21 December 2016

Michelle Groves
Chief Executive Officer
Australian Energy Regulator
Level 35, The Tower
360 Elizabeth Street
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Dear Michelle

re: Regulatory Treatment of Battery Storage Project

The purpose of this letter is to seek your views on the proposed regulatory treatment of ElectraNet's battery storage project, and confirmation that this treatment is in accordance with the requirements of the National Electricity Rules and applicable regulatory guidelines. This follows initial discussion of this matter with Chris Pattas on 12 December 2016.

ElectraNet is proposing to install a <30 MW (8 MWh) Energy Storage Device (ESD) on its transmission network through the Energy Storage for Commercial Renewable Integration South Australia (ESCRI-SA) Project. This project is the subject of a funding application with ARENA.

The ESD is able to provide a number of prescribed network services, including:

- improved connection point reliability in the local network, leading to a reduction in unserved energy; and
- fast frequency response reducing the number of periods in which the rate of change of frequency (RoCoF) constraint on imports over the Heywood interconnector is binding. This constraint is imposed as a consequence of a South Australian Government obligation, targeted at maintaining expected RoCoF of at or below 3 Hz/s in the event of a non-credible contingency.[1] Reducing the periods in which this constraint binds will lead to a broad range of market benefits, including a reduction in generator dispatch costs.

These services directly contribute to the capital expenditure objectives in the NER.

In addition to these prescribed services, the ESD also has the capability to provide energy and/or ancillary services on a contestable basis via the wholesale market and the contestable ancillary services market.

[1] The South Australian Government Gazette, 12 October 2016

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Where the ESD is also used to provide these contestable services, this lowers the costs of the ESD that would need to be recovered from electricity customers via prescribed transmission charges. ElectraNet therefore sees merit in the ESD also being used to provide these contestable services.

Importantly, the proposed arrangement for the ESCRI-SA project is that ElectraNet would not itself participate in the provision of contestable services. Rather, it would lease access to the ESD asset to an unrelated party (AGL) for an agreed and transparent fixed fee. AGL would provide contestable services using the ESD asset, with ElectraNet playing no role in how the ESD asset is used to provide these services.

The proposed use of the ESD in this manner to provide both regulated and contestable services is consistent with the current provisions of the regulatory framework, including the transmission ring-fencing guidelines. It is also consistent with the recently updated distribution ring-fencing guidelines.

In summary, the regulatory treatment proposed for the project is as follows.

- The ESD would be 100% owned by ElectraNet.
- A proportion of the cost of the ESD would be treated as a capital investment relating to prescribed services, and would be incorporated in ElectraNet's RAB, with the remaining value sitting outside of the RAB – these prescribed service benefits would be estimated in a transparent manner and this cost allocation would occur in line with ElectraNet's approved Cost Allocation Methodology. This is discussed further below.
- The lease payment made by AGL for access to the ESD would be treated as non-regulated revenue by ElectraNet – the lease payments would recover the costs of a portion of the ESD that is not used to provide regulated services (i.e. this cost is not included in the RAB).
- The remaining capital costs of the project would be recovered through ARENA funding (which costs would also be excluded from the RAB, further benefiting electricity customers).
- The ESD would not trigger the AER's Shared Asset Guideline, as the costs of the asset would be allocated up front between regulated and non-regulated services according to the approved Cost Allocation Methodology (CAM).

The remainder of this letter sets out the compatibility of the regulatory arrangements proposed for the ESCRI-SA project with:

- current Chapter 6A provisions relating to efficient capital expenditure and other relevant requirements of the NER;
- the current transmission ring-fencing guidelines;
- the new distribution ring-fencing guidelines;
- the shared asset guideline; and
- cost allocation provisions.

These requirements are addressed in turn.

1. NER provisions relating to efficient capital expenditure on prescribed services

The proposed regulatory treatment of the ESD is consistent with the provisions of Chapter 6A relating to efficient capital expenditure and other relevant requirements of the NER.

The ESD will provide services relating to the quality, reliability or security of supply of prescribed transmission services. Expenditure on the ESD is therefore consistent with the capital expenditure objectives set out in clause 6A.6.7(3) of the NER:

- The ESD will contribute to maintaining the quality, reliability and security of supply.
- It will also reduce the costs to the market associated with the current RoCoF constraint on imports over the Heywood interconnector.
- Expenditure on the ESD is similar to investment that ElectraNet might undertake in other transmission assets (such as SVCs or synchronous condensers) and is consistent with a least cost, technology neutral approach to transmission service provision.

