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Dear Commissioners

AEMC Discussion Paper – Integration of Energy Storage Regulatory Implications

1. Introduction

EnergyAustralia welcomes the opportunity to comment on the Australian Energy Market Commission's (the Commission) Discussion Paper on the regulatory implications of the integration of energy storage. We are one of Australia's largest energy companies, providing electricity and gas to over 2.5 million household and business customers in NSW, Victoria, Queensland, South Australia and the Australian Capital Territory. We also own and operate a multi-billion dollar portfolio of energy generation and storage facilities across Australia, including coal, gas and wind assets with control of over 4,500MW of generation in the National Electricity Market.

The Discussion Paper is timely and comprehensive, identifying important issues that need to be addressed as storage becomes an increasingly cost-effective mechanism for satisfying energy needs. We are pleased that the Commission is taking a broad view by releasing this paper at a time that coincides with various complementary reform initiatives. A notable example is network tariff reform, which is an important initiative that will send appropriate signals for network utilisation and encourage efficient investment in new technologies.

EnergyAustralia supports a guiding principle of competitive neutrality across the entire energy sector; that is, regulation should avoid conferring an advantage on specific technologies or business models. This will encourage consumption and investment that reflects the efficient cost of generation and transportation, and realise the full range of benefits that storage technology offers. We are pleased that the Discussion Paper suggests the Commission holds a similar view, particularly in its discussion of the regulation of network services.

The remainder of this submission focuses on those areas of the broader regulatory framework that we view as particular priorities.

2. Consumer protections

The focus of the Discussion Paper is the wholesale market and the oversight of network investment. EnergyAustralia also views the regulatory framework for the sale as energy as a significant determinant of the efficiency of investment in storage technology and as a result, outcomes in the retail energy market. This is because regulation can create differences in the cost structure and commercial flexibility of different retail market participants, conferring an advantage on some that can undermine effective competition.

Section 2.2 of the Discussion Paper includes analysis of the retail authorisation framework so we take this opportunity to reiterate some of the key points we made in respective submissions to the COAG Energy Council (in its review of new products and services) and the AER (in its review of the regulation of 'innovative energy sellers').

- While regulators are seeking to adopt a proportionate regulatory response to the emergence of new business models based on the size of participants, this will potentially create significant differences in the regulatory obligations of incumbent businesses and those of new market entrants. This will also lead to differences in cost structures between competing market participants where the objective should be a level playing field. For example, the current regulatory framework limits retailers' commercial flexibility to recover costs or manage risk – particularly in areas such as billing and disconnections, which have very detailed requirements with regard to timing and content.

- Maintaining an appropriate level of customer protections, irrespective of the mechanism through which customers obtain energy, is important. The following minimum consumer protections should apply to the sale of energy, irrespective of how it is sold:

    - Clarity of terms and conditions – energy sellers should be required to provide a clear statement of the terms and conditions of their commercial arrangement with customers (including pricing, effective interest rates and repayment terms) and to obtain explicit informed consent to offer or vary arrangements.

    - Privacy obligations, noting that a small business with an annual turnover of $3 million or less is a small business operator and so not covered by the Privacy Act under the current Australian Privacy Principles.

    - Specific obligations to manage hardship and the appropriate handling of debt in line with energy retailers' current obligations.

    - Limitations on the ability of energy sellers to recover unbilled amounts beyond a prescribed timeframe (i.e. restrictions on backbilling).

    - Prohibitions on disconnections, including appropriate arrangements for life support customers and obligations to follow certain procedures – such as a positive obligation to ensure there is continuity of supply – prior to disconnecting the service.

    - Access to alternative dispute resolution mechanisms, such as Ombudsman schemes and the subsequent need to ensure that complaints are registered against the appropriate entity (i.e. complaints against an 'innovative' seller

should not be recorded as complaints against the authorised retailer).

    - Maintenance of records and obligations to provide customers and authorised third parties with access to consumption data (i.e. to mirror the recent Commission decision to facilitate customer access to data).

- Formal reporting requirements should be applied to new service and product providers to assist policy makers and regulators understand changing market dynamics and the scale of new activities. This would facilitate the ongoing assessment of their significance and the extent of effective competition in retail markets.

- The Commission should expand its definition of the market (in its annual reviews of retail competition, for example) to include alternative sellers and other forms of retail offerings. The limited definition used to date is likely to reflect the lack of reliable information about the scale and form of alternative sellers and will become an increasingly significant analytical gap in the future.

We have previously stated that the outcome of the AER's review of 'innovative energy sellers' from earlier this year has the potential to discriminate in favour of particular technologies and business models. Therefore, we continue to await both its outcome and that of the COAG Energy Council's review of new products and services with keen interest.

The AER's approach to the regulation of the sale of energy will influence the incentive structure of different business models. In the context of storage, this includes the volume of electricity that aggregators might access and offer back into the wholesale market, the volume available to networks in the provision of network services, and the network capacity required to manage the two-way flow of energy. We favour a guiding principle of competitive neutrality across the entire sector as this will encourage efficient consumption and investment decisions, rather than implicitly subsidising some technologies or business models.

