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AER 2021 – Victorian Network Determination 2021-26, Draft Decision and updated proposals

EnergyAustralia is one of Australia’s largest energy companies with around 2.5 million electricity and gas accounts across eastern Australia. We also own, operate and contract an energy generation portfolio across Australia, including coal, gas, battery storage, demand response, wind and solar assets, with control of over 4,500MW of generation capacity.

This submission provides our views on the AER’s draft decision and includes a response to the Victorian distributors revised tariff proposals that were subsequently published in early December 2020. This submission is limited to our views on to Large Business Tariffs and their application to grid-scale storage. Our response is informed by our experience of operating two grid scale storage assets in the National Electricity Market (NEM); Gannawarra and Ballarat Energy Storage Systems (BESS and GESS), both located in Victoria. Gannawarra is connected to Powercor’s distribution network while Ballarat is transmission-connected.

This submission includes suggestions for improving network tariffs to incentivise efficient use of storage assets, but also highlights the economic cost of current disparities between distribution and transmission connected assets. We have provided our views on the proposed tariff structure and requested clarification on the application of some conditions.

We recognise the impending AEMC determination on broader changes to the rules for storage and bi-directional assets. We thank the AER for seeking to progress tariff reform for storage facilities in the meantime, rather than deferring to the AEMC process which, given the breadth of issues covered and their complexity, could be delayed. Given the volume of storage that is anticipated, it is important to improve location investment signals expediently.

The importance of tariff reform to support the transition of the NEM

Grid-scale storage is expected to play a significant role in the transition of the electricity market; up to 3 GW is expected in Victoria in the next two decades.¹ Its role will include shifting surplus energy to peak demand periods, providing network services and providing fast frequency response services. Despite their increasingly vital role, at this point in time no projects have been delivered without receiving financial support from governments. There are several reasons for this but network tariff changes present one avenue for improving their relative economics. We raise two key areas for change: unexplained locational signals to

¹ AEMO 2020 ISP Final – Central with Updated Demand (DP1) scenario.

preference connection to transmission networks rather than distribution networks, and improving signals for efficient use of network infrastructure.

- *Improving investment location signals*

The current distribution tariff structure creates unexplained incentives for investors to preference transmission-connected projects, creating opportunity costs for customers as efficient distribution-connected projects are avoided.

Grid-storage assets can be connected to either transmission or distribution networks. As highlighted by the AEMO and the AEMC², there is currently a disparity between the network demand tariffs applied to projects in distribution networks and those in transmission networks. This difference disadvantages distribution-connected assets and could create avoidable economic costs as investors will be implicitly encouraged to eschew distribution projects in favour of transmission-connected options.

Customers ultimately pay the price for these decisions. Storage that is co-located with wind or solar brings much needed flexible capacity into the NEM and offers efficiency gains in locational firming and shared connection costs. In addition, there may be areas of the distribution network that offer economic benefits over transmission-connected projects due to lower cost land or the ability to utilise network headroom or transformer capacity. Due to the current structure of demand tariffs these economic benefits may be lost as a large number of distribution-connected solar and wind sites that could be good candidates for co-located storage are unlikely to be developed.

We think the current distribution network tariff arrangements create a genuine barrier for commercial storage, limiting opportunities to network-owned assets only. This will be exacerbated if, as proposed, any generation facilities or batteries owned by DNSPs are exempt from network tariffs. As such, we support the AER's proposed option 4 to exempt all storage assets that are registered as scheduled loads from network tariffs. This would align network charging approaches between transmission and distribution networks and, as outlined by the AER, network augmentation assessments would mirror those in place for other generation facilities.

- *Improving utilisation signals*

Network tariffs that incentivise the most efficient use of both the network and the storage asset will lower energy provision costs for customers. The proposed tariffs improve operational signals but there is an opportunity to refine the approach and improve outcomes. Tariffs for grid-storage should be progressing towards a structure that effectively incentivises the most efficient use of the network, encouraging charging when network congestion is low or other technical constraints allow, and discharging when local load driven congestion or technical constraints require remedy.

The revised tariff proposal for Large Business customers represents an improvement on current arrangements. We support the proposed changes to demand tariffs whereby charges are based on demand between 7am and 7pm on weekdays, rather than current approach calculated over a 24-hour period. [REDACTED]

² AEMC, Integrating energy storage systems into the NEM, rule change request (ERC0280), <https://www.aemc.gov.au/rule-changes/integrating-energy-storage-systems-nem>

[REDACTED]
[REDACTED]
[REDACTED] We also recognise the intent of the 'incentive' tariff to further discourage load during peak periods on the network. Both of these approaches provide time-based signals for storage assets to efficiently utilise spare network capacity.

Changes to further optimise use of both network and storage assets are possible. The proposal for a 12-hour demand tariff window fails to recognise that there could be low demand periods within that window during which it is beneficial to the network for storage to charge. AEMO's 2020 Electricity Statement of Opportunities (ESOO) report signalled that negative demand could occur in Victoria as early as 2024-25.³ Periods of low demand can create problems for system operations. By providing signals to charge at low demand times, storage can mitigate these challenges, delivering benefits to the market through avoided solar curtailment (and subsequent opportunity costs) and other mitigation measures AEMO or networks may need to take to manage system operations at negative levels of demand.

