an energy storage system (ESS) is not required to provide MNBPFR. An ESS is only required to provide MNBPFR when it has been issued a clause 4.9.2 dispatch instruction for the provision of active energy output greater than 0 MW. We also consider the wording of the section should not be restricted to battery energy storage systems and should apply to all energy storage systems in general.

We offer the following revised wording for AEMO's consideration.

*Subject to **NER 4.4.2(c1)**, PFR must remain continuously enabled at the PFR Settings, unless agreed with AEMO, independent of ancillary services enablement.*

*Although Affected GSs comprising an energy storage system **are only required by NER 4.4.2(c1)** to provide PFR in periods when the Affected GS has been issued a **clause 4.9.2** dispatch instruction for active energy output greater than 0 MW, for power system operational purposes AEMO prefers that their PFR Settings for energy storage systems do not change by reference to the direction of energy flows for which they are dispatched.*



Whilst AEMO prefers that PFR settings for energy storage systems do not change by reference to the direction of energy flows for which they are dispatched, AEMO's agreement is not required to disable the provision of PFR when an energy storage system has not been issued a clause 4.9.2 dispatch instruction for active energy output greater than 0 MW.

This last paragraph ensures that AEMO does not impose a requirement on an energy storage system in the PFRR that does not align with NER subclause 4.4.2(c1).

For further detail or questions regarding this submission please contact Peter Wormald (peter.wormald@shellenergy.com.au).

Yours sincerely,

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