

**Australian Energy Market Commission**

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## **RULE DETERMINATION**

**National Electricity Amendment (Replacement  
expenditure planning arrangements) Rule 2017**

**Rule proponent**

Australian Energy Regulator

18 July 2017

**RULE  
CHANGE**

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## **About the AEMC**

The AEMC reports to the Council of Australian Governments (COAG) through the COAG Energy Council. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the COAG Energy Council.

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## Summary

The Australian Energy Market Commission (AEMC or Commission) has made a rule to increase the transparency of network service provider plans to retire, de-rate and replace network assets. The rule has the effect of including network asset retirement and de-rating information in network service providers' annual planning reports. It also extends the current regulatory investment test frameworks to include replacement expenditure.

The rule has been made in response to a rule change request submitted by the Australian Energy Regulator (AER). While the rule is a more preferable rule, it incorporates many of the elements proposed by the AER.

### *Context*

The AER proposed the rule change request in the context of a changing electricity environment. Specifically:

- there have been significant changes in the national electricity market and the broader energy industry that have spurred on a change in network planning and investment patterns, making replacement expenditure of greater relative importance than augmentation expenditure
- technological changes have emerged that suggest that non-network solutions are becoming more viable alternatives to replacement network investment
- there is now a greater focus on managing existing network assets in comparison to the historical focus on expanding networks due to the flattening of electricity demand growth.

As a result of these changes, the Commission considers that the current electricity network planning frameworks in the National Electricity Rules do not provide sufficient transparency on network asset retirement, de-rating and replacement decisions by network service providers. The rule has been made with the aim of addressing this deficiency.

In making the rule, the Commission has considered the primary purpose of the current framework of annual planning reports and regulatory investment tests. This purpose is to support the planning of, and decisions on investment in, a network by:

- creating incentives for network service providers to consider potential non-network solutions to network constraints or limitations
- establishing clearly defined planning and decision-making processes to assist network service providers in identifying the solutions to network issues in a timely manner
- providing transparency on network planning activities to assist non-network providers to put forward non-network options as credible alternatives to

network investment and assist network users to make decisions about where best to connect to the network.

The purpose of the planning framework is not to regulate or direct which plans or decisions should be made, nor to determine what investment costs should be recoverable from regulated prices and revenues.

However, it does accompany an incentive-based economic regulatory framework. In this context, the planning information and investment decision-making process may also provide opportunities for the AER and other stakeholders to be more fully informed on the efficiency of network investment decisions. This in turn would be likely to support an outcome where consumers only pay for efficient investments arising from retirement and de-rating decisions.

#### *The rule*

The rule makes a number of amendments to the planning and investment framework with the aim of creating a set of requirements that will apply equally to both network augmentation and replacement capital investments. The rule:

- specifies that information on all planned asset retirements in distribution and transmission networks, including the reasons for the retirements, is to be included in the distribution and transmission annual planning reports
- specifies that information on planned asset de-ratings that result in a system limitation or constraint on a network including the reasons for these is to be included in the annual planning reports
- allows two or more asset retirements or de-ratings to be reported together where the assets, of the same type, are to be retired or de-rated across more than one location in the same calendar year and where the replacement cost of each asset is less than \$200,000
- aligns reporting requirements on network needs and options to address these in a replacement context with those required in an augmentation context for transmission networks (these requirements are already aligned for distribution networks)
- extends the distribution and transmission regulatory investment tests to network replacement expenditure decisions
- requires reporting on the approach to asset management to be included in the transmission annual planning reports (this requirement already exists for distribution annual planning reports)
- specifies that the regulatory investment test for transmission is to be undertaken again where there is a material change in circumstances (however, a network service provider can seek an exemption to undertake the test again from the Australian Energy Regulator)

- clarifies that distribution annual planning reports will need to include information on investments in information technology and communications systems related to the management of network assets (there is no equivalent provision to amend in regard to transmission annual planning reports).

A number of ancillary changes have also been made to the National Electricity Rules in the rule.

The changes made by the final rule are consistent with those set out in the draft rule with a few exceptions. The differences between the final rule and the draft rule broadly relate to improving the workability and implementation of the new requirements. The amended processes should support efficient network investment in the future and contribute to consumers paying no more than necessary for their electricity services.

#### *Transitional arrangements*

The final rule provides for arrangements relating to the introduction of:

- the new annual planning report requirements
- the regulatory investment tests for replacement expenditure.

Table 1 below sets out the timing of the annual planning report which the new reporting requirements will apply to for each network service provider.

**Table 1: Timing of application of new reporting requirements**

<b>Network service provider</b>	<b>New annual planning reporting requirements will apply</b>
All DNSPs except for Energex, Ergon and TasNetworks	For the 31 December 2017 annual planning reports
All TNSPs and TasNetworks (distribution)	For the 30 June 2018 annual planning reports
Energex and Ergon	For the 30 September 2018 annual planning reports

Source: Rule 11.99.3 and clause 2 of the amending rule.

The regulatory investment test for replacement expenditure will commence on 18 September 2017. Replacement capital expenditure incurred after this date must go through the regulatory investment test process, where the cost of the most expensive option to address the network need is above the cost threshold (\$6 million for transmission and \$5 million for distribution). This is also the date that the AER must complete any updates to the regulatory investment test and regulatory investment test application guidelines required as a result of the rule.

The commencement date for the regulatory investment tests is subject to two exemption mechanisms.

First, replacement projects that have been "committed" to by a network service provider on or prior to 30 January 2018 are exempt from the new regulatory investment test process.

Second, the rule also exempts replacement projects from the RIT-D relating to the second stage of a program to install rapid earth fault current limiters by Victorian distribution network service providers under the Electricity Safety (Bushfire Mitigation) Regulations 2013 (Vic).

Network service providers using either, or both, of these exemption mechanisms must publish and maintain a list of excluded projects on their websites, including the name and description of the projects and their scheduled completion dates, until all of these projects have been completed.

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# 1 Australian Energy Regulator's rule change request

## 1.1 The rule change request

On 30 June 2016, the Australian Energy Regulator (AER) made a request to the Australian Energy Market Commission (AEMC or Commission) to make a rule regarding replacement expenditure planning arrangements (rule change request).

Specifically, the rule change request proposed to amend the National Electricity Rules (NER) to require transmission and distribution network service providers to include in their annual planning reports:

- information on planned asset retirements and de-ratings<sup>1</sup> (with a guideline to be prepared by the AER to determine the class of assets required to be reported on)
- options to address network needs, such as limitations and constraints, arising from these retirements and de-ratings.

The rule change request also proposed to extend the application of the regulatory investment tests to replacement capital projects. In doing so, the AER has proposed the inclusion of an exemption process so that a regulatory investment test is not required for "like-for-like" replacements.

A number of related secondary amendments to the NER have also been included in the rule change request. These changes are:

- amending clause 5.11.2 of the NER to explicitly require service providers to notify any affected registered participants and the Australian Energy Market Operator (AEMO) of technical limits that will be exceeded from planned asset retirements or de-ratings
- requiring transmission network service providers (TNSPs) to provide information on their asset management approach in the annual planning reports
- requiring TNSPs to reapply the regulatory investment test for transmission (RIT-T) where there is a material change in circumstances since the publication of a project assessment conclusions report and the preferred option is no longer the preferred option and
- clarifying an existing requirement in Schedule 5.8(m) of the NER to require distribution network service providers (DNSPs) to provide information on information technology and communication systems in their distribution annual planning reports (DAPRs).

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<sup>1</sup> The AER defines a de-rating as a reduction in the capability of a network asset. AER proposed rule drafting, p. 1.

## 1.2 Current arrangements

### 1.2.1 Overview of current planning requirements

Chapter 5 of the NER outlines provisions in relation to network connection, planning and expansions. The chapter is in two parts: Part A sets out rules on connections to distribution and transmission networks; and Part B includes the rules in relation to network planning and expansions. Part B is relevant to the AER's rule change request.

The context of this framework is set out in Figure 1.1. This figure identifies the various regulatory instruments that are relevant to network investment information and decision making in addition to their key objective.

**Figure 1.1 Network investment regulatory instruments**

Instrument	Frequency	Objective
Annual planning report	<ul style="list-style-type: none"> <li>Annual with forward planning period of five years (distribution) and ten years (transmission)</li> </ul>	<ul style="list-style-type: none"> <li>Report on <b>expected future operation of networks</b> over an appropriate planning period</li> <li>DNSPs to develop a <b>demand side engagement strategy</b></li> </ul>
Regulatory investment test	<ul style="list-style-type: none"> <li>As required</li> </ul>	<ul style="list-style-type: none"> <li>Identify an <b>efficient option for new infrastructure</b></li> </ul>
Regulatory information instruments	<ul style="list-style-type: none"> <li>As required</li> </ul>	<ul style="list-style-type: none"> <li>AER sets out objectives - either a <b>regulatory information order</b> or <b>regulatory information notice</b></li> </ul>
Revenue proposal	<ul style="list-style-type: none"> <li>For each regulatory control period: normally five years</li> </ul>	<ul style="list-style-type: none"> <li>Allow AER to make a <b>revenue determination</b> that sets <b>maximum allowable revenue</b> for a network service provider over a regulatory control period</li> </ul>

Source: National Electricity Law and National Electricity Rules.

Two of the key parts of the planning framework are set out in the following sections, namely annual planning report requirements and the regulatory investment tests.

### 1.2.2 Annual planning report requirements

Part B of Chapter 5 sets out planning and reporting requirements for network service providers. Under these requirements, each network service provider is to undertake an annual planning review to identify emerging network constraints expected to arise over ten-year (for transmission networks) and five-year (for distribution networks) planning horizons.<sup>2</sup> The results of a review are then published in an annual planning

<sup>2</sup> NER clauses 5.12.1 and 5.13.1.

<sup>2</sup> Replacement expenditure planning arrangements

report. The annual planning reports are to be published each year by 30 June (transmission) and 30 December (distribution).<sup>3</sup>

The details of the annual planning report requirements are slightly different between transmission and distribution.

In transmission, TNSPs are required to carry out an annual planning review and subsequently publish a transmission annual planning report (TAPR).<sup>4</sup> A TAPR must include information on:

- forecast loads
- planning proposals for connection points
- a forecast of constraints (including constraints caused by the requirement for asset replacement)
- where a reduction in forecast load would defer a constraint for a period of 12 months (including where the constraint is caused by the requirement for asset replacement), information regarding the forecasted times, connection points and load reduction
- proposed augmentations (including the reason for the constraint related to the augmentation) the proposed solution to the constraint, the cost of the proposed solution, and other network and non-network options considered to address the constraint
- how proposed augmentations relate to the most recent national transmission network development plan (NTNDP) published by AEMO
- proposed replacement transmission network assets including the purpose of the asset, a list of network or non-network options that are being, or have been considered, and the estimated capitalised expenditure on the proposed replacement asset.<sup>5</sup>

In distribution, a DNSP's annual planning review must include an assessment of the future operation of its network over the planning period. This includes:

- preparing maximum demand forecasts on different parts of the network
- identifying limitations on the network, including those caused by the requirement for asset refurbishment or replacement

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<sup>3</sup> NER clause 5.12.2 and 5.13.2. However, Energex and Ergon are required to publish their annual planning reports by 30 September under section 2.2.1 of the Electricity Distribution Network Code (Queensland) and TasNetworks is required to publish its DAPR by 30 June under clause 8.3.2 of Tasmanian Electricity Code.

<sup>4</sup> NER clauses 5.12.1 and 5.12.2.

<sup>5</sup> NER clause 5.12.2.

