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Australian Energy Market Commission
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Reference SEA0002: Integration of Storage: Regulatory Implications – Draft Report

Thank you for the opportunity to respond to the Integration of Storage: Regulatory Implications – Draft Report (the Paper).

Simply Energy is a leading energy retailer servicing Victoria, South Australia, New South Wales and Queensland. Simply Energy is a member of the Energy Retailer's Association of Australia (ERAA).

The Paper sets out the Australian Energy Market Commission's (AEMC) analysis and preliminary findings with respect to the extent storage is covered by current regulations, and how regulations may need to change to provide better outcomes with respect to storage.

While the Paper states that current regulations can deal effectively with many of the issues raised by storage, we are concerned that it allows an increase in the scope of regulated monopoly activities into an area that does not exhibit natural monopoly characteristics. This is inconsistent with the framework of energy regulation in Australia, which is built on the understanding that competitive markets give the best customer outcomes, and that regulation is second-best.

We urge the AEMC to look instead at maximising the scope of competitive energy markets, and restrict the activity of regulated monopoly businesses to natural monopolies.

This submission comprises a letter that addresses key issues, and an attachment that responds to the AEMC's preliminary findings.

Storage is not a natural monopoly, it is contestable

Simply Energy strongly supports the AEMC's view that energy storage is not a natural monopoly. "The AEMC is therefore of the view that for the purposes of network regulation, storage should be considered a contestable service." (The Paper, page ii).

Network ownership of storage threatens development of the market and competitive outcomes

Much of the discussion in the Paper seems to assume that regulated networks will own energy storage, and as a result focuses on how the regulatory framework needs to develop to deal with potential market failures that follow from regulated networks owning storage assets.

Simply Energy considers that the AEMC needs to specifically consider whether regulated networks should own storage assets. These assets do not exhibit natural monopoly characteristics and a competitive market for their services should be allowed to develop without the threat of disruption by regulated network businesses.

Network-scale storage has no more natural monopoly characteristics than peaking generation located close to loads. In both cases energy is provided at times of high prices, and network benefits are obtained because

additional network capacity to bring the energy from distant sources is not needed. If regulated networks are allowed to own storage then this is analogous to allowing them to own generation. Neither are in the interests of consumers because they unnecessarily transfer the investment risk from the project investor to the consumer.

Also, if regulated networks are able to invest in storage assets using regulated revenue then this will crowd out any similar projects from competitive providers. This is because the regulated network can invest in the certainty that it will receive a return on its investment, whereas a competitive provider faces uncertain returns.

The threat of crowding out even exists when the regulated business chooses not to provide competitive services using its regulated assets. Potential competitors know that it can do so at any time and undercut their investment, hence they do not invest. The AEMC should ensure that this situation cannot evolve.

Similar to the prohibition on regulated networks owning remotely-read meters, a prohibition on regulated network ownership of energy storage is appropriate, to allow the competitive market for storage to evolve. This will be in the long-term interests of consumers, as it will maximise the scope of competitive outcomes, rather than extending regulated outcomes, which the regulatory framework sees as second-best.

Further, technology neutrality should not be used to justify extending the reach of regulated monopoly networks into areas such as energy storage that are not natural monopolies, solely because the areas fall within the NER definition of a network.

On page 30 the Paper refers to the AER's consideration of the NER definition of a distribution system. To paraphrase the NER, a distribution system comprises a distribution network and connection assets (storage is not a connection asset). The NER defines a network as 'The apparatus, equipment, plant and buildings used to convey, and control the conveyance of, electricity to customers (whether wholesale or retail) excluding any connection assets'.

This is a very broad definition, and regulated network businesses have argued that remotely-read meters should fall within it as part of the control of the conveyance of electricity. Despite this, remotely-read meters have been excluded from regulated networks because they do not have natural monopoly characteristics. Storage should also be excluded for the same reason, despite its potential to fall within the NER definition of a network.

Also, the Paper considers that the use of network-owned storage to sell electricity into the wholesale market is analogous to the use of utility poles to host a broadband network. (the Paper, page 24). This is a poor analogy because energy and broadband are separate industries, whereas electricity distribution and the wholesale market are components of the same industry. The risk that regulated networks will privilege their related parties over unrelated wholesale market participants are much greater than the risk they will privilege related party broadband suppliers over unrelated broad band suppliers. This is because the differences between the energy and telecommunications industries means that regulated networks tend not to have related party broadband suppliers.