ElectraNet proposes to include that portion of the cost of the ESD that relates to the provision of prescribed services (calculated in line with its Cost Allocation Methodology) as part of its ex ante capex forecast. The cost of the ESD associated with the prescribed investment is currently anticipated to be in the region of $10-15m. This is below the threshold for a contingent project.

ElectraNet intends to demonstrate the efficiency of the cost and timing of the prescribed portion of the ESD by means of a RIT-T or equivalent economic cost-benefit assessment. This will be used to assess whether the project represents the most economical solution and to test it against all available feasible alternatives:

- Investment in the ESD is expected to increase the available capacity of the network, by reducing the periods in which the import constraint on the Heywood interconnector binds. It therefore falls within the definition of ‘augmentation’ set out in the National Electricity Law, where: ‘augmentation of a transmission or distribution system means work to enlarge the system or to increase its capacity to transmit or distribute electricity’.
- ElectraNet has undertaken RIT-T assessments for other prescribed investments that involve potential network investment in a range of similar transmission assets, including reactors, SVCs, STATCOMs and synchronous condensers.
- The expected cost of the prescribed portion of the investment exceeds the RIT-T threshold of $6m.

The proposed ESD is a pilot project, which is expected to provide learnings to the wider market in relation to the cost-effective adoption of storage technologies to provide network services.

The project will also comply with all relevant generator registration and exemption requirements applicable under the NER, with AGL bearing these obligations as the entity responsible for the contestable services provided by the asset.

2. Transmission Ring-Fencing Guidelines

The proposed regulatory treatment of the ESD is consistent with the Transmission Ring-Fencing Guidelines.

The current transmission ring fencing provisions that apply to ElectraNet prohibit TNSPs from carrying on a ‘related business’, which is defined as generation, distribution or retail businesses. TNSPs are not prevented from undertaking business activities that fall outside of these specific definitions.

There has previously been debate as to whether use of a storage device to provide power to the wholesale market should be considered as 'generation', and therefore whether it should be considered as falling within the definition of a 'related business'. However, this discussion is not relevant in the current case, as ElectraNet is not intending to itself use the ESD to provide contestable services to the wholesale market.

Rather, the service proposed to be provided by ElectraNet is leasing access to the ESD to an unrelated third party. The leasing of access to an asset (namely the ESD) does not fall within the scope of the defined 'related businesses'. ElectraNet's proposed ownership of the ESD and the leasing of access to the asset is therefore consistent with the current transmission ring-fencing guideline.

Even in the event that it were considered that leasing access to the ESD was a 'related business' (which we do not believe to be the case), the prohibition on conducting a related business applies only if the related business in total attracts revenue of more than five per cent of the TNSP's total annual revenue.[2] This is around $17m per annum in the case of ElectraNet, which is more than the revenue that would be derived from the ESD.

3. Distribution Ring-Fencing Guidelines

The proposed regulatory treatment of the ESD is also consistent with the new distribution ring-fencing guidelines which were published by the AER on 30 November 2016, and the AER's stated objectives in developing those guidelines.

In particular, the AER has explicitly preserved the ability to lease out access to regulated network assets under those guidelines, noting that the new requirement to legally separate a DNSP's distribution services and transmission services from any other services that they may provide:

> does not prevent a DNSP granting another legal entity the right to use assets of the DNSP in providing other distribution services or other services, where those assets are also used by the DNSP to provide distribution services or other services, but only where doing so does not materially prejudice the provision of direct control services by the DNSP.[3]

While the timeframe for any review of the transmission ring-fencing guidelines remains to be confirmed, should equivalent ring-fencing provisions be applied to TNSPs in the future, it is clear that:

- ElectraNet would continue to be able to own 100% of the ESD asset, and be allowed to grant access to a non-related party to use those assets to provide other services (via a lease),[4] provided that this did not prejudice the provision of prescribed services using that asset; and
- The revenue from this 'asset provision service' would be considered non-regulated transmission revenue.[5]

[2] AER, Transmission ring fencing guidelines, Aug 2002, clause 7.1.