- identifying whether any corrective action is required to address the identified limitations
- taking into account any jurisdictional electricity legislation.<sup>6</sup>

Following the review, the DAPR is to set out information on:

- forecast loads on different parts of the network
- factors that may have an impact on the network
- system limitations for sub transmission lines, zone substations and certain primary distribution feeders including options that may address these limitations
- committed investments to be carried out within the forward planning period with an estimated capital cost within a cost threshold determination that are to address a refurbishment or replacement need or an urgent and unforeseen network issue and alternative options that were considered.<sup>7</sup>

Each DNSP is also required to provide information on their asset management approaches, and certain other matters.<sup>8</sup>

In addition and related to the DAPR, a DNSP is required to develop a demand side engagement strategy for engaging with non-network providers. This is to detail a DNSP's processes and procedures for assessing non-network options as alternatives to network expenditure.<sup>9</sup> As part of this, DNSPs are required to maintain a register of parties interested in being notified of distribution network planning and expansion developments.

### 1.2.3 Regulatory investment tests

The second key aspect of the planning and investment framework is the requirement for network service providers to carry out, subject to some exemptions, a regulatory investment test process to determine the most appropriate solution to a forthcoming network constraint or limitation. A regulatory investment test determines, through a cost benefit assessment, the preferred option (either a network or non-network solution) that maximises the net economic benefits to all those who produce, consume and transport electricity in the national electricity market (NEM). There are two tests: one for transmission projects (RIT-T) and one for distribution projects, the regulatory investment test for distribution (RIT-D). Broadly, the tests are both focussed on projects that are addressing augmentation of the relevant network although some details differ.

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<sup>6</sup> NER clause 5.13.1.

<sup>7</sup> NER clause 5.13.2 and Schedule 5.8.

<sup>8</sup> NER Schedule 5.8.

<sup>9</sup> NER clause 5.13.1(f).

In general, network service providers are only required to undertake a regulatory investment test where:<sup>10</sup>

- the most expensive potential credible option to address a need is more than the specified cost threshold (currently \$6 million for transmission network investments and \$5 million for distribution network investments)<sup>11</sup>
- the investment is not addressing an unforeseen and urgent network issue that would have an effect on reliability
- the investment does not relate to the replacement, maintenance (transmission) or refurbishment (distribution) of existing assets.

Regulatory investment test application guidelines are required to be developed and published by the AER.<sup>12</sup> These guidelines are to provide guidance and worked examples on the use of the regulatory investment tests.

A number of parties, including registered participants, the AEMC, AEMO and connection applicants, are able to raise a dispute in regard to the conclusions set out in the project assessment final report published at the conclusion of a regulatory investment test process.<sup>13</sup>

Figures 1.2 and 1.3 provide an outline of the key events, or milestones, that arise during the application of a RIT-D and RIT-T.

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<sup>10</sup> NER clauses 5.16.3 and 5.17.3.

<sup>11</sup> The capital cost thresholds are set out in clause 5.15.3 of the NER. Every three years the AER must undertake a review of the thresholds and determine whether the current cost thresholds need to be updated to reflect any increase or decrease in input costs. See AER, *Cost threshold review for the regulatory investment test, Final determination*, November 2015.

<sup>12</sup> NER clauses 5.16.2 and 5.17.2. AER, *Regulatory investment test for distribution guidelines*, 23 August 2013 and AER, *Regulatory investment test for transmission guidelines*, June 2010.

<sup>13</sup> NER clauses 5.16.5 and 5.17.5.

**Figure 1.2 RIT-D process milestones**

<b>Screening test notice</b> or <b>Non-network options report</b>	<b>Project assessment draft report</b>	<b>Project assessment final report</b>
Reasons for <b>determination that there is no non-network option</b>	Description of <b>identified need</b> and underlying assumptions	Description of <b>identified need</b> and underlying assumptions
Methodologies and assumptions	Technical characteristics of <b>identified need</b>	Summary of <b>submissions to the non-network options report</b>
	Summary of all <b>credible options</b>	Description of each assessed <b>credible option</b>
	Technical characteristics of each <b>credible option</b>	Market benefit for each <b>credible option</b>
	Construction timetable and commissioning date for each <b>credible option</b>	Breakdown of operating and capital expenditure for each <b>credible option</b>
	Indicative capital and operating costs for each <b>credible option</b>	Methodologies used in quantifying each class of cost and market benefit
	Information to assist non-network providers to submit a <b>non-network proposal</b>	Net present value analysis of each <b>credible option</b>
		Technical characteristics, costs and timetable for <b>preferred option</b>

Source: NER clause 5.17.

**Figure 1.3 RIT-T process milestones**

<b>Project specification consultation report</b>	<b>Project assessment draft report</b>	<b>Project assessment conclusions report</b>
Description of <b>identified need</b> and underlying assumptions	Description of each assessed <b>credible option</b>	Summary of <b>submissions to the project assessment draft report</b>
Technical characteristics of <b>identified need</b>	Summary of <b>submissions to the project specification consultation report</b>	
Description of all <b>credible options</b>	Breakdown of operating and capital expenditure, and material market benefit for each <b>credible option</b>	
Technical characteristics of each <b>credible option</b>	Description of methodologies used in quantifying each class of material <b>market benefit and cost</b>	
Whether each <b>credible option</b> has a material inter-network impact	Net present value analysis of each <b>credible option</b>	
Classes of immaterial network options and justification for each <b>credible option</b>	Identification and technical characteristics of <b>preferred option</b>	
Construction timetable and commissioning date for each <b>credible option</b>	Construction timetable and commissioning date for <b>preferred option</b>	
Indicative capital and operating and maintenance costs for each <b>credible option</b>		

Source: NER clause 5.16.

### 1.3 Rationale for the rule change request

In its rule change request, the AER provided its rationale for the proposed rule. In summary, the AER considered that in the current environment of low electricity demand growth combined with non-network alternatives increasingly providing viable alternatives to network solutions, the electricity network planning frameworks in Chapter 5 of the NER do not provide sufficient transparency on network asset replacement decisions by network service providers.<sup>14</sup>

The AER acknowledged that Chapter 5 of the NER currently requires a network service provider's annual planning report to briefly outline projects that address replacement needs, including options that may address the needs. However, the AER does not consider this information is sufficient. In its view, the annual planning reports should include detailed information on asset retirement and de-rating decisions and, if a network need arises from this decision, promote consideration of viable options, including non-network options to ensure an efficient investment decision.<sup>15</sup>

Broadly, the reason that the AER has proposed to widen the scope of the annual planning reports and the regulatory investment test processes is "to ensure that the Chapter 5 framework adapts to the changing external environment and continues to promote efficient network investment outcomes".<sup>16</sup> The AER noted that:<sup>17</sup>

- there have been significant changes in the NEM and broader energy industry that have spurred on a change in network planning and investment patterns
- technological changes have emerged that have challenged the previous presumption of like-for-like replacement
- there has been stagnation of electricity demand and consumption in the NEM due to increased penetration of solar photovoltaic, energy efficiency and reduced usage in response to rising network costs
- there is now a greater focus on managing existing network assets in comparison to the historical focus on expanding networks.

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<sup>14</sup> AER rule change request, p. 1.

<sup>15</sup> *ibid.* pp. 6 & 12.

<sup>16</sup> *ibid.* p. 1.

<sup>17</sup> *ibid.* p. 5.

The AER noted that AEMO's 2015 NTNDP reported that over the next twenty years, transmission networks will focus on replacement rather than augmentation. The AER also stated that recent transmission and distribution determinations show that replacement expenditure is now a significant part of capital expenditure. In the AER's view, the consequences are expected to be:<sup>18</sup>

- a stronger economic case for the use of non-network solutions as investment in long-life network assets can be deferred until there is a more certain need
- increased uncertainty about the optimal capital investment strategy.

#### **1.4 Solution proposed in the rule change request**

The AER proposed amendments to Chapter 5 of the NER "to mirror the augmentation capital expenditure reporting and planning requirements for replacement capital expenditure".<sup>19</sup>

It has proposed to strengthen the reporting requirements under the annual planning reports and broaden the scope of the RIT-D and RIT-T to include replacement expenditure by removing existing exemptions relating to replacement. The AER considered that these changes are consistent with the purpose of the regulatory investment test, and with the broader network planning framework that promotes efficient investment outcomes.<sup>20</sup>

Specifically, the AER has proposed that Chapter 5 of the NER be amended to:<sup>21</sup>

- introduce new reporting requirements in both transmission and distribution annual planning reports to require network businesses to provide information on planned asset retirement and de-rating decisions and the development of credible options to address network needs arising from these decisions
- introduce a new guideline on replacement capital expenditure which will determine the types of replacement assets captured in the annual planning reports and set out principles that network service providers must follow in deciding whether to retire or de-rate assets
- extend the application of the RIT-T and RIT-D to replacement expenditure, including an exemption framework to exclude like-for-like replacement projects.

The AER also included proposed amendments to clause 5.11.2 of the NER that would explicitly require a network service provider to notify affected registered participants

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18 *ibid.* pp. 6-7.

19 *ibid.* p. 3.

20 *ibid.*

21 *ibid.*

and AEMO of technical limits that will be exceeded as a result of planned asset retirements and de-ratings.<sup>22</sup>

In addition, the AER proposed amendments to the TAPR and RIT-T to mirror provisions introduced to the DAPR and RIT-D in the 2012 distribution network planning and expansion rule. These changes are:<sup>23</sup>

- introducing a RIT-T re-application clause mirroring the re-application clause for the RIT-D
- introducing a clause requiring TNSPs to provide information on their approach to asset management, mirroring current reporting requirements for DNSPs.

Lastly, the AER has also sought to amend an existing requirement in Schedule 5.8(m) of the NER to require DNSPs to provide information on IT and communication systems in their DAPRs.<sup>24</sup>

## 1.5 Relevant background

The transmission planning framework has been in place since the introduction of the NER in 2005. A framework was also part of the National Electricity Code. Many of the components of this current framework originate from the AEMC's reviews on national transmission planning arrangements (completed on 30 June 2008), and a national framework for distribution network planning and expansions (completed on 23 September 2009). The then Ministerial Council on Energy submitted rule change requests seeking to implement recommendations made in those reviews. These resulted in the introduction of a:

- RIT-T framework<sup>25</sup>
- national distribution planning framework that included the creation of the RIT-D and the distribution annual planning arrangements.<sup>26</sup>

The 2008 review also led to the establishment of AEMO as the national transmission planner in the NEM.<sup>27</sup>

The AEMC proposed changes to the transmission planning framework as part of its design and testing of the optional firm access model, a concept that was developed as part of its transmission frameworks review. While the Commission considered that the optional firm access model should not be implemented at that time, it recommended amending the NER to increase transparency regarding the level of coordination of

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<sup>22</sup> *ibid.* p. 1.

<sup>23</sup> *ibid.* p. 3

<sup>24</sup> AER proposed drafting, p. 5.

<sup>25</sup> AEMC, *Rule determination, Regulatory investment test for transmission*, 25 June 2009.

<sup>26</sup> AEMC, *Rule determination, Distribution network planning and expansion framework*, 11 October 2012.