Furthermore, the Italy case study conclusion on page 39 of the Paper, that regulatory authorities have decided that network-owned and operated storage does not go against unbundling requirements, should be treated with caution due to the high-levels of vertical integration shown in the operations of A2A, Edison S.p.A., and Enel, which have both generation and network arms.

Existence of split benefits does not justify network ownership

On page 56 the Paper considers a case study from Oncor in Texas, which attempts to solve a ‘split-benefits problem’ relating to energy storage. Like many pieces of infrastructure, energy storage can provide multiple benefits¹. The case study suggests that a solution to the problem identified by the network business is for the network business to own the storage infrastructure, and auction its wholesale market benefits to market participants. The Paper considers that this ensures that the network business is not participating in the wholesale market.

While this model appears to avoid the problem of a regulated network business distorting the wholesale market, it does not consider whether other ownership models may provide better outcomes. As in the Victorian smart meter roll out, a ‘split benefits problem’ is used to justify monopoly ownership of an asset that is accepted to not have natural monopoly characteristics.

Additionally, it is not appropriate to include wider societal benefits (as included in the Oncor case study) in the assessment of whether storage is selected instead of other methods of providing network services, unless these benefits are specified in the service definitions that networks must meet. Otherwise the assessment will privilege one technology over another, which the regulatory framework intends to avoid.

Open and transparent arrangements are required when network businesses consider storage solutions

An alternative to allowing network businesses to own storage, and requiring them to auction off the wholesale market benefits, is to prohibit them from owning storage as a regulated network asset (as they are prohibited from owning remotely-read meters as a regulated network asset), and require them to openly and transparently seek storage services from the competitive market when they are needed to meet market needs. Competitive market providers would have strong incentives to capture all the benefits (wholesale market and network) in order to win the contract to supply the storage services to the network. The one who can maximise the value of the wholesale market benefits is the one who is best placed to offer the network benefits at the lowest price.

Open and transparent arrangements are required otherwise network businesses will have an incentive to deal with related parties on a non-arms length basis, to the detriment of consumers. Ring fencing is a necessary component of a regulatory framework that allows network businesses to transact with related parties, but it is not sufficient to give good consumer outcomes. Open and transparent arrangements are also required so that regulators and consumers can identify when network businesses obtain services from related parties and why they were selected instead of unrelated suppliers.

Furthermore, it is very difficult to assign value to each of the benefits that storage can provide. For example, it can defer network augmentations for voltage control due to high levels of rooftop PV generation, provide additional delivery capacity at peak times, and the ability to arbitrage between wholesale prices at different times. Open and transparent arrangements are the best way of assigning value to these benefits.

The Paper shows an over-reliance on ring-fencing regimes

The Paper considers that ring-fencing addresses many of the issues raised by network business ownership of storage. On page 66 the Paper states that ‘The AEMC is broadly confident in the ability of ring-fencing to address the first and third of these situations.’ These situations referred to are cross-subsidising a competitive service from regulated activities and sharing commercially sensitive information.

¹ Synchronous generation, for example, provides frequency control as well as energy.

However, a ring-fencing regime is only the starting point for a regulatory framework that relies on ring fencing. Accounting standards require that corporate accounts reflect financial substance rather than legal form. Similarly, ring-fencing cannot rely on legal separation, but must ensure the 'financial substance' that regulated businesses do not privilege their related parties over unrelated parties.

As a result, it is insufficient to craft ring-fencing rules and think that the job has been done. Regulated businesses tend to operate to the letter of the regulations, and will do everything they can to benefit their owners as long as they operate within them. This has been considered an appropriate part of the regulatory regime – if you know they operate like this then you know how to incentivise them to deliver the consumer outcomes sought by regulators and policy makers.

However, what this also means is that regulated businesses will constantly test the limits of the regulations that they operate under. Given the potential gains to be made from related-party transactions, ring-fencing requirements are likely to be severely tested. The AER will need to have a qualified and experienced team that monitors network businesses' transactions to ensure that their financial substance is consistent with the customer outcomes intended to be achieved by the ring-fencing regulations. If not, then a rule change will be needed to realign the rules with the long term interests of consumers.

