

07 September 2018

Mr Peter Adams  
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Australian Energy Regulator  
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Sent via email to: [RIT@aer.gov.au](mailto:RIT@aer.gov.au)

Dear Mr Adams

## Review of the Application Guidelines and Explanatory Statement— Regulatory Investment Tests

SA Power Networks welcomes the opportunity to comment on the draft Application Guidelines and Explanatory Statement for the Regulatory Investment Test for distribution (RIT-D). We support the positions contained in Energy Networks Australia's (ENA) submission, including the suggested re-drafting and case studies. Our submission supplements the ENAs.

Our key recommendations are that:

- 'generation dispatch' and 'competition benefits' should be included in the market benefits classes that distributors can consider—Distributed Energy Resources (DER) can increasingly impact wholesale markets, and automatic inclusion improves regulatory certainty and administrative efficiency;
- clarifications are needed on what should comprise a base case for replacement expenditure;
- all external financial contributions (either voluntary or required by connection charging frameworks) should be deducted from project costs in RIT-D assessments to promote outcomes consistent with the National Electricity Objective (NEO); and
- consideration is needed on how to 'better weight' High Impact Low Probability (HILP) events, consistent with the Council of Australian Governments Energy Council recommendation (CoAG EC).

The AER should also further clarify:

- how to describe an 'identified need' driven by a safety risk; and, that 'identified needs' may seek to achieve multiple goals;
- that 'decision rules' used to calculate option value for a project that passes a RIT-D, should be taken to be approved—that is, subsequent RIT-Ds should not need to be run for latter stage investments made consistent with the 'decision rules' included within the initial option value assessments; also, that projects with option value may involve more than the minimum amount of investment;
- that flexibility should be retained to choose a Value of Customer Reliability (VCR) that is fit-for-purpose; and
- some minor drafting issues in relation to: the treatment of asset removal / disposal costs; the treatment of land costs; and screening for non-network options.

We would be happy to discuss our submission further. If you have questions on any matter we have raised, please contact Bruno Coelho on 08 8404 5676.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Richard Sibly".

Richard Sibly  
**Head of Regulation**

## Key issues

### Other market benefits

The NER contain a list of market benefits classes that can be considered in a RIT, and allow the AER to include other classes deemed relevant. The list for the RIT-T contains two classes of benefits additional to those specified for the RIT-D, namely: *'changes in fuel consumption arising through different patterns of generation dispatch'* and *'competition benefits'*. These benefit classes should be automatically included in the Application Guidelines and distributors should not have to apply for their inclusion, given that:

- this would achieve greater consistency between the RIT-T and RIT-D, which the AER identified as a key driver of its current review;
- these benefit classes have only to-date been excluded because DER's impact was considered to be immaterial. This assumption is no longer true, particularly in South Australia and Queensland, and other NEM jurisdictions in future. The increasing volume of DER capacity connecting to distribution networks can now impact both the costs of wholesale market generation and levels of competition. The AER appears to accept these points;<sup>1</sup>
- this would avoid unreasonable administrative impost by distributors having to individually and repeatedly apply to have benefit classes considered relevant when they clearly already are;
- this improves regulatory certainty for all stakeholders ahead of not only RIT-Ds but also distribution regulatory proposals. We take the Application Guidelines as setting expectations on how business cases are to be constructed for any project, and to-date, DER integration issues have been a core focus for our customers in our 2020-25 Regulatory Proposal stakeholder engagement; and
- contrary to the AER's view, examining DER's impact on generation dispatch and competition in the NEM are issues that are not captured by other market benefit categories such as *'changes in load transfer capacity and the capacity of embedded generators to take up load'*, which pertain instead to situations where end-users gain access to back-up power supply.<sup>2</sup>

### Base cases

#### Clarifications

The discussion of base-cases is generally difficult to interpret, particularly due to varying use of terminology, and explanation on what is covered by 'reliability corrective action' (RCA). In our view:

- Credible 'Business As Usual' (BAU) expenditure on a deteriorating asset might not only involve operating and maintenance expenditure as the AER suggests. The Application Guidelines should recognise that in some cases BAU expenditure might also involve minor capital expenditure such as replacement of minor components within a larger asset or minor refurbishments.
- RCAs might be driven by various requirements on service quality, reliability and safety, via reference to Schedule 5.1 of the NER and applicable regulatory instruments.<sup>3</sup> RCA projects might not always only pertain to maintaining service reliability levels (e.g. maximum levels of SAIDI and SAIFI), but instead aim to maintain compliance with other aspects of required service performance. The AER appears to share this view. We note that in clarifying safety requirement driven identified needs, the AER pointed to example 5 of the Application Guidelines which concerns an identified need driven by a service standard requirement. However, the Application Guidelines and Explanatory Statement appear elsewhere to only refer to deterministic reliability standards in characterising a RCA and fails to recognise other aspects like safety for example.<sup>4</sup>
- The Explanatory Statement outlines that for replacement of assets serving reliability functions, the base case could be any option that maintains conformance to relevant standards, which might involve replacing an asset upon failure, or replacing it when the probability of failure exceeds a stipulated

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<sup>1</sup> AER, *Explanatory statement – Review of the application guidelines for the regulatory investment tests*, July 2018, p.42.

<sup>2</sup> AER, *Explanatory statement – Review of the application guidelines for the regulatory investment tests*, July 2018, p.42.

<sup>3</sup> NER, Section 5.10.2.

<sup>4</sup> AER, *Draft Regulatory Investment Test for distribution application guidelines*, July 2018, Example 11, p.35.

service level.<sup>5</sup> However, the AER should clarify how to treat service risks where an asset might serve a function required by a regulatory instrument, but there is no stipulated level of probability of failure that cannot be exceeded. It is generally imprudent and inefficient to run assets to failure, given the consequential costs of unplanned outages, significant damage to equipment and potential secondary and tertiary damage to adjacent equipment. It is more prudent to proactively replace assets prior to failure on the basis of proactive condition-based assessment.

- The Application Guidelines provide that the BAU base case should include credible expenditure on a deteriorating asset, as long as this meets legal obligations or is consistent with efficient industry practice.<sup>6</sup> The intended scope of this caveat should be clarified. As noted, efficient industry practice often involves proactive condition-based replacement rather than running assets to failure.

*Additional issues:*

Secondary systems (e.g. sub-station protection) require specific consideration. In our view:

- Where there is a legal requirement to maintain / construct a secondary system, its replacement or acquirement should form the base-case.
- Even where there is no legal requirement, acquiring / replacing a secondary system should form the base-case to avoid modelling unrealistic / impractical states of the world. For example:
  - while there might be no immediate consequences of delaying replacement of a secondary system when it reaches the end of its technical life, the impact of the failure of the primary and secondary system will depend on whether there are other interconnected secondary systems (in the next section of the network) and if so, if they are performing as intended (i.e. whether they are replaced when needed or not) and capable of performing the necessary protection action; and
  - to assess this effectively would require modelling the probability of multiple concurrent asset failures (and their consequential costs). In addition to being impractical to model, a state of the world in which a distributor is facing multiple concurrent failures of this nature would likely overwhelm a distributor's ability to manage its network, therefore the scenario itself is unrealistic.

### **External financial contributions**

The AER considers that any external financial contribution should be deducted in determining if project costs exceed the RIT-D threshold, but contributions from within the electricity sector should not be deducted from project costs when running a RIT-D. The AER's rationale is that electricity sector contributions would represent wealth transfers and be inconsistent with the RIT-D's intent.<sup>7</sup> We disagree and consider that the NEO will be promoted by allowing all external contributions to be deducted from project costs within a RIT-D, noting:

- There is no apparent reason for differing treatment with respect to threshold identification and net market benefit assessment.
- A RIT-D's ultimate aim is to identify projects to be funded by regulated Distribution Use of System (DUoS) charges. To the extent that an external financial contribution reduces these charges, this should form part of the analysis.
- Considering wealth transfers is relevant where there is a risk of creating a cost impost for one entity / industry segment, and a benefit for another entity / industry segment, such that the overall benefit to a market is neutral. However, contributions from electricity market participants may arise by various means and have additive rather than neutral effects. For example:
  - a market participant may voluntarily wish to co-contribute with a distributor to deliver a project to jointly address a distribution identified need (e.g. to avoid a constraint) as well as an unregulated need (e.g. participation in FCAS market);

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<sup>5</sup> AER, *Explanatory statement – Review of the application guidelines for the regulatory investment tests*, July 2018, p.30.