<sup>27</sup> AEMC, *National transmission planning arrangements, final report*, 30 June 2008.

transmission and generation in the NEM. In particular, the Commission recommended extending the application of the RIT-T to relatively major network replacements on key transmission flow paths.<sup>28</sup>

In addition to this final rule determination a number of processes are underway, or have recently concluded, that consider issues related to the current planning and network investment arrangements in the NER. In particular:

- National Electricity Amendment (Local Generation Network Credits) Rule 2016 – this rule requires DNSPs to publish specific information on expected system limitations in accordance with a template specified by the AER.<sup>29</sup>
- National Electricity Amendment (Transmission Connection and Planning Arrangements) Rule 2017 – among other matters, this rule requires TNSPs to provide more detailed information on network constraints and demand. It also tasks the AER with the development of a guideline on the consistency of annual planning reports.<sup>30</sup>
- Contestability of energy services and Contestability of energy services - demand response and network support rule change requests – these two requests, one from the COAG Energy Council and the other from the Australian Energy Council, aim to promote greater contestability for a range of energy services and are under consideration by the AEMC. Relevantly, the Australian Energy Council rule change request includes proposed changes to the RIT-D.<sup>31</sup>
- Alternatives to grid-supplied network services rule change request – this rule change request, submitted by Western Power, is currently under consideration by the AEMC.<sup>32</sup>

In addition, the COAG Energy Council tasked officials to review the effectiveness of the RIT-T in the current market environment, particularly in relation to NEM interconnector investment. The AEMC was part of the working group for this review. The working group published a report on 6 February 2017, which found that the RIT-T was an appropriate mechanism for facilitating new transmission infrastructure that is in the long term interests of consumers.<sup>33</sup>

The COAG Energy Council report also made recommendations to improve existing arrangements including to ensure that: system security and emission reduction goals are adequately considered; low probability but high impact events like the South Australian system black event in September 2016 are appropriately taken into account;

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<sup>28</sup> AEMC, *Optional firm access, design and testing*, final report - volume 1, 9 July 2015.

<sup>29</sup> AEMC, *Rule determination, Local generation network credits*, 8 December 2016.

<sup>30</sup> AEMC, *Rule determination, Transmission connection and planning arrangements*, 23 May 2017.

<sup>31</sup> AEMC, *Contestability of energy services*, Consultation paper, 15 December 2016.

<sup>32</sup> AEMC, *Alternatives to grid supplied network services*, Consultation paper, 14 June 2017.

<sup>33</sup> COAG Energy Council, *Review of the regulatory investment test for transmission*, 6 February 2017.

and information about transmission networks is more accessible to support more effective engagement by non-network providers.<sup>34</sup>

## **1.6 The rule making process**

On 27 October 2016, the Commission published a notice advising of its commencement of the rule making process and consultation in respect of the AER's rule change request. A consultation paper identifying specific issues for consultation was also published. Submissions closed on 24 November 2016.

The Commission received 25 submissions in this first round of consultation. The issues raised in submissions are discussed and responded to throughout this final rule determination. In addition to considering written submissions, AEMC staff invited stakeholders that made a submission to discuss the rule change request. The issues raised in these discussions have also been considered in making this final rule determination.

On 11 April 2017, the Commission published a draft rule determination making a more preferable draft rule.<sup>35</sup> Submissions on the draft rule determination closed on 6 June 2017. The Commission received 21 submissions on the draft rule determination. Issues raised in submissions are discussed and responded to throughout this final rule determination.

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<sup>34</sup> *ibid.*

<sup>35</sup> The draft rule determination was published under s. 99 of the NEL.

## 2 Final rule determination

The Commission's final rule determination is to make a more preferable rule. Consistent with the intent of the AER's proposed rule, the more preferable rule has the effect of:

- including retirement information for all network assets in network service providers' annual planning reports
- including de-rating information for those network asset de-ratings that cause a system limitation or network constraint in network service providers' annual planning reports
- allowing two or more asset retirements or de-ratings to be reported together where the assets, of the same type, are to be retired or de-rated across more than one location in the same calendar year and where the replacement cost of each asset is less than \$200,000
- aligning reporting requirements on network needs and options to address these in a replacement context with those required in an augmentation context for transmission networks
- extending the regulatory investment tests to include replacement capital expenditure
- requiring reporting on the approach to asset management to be included in the transmission annual planning reports
- clarifying that the regulatory investment test for transmission is to be undertaken again where there is a material change in circumstances (however, a network service provider can seek an exemption to undertake the test again from the AER)
- clarifying that distribution annual planning reports will need to include information on investments in information technology and communications systems related to the management of network assets.

Some ancillary changes have also been made in the rule.

The Commission's reasons for making this final rule determination are set out in section 2.4 below.

This chapter outlines:

- the rule making test for changes to the NER
- the more preferable rule test
- the assessment framework for considering the rule change request

- the Commission's reasons for making a more preferable rule against the national electricity objective.

Further information on the legal requirements for making this final rule determination is set out in Appendix A.

## 2.1 Rule making test

### 2.1.1 Achieving the national electricity objective

Under the NEL, the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national electricity objective (NEO).<sup>36</sup> This is the decision making framework that the Commission must apply.

The NEO is:<sup>37</sup>

“to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system.”

The Commission considers that the most relevant aspect of the NEO for the purposes of this rule change request is the efficient investment in and operation of electricity services.

### 2.1.2 Additional rule making tests - Northern Territory

From 1 July 2016 the NER, as amended from time to time, apply in the Northern Territory, subject to derogations set out in Regulations made under the Northern Territory legislation adopting the NEL.<sup>38</sup> Under those Regulations, only certain parts of the NER have been adopted in the Northern Territory.<sup>39</sup> As the proposed rule relates to parts of the NER that currently do not apply in the Northern Territory, the Commission has not assessed the proposed rule against additional elements required by Northern Territory legislation.<sup>40</sup>

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<sup>36</sup> Section 88 of the NEL.

<sup>37</sup> Section 7 of the NEL.

<sup>38</sup> National Electricity (Northern Territory) (National Uniform Legislation) (Modifications) Regulations.

<sup>39</sup> For the version of the NER that applies in the Northern Territory, refer to: [http://www.aemc.gov.au/Energy-Rules/National-electricity-rules/National-Electricity-Rules-\(Northern-Territory\)](http://www.aemc.gov.au/Energy-Rules/National-electricity-rules/National-Electricity-Rules-(Northern-Territory)).

<sup>40</sup> National Electricity (Northern Territory) (National Uniform Legislation) Act 2015.

## 2.2 Making a more preferable rule

Under s. 91A of the NEL, the Commission may make a rule that is different (including materially different) to a proposed rule (a more preferable rule) if it is satisfied that, having regard to the issue or issues raised in the rule change request, the more preferable rule will or is likely to better contribute to the achievement of the NEO.

In this instance, the Commission has made a rule which is a more preferable rule. This rule requires reporting on all network asset retirements, and reporting on de-ratings of network assets that cause network limitations or constraints (individually or in groups for asset retirement or de-rating programs across a service provider's network), both of which are to be included in network service providers' annual planning reports. This approach removes the need for the AER's proposed guideline on asset retirement and de-ratings.

The rule also extends the regulatory investment tests to include replacement capital expenditure, while clarifying that maintenance is exempt from both the RIT-T and the RIT-D.

While the Commission's rule is a more preferable rule it incorporates many of the elements proposed by the AER. The key difference between the rule and the proposed rule is the approach taken to achieve the desired outcomes.

Section 2.4 below sets out a summary of reasons for the rule and differences to the approach taken between the more preferable rule, the draft rule and the AER's proposed rule. It also sets out how the rule will, or is likely to, better achieve the NEO than the proposed rule.

## 2.3 Assessment framework

As required, the AER's rule change request has been assessed against the NEO. The most relevant aspect of the NEO for the purpose of this rule change request is the efficient investment in, use, and operation of electricity services – namely the electricity transmission and distribution networks in the NEM. In particular, the Commission has considered the following:

- **Transparency.** Whether sufficient and relevant information about a network is available to enable non-network providers to engage with network service providers and propose feasible and credible alternatives to address network needs. In addition, information about a network may assist connection applicants make more efficient decisions about where and when to connect. Publicly available information regarding the investment plans for a network may also assist the AER in making its regulatory decisions and stakeholders to engage in regulatory processes. Information provision may therefore lead to more efficient network investment decisions which may lead to lower electricity prices for consumers.

- **Technology neutrality.** If the NER is sufficiently flexible to adapt to changes in technology over time and not stifle innovation and investment it will allow the widest range of potential options to address a network need to be considered, and therefore lower costs to consumers.
- **Regulatory and administrative burden.** The administrative costs of any new regulatory requirements should not outweigh the benefits that may emerge from the application of those requirements.
- **Clarity and certainty.** Whether the requirements of the NER are clear and certain, enabling network service providers to understand and comply with their obligations. In addition, whether the requirements support consistent network planning processes and provide certainty for the process for network investment into the future.

The Commission has also considered the overall purpose of the planning and investment framework currently set out in the NER as well as its relationship with the incentive-based economic regulatory framework applied to electricity networks.

## 2.4 Summary of reasons

The more preferable rule made by the Commission is published with this final rule determination. The key features are set out below and in Chapters 4 to 7 of this final rule determination.

In making the rule, the Commission has considered the overall purpose of the current framework of annual planning reports and regulatory investment tests. As stated in the AEMC's determination on distribution planning and expansions, the framework (for both transmission and distribution):<sup>41</sup>

- creates incentives for network service providers to consider potential non-network solutions to network constraints or limitations
- establishes clearly defined planning and decision-making processes to assist network service providers in identifying the solutions to network issues in a timely manner
- provides transparency on network planning activities to assist non-network providers to put forward non-network options as credible alternatives to network investment and assist network users to make decisions about where best to connect to the network.

These points encompass the primary purpose of the framework: to support the planning of and decisions on investment in the network and use of the network. Its purpose is not to regulate or direct which plans or decisions should be made, nor to

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<sup>41</sup> AEMC, *Rule determination, Distribution network planning and expansion framework*, 11 October 2012, pp. i and iv-v.

determine what investment costs should be recoverable from regulated prices and revenues.

However, it does accompany an incentive-based economic regulatory framework. In this context, the planning information and investment decision-making process is likely to provide opportunities for the AER and other stakeholders to be more fully informed on the efficiency of investment decisions. This in turn is likely to assist the AER in making network service provider revenue determinations. It is also likely to assist stakeholders to engage in revenue determination processes. As acknowledged in the distribution planning and expansions rule determination, these outcomes are also benefits of the planning and investment framework.<sup>42</sup>

It should be noted that the AER is not dependent on the planning and investment framework to obtain information on the activities and decisions of network service providers. The NEL provides extensive information gathering powers to the AER in the form of regulatory information notices and regulatory information orders.<sup>43</sup> These are the appropriate instruments for the AER to obtain information it requires for making revenue determinations for network service providers.

Having regard to the issues raised in the rule change request and during consultation, the Commission is satisfied that the more preferable rule will, or is likely to, better contribute to the achievement of the NEO. In the context of the planning framework, this is because the rule is likely to:

- Improve transparency regarding retirement and de-rating planning decisions made by network service providers:
  - The rule specifies that information on all planned retirements in distribution and transmission networks is to be included in the annual planning reports. In addition, information on planned de-ratings that result in a system limitation or constraint on a network are to be included. This information is broader than that proposed by the AER. The effect of the rule would be to have a similar level of information available for retirements and certain de-ratings as is currently available in the context of load that drives a need for augmentation of an electricity network. As a result, the rule provides a greater level of transparency than the proposed rule.
  - The greater transparency regarding retirements and de-ratings including the reasons, methodologies and assumptions used in making these decisions (while considering factors such the condition of network assets) is expected to be used by non-network providers in engaging with network service providers and the consideration of their own investment opportunities in the electricity networks. Second to this, the information

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<sup>42</sup> AEMC, *Rule determination, Distribution network planning and expansion framework*, 11 October 2012, pp. 37 & 39.