While related party transaction risk and ring-fencing are not new issues in themselves, the characteristics of battery-based storage mean that their importance has greatly increased.

The Paper refers to pumped storage hydroelectricity as an example of how storage is already dealt with successfully by the NER. The current rules deal successfully with pumped storage hydroelectricity because these are large-scale projects that are only feasible in locations with the right terrain. Furthermore, they are registered as generators in a competitive market. As a result, regulated networks have not invested in pumped storage hydroelectricity infrastructure and therefore the risks of related party transactions and the need for ring-fencing in relation to pumped storage hydroelectricity investments by regulated networks are very low.

The new battery-based storage is very different. It is made up of small, scalable components rather than large individual projects, and it can be deployed anywhere. This gives regulated networks a credible mechanism that they never had before to invest in infrastructure with regulated revenue that they can then use to provide wholesale market benefits to related parties. Pumped-storage hydroelectricity never gave them this and so regulations that successfully dealt with pumped-storage hydroelectricity are insufficient to deal with the battery-based storage available today.

Nevertheless, if ring-fencing becomes the cornerstone of how storage is integrated into the NEM, then a clear and straightforward framework, like that applying to TNSPs, is required. As described on page 50 of the Paper, to limit their market power, TNSPs are not allowed to carry on related businesses that generate more than 5% of its revenue. A similar concept, but with a limit that is appropriate for them, should be applied to DNSPs. Clear accounting rules and penalties for breaching these requirements are also needed if ring-fencing is going to achieve any of its intended benefits.

Network businesses' preference for ownership and control should not dictate regulatory settings

On page 64 the Paper acknowledges that network businesses have a preference for ownership and control compared to contracting with non-related parties to obtain services. It provides the example of when 'parties are unable to negotiate a network support agreement that provides sufficient confidence that a network business would rely on distributed storage in the place of network augmentation. The network may then prefer to directly control the storage itself, if that is the cheaper alternative to augmentation.'

This preference does not justify a regulatory framework that allows network businesses to invest in assets that provide services that could be provided at lower cost by third-party businesses.

The AER needs clearer rules to ensure that competitive markets are able to flourish

On page 31 and page 36 the Paper relates the Australian Energy Regulator's (AER) framework and approach decision in relation to United Energy, which expanded the scope of the regulated distribution network into the homes of consumers and behind their meters. The AER decided that regulated revenue could be received from all consumers to pay for the network business installing storage behind the meter at some customers' premises. The AER considered that this was a form of embedded network, owned by the distribution business.

This is an example of the AER making a policy decision with implications across the energy supply chain, which should be decided instead by the COAG Energy Council or the AEMC. The AER does not have the role or expertise to make these wide-ranging policy decisions.

As a result, Simply Energy considers that the AEMC needs to review the regulations that the AER applies to ensure that the AER cannot decide on policy, but is given clear direction by the COAG EC and AEMC.

Specifically, given its role in approving network business revenue proposals, the AER needs to be given clear rules about what network businesses can and cannot do (what the boundaries are to the definition of a 'distribution system'), and therefore what they should and should not receive regulated revenue for.

Page 31 of the Paper also states that the AER needs to consider whether allowing a network business to finance a storage business from regulated revenue was likely to impede development of a competitive storage market. This is a critical question that cannot be left to the AER to decide on a piecemeal basis. Without a clear review and decision by the AEMC or policy makers in relation to this question, there is the real risk that the competitive storage market will be impeded by network investments one project at a time. Each project is small enough that the AER does not consider it to be a threat to competition, but over time they add up to stifle any emerging competitive market.

Regulations should be capable of dealing with anticipated potential future changes

Some network businesses have raised the prospect of using distributed generation and storage technology to take some of their network fringe areas partially or fully off the interconnected National Electricity Market (NEM) grid. The issues this raises are analogous to those currently raised by embedded networks.

The AER has recently consulted on changes to its exempt selling guideline that relate to embedded network retrofits. The AER has attempted to trade-off the access of embedded network customers to competitive retail offers against the perceived savings these customers can make by accessing the embedded network owner's bulk purchasing power for energy and bulk-priced network connection.

The AER considers that if all affected customers consent to the creation of an embedded network retrofit, then it can proceed with minimal regulatory oversight.

