



AGL Energy Limited

T 02 9921 2999

F 02 9921 2552

agl.com.au

ABN: 74 115 061 375

Level 24, 200 George St

Sydney NSW 2000

Locked Bag 1837

St Leonards NSW 2065

Australian Energy Market Commission

31 August 2023

Clarifying mandatory PFR obligations for bidirectional plant

AGL Energy (AGL) welcomes the opportunity to respond to the Australian Energy Market Commission (AEMC) Clarifying mandatory PFR obligations for bidirectional plant consultation paper.

About AGL

Proudly Australian for more than 185 years, AGL supplies around 4.3 million energy and telecommunications customer services. AGL is committed to providing our customers simple, fair and accessible essential services as they decarbonise and electrify the way they live, work and move.

AGL operates Australia's largest private electricity generation portfolio within the National Electricity Market, comprising coal and gas-fired generation, renewable energy sources such as wind, hydro and solar, batteries and other firming technology, and gas production and storage assets. We are building on our history as one of Australia's leading private investors in renewable energy to now lead the business of transition to a lower emissions, affordable and smart energy future in line with the goals of our Climate Transition Action Plan.

QUESTION 1: ISSUE 1 — NON-INCLUSION OF SCHEDULED BIDIRECTIONAL UNITS IN THE MANDATORY PFR OBLIGATIONS WHEN DISCHARGING

- What are stakeholders' views on the proposal to clarify the scheduled BDU's be required to provide PFR when discharging?

We consider this proposal acceptable as it would be consistent with the obligations of other generators in the NEM, and merely requires bidirectional plant to provide PFR while they are providing energy.

- Is it consistent with the Commission's final determination for Mandatory Primary frequency response rule for scheduled bidirectional units to be included in the mandatory obligations?

Yes, it is consistent to include bidirectional units when discharging.

QUESTION 2: ISSUE 2 — LONG-TERM PROVISION OF PFR

- What are stakeholders' views on AEMO concerns in relation to the long-term provision of PFR?

AGL agrees that AEMO's concern that there may not be sufficient PFR in future to support system security on an ongoing basis is valid, although we consider that the introduction of an effective PFR incentive mechanism which drives PFR provision by market forces from those units that can most efficiently provide it would be superior to mandatory PFR.

- What are stakeholders' views on the role of bi-directional units in providing PFR?

We agree that provision of PFR from bi-directional units will be integral to the efficient provision of PFR in the NEM going forward and agree that if mandatory PFR exists in the NEM then it should apply to bi-directional units.

QUESTION 3: ISSUE 1 — PROPOSAL TO INCLUDE SCHEDULED BIDIRECTIONAL UNITS IN THE MANDATORY PFR OBLIGATIONS

- Do stakeholders agree with the Commission's preliminary position that the proposal to require bi-directional units to provide PFR while discharging aligns with previous determinations for scheduled semi-scheduled generators to be required to provide PFR while generating?

Yes.



QUESTION 4: ISSUE 2 — STAKEHOLDER VIEWS ON AEMO'S PROPOSAL FOR SCHEDULED BIDIRECTIONAL UNITS TO BE REQUIRED TO PROVIDE PFR WHEN THEY ARE CONSUMING ELECTRICITY FROM THE GRID

- Do stakeholders agree with AEMO's proposal that scheduled bidirectional units should be required to provide PFR when charging?

Yes. Broader PFR participation will improve power system security and minimise the frequency shifts which providers of PFR will need to respond to.

- Do stakeholders agree with AEMO's assessment of the costs and benefits of the change?

Broadly, yes.

- What are stakeholders views on the cost impacts for batteries providing PFR while charging?

We expect the cost impact for batteries would be minimal and offset by frequency performance payments. However we suggest the AEMC give careful consideration to the potential cost impacts to ensure they are not significant. If the cost impacts are likely to weaken investment signals for batteries, then we would not support the proposal to extend mandatory PFR to the charging of bidirectional units.