<sup>43</sup> See Part 3, Division 4 of the NEL.

may also assist the AER in its regulatory decision-making processes such as making revenue determinations. Greater transparency of network planning information may also assist stakeholders in engaging in network and regulatory processes.

- Improve transparency regarding replacement investments considered by network service providers:
  - Under the rule the distribution and transmission regulatory investment tests will apply to replacement decisions as well as in the context of augmentation of a network. The rule includes a broader set of replacement decisions than proposed by the AER. This has the effect of applying a transparent, consultative decision-making process to many network service providers' considerations of replacing network assets. This provides a consistent framework for non-network providers and network users to be informed on and engage in decisions regarding all significant investment in networks. It is anticipated that as a result of the process and the greater involvement of non-network providers and network users, more efficient network investment decisions can be made.
  - Application of the regulatory investment test to decisions on the replacement of network assets may also provide relevant information to the AER for consideration in the context of making a revenue determination for an electricity network.
- Be technology neutral:
  - Consistent with the current provisions of the NER, the rule does not specify any particular technological requirements for potential investment projects. The planning reports and, particularly, the regulatory investment test have been established to consider all relevant network and non-network solutions that may be used to address any constraints or limitations arising in electricity networks.
  - The greater transparency regarding retirements and de-ratings may encourage increased engagement from non-network providers which may increase the range of investment options considered by network service providers. This may lead to more efficient network investment decisions which will result in lower prices for consumers.
- Minimise the regulatory burden for network service providers, the AER and stakeholders:
  - The rule does not include the proposed rule's feature of an exemption process, and publication of a new exemption report, for "like-for-like" replacements within the regulatory investment test framework. The Commission considers that as a result, the rule should be easier to administer and make it less burdensome for stakeholders to engage with. The rule extends the current regulatory test framework in the NER to all

potential replacement investments over a capital cost threshold (currently \$5 million for distribution network investments and \$6 million for transmission network investments) – there is no additional exemption process to apply to some investments. Network service providers will use the same process for all replacement investments without having to identify which investments would meet the criteria for the exemption process. As a result, the rule is likely to better contribute to the achievement of the NEO than the proposed rule.

- The proposed rule included requirements that the AER would develop a guideline that would set out the assets a network service provider must report on in its annual planning report and the principles that network service providers should follow when making retirement and de-rating decisions. The rule does not include this guideline. As a result, the Commission considers that the rule has a smaller regulatory burden than the proposed rule because the regulatory and administrative processes required to create, maintain and comply with an up-to-date guideline on retirement and de-rating decisions will not be required. The Commission is satisfied that the current incentive framework under which regulated electricity service providers operate is sufficient to achieve an outcome where consumers only pay for investments arising from efficient retirement and de-rating decisions.
- Provide clarity and certainty for network planning and investment processes:
  - In making the rule, the Commission has sought to apply the current NER provisions that apply to augmentation investments to replacements. This has been done to the extent possible in preference to inserting new and specific provisions as in the proposed rule. The Commission anticipates this approach will assist in providing clarity as the current provisions for annual planning reports and regulatory investment tests will apply equally to all potential augmentation and replacement capital investments.
  - The rule requires network service providers to report on all planned asset retirements, and all de-ratings that result in a constraint or limitation. This provides more clarity and certainty for stakeholders than the proposed rule which would have required the AER to develop a guideline to set out which asset types should be reported on in a replacement context. This attribute of the rule should assist network service providers in making decisions and establishing relevant business processes that will enable them to comply with the NER with greater certainty over time than under the proposed rule. This approach to the rule is expected to contribute better to the achievement of the NEO than the proposed rule.

## Differences between the draft rule and the final rule

The Commission considers that the more preferable final rule is likely to better contribute to the achievement of the NEO than the draft rule for the following reasons:

- In the draft rule, the value of the replacement cost threshold, below which network service providers are able to group assets together that are to be retired or de-rated across multiple locations in the same calendar year for the purpose of reporting, was \$100,000. The final rule has increased this threshold to \$200,000 as this will provide a better balance between the value of reporting information and managing the regulatory burden. Assets valued above \$200,000 will be reported on an individual basis. This captures assets that may be more likely to be replaced with a non-network alternative, which will make it easier for stakeholders to find the relevant information.<sup>44</sup> The final rule also provides for this threshold to be updated to reflect changes in the costs of assets over time. Some drafting amendments have also been made to the annual planning reporting requirements in the final rule to make the information reporting requirements clearer.<sup>45</sup>
- The final rule provides additional clarity and certainty in relation to the roles and responsibilities for the new annual planning reporting requirements and the RIT-T for replacement projects in the declared transmission system in Victoria.
- The regulatory investment test for replacement expenditure will start to apply to projects earlier than the process set out in the draft rule determination. This means that the benefits of the new requirements will start to accrue earlier. At the same time, the final rule continues to allow sufficient time for network service providers to accommodate the extension of the regulatory investment tests to replacement expenditure as a result of the rule. The rule achieves this by exempting replacement projects that are committed to by 30 January 2018 from the regulatory investment test processes. It also exempts replacement projects undertaken by Victorian DNSPs to comply with parts of the Electricity Safety (Bushfire Mitigation) Regulations 2013 (Vic).

## 2.5 Strategic priority

This final rule determination relates to the AEMC's strategic priority to encourage efficient investment and flexibility in markets and networks. More specifically, the purpose of this strategic priority is to allow transmission and distribution networks to evolve to accommodate changes, such as those driven by technology and consumers, while still being able to operate and invest in the infrastructure and services required. The rule is expected to improve the information and processes relevant to network planning and investment activities. These amended processes should support efficient

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<sup>44</sup> Information on the replacement costs of different asset types provided in stakeholder submissions indicates that assets below a replacement cost threshold of \$200,000 have less potential to be replaced with a non-network solution than those above this replacement cost threshold.

<sup>45</sup> These issues are discussed in more detail in section 4.3 of this final rule determination.

network investment in the future and contribute to consumers paying no more than necessary for their electricity services.

### 3 The changing electricity environment

This chapter discusses the AER's views on the changing electricity environment and the consequent need to make amendments to the NER that include strengthening reporting requirements and extending the regulatory investment test processes to replacement expenditure.

#### 3.1 AER's view

The AER regarded the annual planning reports and the regulatory investment test processes as providing a continuum of information to interested parties on planned distribution and transmission network investment. Moreover, it considered the regular updating of network plans assists the effectiveness of the regulatory determination process for network service providers, stakeholders and the AER. According to the AER, another key purpose of the planning framework is to facilitate meaningful engagement between network service providers and a range of interested parties, which assists in achieving efficient investment decisions and planning outcomes.<sup>46</sup>

However, the AER considered the current framework focuses on augmentation, or demand driven, capital expenditure.<sup>47</sup> It stated that current annual planning reporting information requirements on replacement capital expenditure are minimal compared to augmentation information requirements and that replacement capital expenditure is specifically excluded from the RIT-T and RIT-D.<sup>48</sup> In addition the AER submitted that historically, it has been considered that to require a network service provider to undertake a regulatory investment test in these circumstances would result in an unnecessary regulatory burden.<sup>49</sup> The AER also considered that viable alternatives to like-for-like replacement were unlikely and so the planning processes would not yield more efficient options or outcomes.<sup>50</sup>

In the AER's view, the environment in which network service providers now operate is significantly different since the introduction of the transmission and distribution network planning frameworks.<sup>51</sup> As a result, for the network planning framework to continue to promote efficient network development the AER argued that it must be amended to provide an increased focus on replacement expenditure.<sup>52</sup>

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<sup>46</sup> AER rule change request, p. 4.

<sup>47</sup> *ibid.* p. 11.

<sup>48</sup> *ibid.* p. 10.

<sup>49</sup> *ibid.*

<sup>50</sup> *ibid.*

<sup>51</sup> *ibid.*

<sup>52</sup> *ibid.* p. 5.

In particular, the AER noted the following changes in the environment:<sup>53</sup>

- electricity demand and consumption in the NEM has stagnated, and in some cases fallen (although there may be pockets in a network where demand is growing)
- AEMO's 2015 NTNDP forecasts transmission networks will focus on replacement capital expenditure rather than augmentation expenditure in the future
- recent transmission and distribution revenue determination processes have highlighted that replacement capital expenditure is becoming a greater proportion of total capital expenditure
- more viable alternatives to like-for-like replacement expenditure are emerging as the value of deferring major network investment increases in a climate of flat demand
- there is the potential for greater technological changes to impact on the operation of electricity networks in the future as new technologies become more cost effective and accessible.

## 3.2 Stakeholder views

### 3.2.1 First round submissions

The Energy Networks Australia (ENA) stated that it generally agreed with the AER on the changes in the external environment that had been identified in the rule change request. It expressed support for the intent of increasing the transparency of network asset replacement planning. However, the ENA did note that a balance was required between additional regulatory burden and the assessment of investments.<sup>54</sup>

The Energy Consumers Australia (ECA) and Consumer Utilities Advocacy Centre (CUAC) also stated that they generally agreed with the AER's characterisation of the current environment. Consequently, they also agreed with the need to 'update' the requirements on network service providers in relation to replacement of network assets.<sup>55</sup>

On the changing environment, Energex commented:<sup>56</sup>

*"... the operating environment is dynamic, with energy usage patterns shifting due to changes in customers' responses to economic pressures, rising electricity prices, energy efficiency initiatives and the continued rapid deployment of distributed generation."*

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53 *ibid.* pp. 5-7.

54 ENA, first round submission, p. 3.

55 First round submissions: ECA, p. 3; CUAC, p. 2.

56 Energex, first round submission, p. 4.

In response to the AER's view that replacement expenditure has become relatively more important for network service providers, a number of stakeholders made comments.

AEMO commented that its analysis indicates that replacement expenditure accounts for an increasing share of overall network capital expenditure as electricity demand has slowed. In its view, relatively low levels of augmentation capital expenditure are likely to continue into the future. In particular:<sup>57</sup>

“Where augmentation is required, it is likely to be to reinforce specific regional requirements driven by changing location of generation and changing patterns of demand. Overall growth predictions are low, suggesting that when augmentation is required in one area this is offset by lower network requirements in other areas.”

Other stakeholders also agreed with the premise of the AER's rule change request. For example, AGL stated:<sup>58</sup>

“As network capital expenditure is increasingly related to the replacement or refurbishment of aging infrastructure, it is important that non-network solutions are assessed alongside network options when such expenditure decisions are being made.”

Red Energy and Lumo commented that energy storage and distributed generation are becoming more cost competitive to network augmentations and so should also be considered in the context of replacement capital expenditure.<sup>59</sup>

Some stakeholders also responded to AER's view that non-network options are becoming more viable as alternatives to network solutions to asset replacement scenarios. The Energy Users Association of Australia (EUAA) commented that:<sup>60</sup>

“The combination of changes in technology availability and cost and changes in demand patterns across the networks mean that non-network solutions are increasingly viable alternatives for both network replacement and augmentation.”

AGL considered that non-network alternatives may be more viable for replacement than augmentation. It submitted that established customers on a part of the network that is being replaced can be engaged in the design and delivery of a non-network solution.<sup>61</sup>

Similarly, EnerNOC noted that non-network options can be as relevant to a network asset replacement context as an augmentation context because "the fundamental

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57 AEMO, first round submission, p. 1.

