



Your ref:  
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6 November 2015

Mr John Pierce  
Chairman  
Australian Energy Markets Commission  
PO Box A2449  
SYDNEY SOUTH NSW 1235

Via website: [www.aemc.gov.au](http://www.aemc.gov.au)

Attention: Stuart Slack

Dear John

**re: ElectraNet submission in response to the AEMC's integration of storage discussion paper**

ElectraNet appreciates the opportunity to provide this submission in response to the AEMC's Integration of Energy Storage discussion paper. It is timely to consider the implications of the widespread adoption of energy storage in the National Electricity Market (NEM) ahead of the technology becoming economic for consumers and large scale applications. This work should inform participants and policy makers and support the orderly integration of storage technologies into the electricity system.

As the Commission notes in the discussion paper, ElectraNet, AGL and Worley Parsons are jointly engaged in the Energy Storage for Commercial Renewable Integration – South Australia (ESCRI-SA) project, which is supported by the Australian Renewable Energy Authority (ARENA). This project, which seeks to demonstrate the integration of a grid scale storage unit providing both regulated and unregulated services into the transmission network, gives ElectraNet a unique insight into the role of storage at a transmission level.

ElectraNet is party to a separate submission from the Energy Networks Association (ENA). The following additional comments address a number of specific issues in the discussion paper.

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## **Classification of services**

While the discussion paper identifies the transmission service classifications and the economic regulation that applies for network services it does not address the potential integration of storage devices as part of the transmission connection service to generators and transmission customers. This would potentially see the storage device located behind the customer or generator meter, with the market facing component of the device resting with the connecting party notwithstanding the TNSP owning and maintaining the device. This service would be provided on a contestable, non-regulated basis and would reasonably be considered a transmission service not subject to the ring fencing guidelines.

## **Network revenue regulation**

The Commission correctly identifies the arrangements under which a network service from an energy storage device could be procured via capital or operating expenditure. In all cases the service would need to be the most efficient option to displace a conventional method of providing the service.

While the AER has made observations on proposed uses of energy storage in revenue determinations it must be borne in mind that the AER provides a revenue allowance based on efficient benchmark capital and operating expenditure forecasts for the business. It is then for the NSP to make efficient expenditure decisions within these allowances regardless of whether or not a particular project was identified at the time of the approval of the allowance. This would not preclude the NSP choosing to procure a service provided by a new technology such as an energy storage device, subject to the efficiency and prudence of such a decision in accordance with the requirements of the Rules.

## **Incentive schemes**

Where a network support service is procured by a TNSP as an operating expense, that expenditure is typically treated as a network support pass-through, with no materiality threshold. This expenditure would normally be excluded from the efficiency benefits sharing scheme (EBSS) as non-controllable expenditure, as the extent to which the service needs to be deployed each year is driven by external conditions.

## **Case study: ElectraNet, AGL and Worley Parson ESCRI-SA**

The discussion paper notes that the ESCRI-SA project has proposed a hybrid ownership and operation model which would see the asset providing the services being recognised in the regulated asset base (RAB) to the extent the asset is providing a prescribed versus non-regulated service. The economic regulatory arrangements for recognising all or part of the capital cost of the device in the RAB via the Regulatory Investment Test for Transmission (RITT) are well understood as are the arrangements for procuring a storage based service from a third party as an operating expense.

The registration and market facing arrangements are less obvious at grid scale. The particular arrangement for abstracting the TNSP from the market facing component of the storage device under the ESCRI-SA project was proposed as one of the partners, AGL, is the local retailer in South Australia and this approach reduces the complexity of registration arrangements for a relatively small device.

A true grid scale device of tens of megawatts would need to be registered as a generator if it is to derive revenue from the market facing services it could provide on an unregulated basis.

This could then operate through a variant of the ElectraNet model whereby the operation of the market facing component was auctioned to market participants and the proceeds of those auctions returned to customers in an appropriate manner, for example an arrangement similar to the current settlements residue auction process.

Equally, where the value of the market facing component is not sufficiently material, the device could be embedded in the transmission network without registration, much like an existing piece of technology such as a static VAR compensator or reactor, and operated purely as a network device, avoiding the issue of registration with the net energy consumed by the device treated as losses.

This would, however, deny consumers the benefit of any revenue derived from the third party operating the market facing component of the device and reduce the business case for an energy storage solution versus traditional network equipment accordingly, and would only be justified on a case by case basis based on the net costs and benefits.

ElectraNet looks forward to further engagement in this review as it proceeds. Should you have any further questions in relation to this submission please contact Bill Jackson on (08) 8404 7969.

Yours sincerely



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