



11 February 2021

Ms Anna Collyer  
Chair  
Australia Energy Market Commission

Lodged via the AEMC website

Dear Ms Collyer,

## **PROJECT ERC0280: INTEGRATING ENERGY STORAGE SYSTEMS INTO THE NEM**

The Clean Energy Council (CEC) is the peak body for the clean energy industry in Australia. We represent and work with hundreds of leading businesses operating in renewable energy and energy storage along with more than 7,000 solar and battery installers. We are committed to accelerating the transformation of Australia's energy system to one that is smarter and cleaner.

The CEC welcomes the opportunity to comment on the Australian Energy Market Commission's (AEMC's) options paper in relation to the integrating energy storage systems into the National Electricity Market (NEM) rule change proposal. The CEC supports the high-level intention of the paper to explore further options that achieve the outcomes sought by the Australian Energy Market Operator (AEMO) while taking incremental steps towards the trader-services model under development through the Energy Security Board's (ESB's) two-sided market (2SM) work stream. While the CEC supports the policy intent explored in the options paper, we strongly suggest the AEMC remain focussed on the immediate needs of the market operator and industry that are urgently required through this rule change. Ensuring consistency with the 2SM framework should remain a second order priority.

The CEC does not have a strong opinion on either option three or option four presented in the options paper (noting that we had provided support for option two rather than option one at the previous step in the consultation process). This is in part due to the limited detail presented for each of these options. This lack of detail has raised a number of questions as to how these options may work in practice as outlined later in this submission.

The CEC does not necessarily agree with the AEMC's suggestion that the already well-developed and consulted on option two is not a material step towards the 2SM framework. While option two may not tie obligations to services, it is possible to be a technology neutral participant category because at its core, it is designed for participants that have bi-directional energy flows. It is designed to better integrate storage into the NEM and therefore also takes the desired steps towards the 2SM design. However, if industry's priority concerns outlined in our previous submission and reiterated below are addressed expeditiously, the CEC is comfortable to be guided by the AEMC's intention to move the market incrementally towards a 2SM through this rule change.

The remainder of our submission raises these priority industry issues that must be resolved, no matter which option is chosen and discusses potential concerns with options three and four. Please note that due to the timing of this consultation in relation to Christmas shutdowns for the CEC and many of our member companies and the large number of open consultations at this time across the market bodies our comments below may not be an exhaustive list of industry's questions and concerns.

### *Transmission/Distribution use of system charges*

A primary concern for industry that we strongly suggest is prioritised through this rule change process, regardless of the option chosen, is how network use of system charges apply to storage units. The CEC supported the approach outlined in option two<sup>1</sup> that transmission use of system (TUOS) charges would not apply to storage units. We suggest this approach is applied to all three options. We remain concerned that the same approach has not yet been proposed for distribution use of system (DUOS) charges. Ensuring DUOS charges are not applied to storage units would mean consistent charging frameworks for similar assets irrespective of where on the network they are located. A storage unit on the transmission network only pays connection costs. The same unit on a distribution network would pay connection costs and usage charges. There are examples in the market where this inefficient outcome has led to storage assets paying over \$1 million a year in DUOS charges.

If the intent is to apply similar treatment of TUOS (and DUOS) to options three and four, the CEC suggests the AEMC clarify how this will be possible. Specifically, when option three does not create a new participant category exempting this charge.

### *Registration and hybrid facilities*

The CEC is comfortable that the available options solve the registration issues currently facing utility-scale storage assets as they would all require a single registration category for the participant. This would resolve confusion in the market and simplify the process for new participants.

Our concern with options three and four is how the classifications apply to each unit in a hybrid system. The options paper outlines that the intent is that each service provided under options three and four would be scheduled<sup>2</sup>. The CEC is concerned by this approach as it does not recognise the capabilities of these assets and may have unintended consequences on the market. Hybrid assets that have a significantly higher proportion of renewable generation compared to standalone storages may find it difficult to meet the requirements of becoming fully scheduled. This may result in storage assets needing to be dramatically oversized (compared to the proponent's initial plans) to meet these requirements, increasing costs significantly. This could even result in a potential asset never being developed.

We note that the options paper explores the potential to implement dynamic scheduling for hybrid assets based on the state of charge of the storage unit. It is difficult to comment on this proposal without a strong description of how it would work in practice. However, the CEC suggests that this would represent a reduction in flexibility for participants and we argue that it could increase complexity, risk and confusion for new participants. With the intention of this rule change to provide clarity to the registration framework for storage this outcome may not be desirable.

Our previous submission makes several comments noting the benefits increased flexibility in the storage frameworks will have for both hybrid facility operation and the broader system. The CEC supports options that maximise participant flexibility in how they operate their storage assets for the benefits of the participant and their asset, the broader power system and consumers. Flexibility is important so that participants can design their asset to operate in tandem with co-located generation as well as maximise opportunities through operating as a standalone asset by charging and

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<sup>1</sup> CEC, Integrating energy storage systems into the NEM submission, 15 October 2020, page 4, available [https://www.aemc.gov.au/sites/default/files/documents/clean\\_energy\\_council\\_0.pdf](https://www.aemc.gov.au/sites/default/files/documents/clean_energy_council_0.pdf)

<sup>2</sup> AEMC, Options paper- National Electricity Amendment (Integrating Energy Storage Systems into the NEM) Rule 2021, 17 December 2020, page 21, available at <https://www.aemc.gov.au/sites/default/files/2020-12/Integrating%20energy%20storage%20-%20Options%20paper.pdf>

discharging from the grid. Of key importance here is the ability for a storage unit to charge from a co-located renewable generator without receiving dispatch instructions from the market operator<sup>3</sup>.

