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Submitted online to: <https://www.aemc.gov.au/rule-changes/integrating-energy-storage-systems-nem>

Dear Mr Aulbury,

Integrating Energy Storage Systems into the NEM
Reference: ERC0280

The Australian Energy Council (the “**Energy Council**”) welcomes the opportunity to make a submission in response to the Australian Energy Market Commission’s (“**AEMC’s**”) *Integrating Energy Storage Systems into the NEM Options Paper*.

The Energy Council is the industry body representing 21 electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. These businesses collectively generate the overwhelming majority of electricity in Australia, sell gas and electricity to over ten million homes and businesses, and are major investors in renewable energy generation.

Introduction

On 5th January 2021 the Energy Security Board (“**ESB**”) published a directions paper which touched on two-sided markets in its chapter on Demand Side Participation. The paper referred to the AEMC’s Integrating Energy Storage Systems in the NEM rule change assessment, indicating that it is the “first step on the path to a trader-services model”.¹ In addition it said that “[o]ptions for alternative scheduling and dispatch arrangements are being explored through the AEMC’s generator connections rule change ...”.²

It is clear from this, and other references in the ESB’s Directions Paper, that development of a robust, cost-effective two-sided market will require significant collaboration between the ESB and other market bodies. It is therefore important that the AEMC, when considering this rule change request, is cognisant of the many elements which will contribute to a functioning, efficient two-sided market.

The Australian Energy Market Operator’s (“**AEMO’s**”) original rule change request was lodged on 23rd August 2019. In its 15th October 2020 submission to the Consultation Paper, AEMO identified a number of additional issues. It is apparent that continued investigation reveals further issues, and it is important that all matters are investigated fully before market changes are made.

The Energy Council believes that there is an opportunity for the AEMC to make some of the incremental changes proposed, which lay the foundation for the ESB’s two-sided market conclusion and recommendations, once they have been developed more fully. However, the Energy Council would not support significant rule changes until the outcomes of the ESB’s deliberations become clearer, particularly since the benefits and costs of any changes have not been quantified.

¹ Energy Security Board, *Post-2025 Market Design Directions Paper*, January 2021, p.72

² *ibid.*, p.69

Discussion

Registration and Participation Framework

The AEMC correctly identified that redefining participant categories is not within the scope of the rule change request, and suggests four different options for the registration and participation framework which could address the issues raised in the rule change request.

In its 15th October 2020 submission, the Energy Council saw little value in amending participant categories, and distinguishing between storage and hybrid facilities. The Energy Council continues to hold that view, but appreciates that Option 3 (modifications to existing participant categories), which the AEMC has proposed, may be a minor change which would be simple and cost-effective to implement, and may provide a starting point for a transition to a more generic participant category model. However the Energy Council emphasises that grandfathering existing assets, as well as those under construction, may diminish the value of this change. In addition, it will be important that participant categories remain as technologically-neutral as possible.

The Energy Council considers that Option 4 (introduction of a new participant category, the Integrated Resource Provider), should be considered in the context of the ESB's recent Directions Paper, to ensure consistency with its broader consideration of the requirements for a two-sided market.

The Energy Council appreciates the direction implied in Option 4 that the distinction between producer/consumer/storage is blurring, and that consolidation of participant categories seems a natural consequence and consistent with a "two-sided market". The ESB's trader-services model has attractions in that regard, but is a different and more substantial reform than any of the options presented here.

Scheduling under Options 3 and 4

As a consequence of the proposed Options 3 and 4, there is a need to consider how scheduling for the modified or new participant categories would occur. The Energy Council has proposed a rule change to lower the threshold for conventional scheduling/semi-scheduling, as it applies to generators, from 30 to 5MW.³ While any threshold has a degree of arbitrariness, the Energy Council continues to consider conventional scheduling a not unreasonable burden for new generators between 5 and 30MW, commensurate with their growing market impact. Similarly, the Energy Council considers that conventional scheduling concepts should also apply down to the same threshold for storage and hybrid facilities – an approach it is understood that AEMO already applies.

Less than 5MW the individual burden of conventional scheduling may outweigh the market benefit. In this regard the desire for the ESB to develop a "light scheduling" mechanism, intended for such assets of this size, is noted. The Energy Council supports simplified scheduling arrangements for these market participants, but notes that until the mechanism is developed, and more detail is available to market participants and intending market participants, the threshold for scheduling should not be lowered below 5MW.