58 AGL, first round submission, p. 2.

59 Red Energy and Lumo, first round submission, p. 1.

60 EUAA, first round submission, p. 3.

61 AGL, first round submission, p. 1.

principle" is the same although it noted some assets (such as switching relays) are unlikely to be addressed with non-network solutions.<sup>62</sup> RES Australia (RES) and the Total Environment Centre (TEC) also considered that non-network solutions were suited to replacing particular categories of assets.<sup>63</sup>

Network service providers were more cautious on the potential of non-network options. CitiPower and Powercor stated that they did not consider that non-network alternatives were viable for the vast majority of assets.<sup>64</sup> Similarly, Energex commented that the potential for non-network solutions to be viable alternatives for like-for-like replacements "will generally be restricted to higher voltage assets".<sup>65</sup> SA Power Networks submitted that replacements generally have shorter planning timeframes and involve more individual and low cost works with no alternatives to like-for-like replacement. AEMO noted that in some ageing network assets are deeply embedded within the network, and there would be no viable alternative to replacing these assets on a like-for-like basis. Ergon and Jemena similarly commented that the potential for non-network solutions was limited.<sup>66</sup>

### **3.2.2 Second round submissions**

Stakeholders generally supported the objective of the draft rule.<sup>67</sup>

## **3.3 Analysis and conclusion**

Three key points were made by the AER in regard to the environment in which the electricity network service providers are operating. First, that electricity demand growth has flattened across much of the NEM. This is illustrated by the figure below which provides a long term view of electricity consumption growth for the NEM. This long term view is consistent with data, as noted by the AER, from network service providers.<sup>68</sup>

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<sup>62</sup> EnerNOC, first round submission, p. 2.

<sup>63</sup> RES, first round submission, p. 2.

<sup>64</sup> CitiPower and Powercor, first round submission, p. 1.

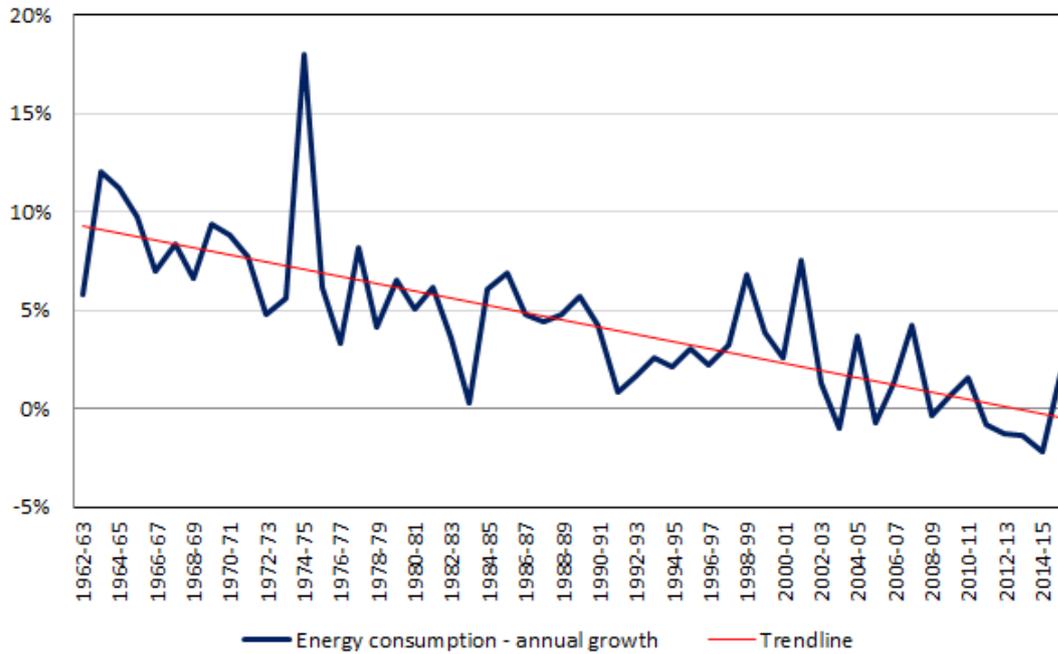
<sup>65</sup> Energex, first round submission, p. 4.

<sup>66</sup> First round submissions: SA Power Networks, p. 3; AEMO, p. 3; Ergon, p. 4; Jemena, p. 3.

<sup>67</sup> Second round submissions: Ausgrid, p. 1; AGL, p. 1; Endeavour, p. 1; Jemena, p. 1; Energex and Ergon, p. 1; AusNet Services, p. 1; EUAA, p. 1; PIAC, p. 1; CEC, pp. 1-3; ENA, p. 1; AEC, pp. 1-2; MEU, pp. 1-2 & 4. AER, p. 1.

<sup>68</sup> AER rule change request, p. 6.

**Figure 3.1 NEM annual energy consumption growth rate, 1960-61 to 2014-15**

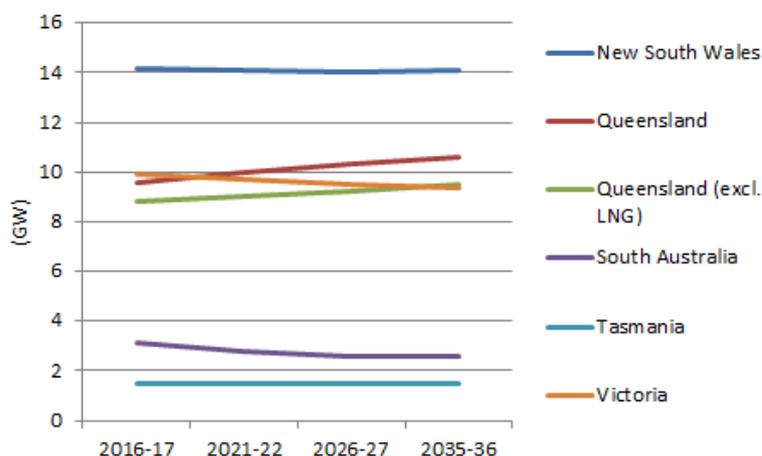


Source: AEMC analysis of data from Office of the Chief Economist, Department of Industry, Innovation and Science, *2016 Australian energy statistics update*, October 2016.

Information on forecast demand for the NEM is included in AEMO's national electricity forecasting report. The 2016 report included data on maximum demand for summer and winter from 2016-2017 to 2035-2036.<sup>69</sup> An analysis of this information is set out in Figure 3.2 and Figure 3.3. In summer, the forecast is that the demand in most jurisdictions will be flat. Only Queensland is expected to experience some demand growth over the forecasting period. While winter electricity demand is forecast to grow in New South Wales, Victoria and Queensland, it is expected to remain flat for Tasmania and South Australia.

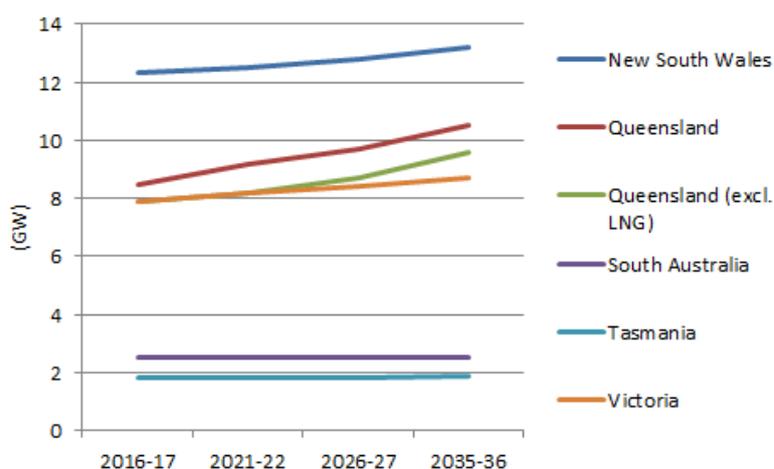
<sup>69</sup> AEMO, *National electricity forecasting report for the national electricity market*, June 2016, p. 6.

**Figure 3.2 Forecast summer maximum demand by state**



Source: AEMC analysis of data from AEMO, *National electricity forecasting report for the national electricity market*, June 2016, p. 6.

**Figure 3.3 Forecast winter maximum demand by state**



Source: AEMC analysis of data from AEMO, *National electricity forecasting report for the national electricity market*, June 2016, p. 6.

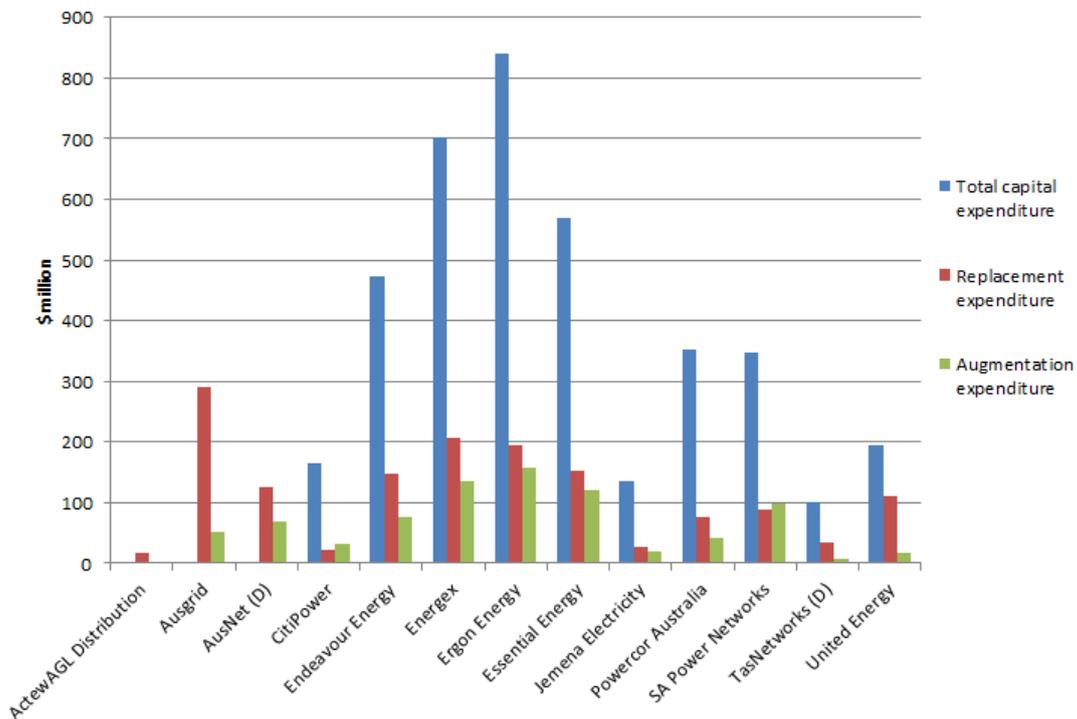
The second point made by the AER in regard to the current and expected environment was that replacement capital expenditure has been a growing proportion of total capital expenditure.<sup>70</sup> The AEMC has considered network service provider capital expenditure data. This data, as illustrated in Figures 3.4 to 3.7 below, is consistent with the AER's conclusion: replacement capital expenditure is a more significant, and increasing, proportion of total capital expenditure compared to augmentation capital expenditure.

Figures 3.4 and 3.5 sets out capital expenditure by type in 2015 for each network service provider. Figures 3.6 and 3.7 sets out capital expenditure by type over time for

<sup>70</sup> AER rule change request, p. 6.

two network service providers as examples (one DNSP and one TNSP). The Commission has observed a similar pattern of an increasing amount of replacement expenditure over time compared to the amount of augmentation expenditure across all network service providers.