The AEMC also notes the potential to establish separate connection points for certain assets under options three and four, allowing scheduling obligations to be tied to each asset<sup>4</sup>. While the CEC would support this level of flexibility as it would resolve some of the issues noted above, we do not understand how this is materially better to option two, assuming a significant portion of participants may elect to operate under this flexibility.

#### *Price bid bands*

The CEC supports a minimum of 20 price bid bands for storage assets. We support the ongoing assessment of whether 20 price bid bands is the suitable minimum number of bands or if additional bands would support a more dynamic dispatch.

#### *Performance standards*

The options paper outlines that under options three and four, performance standards would be set at the connection point (noting that for option four, performance standards would be based on services rather than technology)<sup>5</sup> as per the current approach. Our previous submission provided support for the proposal for performance standards to be applied to each asset behind the connection point<sup>6</sup>. We suggest this approach should be considered for options three and four as a hybrid system may not provide uniform output to comply with a performance standard set at the connection point when a combination of assets is behind that connection point.

#### *DC coupled systems*

The CEC supports further consideration of how to best integrate DC coupled systems. We agree with the AEMC that DC coupled systems can present operational, development and capital cost efficiencies for new projects. We suggest that DC coupled systems are approached similarly through this rule change and the frameworks that govern them be made more effective, flexible and streamlined to ensure they can be fully utilised across the market.

#### *MSGAs*

The CEC is concerned at the approach for Market Small Generator Aggregators (MSGAs) presented in options three and four as they consider changes that are difficult to assess and support at this point in time. For example, option four would result in the scheduling of these assets, which we do not support as we do not believe the operational impacts of such a change have been fully reviewed and understood.

Presently, MSGAs cannot provide frequency control ancillary services (FCAS). The CEC suggests the MSGA classification should be expanded to allow for these assets to provide FCAS as they are technically capable and would assist in supporting the broader power system. We are also concerned

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<sup>3</sup> CEC, Integrating energy storage systems into the NEM submission, 15 October 2020, page 3, available [https://www.aemc.gov.au/sites/default/files/documents/clean\\_energy\\_council\\_0.pdf](https://www.aemc.gov.au/sites/default/files/documents/clean_energy_council_0.pdf)

<sup>4</sup> AEMC, Options paper- National Electricity Amendment (Integrating Energy Storage Systems into the NEM) Rule 2021, 17 December 2020, page 21, available at <https://www.aemc.gov.au/sites/default/files/2020-12/Integrating%20energy%20storage%20-%20Options%20paper.pdf>

<sup>5</sup> Ibid, page 23

<sup>6</sup> CEC, Integrating energy storage systems into the NEM submission, 15 October 2020, page 5, available [https://www.aemc.gov.au/sites/default/files/documents/clean\\_energy\\_council\\_0.pdf](https://www.aemc.gov.au/sites/default/files/documents/clean_energy_council_0.pdf)

that the MSGA category will become the default aggregation category when it may not be a suitable catch all category for all small storage units. The MSGA category may be appropriate for aggregated units such as community storage, provided they can provide FCAS, but many behind the metre applications will not fit within the MSGA framework.

Integrating distributed energy resources (DER) into frameworks created for utility-scale assets presents many challenges. Given the scope of this rule change primarily focusses on utility-scale storage assets, we suggest it will be difficult for the AEMC to maintain timely implementation of the necessary changes for utility-scale storage while still creating an appropriate framework for integrating smaller storage assets.

### *Implementation*

Options two, three and four represent significant changes to how storage would be treated in the NEM. Such significant changes will likely come with a lengthy implementation timeframe to ensure industry and the market bodies have the time to be prepared for the upcoming changes. While we support ensuring there is enough time for implementation, we suggest the AEMC consider the importance of timely implementation closely.

The clean energy industry has advocated for changes to the treatment of storage in the NEM for some time. AEMO has spent considerable time developing their rule change request and consulted deeply with industry on their proposal. Upon lodgement of the rule change request the AEMC queued it as a pending rule change request for some time. We understand that there have been new market reform developments in this timeframe that have required attention, namely the ESB's 2SM, however this rule change request seeks pressing changes that require immediate attention. The CEC remains supportive of the ESB's work to implement a 2SM and the high-level intent to take steps towards that through this rule change. Our concern is the above noted long-term need combined with the additional four-month delay already applied to this rule change request to consider the broader 2SM relationship. The CEC suggests that the immediate needs that we and many other stakeholders outlined in their previous submissions must take priority over taking material steps towards 2SM within this rule change. However, steps that can be taken towards the 2SM framework that do not delay or materially impact the necessary reforms requested through this rule change should be considered.

Finally, options three and four note the potential transitioning of participants from one category to another as part of the reforms. The CEC does not support the forced migration of participants from one category to another and suggests that this remains voluntary (as per traditional grandfathering arrangements). Forcing this transition may cause significant issues, particularly for assets that construction has begun before the implementation, as it may impact operational flexibility and subsequently its financial performance. We also note that transitioning to new categories as a result of new reforms should be free of charge.

Thank you for the opportunity to comment on this consultation. If you would like to discuss any of the issues raised in this submission, please contact Tom Parkinson, Policy Officer, on (03) 9929 4156 or [tparkinson@cleanenergycouncil.org.au](mailto:tparkinson@cleanenergycouncil.org.au) or myself, as outlined below.

Yours sincerely,



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