

Your Ref: ERC0280
Contact Officer: Matt Lady
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Ms Merryn York
Acting Chair – Australian Energy Market Commission
GPO Box 2603
SYDNEY, NSW 2001

Dear Ms York,

Consultation Paper—Integrating Energy Storage Systems into the NEM

Thank you for the opportunity to comment on the AEMC's consultation paper in relation to AEMO's Integrating Energy Storage Systems rule change request.

With the increasing uptake of grid-based battery storage as a source of firming energy and ancillary services provision, it is becoming increasingly important that the regulatory regime adapts and keeps pace with these developments and does not create barriers to entry.

We welcome the AEMC's recognition of the interaction between this rule change request and the other reforms underway, including the Energy Security Board's (ESB) Post-2025 Market Design Program and rule change requests relating to distribution network service providers recovering costs for export services. These processes will have implications for the future regulation and integration of energy storage systems in the NEM.

Co-ordination across these reforms is important to achieving consistent and coherent policy outcomes. A clear example of this, as noted in the AEMC's consultation paper, is the ESB's consideration of two-sided markets which if implemented would impact directly on the participation classification proposals central to this rule change request.

In the attachment to this submission (Attachment A) we provide more detail on issues regarding the application of fees and charges to energy storage systems and participant compliance with the National Electricity Rules.

We look forward to continue working with the AEMC to ensure the regulatory regime is fit-for-purpose and supports the timely and efficient integration of energy storage systems into the NEM. If you have any questions, please feel free to contact Matt Lady (08 8213 3491).

Yours sincerely,



Mark Feather

General Manager, Policy and Performance

15 October 2020

Attachment A: AER response to the consultation paper

Energy storage systems and charging arrangements

In the *State of the Energy Market 2020*, we highlighted the significant transformation underway in the NEM. We also highlighted the importance of effectively and efficiently managing this transition.

One aspect of this transformation is the growth in renewable generation that is creating commercial opportunities for energy storage systems, such as grid scale batteries, to act as new sources of network support and energy management.

As the NEM evolves, the regulatory framework should avoid creating barriers to emerging technologies and business models, and enable network service providers to make efficient choices between capital and operating requirements.

This rule change request is a timely opportunity to consider how to reduce barriers to entry for energy storage proponents, and how to minimise investment distortions across the NEM.

We consider market participants would benefit from increased clarity and certainty in the National Electricity Rules (NER) in respect of network charging arrangements for energy storage systems.

Network charging arrangements and practices for energy storage systems vary, and therefore provide different investment price signals both across the transmission and distribution networks and within jurisdictions on the same network. This can mean that there are significant differences between network charges for grid-scale batteries at the transmission level compared with those at the distribution level.

In their draft Tariff Structure Statements (TSS) for the 2021-26 regulatory control period, each Victorian distributor proposed that any grid-connected battery they own should be exempt from network tariffs. However, their proposed tariff treatment differs for batteries that they do not themselves own.

Some distributors have proposed to exempt grid-scale batteries from network tariffs if the battery is operated 'to the net benefit' of their customers, while others have proposed to treat them in accordance with their load characteristics.

Differential treatment by the Victorian distributors—particularly as stark as being exempt or facing a full network tariff—is likely to be distortionary and not lead to battery development in the most efficient locations.

We also note the Australian Energy Market Operator's (AEMO) observation that the NER lacks sufficient clarity as to how Transmission Use of System (TUOS) and Distribution Use of System (DUOS) charges may apply to grid-scale batteries.

This rule change request provides the opportunity for the AEMC to improve clarity in the NER by determining the eligibility of network service providers (NSP) to recover network costs from energy storage systems, including whether:

- energy storage systems connected at the transmission level are or would be liable for TUOS charges;
- energy storage systems connected at the distribution level are or would be liable for TUOS and/or DUOS charges;
- energy storage systems connected at either transmission or distribution levels are or would be liable for export charges or import charges, or both.