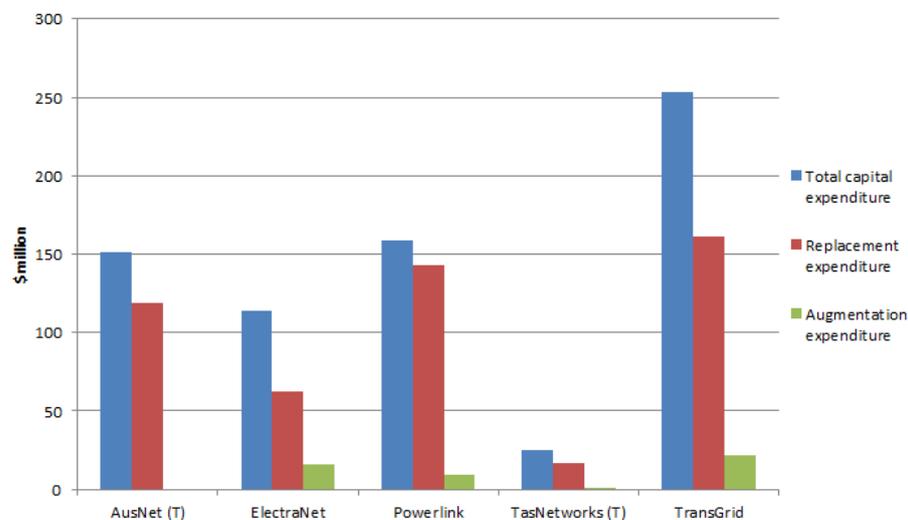
**Figure 3.4 DNSP capital expenditure breakdown, 2015**



Note: Total capital expenditure is not the sum of network replacement and augmentation expenditure as it includes non-network capital expenditure such as expenditure on buildings.

Source: AEMC analysis of AER data compiled from DNSP responses to regulatory information notices.

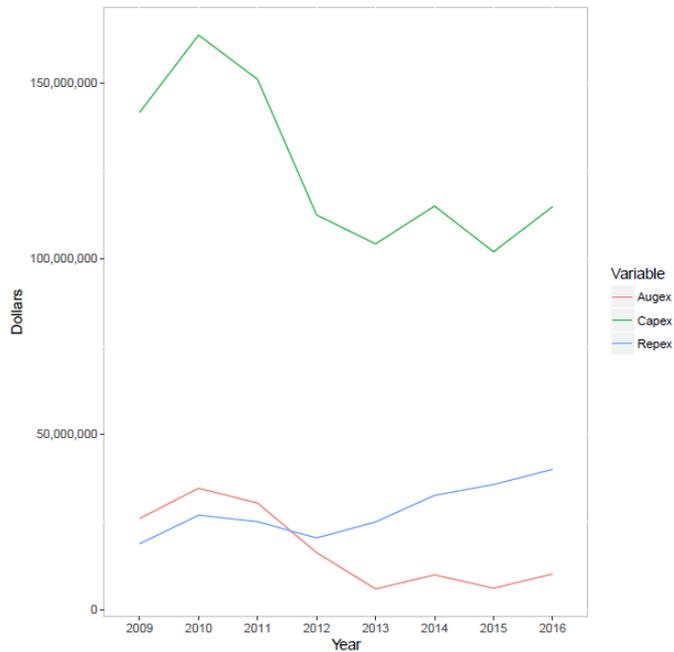
**Figure 3.5 TNSP capital expenditure breakdown, 2015**



Note: Total capital expenditure is not the sum of network replacement and augmentation expenditure as it includes non-network capital expenditure such as expenditure on buildings.

Source: AEMC analysis of AER data compiled from TNSP responses to regulatory information notices.

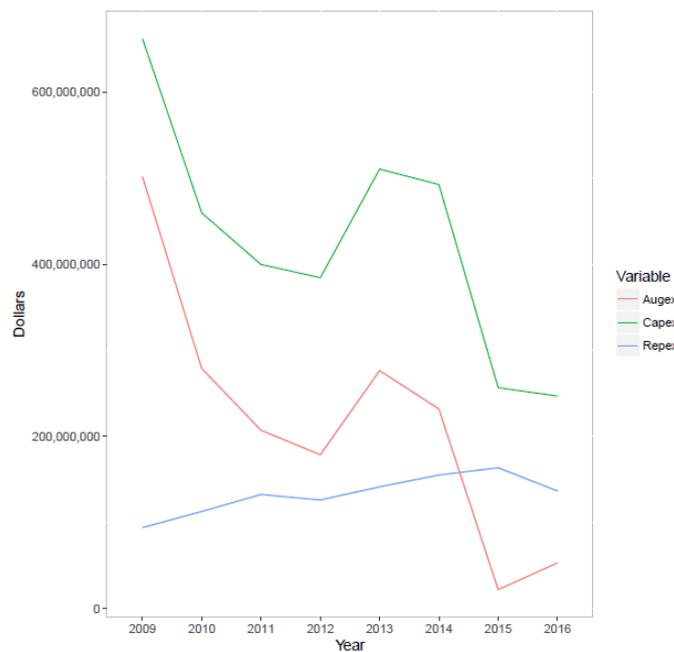
**Figure 3.6 TasNetworks's distribution network capital expenditure breakdown, 2009 to 2016**



Note: Total capital expenditure is not the sum of network replacement and augmentation expenditure as it includes non-network capital expenditure such as expenditure on buildings.

Source: AEMC analysis of AER data compiled from TNSP responses to regulatory information notices.

**Figure 3.7 TransGrid's capital expenditure breakdown, 2009 to 2016**



Note: Total capital expenditure is not the sum of network replacement and augmentation expenditure as it includes non-network capital expenditure such as expenditure on buildings.

Source: AEMC analysis of AER data compiled from TNSP responses to regulatory information notices.

As demand growth stagnates and network service providers focus more on the management of the existing electricity networks rather than growth, it is likely that replacement expenditure will continue to form a larger proportion of capital expenditure than it has in the past. In addition, as submitted by the AER, in a low electricity grid demand growth environment there is likely to be a stronger economic case for non-network solutions. This is because investment in long lived assets can be deferred until there is a more certain need, reducing the risk of stranded assets.

In addition, the technological shifts that have enabled recent improvements in the feasibility of non-network replacement options are also likely to continue.

The third point that the AER made is that technological changes are challenging the previous presumption of like-for-like replacement. The Commission considers there may be alternatives to replacing network assets with a like-for-like replacement. This may take the form of:

- non-network alternatives such as batteries, embedded generators and demand management alone
- non-network alternatives combined with a network option (a hybrid solution), or
- a more efficient network configuration.

However, there may still be some instances where the only option is to replace the asset with the same asset or a modern day equivalent. This is more likely to be the case where assets are deeply embedded within a network or operational equipment such as switchgear.

As the cost of storage and embedded generation declines and the penetration of these technologies increases, non-network and hybrid network and non-network solutions may become more cost effective alternatives to network capital investment.

In light of the environment in which the electricity networks are currently and likely to be operating under, the limited planning information available on retirements and de-ratings of network assets as well the exclusion of replacement projects from the regulatory investment test processes do appear to be gaps in the regulatory framework that should be addressed.

## 4 Annual reporting requirements

This chapter considers the AER's proposal to expand the annual planning reporting requirements for replacement expenditure and stakeholder views on this proposal.

### 4.1 AER's view

The AER considered that the NER does not currently require a network service provider to provide a sufficient level of information in its annual planning report on network replacement expenditure.<sup>71</sup> In addition, it submitted that annual planning reporting requirements for network replacement expenditure are minimal compared to those for augmentation expenditure.<sup>72</sup>

To address this problem, the AER proposed amendments to the NER to require a network service provider to provide information on planned asset retirements and de-ratings in its annual planning report. In particular:

- a brief description of the asset, including location, being retired or de-rated
- a detailed summary of the justification for the asset to be retired or de-rated
- the date from which the asset will be retired or de-rated and an explanation of why this has changed from the previous annual planning report (if relevant).<sup>73</sup>

In addition, the AER proposed that the NER require network service providers to provide information on options to address any network needs arising from these retirements and de-ratings. In particular:

- an overview of the identified need
- the proposed solution to address the need, including the cost of this solution
- other options which have been considered by a network service provider to address the need and the cost of these options
- the technical characteristics a non-network option would be required to deliver to partially or fully address the identified need
- when the network service provider intends to commence a RIT consultation process if this is required to be undertaken
- whether the proposed solution selected from the options will have a material inter-network impact (transmission only).<sup>74</sup>

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<sup>71</sup> An outline of the current annual planning report requirements in the NER are set out in section 1.2.2.

<sup>72</sup> AER rule change request, pp. 10-11.

<sup>73</sup> *ibid*, p. 13 and Attachment pp. 2-4.

The AER considered that the reporting of this information would promote efficient network investment by, for example, assisting non-network providers to identify efficient network investment opportunities, assisting connection applicants determining the most efficient connection location and assisting the AER to assess network service providers' revenue proposals as part of their revenue determination processes.<sup>75</sup>

While the AER considered there should be more reporting of replacement planning decisions, it submitted there are some assets which can only be replaced on a like-for-like basis. The AER proposed that these assets be excluded from the reporting requirements because there would be limited benefit in reporting on them. The AER therefore proposed that the NER require it to develop a guideline setting out the types of assets network service providers are to report on.<sup>76</sup>

To achieve this, the NER would set out some principles that the AER would be required to follow in developing the guideline.<sup>77</sup> Among other matters, the AER would be required to consider:

- whether a type of network asset is likely to be retired individually or part of a broader asset replacement program
- the ability of a network service provider to provide the information and whether the costs of providing the information outweigh the benefits of the information being reported on in the annual planning reports
- whether there are likely to be alternatives to like-for-like replacement.<sup>78</sup>

In addition, so that asset retirement decisions reflect prudent and efficient replacement expenditure, the guideline would set out principles and a broad approach that network service providers would be required to follow when planning the retirement or de-rating of network assets.<sup>79</sup> The AER would develop and update the guideline in accordance with the transmission and distribution consultation procedures in the NER.<sup>80</sup>

The AER submitted that its proposed reporting requirements would not result in an onerous burden for network service providers.<sup>81</sup> It noted that information on asset retirement and de-rating decisions is already provided to the AER as part of the revenue determination processes.<sup>82</sup> In addition, it submitted that requiring reports on

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74 *ibid.*, p. 13 and Attachment pp. 3-4.

75 *ibid.*, pp. 14-15.

76 AER rule change request, pp. 15-16.

77 *ibid.*

78 *ibid.*

79 *ibid.* p. 16.

80 *ibid.* p. 15.

81 *ibid.* p. 14.

82 *ibid.*

a sub-set of assets as specified in the AER's guideline would reduce the regulatory burden.<sup>83</sup>

## 4.2 Stakeholder views

### 4.2.1 First round submissions

#### *Gaps in the reporting requirements*

Network service providers generally considered the existing annual reporting requirements for replacement expenditure are sufficient. They noted existing information that is publicly available, including the network opportunity maps developed by the Institute of Sustainable Futures.<sup>84</sup> However, TransGrid submitted there is room to provide more information to the market in relation to network asset replacements.<sup>85</sup> Similarly, Jemena considered forecasts of future network capacity changes in the DAPR could provide useful information for non-network providers.<sup>86</sup>

Non-network providers, retailers and consumer groups generally considered that there are information gaps in the NER relating to replacement expenditure and that these should be filled.<sup>87</sup>

Specifically, RES submitted that the following information would assist efficient market engagement and appraisal of non-network options:

- capacity shortfall if the existing asset is retired or de-rated (under system normal and contingency conditions for a defined peak demand forecast)
- indicative costs of network options that have been considered
- description of the network topology
- whether a non-network option would need to supply an islanded system under system normal or contingency conditions
- timing requirements.

