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Options Paper – Integrating Energy Storage Systems into the NEM – ERC0280

Essential Energy welcomes the opportunity to provide a submission to the Australian Energy Market Commission (the AEMC) on its *Integrating Energy Storage Systems into the NEM Options Paper* (the Options Paper). Energy Networks Australia has also made a submission to the options paper, which Essential Energy supports.

Energy storage is set to play an increasingly important role in the operation of the national electricity market (NEM), a role that is forecast to grow strongly in the coming years as the costs of storage decline. At present, the National Electricity Rules do not specifically define energy storage systems, with storage assets typically being registered as both load and generation. For this reason, Essential Energy considers it appropriate to clarify the regulatory treatment of energy storage devices, and where appropriate, progress targeted reforms which deliver outcomes that meet the national electricity objective.

To enable the future grid Essential Energy would encourage the AEMC to closely consider the following areas as part of the options paper:

- On balance we believe option three, the modification of existing categories to accommodate bi-directional flows, offers a simple and efficient solution to make it easier for energy storage systems and hybrid facilities to register and participate in the NEM. Option three also provides the benefit of avoiding the creation of an entirely new bi-directional registration category. Options two and four create new participant categories and subsequent processes for both AEMO and participants, this introduces further regulatory complexity and as such is not supported. Similarly option one (no change) is not supported as it fails to suitably accommodate bi-directional flows in a simple or transparent manner.

- Essential Energy is supportive of the technology agnostic principles of the NEM, whereby wherever possible all generators and load are treated in an equal manner when utilising the network. As such, we do not support proposals to not apply network charges (both transmission or distribution) to energy storage system network users. Where energy storage systems do act as a load on the system, it is appropriate that transmission and distribution charges apply which are reflective of the costs associated with its' consumption of energy and corresponding impact on the network. This is especially true given the increasingly frequent occurrence of reverse power flows from the distribution network to the transmission network primarily due to Distributed Energy Resources (DER) penetration at select times of the day. When network charging amendments are required, arrangements can be dealt with through

existing pricing processes and tariff structure statements that are subject to customer consultation and AER assessment.

- At present the Energy Security Board is developing advice on several key market design initiatives and recommending holistic changes to the NEM, including the introduction of the two-sided market "trader" model. These reforms are in addition to the AEMC's *2019 Wholesale Demand Response Rule Change* and the *2020 DER Integration Updating Regulatory Arrangements Rule Change*. It is also worth noting the AER is currently reviewing the specific ownership and operational restrictions as part of *the Updating the Distribution Ring-Fencing Guideline*, a process which is due to be completed in the later part of this year. These interrelated workstreams will have a direct impact on the treatment of energy storage systems. Wherever possible, we would encourage the strategic alignment of recommendations and workstreams to maximise efficiencies, minimise duplication and also to minimise compliance risks for stakeholders. Again, this aligns with option three (modification of existing arrangements), as opposed to options three and four which create entirely new participant categories and associated processes.

- Essential Energy does not support the proposal for a formal and expanded role for AEMO in determining the relevant network standards and requirements when considering connection agreements for network owned energy storage systems. The existing regulatory arrangements already obligate network businesses to ensure all connecting energy storage devices meet required performance standards which ensure network protections, regardless of the ultimate storage system owner. In addition, AEMO has several existing formal roles and functions in assessing and approving access standards of connection applicants, supplementing the already comprehensive informal cooperation and consultation undertaken with network service providers when proceeding through the connection process. As such, the potential for compliance risks appears low.

- A number of hybrid storage systems exist across the NEM who may have to reclassify their facilities as a result of this rule change. Essential Energy would support the AEMC in providing guidance as to implementation expectations for both new and existing energy storage connections, including any potential grand fathering arrangements. In particular, the impact on existing connection agreements should be considered.

If you have any questions in relation to this submission, please contact Anders Sangkuhl, Regulatory Strategy Manager via anders.sangkuhl@essentialenergy.com.au or via phone 0409 968 326.

Yours sincerely,

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