



15 October 2020

Merryn York  
Acting Chair  
Australian Energy Market Commission

Lodged online: [www.aemc.gov.au](http://www.aemc.gov.au)

Dear Ms York,

**AEMC: INTEGRATING ENERGY STORAGE SYSTEMS INTO THE NEM – CONSULTATION PAPER**

Origin Energy Limited (Origin) welcomes the opportunity to provide comments to the AEMC on the integrating energy storage systems into the NEM consultation paper.

We consider that the absence of a storage-specific participant category has not been a major barrier to investment to date. It is not evident that introducing a new participant type to cater specifically for storage systems would provide significant benefits. Instead, the AEMC should focus on identifying any specific barriers within the current arrangements and propose targeted solutions to address them.

**It is not clear that the lack of a storage-specific participant category is a deterrent to investment**

The regulatory framework that underpins how different assets are incorporated into the wholesale market reflect the prevailing technologies of the time. As new types of technologies become more prevalent, it is crucial to ensure that existing frameworks do not hinder innovation. Origin therefore broadly supports efforts aimed at more effectively incorporating new technologies.

We consider that the major barriers to entry for grid-scale storage resources have tended to be non-regulatory in nature (e.g. the cost of the assets). These barriers are lowering and will continue to do so through further technological advancement and innovation.

In our experience, being required to register as both a market load and market generator and provide two separate bids for each component have not been a deterrent to investment. It is therefore not evident that the overarching problem relates to the lack of a storage-specific participant category.

**The AEMC should identify specific issues with the current framework and propose simpler solutions**

While introducing a new participant category for storage may seem pragmatic in theory, in practice, implementation is likely to be complex and costly. For example, the consultation paper notes that the changes to AEMO's systems alone are likely to cost \$8-10 million. Market participants would also incur costs due to system changes that would be required. These costs have yet to be quantified.

It is also not clear if having one participant category would substantially reduce complexity, since new obligations would still need to account for the specificities of bidirectional units (e.g. two marginal loss factors, the two-way flow of energy etc.) and would likely embed new obligations throughout most aspects of the rules. It is therefore not clear that introducing a new participant category would necessarily make it easier for storage to participate in the market.

Given this, we consider that the AEMC should instead clearly identify specific issues within the current framework and address those directly, including by making changes to existing obligations to account

for the specificities of storage devices. This will help ensure that solutions are targeted and proportionate to the problems. We provide comments below on some of the issues identified in the rule change request.

**Table 1: Origin's comments on issues raised in the rule change request**

Issues raised in the rule change request	Comments
<b>Central dispatch</b>  AEMO is concerned about conflicting dispatch targets that arise due to storage having two separate bids for load and generation using two different dispatch unit identifiers (DUIDs).	If this is the primary issue, a simpler solution could be for AEMO to implement changes to flag such conflicts in NEMDE. A conflict between the two separate bids would be a non-compliant bid and the participant would receive an error and would be required to re-submit.
<b>Forecasting</b>  AEMO is concerned that storage may not be properly represented in short-term forecasts. For example, storage may be classified as energy constrained if it cannot generate at full capacity for a 24-hour period.	The AEMC should consider if there could be a specific provision in the rules or AEMO's procedures to account for new storage technologies for forecasting purposes, building on existing requirements for energy-limited plant.  It is not clear that a new participant category is needed to address this problem.
<b>Transmission and Distribution Use of System charges (TUOS and DUOS)</b>  AEMO notes that there is no clear agreement on how TUOS and DUOS should apply to battery storage units and hybrid units.	We agree the lack of clarity around TUOS and DUOS charging is creating unnecessary uncertainty for storage proponents. The current framework can lead to inconsistent application of charges across the network.  The AEMC should provide clarity, in the rules, for TUOS and DUOS charging for storage systems to reduce uncertainty. We consider that TUOS charges should not apply to storage units because the purpose of these facilities is typically to aid peak demand levels by discharging energy, and to recharge during times of lower demand and prices.  TUOS charges are paid for by end users who can exacerbate peak demand levels which require further network investment, unlike generation. The services provided by storage units are more akin to generation than consumption and generators are not subject to TUOS charges.

**The AEMC should clarify the process for this rule change given its overlap with the ESB's work on two-sided markets**

The AEMC proposes multiple potential approaches for this rule change, including the option to implement certain aspects of the ESB's two-sided market (such as collapsing the different types of market participants into fewer categories or imposing obligations based on services rather than technology type), given the overlap between the two programs.

We do not consider that it would be appropriate for this rule change to start implementing elements of a two-sided market, which is a separate issue. This rule change should proceed as normal and focus on addressing existing barriers, if any, to integrating storage within the current arrangements.

Should you have any questions or wish to discuss this submission further, please contact Sarah-Jane Derby at [Sarah-Jane.Derby@originenergy.com.au](mailto:Sarah-Jane.Derby@originenergy.com.au) or by phone, on (02) 8345 5101.

Yours sincerely



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