Furthermore, as per the Energy Council's rule change, it is recommended that threshold changes apply only prospectively.

The Options Paper also contemplates dynamic scheduling obligations for hybrid units, for example based on a state of charge. While recognising the AEMC's attempt to simplify participation, the Energy Council believes that creating an exemption from continuous participation may have the consequences of:

³ Available at <https://www.aemc.gov.au/sites/default/files/2020-10/Rule%20change%20request%20-%20AEC.PDF>

- complicating the market;
- confusing generators not subject to the exemption;
- creating a gaming opportunity for hybrid units;
- contributing to additional bidding and risk costs; and
- causing an increased burden on the hybrid unit to change back and forth between operational modes.

The Energy Council makes the observation that the only time that scheduling information is not useful to the market is when the unit is in a steady-state. However this is also the time when the effort of scheduling for the owner is trivial. Thus the suggestion may offer only false simplicity.

Non-Energy Cost Recovery

The Energy Council agrees with the general thrust of the Options Paper, which seeks to align the non-energy charges with the “causer-pays” principle, however there is detail lacking in Table 3.1 (Assessment of Options for Non-Energy Cost Recovery). The Energy Council observes that any charge levied on gross storage energy flows will lead to dispatch inefficiency by artificially raising the marginal cost of cycling. Thus it believes that fundamentally Option 3 (Apply “Causer-pays” Approach to all Market Participants) should be implemented, but it is important that:

- some other non-energy costs such as intervention and administered price compensation cost recoveries that are levied on market customers should not be levied on storage, as these are to the benefit of end-use customers;
- intervention and market suspension adjustments that apply to generators should equally apply to storage exports;
- Participant Fund cost recovery should be levied on storage exports; and
- market shortfall and surplus should apply to storage exports as applies to generation.

Option 3 also has the advantage of resolving the recent concern over the recovery of these costs when nett regional demand falls to zero. In addition, it should allow AEMO to reverse its recently proposed “quick-fix” to enable settlements to solve during such situations.⁴

DC-coupled Systems

To the Energy Council’s mind, there should be little difference in the treatment of AC-coupled systems and DC-coupled systems behind a connection point. Although AEMO’s current procedures cater for AC-coupled systems, the ESB has foreshadowed that under the “trader-services model”, obligations will be attached to services at connection points, rather than being attached to particular registration categories or assets.⁵ This suggests that any changes in the Rules to accommodate DC-coupled systems should adopt this philosophy in its wording.

Ancillary Services Provisions

The Energy Council is broadly supportive of AEMO’s proposal to introduce a classification for an “ancillary services bidirectional unit”, but again considers that its introduction should be considered by the ESB as part of its two-sided market reforms. It is unclear from AEMO’s rule change request or the Options Paper the magnitude of the benefits to be obtained from the proposal, nor AEMO’s costs of implementation, therefore the Energy Council suggests that the AEMC should not implement this proposal until the market architecture becomes clearer.

Treatment of DUoS

The Energy Council notes that there is little discussion in the Options Paper regarding the treatment of distribution use of system charges (“**DUoS**”).

⁴ Australian Energy Market Operator, *NEM Settlement under Zero and Negative Regional Demand Conditions Issues Paper*, November 2020

⁵ ESB, p.71


As it stands, utility-scale storage systems connected to the distribution system incur costs to charge, whereas transmission-connected utility-scale storage systems do not. The Energy Council suggests this anomaly of asymmetric regulatory treatment of comparable systems should be addressed in any rule change implemented, with DUoS charges being removed for utility-scale storage systems.

Conclusion

As expressed in the Energy Council's previous submission, it is recommended that the AEMC should exhibit caution in implementing rule changes ahead of the ESB's market redesign becoming clearer. Nevertheless, some of the incremental changes which have been proposed in the Options Paper can be implemented simply and cheaply, and it is unlikely that they will affect future market changes. In that respect the Energy Council believes that cautious progress can be made in addressing the needs outlined in the rule change request.

Any questions about this submission should be addressed to the writer, by e-mail to Duncan.MacKinnon@energycouncil.com.au.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Duncan MacKinnon', with a long horizontal flourish extending to the right.

Duncan MacKinnon
Wholesale Policy Manager
Australian Energy Council