

31 August 2023

Victor Stollmann
Project Lead
Australian Energy Market Commission

Dear Victor

RE: Clarifying mandatory primary frequency response obligations for bi-directional plant (ERC0364)

Thank you for the opportunity to provide feedback on the *Clarifying mandatory primary frequency response obligations for bi-directional plant* rule change proposal.

BayWa r.e. is concerned that this rule change may negatively impact the already marginal economic business case for proponents developing new Battery Energy Storage Systems (BESS) in the NEM. This may result in fewer BESS being brought onto the NEM and at a slower rate of deployment. This would be particularly detrimental given the important role BESS plays at this critical time in Australia's energy transition.

Specifically, BayWa r.e. are concerned around AEMO's proposal for scheduled bidirectional units to be required to provide Primary Frequency Response (PFR) when they are consuming electricity from the grid or when enabled for market ancillary services. This requirement would add further to costs that are applicable specifically to charging BESS, compared to generators, such as Transmission Use of Service (TUOS) and Distribution Use of Service (DUOS) charges.

Our key points are:

- We support decision to reinstate PFR for generation mode for bi-directional units.
- We are concerned about PFR being provided when both charging and during dispatch to provide both contingency and regulation FCAS. This is problematic from a financial modelling and business case perspective because:
 - This could mean, if required to provide PFR when charging or at 0 MW and being enabled to provide regulation or contingency FCAS may compromise the amount of FCAS BESS is able to provide during dispatch.
 - The economic model for grid scale BESS development in Australia is already marginal. These additional modes will cost the battery in additional control systems, additional energy, faster degradation over the lifecycle of the plant, and additional wear and tear of the batteries leading to impact on round trip efficiency of the battery. The overall impact will be less proponent developing BESS in the NEM.

- The rule change may also result in the unintended consequence of batteries reducing their frequency droop setting and providing slower responses.
- Bi-directional units' treatment as a load contributing factor for TUOS and DUOS charges, and requirement to provide mandatory PFR places further stress on the economic case for batteries. There are no loads in the NEM which are required to provide PFR. This rule change skews the market unfairly.
- We support incremental changes to promote long-term, consistent, and predictable PFR, such as consideration of voluntary registration of frequency response settings to benefit from the PFR incentive arrangements. Utilising this methodology would assist provision of PFR to be market driven, and therefore, may be more efficient.
- Battery storage projects may be subject to additional charges if they are not able to provide primary frequency response (PFR) when they are not fully charged, or if they are not enabled to provide either raise or lower frequency control ancillary services (FCAS).

We welcome the opportunity to contribute further to this discussion and/or elaborate on the points above. Thanks for your important work on this topic and we look forward to hearing the outcome.

Kind regards,



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ERC0364 BayWa re stakeholder submission






August 2023_BayWa submission

Final Audit Report

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