Ausgrid Submission

AEMC *Integrating Storage Rule Change* Options Paper

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Australian Energy Market Commission
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Lodged online

Dear Mr Aulbury,

We welcome the opportunity to comment on the Australian Energy Market Commission's (AEMC) *Integrating Energy Storage Systems into the NEM* options paper (Options Paper). We support the ongoing work to integrate flexible resources, particularly batteries, into the energy system.

Ausgrid owns and operates a shared electricity network that powers the homes and businesses of more than 4 million Australians living and working in an area that stretches from the Sydney CBD to the Upper Hunter. We see our grid as a shared, open platform, upon which a new ecosystem of products and services will evolve.

Energy storage systems have the potential to unlock significant benefits for customers and are playing an increasingly important role in the national electricity market (NEM). Innovative storage system use-cases are also emerging. In 2021, Ausgrid is planning to trial three community batteries that will allow customers to save on their electricity bills and derive more value from a rooftop solar investment, without needing to own and maintain a household battery system.

Our trial follows a Feasibility Study from KPMG which concluded that a community-based model for energy storage is set to be economically feasible, in terms of providing net positive benefits, by 2023. KPMG observed:[1]

> *a community battery has the potential to provide a cost-effective energy storage solution for all customers ('society') by addressing local electricity network constraints, as well as a range of broader system level services and benefits (wholesale market arbitrage, FCAS (Frequency Control Ancillary Services), photovoltaic (PV) customer storage-as-a-service, and additional benefits to customers, in the form of avoided capital expenditure for participating customers and benefits to the wider customer base.*

As more energy storage systems seek to connect to the NEM, and innovative service delivery models are developed, it is timely for the AEMC to consult on how the existing regulatory arrangements may

[1] KPMG, Ausgrid Community Battery: Feasibility Study Report, February 2020, p. 4: https://www.ausgrid.com.au/In-your-community/Community-Batteries/Community-battery-feasibility-study

need to be changed. We therefore welcome the AEMC's Options Paper, but have questions or comments about the following:

- the scope of the rule change request and how it overlaps with other regulatory processes;
- the registration options for storage and hybrid facilities; and
- the connection process for network-owned energy storage.

Regulatory overlap should be minimised by targeting incremental changes

The AEMC should focus on incremental improvements to the existing arrangements for energy storage systems that can improve regulatory outcomes while still leaving room to accommodate other, broader reforms currently underway. This will remove duplication in regulatory processes and mitigate the risk of overlapping reviews coming to different findings or inconsistent policy positions.

The rule change request submitted by the Australian Energy Market Operator (AEMO) is significant in scope. It puts forward proposals that intersect with several other regulatory processes, including the Energy Security Board's (ESB) post 2025 work on the 'two-sided market' and the AEMC's *Network planning and access for DER* rule change which is already considering if distributed energy resources (DER) should be charged (and rewarded) for both the import and export of energy through Distribution Use of System (DUOS) charges. These regulatory processes should be allowed to continue in consultation with customers and other stakeholders. We therefore recommend that only incremental changes are made in response to AEMO's rule change proposal.

Any changes to the registration of systems should be flexible and adaptable

The Options Paper notes that the National Electricity Rules (NER) do not define storage technologies and as a consequence there are no registration categories for storage systems. We agree that this is an issue which requires the AEMC's attention. Of the four options raised, we consider the modification of existing categories (option 3) should be pursued as an interim measure with a view to setting a pathway towards creating a new participant category (option 4).

The creation of a new participant category (option 4) is preferable because it takes a technology neutral approach to registration. This is becoming increasingly important, particularly for energy storage systems which can provide a dynamic range of services that are not limited to a single, fixed technology type. For example, batteries installed at the distribution level can perform several services throughout the day ranging from:

- **network services**: distribution networks are installing batteries in order to resolve network constraints, as well as provide voltage control and other services.
- **customer storage services:** batteries can provide customers with greater control over their energy use, as well as reducing costs and their carbon footprint.
- **market services:** batteries are increasingly being used to provide ancillary services such as frequency control ancillary services (FCAS) to help keep the network secure.

