

19 May 2017



Ms Kate Reid  
Australian Energy Market Commission  
PO Box A2449  
SYDNEY SOUTH NSW 1235

Dear Ms Reid

## Review of regulatory arrangements for embedded networks

SA Power Networks welcomes the opportunity to comment on the AEMC's consultation paper—*Review of regulatory arrangements for embedded networks*. Our submission focusses on broad issues that should be considered within the AEMC's review. We would be pleased to assist in more practical consideration of these issues as the review progresses. Issues include:

- The assessment criteria—promoting efficient investment and competition should extend to enabling any party including network businesses to offer energy infrastructure services to Embedded Network Operators (ENO)<sup>1</sup> / Embedded Network Managers (ENM)<sup>2</sup> where this might lead to efficient outcomes for customers;
- The review's scope—consideration is needed on whether embedded network services should reflect essential service expectations, with particular regard to infrastructure performance standards, and consumer protections where ENOs / ENMs cease operating; and
- Definitions—clarifications are required on the interplay between various related definitions applying to parties providing embedded network related services.

### Assessment criteria

While the assessment criteria the AEMC intends to apply in assessing regulatory arrangements for embedded networks appear sufficiently broad, their application needs clarifying. Among these are criteria concerning the facilitation of competition, customer choice and promotion of efficient investment. Applying these criteria should also include consideration of the following:

- Various reasons might drive customers to choose to be part of an embedded network. However, there might not always be visibility for customers as to the relative costs of service provision with respect to being part of an embedded network as opposed to having a direct connection to a shared network. Customer choices here might be driven by a desire to have alternatives to distribution prices that are averaged across all customers connected to shared networks (i.e. postage stamp pricing).<sup>3</sup>
- In some cases, privately built infrastructure in embedded networks might not represent the most efficient solution. In this context, consideration is needed on whether regulatory arrangements should allow all parties to truly compete to mitigate inefficient outcomes. This might include allowing all parties including network businesses to offer some or all components of embedded network infrastructure services to the owners of embedded networks.

<sup>1</sup> This term is undefined but as identified in the AEMC's consultation paper, is commonly used to describe the party that owns, controls or operates an embedded network, and commonly also on-sells electricity to customers within that embedded network, under AER exemptions from being registered as a network service provider or holding a retailer authorisation.

<sup>2</sup> The National Electricity Amendment (Embedded networks) Rule 2015 introduces a new accredited provider role, the embedded network manager, into the National Electricity Rules (NER) to be responsible for performing market interface services for embedded network customers. This rule comes into effect on 1 December 2017.

<sup>3</sup> In some NEM jurisdictions, distribution businesses such as ourselves are prevented by law from charging differently based on a customer's location.



### Essential service expectations of embedded networks

It is appropriate for the consultation paper to question if the regulatory framework remains fit for purpose given the changing nature of embedded networks. In exploring this topic, a fundamental preliminary question concerns the extent to which embedded network energy services continue to reflect essential service expectations. This is noting that:

- Current regulatory arrangements applying to embedded networks evolved incrementally from measures initially designed to apply to quite limited scenarios. This included where customers were to be charged for energy services within caravan parks, some multi-tenanted buildings and shopping centres.
- We now observe rapidly growing interest in establishing embedded networks for much broader applications—entire suburbs / communities and residential and business developments, both on a greenfield and a brownfield site basis.
- Continuation of current trends could lead to an ever larger patchwork of private networks emerging alongside / within, but with different performance standards to, shared distribution networks:
  - The expectations of shared networks are clear—they are built and operated to perform to a regulated standard commensurate with government and community expectations as to the reliability, quality, safety and security of an essential service. The essential service performance expectations of shared networks also extend to other matters of customer protection such as visibility / certainty on pricing, response timeframes and processes for planned and unplanned works and the management of customer enquiries.
  - However, the performance expectations of embedded networks are less clear and need consideration. That is, does a customer's decision to be provided energy services via an embedded network diminish the extent to which these are essential services?
- If there are essential service expectations of embedded networks then consideration is needed on whether there should be a uniform standard of performance, either across embedded networks themselves, or between embedded networks and shared networks.