EnerNOC noted the AER's proposal to include information on the technical characteristics a non-network solution would be required to provide to address a network need is critical for non-network service providers.<sup>88</sup>

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<sup>83</sup> *ibid.* pp. 14-15.

<sup>84</sup> First round submissions: Ausgrid, pp. 5-6; ENA, pp. 10-11; CitiPower and Powercor, pp. 1-2; Ergon, p. 6; Energex, p. 6.

<sup>85</sup> TransGrid, first round submission, p. 3.

<sup>86</sup> Jemena, first round submission, Attachment 1, p. 1.

<sup>87</sup> First round submissions: AGL, pp. 4-5; EnerNOC, pp. 2-3; EUAA, pp. 3-4; AEC, pp. 2-3; RES, p. 2.

<sup>88</sup> EnerNOC, first round submission, p. 3.

AEMO also considered the information required by the NER on replacement expenditure is currently insufficient.<sup>89</sup> It stated that network service providers have interpreted their obligations in a range of different ways. As a result, the information published often lacks the practical details required in order for commercial parties to seriously pursue non-network options.<sup>90</sup> In addition, AEMO suggested the following information be required to be reported in the annual planning reports:

- a forecast demand trace or summary statistics such as a duration curve that sets out the expected frequency and duration of system limitations
- required response times.<sup>91</sup>

*Additional information in the annual planning reports*

As set out above, the AER proposed that the following information be included in annual planning reports:

- planned asset retirements and de-ratings
- options to address any network needs that arise from retirements or de-ratings.

In general, network service providers did not support the AER's proposed reporting requirements. The reasons given included: the information is already reported; the current reporting of information is sufficient; and the proposed information would be of limited value.

More specifically, some network service providers noted they are not able to define exact quantities or locations of all asset retirements and de-ratings at the start of each year and that providing this information in the annual planning reports could mislead stakeholders.<sup>92</sup>

In addition, network service providers considered that the definition of “de-rating” needs to be clarified.<sup>93</sup> Ausgrid submitted it should not extend to “reactionary de-ratings” which are made in response to equipment suffering damage or where routine testing indicates that the equipment is not performing to its design specifications.<sup>94</sup> TransGrid submitted that the de-rating of an asset is generally not planned but could be reported after the event has occurred.<sup>95</sup> Ergon and Energex considered incremental planned de-ratings should not be reported on as rating changes are an ongoing operational function of a network.<sup>96</sup> Jemena considered it appropriate

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<sup>89</sup> AEMO, first round submission, pp. 3-5.

<sup>90</sup> *ibid.*

<sup>91</sup> *ibid.*

<sup>92</sup> First round submissions: SA Power Networks, p. 4; Ergon, p. 8.

<sup>93</sup> First round submissions: Ausgrid, p. 8; ENA, p. 11.

<sup>94</sup> Ausgrid, p. 8.

<sup>95</sup> TransGrid, first round submission, p. 3.

<sup>96</sup> First round submissions, Ergon, p. 9; Energex, p. 10.

that the reporting requirements extend to asset de-ratings but that the NER already requires this information to be reported.<sup>97</sup>

Non-network providers, retailers, consumer groups and AEMO supported the reporting requirements proposed by the AER.<sup>98</sup> RES submitted that de-ratings may be reported retrospectively if undertaken as a result of emergency risk mitigation.<sup>99</sup>

*What level of reporting should be required for replacement expenditure*

A number of network service providers considered that reporting on retirements and de-ratings and options to address any need arising from these should be limited to high value assets. Alternatively, reporting should be limited to those that have the greatest potential to be replaced with non-network solutions such as high voltage transformers and sub transmission lines.<sup>100</sup>

Of those that considered reporting should be limited to high value assets, Ergon put forward a cost threshold similar to that in Schedule 5.8(g) of the NER (\$2 million). SA Power Networks suggested a threshold of \$5 million.<sup>101</sup> Alternatively, CitiPower and Powercor recommended a cost threshold of \$5 million and where there is viable possibility of efficient non-network alternatives. It submitted that defining asset types that can only be replaced on a like-for-like basis is difficult as the assets may change over time.<sup>102</sup>

Network service providers that considered reporting should be limited to assets that have the greatest potential to be replaced with a non-network alternative also submitted there are no alternatives to assets such as protection and communication systems, poles, switchgear, fire systems, IT assets and buildings. They considered there are no benefits in reporting on these assets and these asset types should be excluded from any new obligations.<sup>103</sup>

In contrast, AEMO considered single site-specific projects relating to primary network assets (substations and lines) should be reported in the annual planning reports. This is because such work comprises over 60 per cent of the total cost of TNSPs' proposed replacement and renewal programs. The remaining 40 per cent relates to programs of work occurring over multiple sites.<sup>104</sup>

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97 Jemena, first round submission, Attachment 1, p. 2.

98 First round submissions: AGL, p. 5; AEMO, p. 5; EnerNOC, pp. 3-4; EUAA, p. 4; RES, p. 3.

99 RES, first round submission, p. 3.

100 First round submissions: ENA, p. 11; Ausgrid, p. 8; Energex, p. 10; Ergon, p. 9; CitiPower and Powercor, p. 3; Jemena, Attachment 1, p. 3; SA Power Networks, p. 3.

101 First round submissions: Ergon, p. 9; SA Power Networks, p. 3.

102 CitiPower and Powercor, first round submission, p. 3.

103 First round submissions: ENA, p. 11; Ausgrid, p. 8; Jemena, Attachment 1, p. 3.

104 AEMO, first round submission, p. 5.

Non-network providers, retailers and consumer groups generally considered there should be fewer limitations to the reporting requirements.<sup>105</sup> The EUAA considered all assets should be reported on.<sup>106</sup> AGL noted there may be some asset replacements for which a non-network solution is unlikely to be a potential substitute, such as protection equipment and switchgear. It commented that it may be appropriate that reporting on these assets could be less detailed.<sup>107</sup>

RES suggested that assets where the highest cost network option exceeds \$5 million are reported on an individual basis and lower cost assets are reported on from a program perspective.<sup>108</sup> It considered that as a minimum the reporting requirements should extend to underground cables, overhead lines, transformers and reactive plant.<sup>109</sup> In addition, RES submitted that it is unlikely that non-network options can provide feasible alternatives to the replacement of switchgear or secondary systems at this stage but it may be feasible to develop an efficient network, non-network hybrid solution for a large group of switchgear.<sup>110</sup>

#### *Proposed AER network retirement reporting guideline*

There were differing views on the proposed AER network retirement reporting guideline to set out the types of asset a network service provider must include when reporting on asset retirements and de-ratings. Ergon, EnerNOC and PIAC supported the guideline which would set out the types of asset to be included in reports of asset retirements and de-ratings.<sup>111</sup> Similarly, AGL submitted there may be merit in introducing the guideline for this purpose.<sup>112</sup> Alternatively, SA Power Networks considered that decisions on which assets are unlikely to have alternatives to like-for-like should be left with network service providers rather than being prescribed in a guideline which is likely to need constant amendment.<sup>113</sup>

If a guideline were to be required, some stakeholders supported the principles that the AER proposed it be required to follow in developing and updating the guideline.<sup>114</sup> The ENA submitted that the NER should set out clear principles and appropriate guidance to the AER to avoid regulatory uncertainty.<sup>115</sup>

However, a number of stakeholders put forward alternatives for setting out the types of asset that must be included in reports on asset retirements and de-ratings. RES

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105 First round submissions: EnerNOC, p. 4; EUAA, p. 4; AGL, p. 5.

106 EUAA, first round submission, p. 4.

107 AGL, first round submission, p. 5.

108 RES, first round submission, p. 4.

109 *ibid.*

110 *ibid.*

111 First round submissions: PIAC, pp. 3-4; EnerNOC, p. 4; Ergon, p. 9.

112 AGL, first round submission, p5.

113 SA Power Networks, first round submission, p. 2.

114 First round submissions: Ergon, p. 10; AEMO, p. 6.

115 ENA, first round submission, pp. 11-12.

considered an alternative option is the inclusion of an appropriate template in the annual regulatory information notice made by the AER.<sup>116</sup> TransGrid suggested that a network service provider identify the assets which should be exempt in the regulatory determination process.<sup>117</sup> AEMO supported a dynamic framework that could evolve as circumstance change.<sup>118</sup>

The AER had proposed a second role for the guideline, this being to set out principles and a broad approach to be followed in making retirement and de-rating planning decisions.<sup>119</sup>

Network service providers generally opposed this on the basis that the AER should not prescribe business and asset management practices.<sup>120</sup> Jemena considered it would be useful but the principles and broad approach would have to be set at very high level to accommodate various approaches to asset management practices.<sup>121</sup> AGL submitted the network service providers were best placed to consider when assets would most appropriately be retired although overarching principles may offer a useful guide and enhance the predictability of network planning decisions.<sup>122</sup> EnerNOC considered the most important thing is that a network service provider gives some visibility into their employed principles and methodologies in their annual planning reports.<sup>123</sup>

#### *Regulatory burden of additional reporting requirements*

Network service providers had mixed views on the amount of additional reporting that they would be required to undertake under the AER's proposed rule. TransGrid submitted that it did not expect the extension of the annual planning report requirements to network asset replacement decisions to result in a significant additional burden.<sup>124</sup> Alternatively, Ausgrid considered the AER's proposal would impose significant additional reporting requirements, with the magnitude of the impact dependant on the precise form of the requirements.<sup>125</sup> Similarly, CitiPower and Powercor did not consider the benefits of the additional reporting would be likely to outweigh its costs.<sup>126</sup> Jemena estimated the AER's proposal would increase its reporting effort by approximately 20 per cent.<sup>127</sup>

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116 RES, first round submission p. 4.

117 TransGrid, first round submission, p. 4.

118 AEMO, first round submission, p. 6.

119 AER rule change request, p. 16.

120 First round submissions: ENA, p. 12; Ausgrid, p. 9; Ergon, p. 10; Energex, p. 11; CitiPower and Powercor, p. 4.

121 Jemena, first round submission, Attachment 1, p. 4.

122 AGL, first round submission, pp. 5-6.

123 EnerNOC, first round submission, p. 4.

124 TransGrid, first round submission, p. 3.

125 Ausgrid, first round submission, p. 9.

126 CitiPower and Powercor, first round submission, p. 4.

127 Jemena, first round submission, Attachment 1, p. 4.

Where commented, other stakeholders generally did not consider the additional reporting by network service providers required in the proposed rule would be significant given that they should already have access to the information.<sup>128</sup> RES submitted that reporting requirements, including the annual planning reports and AER regulatory information notices, be reviewed holistically to ensure that the reporting burden is not significantly increased.<sup>129</sup>

#### 4.2.2 Second round submissions

##### *Reporting on asset retirements and de-ratings - level of reporting required*

Generally, network service providers considered that the level of the reporting requirements in the draft rule may result in a material compliance burden with some noting that there may be some one-off costs in establishing or modifying reporting systems to enable the preparation and maintenance of the data required.<sup>130</sup> In relation to this, the ENA commented that:<sup>131</sup>

“Based on the initial analysis of the draft rule, a threshold of \$100,000 will result in the following outcome:

- Ergon Energy would need to report separately on approximately 250 different assets per annum;
- Energex would need to report separately on approximately 150 different assets per annum
- AusGrid would need to report separately on 1,000 individual assets asset in the next Annual Planning Report.”

To reduce the regulatory burden and to improve the utility of the information reported, network service providers considered there should be a higher asset replacement cost threshold used to determine which assets can be reported as a group rather than individually compared to the \$100,000 provided in the draft rule.<sup>132</sup>

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<sup>128</sup> First round submissions: AGL, p. 6; EUAA, p. 4.