With increased clarity as to the application of TUOS and DUOS charges for energy storage systems, we expect the shape of distribution network tariffs would be determined by distributors' TSSs, subject to AER approval, after taking into account the characteristics of the network locally.

This would enable network tariffs to signal more effectively the costs of consumption and support the efficient transformation of the energy sector, while maximising the benefits of new and emerging technologies.

Transitional mechanisms needed

The AER recently released its Draft Decision on the Victorian electricity distributors' proposed 2021-26 TSS's. Given the complexity of AEMO's rule change proposal, we expect that the AEMC will make a final determination after the AER has made its final decision on these proposed TSS's in April 2021. In this context, we are mindful that new rules arising from this rule change request may impact on how energy storage systems in Victoria will be charged in the future. Our final decision on the Victorian distribution networks' tariff proposals for grid scale storage will acknowledge the rule change process that will remain ongoing when our process concludes.

More broadly, depending upon the transitional arrangements of any final rule, to action the rule change it may be necessary to re-open the existing suite of approved distribution network TSS's and approved transmission network pricing methodologies across the NEM. At this stage we consider any reopener provisions should be narrowly framed around issues related directly to energy storage systems so as not to facilitate wider changes that may foster tariff instability.

NER compliance

Registration

AEMO suggests that rather than registering energy storage systems as both generators and load for the same unit, as occurs under the existing rules, a new category should be created.

We appreciate the challenge of striking the right balance between creating a proliferation of bespoke categories and the other extreme of categories that are not sufficiently flexible to cater for a variety of participants with different performance characteristics.

The interdependency between the registration category and obligations that flow from registration under the NER, requires processes and obligations to be clear and have fit-for-purpose participant categories. Chapter 2 of the NER also needs to provide sufficient flexibility and discretion to AEMO to ensure that intending participants are appropriately registered according to a category that best aligns with their capabilities and with sufficient conditions upon their registration as AEMO deems reasonable.

Although the proposed changes would be an improvement on the existing regime, we note the interaction and potential incompatibility of these changes with the two-sided market reforms that the ESB is currently considering.

Nonetheless, we consider establishing a new registration category for energy storage systems would flow through to the assessment of obligations in other parts of the NER, and reduce the likelihood of inconsistencies in participant obligations.

AEMO highlights that the NER does not currently contemplate hybrid facilities, and suggests that these facilities should not be registered as one unit unless approved by AEMO on a case-by-case basis.

We note that hybrid facilities may make an efficient contribution to firming up intermittent generation in the NEM; however, such facilities may also create more complexity around what is required from compliance perspective, both for the AER and for market participants.

Technical and operational challenges for storage and hybrid facilities

One of the critical obligations in the NER is for participants to make offers/bids that reflect best the capabilities of the plant and the commercial intent of the participant at all times. We note that under the proposed regime scheduled energy storage assets would participate in central dispatch under one Dispatchable Unit Identifier, and therefore have one offer both for consuming and for generating electricity.

While we are currently unclear how a single offer can both propose to consume and to produce electricity, on balance we consider that dispatch offer requirements should be framed such that key plant characteristics and commercial positions can be accurately reflected while also maintaining underlying consistency across participants.

We understand that conflicting dispatch instructions can occur when the load and generator receive conflicting, simultaneous dispatch instructions and/or FCAS offers, which AEMO has noted is often due to poor framing of dispatch offers/bids.

We note having in place requirements that offers/bids of the relevant unit is able to comply with at all times plays a key role in the participant being able to comply with dispatch instructions arising from those bids and offers.

Performance standards

AEMO notes that for energy storage systems the performance requirements in the NER for load versus generation are not symmetrical, which can be problematic for energy storage systems and hybrid facilities.

Understandably, AEMO is seeking more visibility so it can understand the impact on the power system. AEMO considers the generator performance standards should be based on physical asset type rather than registered participant category.

We consider it important that AEMO has sufficient visibility over equipment connected to the power system so it can effectively manage power system security.

As a general principle, performance standard obligations should be established such that plant performance is set out in a clear and consistent manner, and it is clear how the plant will perform in particular conditions.