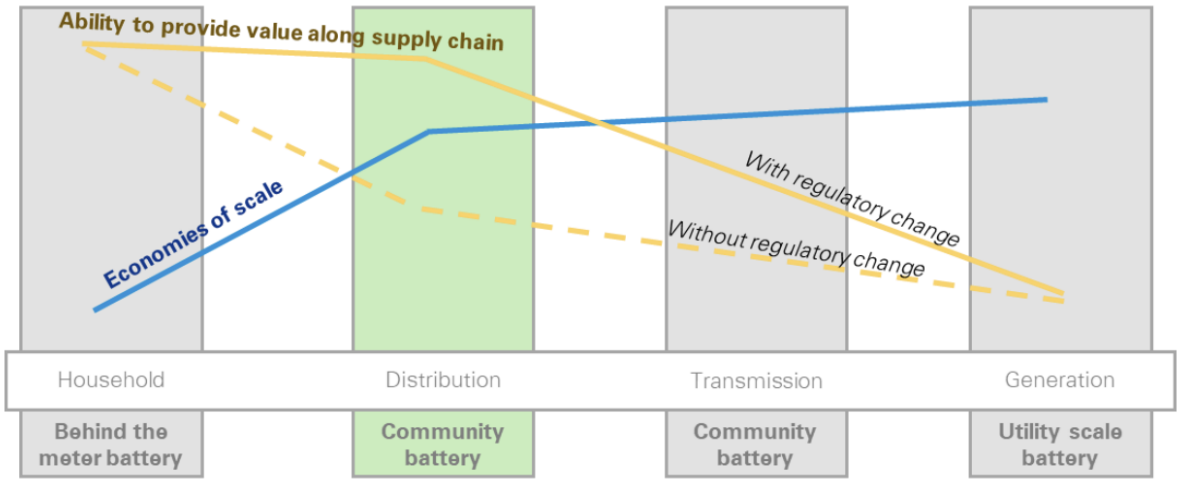
By establishing a new, technology-neutral participant the full range of services that energy storage systems are capable of providing will be captured within the regulatory framework. This shift away from 'asset focused' regulation would also facilitate the move towards a 'trader services' model from which a two-sided market could emerge. A two-sided market underpinned by innovative technologies would benefit customers by reducing the system costs associated with managing peaks and troughs in supply and demand.

To get to this point, however, will require significant technical input to develop universal performance criteria that are not technologically specific. Broad consultation with customers, market participants

and the finalisation of reviews currently underway, such as the ESB's post 2025 work, should be allowed to happen too. We therefore recommend pursuing option 3 in the meantime.

Connection arrangements for network owned storage are likely to work well

Network owned storage can deliver significant benefits for customers. It is a more accessible option compared to individual household batteries that pose a high upfront cost barrier for customers. Community batteries, owned by networks, are also able to leverage greater economies of scale and are uniquely positioned to capture value and benefits for customers right across the electricity supply, as set out in the figure below taken from KPMG's Feasibility Study for community batteries.[2]



Networks are uniquely placed to provide community batteries while maintaining retail competition and building on our existing relationship with local councils and communities. We therefore welcome the submission from AEMO seeking to improve the regulatory framework for network owned storage. At this stage, however, we do not consider there to be a pressing need for changes to the existing connection arrangements for network owned storage, as AEMO's submission suggests may be required.

AEMO's submission observes that, before a storage system joins the grid, the NER requires that a connection agreement is to be negotiated between two separate parties – the connection applicant and the network business. AEMO considers this process to be problematic for network owned storage. This is because the performance standards and system strength assessments that are applied during this process, in AEMO's view, cannot occur when there is no ownership boundary between the network business and the 'connecting' asset. AEMO states:[3]

> *With no actual point of transfer between one person's facilities and another, the NER connection concepts, in theory, simply fail.*

We appreciate AEMO's concern and acknowledge its commitment to ensuring the regulatory framework for network owned storage is fit-for-purpose. However, we do not consider there to be a need for a connection agreement for network owned storage, as the battery system can be treated in

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2 KPMG, Ausgrid Community Battery: Feasibility Study Report, February 2020, p. 18: https://www.ausgrid.com.au/In-your-community/Community-Batteries/Community-battery-feasibility-study

3 AEMO, Submission on Consultation Paper: Integrating Storage into the NEM, 14 October 2020, p. 6.

the same way as other network assets. Where a network connection is required, such as when the battery is to be shared to provide market services, this will always occur in partnership with a registered market participant. To provide AEMO with visibility of the storage device, networks can also share all necessary information with the market operators. Obligations to this effect already exist with respect to AEMO's distributed energy resources (DER) register.

If you have any queries in respect of this submission, please contact Shannon Moffitt on 0468 616 512 or shannon.moffitt@ausgrid.com.au

Yours sincerely

Alex McPherson
Head of Regulation


Thank you!
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Ausgrid