QUESTION 5: ISSUE 2 — STAKEHOLDER VIEWS ON AEMO'S PROPOSAL FOR SCHEDULED BIDIRECTIONAL UNITS TO BE REQUIRED TO PROVIDE PFR WHEN ENABLED TO PROVIDE A MARKET ANCILLARY SERVICE

- What are stakeholders views on AEMO's proposal that scheduled bidirectional units be required to provide PFR when enabled for market ancillary services?
- Do stakeholders agree with AEMO's assessment of the costs and benefits of this change?
- What are stakeholders views on the impacts for a battery in providing PFR while:
 - enabled for regulation services?
 - enabled for contingency services?

The AEMC decided that there should be no requirement for battery energy storage systems to provide PFR when enabled to provide FCAS in the 26 March 2020 *Mandatory Primary Frequency Response*, and 8 September 2022 *Primary Frequency Response Incentive Arrangements*, final determinations. AGL is disappointed that this proposal is being re-prosecuted so soon.

Nevertheless, for **regulation FCAS** we consider a requirement that bidirectional units be required to provide PFR sensible as being enabled for regulation FCAS requires a unit to be constantly adjusting for frequency deviations anyway. As above, if the AEMC finds the cost impact of this requirement to be significant, and likely to weaken investment signals for batteries, then we would not support the introduction of this requirement.

For **contingency FCAS**, which only requires a response in the event of larger frequency deviations, a requirement to provide PFR when enabled will require bidirectional units to change their active power output or consumption when they would otherwise not be required to. The exception being when enabled for very fast, and potentially fast FCAS, which are likely to require a unit to adjust for frequency deviations to ensure they are able to provide the contingency service as required. Generally however, requiring the provision of PFR when enabled for contingency FCAS will increase costs and physical degradation of bidirectional units and impact warranties for units from suppliers which have total cycle limits that capture these adjustments. This may weaken incentives for the investment in, or enablement of, bidirectional units for the provision of contingency FCAS. This is likely to be more problematic for short-duration batteries which cycle less frequently than long duration batteries which are less focussed on targeting peak periods. Due to these concerns, we do not consider it clear that AEMO's proposal for scheduled bidirectional units to be required to provide PFR when enabled for contingency FCAS should be adopted.



QUESTION 6: ISSUE 2 — COMMISSION'S OTHER PROPOSED CHANGES TO PROMOTE THE LONG-TERM PROVISION OF PFR

- What are stakeholders views on the proposed amendments to promote consistent and predictable PFR?

We support the AEMC's proposal to allow the voluntary registration of frequency response settings for units that would like to provide PFR but are not required to.

The AEMC are also proposing that the requirement that scheduled plant that have registered their response settings with AEMO, may not change these settings, unless approved by AEMO, be extended to also cover semi-scheduled plant that have registered their frequency response settings with AEMO. We consider this change sensible given it is now technically feasible for variable renewable generation to operate in frequency response mode.

- Are stakeholders aware of any other incremental changes that would help promote consistent and predictable PFR while aligning with the existing mandatory PFR obligation and the incoming Frequency performance payment arrangements?

No.

QUESTION 7: IMPLEMENTATION CONSIDERATIONS OF REQUIRING SCHEDULED BIDIRECTIONAL UNITS TO COMPLY WITH THE PFRR WHEN DISCHARGING

- Do stakeholders consider that there are any further implementation costs that should be considered by the Commission when assessing extending the mandatory PFR obligations to scheduled BDUs while discharging?

We expect the compliance and implementation costs related to discharging will be minimal.

QUESTION 9: ASSESSMENT FRAMEWORK

- Do you agree with the proposed assessment criteria?

Yes. However we note that mandatory PFR is not consistent with the 'market efficiency' criteria and the introduction of an effective PFR incentive mechanism, which drives PFR provision by market forces from those units at can most efficiently provide it, would lead to more efficient outcomes.

- Are there additional criteria that the Commission should consider or criteria included here that are not relevant?

No.

If you have queries re this submission, please contact Anton King on (03) 8633 6102 or aking6@agl.com.au.

Yours sincerely,

Kyle Auret
A/g Senior Manager Wholesale Markets Regulation