[3] AER, Distribution ring fencing guidelines, Nov 2013, clause 3.1(d).

[4] Under the distribution ring-fencing guideline, ElectraNet would not be able to own 100% of the ESD if it intended to use part of the asset to itself provide other, contestable services. However, this is not the business model proposed by ElectraNet for the ESCRI-SA project

[5] It is noted that Chapter 6A itself determines the classification of transmission services, rather than this being a task that falls to the AER. However, it is helpful to note the parallels with distribution, as it provides further clarification that the lease payments would be non-regulated revenue.

Shared Asset Guidelines

The proposed regulatory treatment of the ESD is consistent with the AER's shared asset guideline.

In the context of the recently issued distribution ring-fencing guidelines, the AER has stated that the ability to provide other entities with the right to use its assets is intended to facilitate DNSPs:

> making regulated assets (or other assets of the DNSP) available to affiliated entities, or to other parties, to use for the provision of other services, consistent with our Shared Asset Guideline.[6] (emphasis added)

Clause 6A.5.5 of the NER provides that a 'shared asset' in the case of a TNSP is one that is used to provide prescribed services, and either:

- non-regulated transmission services; or
- services that are not transmission services.

The shared asset principles in the NER (6A.5.5(c)) require that:

> the Transmission Network Service Provider should be encouraged to use assets that provide prescribed transmission services for the provision of other kinds of services where that use is efficient and does not materially prejudice the provision of those services.

The AER discusses this principle in relation to its distribution ring-fencing guidelines and notes that it supports the National Electricity Objective by minimising the residual cost borne by regulated service customers from their use of regulated assets.[7]

The shared asset provisions are usually thought of in terms of the sharing of assets that are included in the RAB. Indeed, the AER's Shared Asset Guideline states that:

> Service providers recover the costs of their shared assets from consumers of their regulated services.

However, consistent with this principle, the sharing of any TNSP-owned asset which results in a lower proportion of the cost of that asset being included in the RAB in the first place would also be consistent with the NEO in providing an overall more efficient outcome for consumers, as it lowers the costs that consumers have to bear through prescribed charges.

In the regulatory model proposed by ElectraNet, only that proportion of the cost of the ESD associated with the provision of prescribed network services would in included in the RAB. As such, the Shared Asset Guideline would not be expected to apply to the ESD asset, unless in the event that the actual use of the ESD between regulated and non-regulated services was to change in the future from that which was envisaged initially in applying the CAM.[8]

Nonetheless, the ability to share the ESD asset such that the cost borne by consumers through regulated charges is lower than it otherwise would be is consistent with the AER's discussion of why the leasing of assets should be permitted under the distribution ring-fencing guidelines.

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6 AER, Distribution ring fencing guidelines Explanatory Statement, p. 20

7 AER, Distribution ring fencing guidelines Explanatory Statement, p. 81

8 The AER notes in its Explanatory Statement for the Distribution Ring-fencing guidelines that the Shared Asset Guideline is the means for the AER to share costs fairly between customers when a DNSP's Cost Allocation Method becomes outdated because of a change in use of a regulated asset.

Cost Allocation Requirements

ElectraNet will allocate the costs of the ESD (both capital and operating costs) in accordance with its CAM approved by the AER.

ElectraNet's CAM allocates costs between prescribed transmission services, negotiated transmission services and non-regulated transmission services. It is envisaged that the costs associated with the ESD will be allocated between prescribed transmission services and non-regulated transmission services.

Under ElectraNet's CAM, costs are allocated either on a direct basis (based on directly attributable timesheets and invoices) or, where that is not possible, on a causal basis. The current CAM provides examples of how casual allocation will be applied for assets that provide various transmission services.

Outcomes of applying the cost allocation framework will be set out as part of the annual regulatory information reporting, and will be consistent with the transmission ring-fencing guidelines.

We look forward to your consideration of the proposed regulatory treatment of the battery storage project as outlined above, and confirmation of the consistency of these arrangements with the applicable requirements of the NER and relevant guidelines.

We look forward to further engaging with the AER on this important issue. Please feel free to call me on (08) 8404 7983 or Simon Appleby on (08) 8404 7324 should you wish to discuss any aspects further.

Yours sincerely

Rainer Korte
Executive Manager Asset Management

cc: Chris Pattas, General Manager Networks (Investment and Pricing)