Options to capture these benefits include an inverted 'incentive tariff' or removing disincentives to charge during the day altogether. We suggest there may be merit in a 'positive' incentive tariff that rewards load during prescribed periods of very low demand. The intent of this tariff would be to mitigate the impacts of minimum demand on the system. A less administratively complex approach could be option 4 as presented in the AER's draft decision; that grid storage be exempt from network tariffs if they are registered as scheduled loads⁴ as they have non-firm access. This would allow storage to respond to energy market signals to maximise efficient charging when spot prices are low during the middle of the day.

Tariff exemption conditions require further analysis and justification

EnergyAustralia supports an outcome where grid storage receives a network tariff exemption when it registered as a scheduled load.⁵ However, the proposed conditions associated with tariff exemption would relegate this option, as currently proposed, as an inferior approach.

[REDACTED]
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[REDACTED] There is limited justification for the proposed conditions and we make the following requests for clarification of intent.

- The merits of avoided TUOS payments being revoked is unexplained and appears somewhat punitive and counterintuitive. Avoided TUOS payments recognise that the distributor has received the energy it needed from an embedded generator and as a consequence is not charged by a transmission business for that energy. It provides an incentive for embedded generators to supply the distribution network at peak demand times. By requiring assets with tariff exemptions to forgo these payments the networks are removing a direct financial incentive for storage assets to provide support to the system at peak times. The appears counterintuitive and unproductive in the context of continuous improvement in efficient signal-based tariffs. An asset could contribute to avoided TUOS and still provide a net benefit (as required by the proposed criteria for network tariff exemption). They are not mutually exclusive

³ AEMO, 2020 ESOO, Central Scenario 50%POE operational demand.

⁴ Or any subsequent classification with parallel rights and obligations developed by the AEMC as part of the Integrating Storage rule change.

⁵ As above.

services. Further, the reason the distribution business should receive a financial reward, through lower transmission charges, when embedded generators have provided energy is not explained.

- [REDACTED]
- The requirement for negotiations to only be contemplated where they offer net benefits to the network is a limited lens through which to consider exemptions. Limiting exemptions to circumstances where the asset provides benefit to network fails to acknowledge whether the proposed use of the asset actually creates any cost for the network. Charging assets outside peak periods, but during the proposed 7am to 7pm window, may offer no benefit to the network, but may also present no risk or additional cost to the network, while concurrently providing other benefits to the broader market through the ability to efficiently respond to other market price signals.

It would be more appropriate for a 'do no technical harm' provision to instead be proposed. This would lower the threshold for negotiation and be practically easier to understand and test. It would also provide an opportunity for networks to provide technical information on any technical issues the storage asset causes, that the asset can then address. Alternatively, the definition of net benefit could be expanded to capture broader market benefits.

- The provision for networks to have tariff exemptions for their own assets introduces an inherent advantage based on ownership and raises competition questions. The AER should consider implications in relation to its current assessment of ring-fencing guidelines.⁶ For example, if networks are eligible to access non-network revenue streams for their storage assets, and these assets are exempt from network tariffs, they receive a distinct advantage over commercial assets seeking to provide services to networks.

Clarifications on application of the proposed tariffs

- *Minimum Chargeable Demand* – we seek confirmation that this is a new threshold and that minimum charge is only incurred if the load imports energy during the relevant 12-hour window. In other words, for example, an asset with a 0.5 MVA load on the sub-transmission tariff during the designated window would be charged as if it was 10 MVA, but if the asset does not draw load at any point during the window, it faces no charges. EnergyAustralia would also appreciate more explanation of how these demand thresholds have been arrived at as they appear to disadvantage smaller users.
- *Incentive tariffs* – we seek clarification on how this incentive tariff will be set. Including:

⁶ AER, Updating the Ringfencing Guidelines for Stand-Alone Power Systems and Energy Storage Devices, Issues Paper, November 2020 https://www.aer.gov.au/system/files/AER%20-%20Ring-fencing%20Issues%20Paper%20-%20November%202020_0.pdf

- how locations will be defined (e.g. at feeder level, substation level),
 - the statistical method to be used to identify the relevant time window in each location. (Is it based on historical data (how many years?) or will it incorporate forward estimations of system use?),
 - How frequently suitability of the time window will be reassessed.
- *Eligibility for tariff exemption* we seek clarification that it will be possible for storage assets to request a tariff exemption at any point in time, in other words it is not a limited opportunity at the time of negotiating a connection agreement.

In conclusion, exempting all grid storage from network tariffs - regardless of ownership - if they are registered as scheduled loads as they have non-firm access is a sound outcome that EnergyAustralia would support. If this is not feasible, our view is that network tariffs for storage should seek to incentivise optimal use of both storage and network assets. Stronger signals for charging and discharging based on market conditions or network capability would be beneficial to customers. The proposed tariffs reflect an improvement on the status quo. However, further improvements could be achieved and importantly the proposed conditions on tariff exemptions are unjustified and incongruous with the objectives of optimising efficient use of assets.

If you would like to discuss this submission, please contact me on [REDACTED] or [REDACTED].

Regards

Georgina Snelling
Regulatory Affairs Lead