31st August 2023

Benn Barr
Chief Executive Officer
Australian Energy Market Commission
Level 15
60 Castlereagh Street
Sydney, NSW 2000

Lodged online at: [Lodge a submission | AEMC]

Re: **National Electricity Amendment (Clarifying Mandatory PFR Obligations for Bidirectional Plan) Rule 2023 - Consultation Paper**

Dear Benn:

Tilt Renewables welcomes the opportunity to make a submission to the above Consultation Paper ("Paper") as part of our continuing engagement with the AEMC.

Tilt Renewables is committed to continue playing a lead role in accelerating Australia's transition to clean energy. Tilt is the largest owner and operator of wind and solar generation in Australia, with 1.7 GW of renewable generation capacity across ten operating wind and solar farms (or under construction). In addition, Tilt Renewables has a development pipeline of over 5 GW of wind, solar and storage projects.

Executive Summary

- Tilt Renewables strongly opposes requiring Primary Frequency Response (PFR) when Battery Energy Storage Systems (BESS) are providing FCAS. This matter was decided previously, and if reversed, would result in significant new costs and present an economic impediment and regulatory risk for storage projects.
- We do not consider that requiring BESS to provide PFR while charging to be unreasonable; however, it would be best delayed until frequency performance payments take effect in 2025.

Requiring BESS to Provide PFR when enabled for FCAS

The AEMC decided that BESS should not provide PFR when they are only providing FCAS during consideration of previous rule changes. Therefore, this rule change is inappropriately titled as it seeks to change, not clarify, mandatory PFR obligations for bi-directional plant. The consultation paper does not provide any effective rationale as to why the previous AEMC decision on this issue should be overturned. To re-raise issues that have already reached final determination by the AEMC is a distraction for industry, not a prudent allocation of AEMC resources and reduces investor confidence to invest in BESS assets which will prove critical to the reliability and security of the NEM through the transition to a lower carbon energy system dominated by variable renewable energy sources.

The primary objection to requiring BESS to provide PFR when enabled for FCAS is that it will require the BESS to charge and discharge small amounts of power (being referred to as 'micro-cycling') which will make the BESS' warranty expire more quickly as BESS warranties are limited by the number of charge/discharge cycles. As the number of warranted cycles are limited, investors are required to secure their returns on limited energy availability. While Tilt is comfortable with BESS' providing PFR when generating, it is not an appropriate use of the limited warranted cycles to provide PFR outside of generating for free, or for an unknown return under Double Sided Causer Pays (DSCP) when it becomes available. Tilt's comments relating to providing PFR while charging are detailed further below in this Paper.

It's clear that AEMO's goal is to have consistent and predictable PFR availability. Given the rapidly growing rooftop PV fleet which doesn't have PFR capability, along with the also rapidly expanding semi-scheduled fleet which isn't required to provide headroom to supply PFR, Tilt Renewables is acknowledges AEMO's concerns surrounding PFR availability during times of high rooftop PV and/or high renewable output. However, creating PFR availability certainty by mandating that BESS' provide PFR when idle is not the appropriate solution. This proposal by AEMO will stifle BESS investment and increase FCAS costs to both generators and consumers as battery operators will need to price in micro cycling costs into their FCAS offers, adjusting them higher. Tilt Renewables is of the view that this aspect of the proposed rule change does not promote the efficient investment in electricity services and that it trades off the system reliability aspect of the NEO for system security.

If this part of the rule change is adopted, it will have the undesirable situation where the Commonwealth and State Governments are pushing hard to accelerate new storage into the system, through initiatives like the Victorian Energy Storage Target, Capacity Investment Scheme, NSW long-duration LTESA, etc. at the same time that AEMO, via the AEMC, is implementing rule changes that disincentivise or add investment uncertainty new BESS projects. More generally, AEMO's reform programs to modify rules for this new technology class are not helpful to increase investor confidence and lowering cost for consumers. The implemented rule changes to require BESS (but not pumped hydro) changing from two DUIDs to one (and retrospectively applying this to existing BESS) is another example of a reform of limited benefit whereby AEMO's actions run contrary to both State and Federal Government's clear policy objectives to install more storage as soon as possible.

Rather than progressing down this route, Tilt Renewables suggests that AEMO explores implementing a PFR market which has many benefits over the rule change proposed by AEMO. Under a PFR market AEMO could procure only the amount of PFR that is actually required unlike the over-subscription that is currently evident. This will help to eliminate frequency chasing plus the service could be offered, rather than mandated, and provided at the lowest cost, eliminating the need for BESS' to micro-cycle unless it is in their interest to participate. Lastly, as this would be a transparent market, those participating in PFR can be certain of adequate returns with respect to the micro-cycling that would be occurring. Under the proposed rule clarification, there is no certainty of BESS operators covering costs or their required investment hurdle rates as they are mandated to provide PFR for free and hoping that DSCP at least covers their costs.

Requiring BESS to Provide PFR when charging

This change to the existing rules is far less objectionable as BESS can provide this service, to some degree, when charging without any significant detrimental impacts. However, we consider that it would be preferable to align such a rule change to take effect after the introduction of frequency performance payments (scheduled for 2025). The rule change should also be clear on the definition of charging, which should exclude the energy consumed when a BESS is importing from the grid to power auxiliary supply.

Thank you for the opportunity to comment on this Paper. Please feel free to contact jonathan.upson@tiltrenewables.com should you have any questions or to discuss any aspect of this submission.

Yours Sincerely,

Rhys Albanese

Market Operations Manager

Tilt Renewables