Embedded networks owned by exempted parties and distributor-owned micro-grids have the same fundamental characteristic – for practical purposes they replace the customer's access to a range of competitive retail offers with prices charged by a sole (monopoly) provider. There is an information asymmetry between the embedded network proponent and the customer, in terms of the future prices that the customer will face. For example, customers may consent to an embedded network arrangement today, on the basis that the embedded network's prices are lower than the offers currently available in the competitive

market, only to find in two years (for example) that the competitive market now offers lower prices than the embedded network, but the customer has no practical way of accessing them.

The AER acknowledges the problem of ensuring that embedded network arrangements are in the long-term interests of customers, by prohibiting embedded networks charging small customers more than the relevant retail standing offer tariff.

This is an example of retail price regulation being introduced because monopoly arrangements have been allowed to replace competitive market arrangements. This is despite the basis of regulation in the National Electricity Market (NEM) being the shared understanding that competitive markets are in the long-term interests of consumers, and that price regulation is a second-best.

With this in mind, Simply Energy is concerned that regulation is developing in a direction that favours the creation of retail monopolies and the requirement for price regulation, at the expense of competitive markets. We do not consider that this is in the long-term interests of consumers, and if it continues it will create new consumer challenges for policy makers and regulators to respond to in the future, similar to the challenges energy ombudsman services are faced with when dealing with consumer problems relating to photovoltaic systems. For example, how will ombudsman services deal with complaints from embedded network customers who find that they are unable practically to access competitive market offers that significantly undercut the prices charged by the embedded network?

Similarly, how will regulators and ombudsman services deal with consumers in a distributor-owned micro-grid or fringe of grid area who are unable to access competitive market retail offers that are available to customers in the main grid area?

Simply Energy considers that the AEMC needs to look beyond the immediate issue of how to integrate storage into the current regulatory framework, and develop a plan that shows how competitive markets and monopoly arrangements will contribute to future energy supply. This plan can then be evaluated and consulted on to determine whether it meets the long term needs of energy consumers.

This is a critical plan as otherwise it appears that monopoly supply arrangements are being favoured over competitive market outcomes, to the long-term detriment of energy consumers.

If you have any questions concerning this submission, please contact James Barton, Regulatory Policy Manager on (03) 8807 1171.

Yours sincerely

David Murphy
General Manager Commercial

Attachment Comments in response to the AEMC's preliminary findings

End users and aggregators using storage

- Micro-embedded generation NER connection process.

Connection processes should not act as inappropriate barriers to entry. Making it as easy as possible for potential connection applicants to understand the requirements when they are developing projects will minimise the costs of developing projects, increasing the scope of their positive benefits. To achieve this, distribution businesses should be required to have a basic storage connection offer.

- Distribution technical requirements for behind the meter storage.

Simply Energy's starting point is that network technical requirements should be focused on safety and compatibility, with the financial impact on the network signalled through tariffs and connection charges. Standard technical requirements that are common across all networks will facilitate development of a nationwide behind the meter storage market. Distribution businesses are able to signal the financial impacts that are specific to their network using tariffs and charges.

- Investigation of small generation aggregator registration applicability to behind the meter storage.

Simply Energy supports the investigation of whether the small generation aggregator registration is appropriate for behind the meter storage. As with rooftop PV, customers who do not own these assets are affected by the decisions of those who do. The investigation should ensure that cross-subsidies from customers without storage, to customers with storage, are not introduced.

- Small generation aggregators offering frequency control ancillary services (FCAS) into the wholesale market.

Simply Energy supports competitive markets wherever possible, as they generally maximise the long-term benefits for consumers. Additional potential sources of FCAS will tend to benefit consumers, especially as the need for FCAS is expected to increase as the share of energy generated by intermittent renewable energy sources increases. At the same time, different types of FCAS need to be correctly valued, to ensure that incentives for lower quality FCAS are not inadvertently created. Specifically, only scheduled market generators can offer market ancillary services. This requirement needs to be maintained, otherwise the market ancillary services market will be distorted by the operation of non-dispatched services.

Network businesses integrating storage

- Service classification.

Simply Energy supports the AEMC's preliminary view that the provision of behind the meter storage is contestable and as a result networks cannot invest in it using regulated revenue. If they require its services then they must obtain them by contract.

- Cost recovery.

The Paper states that prohibitions on networks owning storage or requirements that they only competitively tender for storage on their networks are not recommended. The reason provided is that the

level of activity by retailers and direct sellers makes it unlikely that network ownership of storage will prevent development of a competitive market for storage devices.