### Embedded network service components

The terms commonly applying to an embedded network service provider appear to assume that an embedded network is fully built, owned, controlled and operated by one entity.<sup>4</sup> In practice, the situation might be different, and the energy infrastructure 'backbone' within an embedded network might be a service element distinguishable from other embedded network services offered by ENOs / ENMs. This service could comprise some or all of the following:

- Initial construction of the energy infrastructure;
- Ongoing maintenance of the energy infrastructure;
- Energy supply restoration; and /or
- Responsibility for ongoing service performance / levels.

As these infrastructure components of embedded networks are, in practice, alternatives to the services obtained by direct connection to a shared network, consideration should be given to relative service provision costs. There might be situations where these services might, due to economies of scale and scope, be more efficiently provided by a network business rather than a private operator. In these situations, effective competition, choice and efficient investment as identified by the AEMC's

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<sup>4</sup> For example, the AEMC's consultation refers to ENOs in this way. Further, the definition of embedded networks in the NER also refers to a distribution system owned, control or operated by a person.





assessment criteria, are more likely to be promoted if all parties (including network businesses) are able to compete to provide some or all of these services to ENOs / ENMs.

Further, there might also be situations, that the AEMC should have regard to, where ENOs / ENMs actually do not want to be responsible for some or all of the components of the infrastructure 'back-bone' services within embedded networks. These situations might be particularly relevant if there are in fact general expectations that embedded networks perform to a level of service equivalent to a shared network. As noted above, expectations of shared networks cover a large range of service issues, from technical to customer interaction performance. We note that similar issues already arise in practice with respect to new residential / commercial developments in South Australia, for example:

- Developers currently choose whether to construct the energy reticulation infrastructure of new developments themselves or to outsource this task to us;<sup>5</sup> and
- Even where developers have opted to construct the energy infrastructure themselves, this infrastructure has almost always been gifted back to us and incorporated into the shared network. This then allows customers within these developments to be covered by the same service performance safeguards as other customers.<sup>6</sup> It should be noted that where this occurs, developers need to build the infrastructure to our standards so that it can later be incorporated into the shared network.

### **Providers of last resort**

As a key consumer protection, the AEMC should also consider the need for arrangements to deal with situations where ENOs / ENMs become insolvent / cease operating. Customers should have access to service providers of last resort. Consideration is needed on the extent of services that would be envisaged to be performed by a provider of last resort.

At least with respect to the essential service infrastructure elements of embedded networks, network businesses might be well placed to take on some of the role of providers of last resort. This role might essentially build on the expertise and systems that network businesses already have available, but these issues need further consideration.

### **Definitions**

Where energy infrastructure service components can be distinguished from other embedded network services, and where ENOs / ENMs might seek to engage network businesses to deliver these components, clarifications are needed on the application of key NER definitions applying to these services and service providers. This is noting that:

- The NER definition of an embedded networks suggests that this is a distribution system not owned, controlled or operated by a network service provider.<sup>7</sup> However, it is unclear if this precludes network businesses offering energy infrastructure services to ENOs or ENMs where this could deliver efficient outcomes consistent with the National Electricity Objective.
- Consideration should also be given on the interaction of the embedded network definition with the NER definition of 'distribution services'<sup>8</sup>. Unless the infrastructure services that networks could potentially provide ENOs and ENMs are considered to be distribution services, then

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<sup>5</sup> This is in relation to the contestable component of the works.

<sup>6</sup> That is, the network infrastructure assets are included on our asset registers, the ongoing maintenance and replacement / augmentation of these assets are undertaken by us, and the performance of these assets are captured in calculations of our performance against reliability standards and incentive schemes. Where gifting occurs, the asset cost is not incorporated into our regulated asset base (RAB).

<sup>7</sup> Chapter 10 of the NER.

<sup>8</sup> Chapter 10 of the NER: A 'distribution service' is defined as, "A service provided by means of, or in connection with, a distribution system."



network businesses would under the AER's ring-fencing guideline be prohibited from offering these service to ENOs and ENMs even where efficient; and

- If a network business was to seek to take on all of the functions of an embedded network including ownership, then it is unclear if this would be precluded by way of the NER definition of embedded networks, or if this would be interpreted to be just another 'distribution system'.<sup>9</sup>

If you wish to discuss any of our comments further, please contact Bruno Coelho on 08 8404 5676.

Yours sincerely



Richard Sibly  
**A/Head of Regulation**

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<sup>9</sup> Chapter 10 of the NER: A 'distribution system' is defined as, "A distribution network, together with the connection assets associated with the distribution network, which is connected to another transmission or distribution system. Connection assets on their own do not constitute a distribution system."