<sup>6</sup> AER, *Draft Regulatory Investment Test for distribution application guidelines*, July 2018, p.14.

<sup>7</sup> AER, *Explanatory statement – Review of the application guidelines for the regulatory investment tests*, July 2018, pp.30-32.

- there might be reasons why this project is only feasible / practical when delivered on a distribution network, therefore if the project did not proceed, the contributing party would not have the option of delivering the project elsewhere (such that the effect would be neutral).
- The AER's position appears inconsistent with its distribution connection charging guideline and the NER connections framework—these encourage / require distributors to seek contributions from proponents such as from large generators, toward network augmentation costs arising from their connection. It is also difficult to understand what the AER's position would mean in practice. For example:
  - if a non-network initiative passed a RIT-D at a given cost (without the contribution deducted) a distributor would have to pay this cost to the non-network provider. However, it is unclear if this is appropriate as the project's cost could have been less if the contribution were deducted; and
  - it is unclear, given the contribution is to be excluded from the RIT-D, if the AER intends that the 'need' of the contributing party is also be excluded. There might be cases where a large generator seeks a connection requiring upgrade to a sub-station by an increment greater than an upgrade which the distributor had already identified as required to meet forecast load growth.<sup>8</sup> Our view is that the contributing party's 'need' must be considered in a RIT-D. Doing otherwise, might lead to solutions being identified which might address a sub-station's load growth, but not the connecting generator's need to export energy.<sup>9</sup> This would be sub-optimal and inconsistent with the NEO.
- The AER's position is also inconsistent with its view that nothing in the Application Guidelines prevents joint ventures between networks and third-parties (e.g. non-network proponents).<sup>10</sup> The AER's position does inhibit joint-ventures, to the extent that a particular project can only practically be delivered on a distribution network. In an environment where energy market challenges increasingly cross over particular segments of the NEM supply chain, joint solution-making is likely to be increasingly relevant.

If contrary to our view, the AER decides to maintain its current position, the interaction between its position and connection charging frameworks must be clarified.<sup>11</sup>

### High-impact low probability events (HILPs)

The AER has not addressed CoAG EC's recommendation that it should consider how to 'better weight' HILP events according to public expectations regarding significant system security events. In our view:

- HILP events are relevant to distribution as well as transmission. There might increasingly be a need to consider both distribution system security as well as measures (perhaps incremental) that distributors could undertake to address broader whole of jurisdiction system security.<sup>12</sup>
- While the AER clarified that significant impact events need to be weighted by their probability of occurrence, this is not the issue that CoAG EC wanted considered. Further, while a VCR could be developed for high impact events, this would also not result in HILP events being 'better weighted'.
- Consideration of 'better weighting' HILP events does not equate to addressing system security 'at any cost', but rather considering where for example, incremental initiatives and expenditures could help to also mitigate the possibility of events which present risk of significant service disruption.
- The AER could consider 'better weighting' HILP events, by reference to 'regret theory' which is a well-accepted economic approach for efficient decision making—i.e. accounting for the effect of an anticipated 'regret' when making a decision in light of uncertainty (the consequence of making an ultimately sub-optimal decision).<sup>13</sup>

<sup>8</sup> In this case, the generator's contribution would be to cover the incremental costs imposed on the sub-station upgrade.

<sup>9</sup> E.g. it might be difficult for a non-network solution to support both load and generation if it were itself a distributed generation solution.

<sup>10</sup> AER, *Explanatory statement – Review of the application guidelines for the regulatory investment tests*, July 2018, p.18.

<sup>11</sup> This also includes clarifying if the capital cost thresholds for determining if a RIT-D applies, is to be calculated on a gross basis or net of any connection rebates provided consistent with a distributors connection policy

<sup>12</sup> COAG EC's comments were made in specific context of a review of the RIT-T but could equally apply to RIT-Ds as distribution system security issues are increasingly also relevant. COAG EC, *RIT-T review*, February 2017, pp.4-6.

<sup>13</sup> This issue is further elaborated (with reference to relevant literature) in the ENA's submission.