Simply Energy does not support this finding and does not consider that the reason provided supports the conclusion. Network-level storage is as inherently contestable as behind the meter storage, and as inherently contestable as controllable distributed generation, which can provide the same benefits. The ability of networks to own distributed generation has limited the development of the market for controllable distributed generation: the impact on the larger-scale storage market would be expected to be the same.

Additionally, the Paper's recommendation seems at odds with the statement on page 64 that 'network-controlled storage has the potential to act as a barrier to the other two models.' The other two models are consumer-controlled and retailer-controlled storage.

- Ring fencing.

Page 59 of the paper states 'Strong enforcement and compliance obligations will also be required to give the market confidence that a level playing field is being maintained'. While this acknowledges the key challenges of an approach based on ring-fencing, Simply Energy is concerned that the paper underestimates the difficulty of ensuring that a level playing field is achieved in practice as well as in legal form. Also, we consider that the AEMC needs to explicitly evaluate the potential costs of enforcement and compliance and determine that it is less than the additional benefits of a ring-fencing approach compared with a prohibition on network-owned storage.

- Annual planning process.

Simply energy considers that the distribution annual planning process should evolve to ensure that competitive providers of solutions to address network constraints have sufficient lead time to develop and deploy solutions.

Ownership and control

- Control should be based on market-based price signals.

Simply Energy strongly supports the statements on page 65 of the Paper that 'The NEM's current framework is built on the idea that market-based outcomes tend to be the most efficient. Control of storage devices should therefore, in all but a narrow band of circumstances related to system security and safety, be based on market-based price signals.' We consider that the AEMC's findings can be improved by applying the support for market-based outcomes throughout the Paper, which lead the AEMC to exclude regulated network ownership of storage.

- AEMO investigation of system operation impacts of distributed energy devices.

Simply Energy agrees that an independent review of the potential impact on system operations of a large number of distributed energy devices is required. This review is needed to inform policy makers to ensure that networks are prevented from using unsupported claims about system operational impacts when considering connection requirements. The AEMC should consider other sources of independent advice as well as AEMO.

- Network businesses must compete on a level playing field.

Simply Energy strongly supports the conclusion on page 69 of the Paper that 'Storage is a contestable service and participation of network businesses in this market must be done on a level playing field with other market participants. The market-led installation of storage is most likely to lead to efficient outcomes.'

- Networks can invest in storage so long as it does not significantly displace competitive energy services.

Simply Energy considers that regulated networks should not own storage, because it has no natural monopoly characteristics. Allowing ownership that is considered to 'not significantly displace competitive energy services' is insufficient to protect the development of a competitive market. If the AEMC confirms its preliminary finding, then it needs to provide a clear, transparent, and repeatable test for the AER to apply when deciding whether any potential investment would significantly displace competitive energy services.

- Energy trading or competitive service provision must be strongly separated from regulated activities.

Simply Energy considers that regulated networks should not own storage, because it has no natural monopoly characteristics. However, if regulated networks are allowed to own storage then energy trading and other competitive rights must be offered to the market in an open and transparent manner that does not reduce competitiveness in a market. For example, it would not be appropriate for a generator with a high degree of market power to work with a regulated network to obtain the energy trading rights in a network storage project, if those rights would increase the generator's market power.

- Network businesses should not own or directly control behind the meter storage.

Simply Energy strongly supports this conclusion, which reflects that energy storage does not have natural monopoly characteristics.

Storage at the wholesale electricity level

- No need for a new category of registered participant.

Simply Energy supports the preliminary finding that the case has not been made for creation of a new registered participant category for energy storage operators. Energy storage will at times supply energy into the wholesale market as do generators, and will at other times take energy from the wholesale market, as do market customers. In the first instance it is reasonable to see whether the existing categories are suitable for the new activity, rather than rushing to create a new category.

- It is unclear how obligations and requirements for different categories of registered participant apply to storage operators.

Simply Energy agrees that more work needs to be done at the detailed level of technical standards, thresholds, fees, prudential requirements, etc, if storage operator registration is formalised by registration in multiple categories. We consider that the AEMC should leave open the possibility of creating a new category for storage operators, if this would give superior outcomes to requiring registration in multiple categories.