3. Parallels with the competition in metering review

The Discussion Paper rightly draws parallels with the Commission's process to promote competition in the provision of metering services. In particular, EnergyAustralia and other retailers have consistently argued for precise definitions and the separation of monopoly network services and potentially contestable services. As such, the Commission's Final Determination and approach to promoting effective competition in metering services – in areas such as the clear distinction between monopoly and competitive services, and the need for effective ring-fencing, for example – can provide a template for the regulation of storage.

An example of the importance of precise definitions in the metering content is the concept of 'network devices'. The Commission's proposed definition is wide ranging and these devices are a mechanism through which distributors can provide or on-sell services to customers, even if it is incidental to the provision of network services supporting the safe, secure and reliable operation of the network. We argued that these services should be provided by parties operating under competitive arrangements.

Similarly, the Energy Retailers Association of Australia (ERAA) argued in its submission that the allowance of 'incidental' services to the provision of network services that support the safe, secure and reliable operation of the network will interfere with competition and the competitive market. It supported the position taken by the Commission in the Additional Consultation Paper to ensure that the National Electricity Rules should prohibit network service providers

from using network devices to provide or on-sell services to third parties. The ERAA recommended application of a civil penalty provision to the revised rule to ensure no competitive advance is abused by a distribution business.

Recognition of the shifting boundaries between what were previously considered monopoly services but are now competitive due to technological development is relevant across all elements of the energy supply chain. This is considered in more detail in the following sections.

4. Network connections and control

EnergyAustralia welcomes the Commission's focus on the process for connecting storage systems to distribution networks and the potential for technical requirements to act as a barrier to entry, irrespective of the need to maintain safe and reliable network operations. The Commission also notes that distribution networks must publish information on their websites relating to the specifics of connecting to their individual networks. In our experience (with the installation of solar facilities, for example), there are notable differences between networks, not just in terms of their requirements but also their approval processes, including timeframes. This creates uncertainty, adds to overall connection costs and / or acts to discourage connections.

Therefore, we agree with the Commission's observation that the standardisation of technical requirements for the connection of storage capability to distribution networks will simplify the connection processes. Standardisation should also extend to the assessment and approval process in order to reduce the administrative burden of connections. An effort should also be made to ensure that the process of connection is streamlined, cost effective for the customer and carried out in a timely manner.

The Discussion Paper also raises the issue of control of storage devices, identifying three possible models (consumer-controlled, retailer-controlled and network-controlled). As the Commission notes, the optimal model is that which is best able to capture system-wide benefits. EnergyAustralia agrees with the AER's view, put forward in its submission to the Commission's Demand Management Incentive Scheme (DMIS) rule determination that parties other than distributors are better placed to derive the full range of additional benefits that storage can enable.

In particular, we agree that while distributors can employ load control devices to manage network issues, retailers can also provide such devices to procure load control from customers to manage both network and wholesale market issues. Retailers are best placed to offer control solutions to customers that complement their broader service offerings, and generate benefits for networks (and for which they are prepared to pay) and across the entire supply chain. The retailer controlled model could be supported by a regulatory obligation for retailers to liaise with networks as they develop storage service offerings. We expect the respective commercial incentives of all parties will be sufficient to realise the full suite of market benefits through negotiated contracts.

5. Classification of network services

The Commission notes that batteries can be used to manage the provision of network services in some instances, improving its performance and potentially removing the need for system augmentation. We agree with the Commission's concerns about the current uncertainty in the classification of storage as a distribution service and the subsequent need for clarity. We also note the discretion available to the AER, which can further contribute to uncertainty for

incumbent and prospective market participants as they consider the environment in which they might intend to invest. Therefore, we recommend the AER develop and then adhere to definitive guidelines for the classification of services.

We acknowledge that this is challenging in an environment of rapid technological change. The emergence of cost effective storage challenges the traditional definition of network boundaries, creating challenges for economic regulators in their classifications and in the assessment of network expenditure proposals. There is no easy solution for the AER, who must assess network expenditure proposals and identify the most economically efficient solution out of a number of potential solutions that may differ significantly.

It is important that the National Energy Law and National Energy Rules do not distort the revenue determination process in favour of particular network solutions. As the Commission notes, this can occur in a number of ways, including the ability to incorporate investment in a regulated asset base, and the certainty (and magnitude) of rates of return on more conventional network augmentation solutions. These challenges highlight the need to incorporate adequate stakeholder consultation in network planning processes and regulatory investment tests for transmission and distribution as a mechanism for addressing the commercial incentives of networks. As mentioned above, measures to promote competition in metering and storage services are complemented by other initiatives, such as the requirement for networks to implement more cost reflective tariffs and the decoupling of volumes and network profits.