## Other clarifications

### Identified need

We agree with the approach of being non-prescriptive on how 'identified needs' are described, and agree that these should be articulated in an objective and customer service focussed manner. Additional clarifications that the AER could consider include:

- adding an example of a safety-driven 'identified need', such as where a distributor considers replacement expenditure is needed to address a growing safety risk which might be unrelated to unserved energy considerations;<sup>14</sup> and
- recognising that there will typically be cases where a proposed investment will aim to address multiple identified needs. For example, our 'valuing and visibility' approach to prioritising replacement expenditure, considers various 'value' parameters, such as safety, compliance, unserved energy etc.<sup>15</sup> While projects typically have a dominant driver, they often serve to address multiple drivers.

### Option value

We welcome the description and examples on identifying 'option value' but recommend clarifying:

- the status of any 'decision rules' used within an option value analysis. Where a project with option value passes the RIT-D, distributors should not be required to re-run a RIT-D to cover the later stage investments which accord with the 'decision rules' that were established. This is noting that:
  - option value analysis involves identifying 'decision rules' on how to respond to changing market conditions at future points in time.<sup>16</sup> As the decision rules are used to identify projects with option value, this value arises even if a later investment needs to be made in response to actual demand being higher than expected (e.g. upgrading a small-scale option); and
  - re-running RIT-Ds for parts of a project which has already passed a RIT-D and has option value, will be redundant and add unnecessary regulatory burden on distributors and stakeholders. RIT-Ds should only be re-run for later stage investments identified as part of the 'decision rules', if there has been a clear material change in circumstances.
- that a project with 'option value' can involve more than the minimum investment amount. This may be implicit but should be clarified. For example, a small-scale option capable of future upgrading and thereby deriving option value, could cost more than a small-scale option with no such capability.

### Value of customer reliability

Distributors should retain discretion to choose a VCR that is fit-for-purpose for each particular RIT-D. This appears to be the AER's intent and we welcome the Application Guidelines setting principles that distributors are to consider in choosing a fit-for-purpose VCR.<sup>17</sup> However, we note that:

- we are yet to observe the AER's approach to developing VCRs consistent with its new responsibilities, and the AER is yet to observe stakeholder views. Therefore, we are unable to support the AER's position that its VCRs will be fit-for-purpose in all circumstances. Reasonable variations to the AER's VCR approaches should not be ruled out; and
- During the time lag from now until when the AER concludes its VCR review, the AER should not unreasonably restrict variations to AEMO's VCRs in upcoming RIT-Ds or business cases within distribution regulatory proposals.

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<sup>14</sup> The ENA's submission sets out a suggested example which we support.

<sup>15</sup> Future information on our approach is provided in our 2020-2025 draft plan. SAPN, *2020-2025 Draft Plan*, 8 August, p.41.

<sup>16</sup> For example, Figure 8 of the Application Guidelines identifies three future time periods and decision rules on initial and subsequent investments (e.g. upgrade or do-noting) if demand turns out to be higher or lower than expected.

<sup>17</sup> These include: willingness to pay; potentially outage length and width of potentially affected area and customer types potentially affected. AER, *Draft Regulatory Investment test for distribution application guidelines*, July 2018, pp.18-19.

## Other issues

On other more specific aspects of the Application Guidelines our views are as follows.

### *Removal / disposal costs:*

We welcome the clarification that the costs of removing / disposing assets (including site rehabilitation) should be included in RIT-Ds. That is, added to the costs of projects which would involve removal of an existing distribution network asset.

### *Land costs:*

We accept the requirement to include within a RIT-D assessment, any land costs incurred in constructing or providing a credible option. However, the RIT-D should only include new investments including those involving new land / easement purchases. Therefore, we recommend that the AER amend the Application Guidelines to clarify that the value of land should be included “...to the extent that it has not already been acquired”.

### *Non-network option screening*

We recommend that the AER clarify that distributors should be permitted to “...exclude any non-network option that would require customers to be disconnected from the distribution network and NEM, where this is not permitted in a given jurisdiction.”

This is an immediately relevant issue to clarify for stakeholders including non-network proponents, as we witnessed in our Kangaroo Island Undersea Cable RIT-D. Our proposed exclusion is qualified, given that:

- the AEMC will soon commence considering the merit of reforms to allow customers to be disconnected from the grid where it is efficient to do so;<sup>18</sup> however,
- it remains uncertain how the reforms will proceed and be implemented in each jurisdiction.

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<sup>18</sup> The AEMC has recently published on its website, terms of reference for the review of “Frameworks for stand-alone power systems”. <https://www.aemc.gov.au>