EnergyAustralia recommends that distribution networks should be required to publish regular information on network constraints and network planning strategies to enable third parties to consider non network solutions. An example of a very useful tool that serves a similar purpose – and which consolidates important data from a diverse range of sources – is the Australian Renewable Energy Mapping Infrastructure (AREMI) project, which is being developed by National ICT Australia (NICTA) with funding from the Australian Renewable Energy Agency to share mapping data and information on emerging network constraints.[1]

Finally, there is merit in reviewing elements of the regulatory investment test for distribution to determine whether it remains valid as the cost of alternative technologies is falling. We recommend review of the $5 million materiality threshold and also refer to the AER's suggestion in its submission to the Commission on demand management incentive scheme rule changes that it should be extended to also capture network replacements.

6. Ring-fencing

We agree with the Commission's concerns about the problems with respect to competitive neutrality in the provision of storage, namely that:

- Networks could cross subsidise a competitive service from its regulated activities, which may impede competition in the competitive market.

- In the course of performing its regulated activities, networks could acquire commercially sensitive information that may provide it with an advantage in a competitive market, with metering data or load profile data as examples.

[1] Further information is available at http://www.uts.edu.au/research-and-teaching/our-research/institute-sustainable-futures/our-research/energy-and-climate-1.

- Networks could restrict competition in a competitive market by restricting access to infrastructure or providing access on less favourable terms than to its affiliate.

The Commission states that it is 'broadly confident' in the ability of ring-fencing to address the first and second issue, noting that the AER has discretion as to the type and strength of separation it would require between regulated and non-regulated activities. However, it notes that the third situation is more problematic and ring-fencing must be 'sufficiently strong'; it cites the structural separation between generation and retail, and network services that was the foundation of the current National Electricity Market, as a clear parallel.

As we noted in our submission to the Commission's DMIS rule determination, there are inherent risks in maintaining competitive neutrality a party is not just competing to provide a service but where they (or a closely related partner) is also the procurer of a service and / or holds important information. The Commission itself notes that transmission businesses should not control generation assets as they would have the ability and incentive to control the network in a way that discriminates in favour of its downstream generation businesses and / or against competitors; therefore, prohibitions are necessary.

The AER's proposed review of ring-fencing arrangements is welcome and must be sufficiently broad to capture storage and metering as similar issues arise. We also recommend the implementation of revised arrangements as soon as possible to facilitate the competitive provision of storage (and metering) services, rather than allowing some market participants to take advantage of the limitations of existing arrangements.

EnergyAustralia is less optimistic than the Commission about the effectiveness of ring-fencing in practice; it is challenging to create a ring-fencing framework that remains suitable over time and as an industry evolves in line with technological change – as the currently deficiencies in existing guidelines demonstrate.

Moreover, ring-fencing is only effective to the extent that rules are clear, that penalties are adequate and that regulators are effective in monitoring and enforcement. This may be beyond current capabilities or manageable with reasonable budgets. Once again, the same issues arise in the context of metering services and we noted above that the ERAA argued for a strengthening of penalty provisions with respect to the on-selling of services via network devices in its submissions to the Commission's rule change process to promote competition in metering.

Therefore, the Commission should ensure the AER reviews the effectiveness of different forms of ring-fencing arrangements (which can include legal separation, independent directors, non-discriminatory access provisions) and give particular consideration to the following:

- explicit prohibitions on networks providing contestable services;

- obligations on networks to provide unambiguous legal undertakings or guarantees of equivalence; and

- obligations for distribution businesses to evaluate and tender for non-network solutions for new investment proposals (for augmentation and replacement). A competitive tender process will identify the full value of any investment activity and identify the best way to deliver that to consumers.

A useful reference is the Organisation for Economic Co-operation and Development's report on experiences with structural separation, which analyses the application of various forms of ring-fencing across numerous industries, including the energy sector.[2]

7. Wholesale market participation

The Discussion Paper notes that storage technology will also enhance the operation of the wholesale market. As an example, the displacement of traditional thermal generation by intermittent renewable generation in some parts of the NEM will increase the wholesale market value of storage.

However, it is important that AEMO has sufficient oversight in order to operate the wholesale market in an orderly manner, to develop accurate forecasts necessary for the efficient operation of the NEM over the longer term, and to effectively undertake its planning functions. If storage aggregators were to control exports to the grid of a total greater than 30MW,[3] or there were a large total of storage exports available from small users, then this would be of a scale that could have significant wholesale market impacts.

Therefore, we recommend that AEMO review its generator classifications and thresholds – and associated obligations – to ensure they reflect the evolving nature of the wholesale market, including the location and volume of total storage capacity.

Should you require further information regarding this submission please call me on (03) 8628 1479.

Yours sincerely

Geoff Hargreaves
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[2] Organisation for Economic Co-operation and Development (2011), Reports on Experiences with Structural Separation, available at http://www.oecd.org/

[3] The threshold for a generator to be registered as a scheduled generator under the National Electricity Rules (chapter 2)