<sup>129</sup> RES, first round submission, p. 4.

<sup>130</sup> Second round submissions: ENA, pp. 7-8; Endeavour Energy, p. 1; CitiPower and Powercor, pp. 2-3; SAPN, p. 1; Ausgrid, Attachment A, p. 2

<sup>131</sup> ENA, second round submission, p. 9.

<sup>132</sup> Second round submissions: ENA, p. 9; United Energy, p. 2; SAPN, pp. 1-2; Ausgrid, p. 2 and Attachment, p. 2; Endeavour Energy, p. 2. Jemena, pp. 1-2; Energex and Ergon, p. 8; TransGrid, p. 5; CitiPower and Powercor, p. 2. The draft rule allowed a network service provider to report assets together where assets of the same type are to be retired across more than one location in the same calendar year and where the replacement cost of each individual asset is expected to have a capital cost of \$100,000 or less.

The majority of network service providers submitted that the threshold should be increased to at least \$200,000.<sup>133</sup> The ENA considered a \$200,000 threshold would provide a balanced approach although it would still result in a significant regulatory burden on some network service providers such as Ausgrid.<sup>134</sup>

United Energy considered that projects and programs with a value above a \$200,000 replacement cost threshold would normally be location specific and serve as useful information to non-network proponents.<sup>135</sup> While broadly supportive of changes to the reporting requirements, TransGrid suggested that a small increase in the reporting threshold would streamline the information without diminishing its usefulness.<sup>136</sup> It provided information on the estimated number of units it plans to replace over a five year period in different cost bands to support its view.<sup>137</sup>

Ausgrid suggested that the threshold should be raised to \$250,000.<sup>138</sup> In addition, it stated that the NER should:<sup>139</sup>

“Allow for asset retirements with a replacement value greater than \$250,000 to be reported as a group, provided the assets are being retired as part of a major project that is reported separately, such as via the RIT-D public process or otherwise on our website including, as a minimum, the equivalent information.”

More generally, Ausgrid also considered that the requirement for network service providers to report on planned asset retirements and de-ratings may result in information which is not in a useful format for non-network providers to identify opportunities.<sup>140</sup>

Endeavour Energy and CitiPower and Powercor considered the threshold should be \$250,000 and be extended to include assets replaced individually as well as those which are to be replaced as part of a larger program.<sup>141</sup> CitiPower and Powercor submitted that this threshold would remove the need for reporting on asset replacements that provide no opportunities for alternative solutions while capturing larger projects.<sup>142</sup>

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133 Second round submissions: ENA, p. 9; Jemena, pp. 1-2, United Energy, p. 2; Energex and Ergon, p. 8.

134 ENA, second round submission, p. 9.

135 United Energy, second round submission, p. 2.

136 TransGrid, second round submission, pp. 3-5.

137 *ibid.*

138 Ausgrid, second round submission, p. 2.

139 *ibid.*

140 Ausgrid, second round submission, Attachment, p. 3.

141 Second round submissions: Endeavour Energy, p. 2; CitiPower and Powercor, p. 2.

142 CitiPower and Powercor, second round submission, p. 2.

Similarly, SAPN submitted there should be a threshold of at least \$300,000 applying to both individual asset replacements and replacements with multi asset projects.<sup>143</sup> To avoid potentially misleading non-network proponents, it considered the threshold should be on the basis of the total cost of replacing an asset including the cost of the asset and installation costs.<sup>144</sup>

Finally, the ENA stated that any cost threshold for reporting established by the AEMC in its final rule should be subject to review so that the cost thresholds remain appropriate in light of changes to input costs. It noted this is also consistent with other cost thresholds in the NER.<sup>145</sup>

Other stakeholders supported the reporting requirements in the draft rule.<sup>146</sup> AGL commented:<sup>147</sup>

“AGL strongly supports the expansion of annual planning reporting requirements to include all planned network asset retirements and asset de-ratings which result in a network constraint over the forward planning period. This will better position non-network service providers to engage with NSPs and to design and deliver non-network solutions in a wider range of circumstances that are a reliable and lower-cost alternative to a network option. AGL believes that this reform is consistent with the need to transition investment planning and decision making towards a more forward-looking model. Whilst some NSPs have noted that they are not yet able to define exact quantities or locations of all asset retirements and de-ratings, a more forward-looking approach is needed to ensure the most cost-efficient outcomes for consumers.”

#### *Other issues*

Some network service providers submitted that the draft rule was not clear on whether reporting was required on all planned network asset retirements over the forward planning period including those which result in a network constraint and those that do not.<sup>148</sup> Energex and Ergon considered network service providers should only be required to report on retirements that result in a network need and therefore need to be replaced.<sup>149</sup>

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143 SAPN, second round submission p. 2.

144 *ibid.*

145 ENA, second round submission, p. 9.

146 Second round submissions: AGL, p. 2; TEC, p. 2; EUAA, p. 1; MEU, p. 2; AEC, p. 2; AER, p. 1; CEC, pp. 1-3; PIAC, p. 1;

147 AGL, second round submission, p. 2.

148 Second round submissions: SAPN, p. 1; Ausgrid, Attachment, p. 1; Energex and Ergon Energy, p. 6.

149 Energex and Ergon Energy, second round submission, p. 6.

The ENA submitted that it should be clear in the rule that the reporting requirements apply on a “per asset” basis rather than a “per project” basis.<sup>150</sup>

Energex and Ergon stated that it was not clear whether reporting requirements were intended to apply to an asset class or to individual plant items and ancillary components the draft rule.<sup>151</sup> They suggested reporting should be at an asset class level rather than an individual component level.<sup>152</sup>

Ausgrid, Energex and Ergon sought clarification on the reporting of linear assets such as cables and conductors as these assets are generally replaced in sections.<sup>153</sup> In particular, Energex and Ergon considered "reconductoring" should be reported at a program level to avoid reporting on a per kilometre basis.<sup>154</sup>

The AER suggested that references to the age of an asset be deleted from the draft rule.<sup>155</sup> It commented that:<sup>156</sup>

“The age of asset can be used as a proxy to predict asset condition when forecasting revenue requirements. However, condition rather than age is relevant when considering whether to retire or de-rate an asset.”

Network service providers expressed concerned that the AER may seek information on individual asset retirements and de-ratings in its distribution system limitation template.<sup>157</sup> The ENA commented:<sup>158</sup>

“It is our understanding that the system limitations report is intended to supplement the distribution annual planning reports in order to provide detail on identified systems limitations in a consistent and useable format, and is not intended to duplicate reporting requirements arising from this rule change. However, certainty in this regard will only be possible following the AER's final decision on template requirements.”

On this topic, United Energy considered that the AEMC should amend the NER to restrict replacement projects reporting in the system limitation template to major asset classes above \$200,000.<sup>159</sup>

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150 ENA, second round submission, p. 9.

151 Energex and Ergon, second round submission, p. 7

152 *ibid.*

153 Second round submissions: Ausgrid, Attachment, p. 2; Energex and Ergon, pp. 7-8.

154 Energex and Ergon, second round submission, p. 8.

155 AER, second round submission, p. 2.

156 *ibid.*

157 Second round submissions: Ausgrid, Attachment, p. 3; Energex and Ergon, p. 8; ENA, p. 10; Endeavour Energy, p. 2

158 ENA, second round submission, p. 10.

159 United Energy, second round submission, p. 2.

Ausgrid submitted that the AEMC should introduce a mechanism into the NER for the review of information requirements in the future to monitor their effectiveness, the associated costs and benefits, and whether an alternative approach to information provision may be more effective.<sup>160</sup>

### 4.3 Analysis and conclusions

#### *Reporting on asset retirements and de-ratings*

The rule requires network service providers to identify in their annual planning reports:

- all planned network asset retirements over the forward planning period (a minimum of five years for distribution networks and ten years for transmission networks)
- all planned asset de-ratings which result in a network constraint or system limitation over the forward planning period.<sup>161</sup>

In particular, network service providers are to provide:

- a brief description of the asset, including its location
- the reasons, including methodologies and assumptions used for deciding that it is necessary or prudent for the network asset to be retired or de-rated taking into account factors such as the condition of the asset
- the date from which the asset will be retired or de-rated and if this has changed from the previous annual planning report an explanation of why.<sup>162</sup>

Where a network service provider retires or de-rates assets of the same type across more than one location in the same calendar year and where the replacement cost of each individual asset is expected to have a capital cost of \$200,000 or less then it can report these assets together rather than separately.<sup>163</sup>

The information required to be provided is largely in line with the information requirements in the AER's proposed rule. However, the drafting of the rule to achieve this differs from that proposed by the AER.

As identified by the AER, information on a network service provider's planned asset retirements and de-ratings is the equivalent to information on demand forecasts in an augmentation context.<sup>164</sup> This is because asset retirements and de-ratings lead to a

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<sup>160</sup> Ausgrid, second round submission, p. 2.

<sup>161</sup> Rule 5.12.2(c)(1A) and Schedule 5.8(b1).

<sup>162</sup> Rule 5.12.2(c)(1A) and Schedule 5.8(b1).

<sup>163</sup> Rule clauses 5.12.2(c)(1B) and Schedule 5.8(b2).

<sup>164</sup> AER rule change request, p. 14.

need for network replacement expenditure and demand is a key driver for augmentation expenditure. That is, a retirement or de-rating creates an identified need to meet existing demand rather than additional demand. As a network service provider is currently required to provide information on its demand forecasts, the rule aligns the reporting requirements for replacement with augmentation in this regard.

Requiring a network service provider to provide information on planned network asset retirements and de-ratings provides greater transparency of these decisions. This may facilitate greater confidence in network replacement needs identified by network service providers and facilitate the identification of opportunities to invest in the network. It may also facilitate the identification of efficient connection locations by network users. This information will also assist the AER and stakeholders in the assessment of network service providers' regulatory proposals as part of the revenue determination process. Network service providers will also be able to use this information to prepare their regulatory proposals.

For completeness, the rule also clarifies that transmission network service providers are to:

- consider the condition of network assets
- consider the potential for replacement of network assets to provide a net economic benefit to all those who produce, consume and transport electricity in the market as part of its annual planning review.<sup>165</sup>

These amendments align the review requirements with the new replacement reporting requirements in the rule and reflect that the annual planning review should consider all investment needs regardless of the cause.

The type of information to be reported in the rule is the same as that which was required to be reported in the draft rule with one exception. As identified by the AER, it is the condition of an asset and not age that is relevant when considering whether to retire or de-rate an asset.<sup>166</sup> The consideration of the age of network assets by network service providers is therefore not required under the final rule.

#### *Level of reporting required*

In its rule change request, the AER proposed that each network service provider be required to report on planned retirements and de-ratings for a sub-set of its assets. It proposed that the types of assets that would be subject to the reporting requirements would be set out in a network retirement reporting guideline to be prepared by the AER.

The rule has not adopted this approach. Instead, it requires the reporting of all planned asset retirements. Requiring reporting of all asset retirements allows for the benefits of providing the information to be fully realised in a simple and efficient way. It also

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<sup>165</sup> Rule clauses 5.12.1(4) and 5.12.1(5).

<sup>166</sup> AER, second round submission, p. 2.

provides clarity for a network service provider on what information is to be reported. The additional regulatory burden is not likely to be significant as network service providers will have this information to hand.

Network service providers may often make planned incremental changes to the ratings of assets to operate them efficiently. It would therefore not be appropriate for network service providers to be required to report on all planned de-ratings. For this reason, information on de-ratings is only required to be reported in the annual planning report when a network need arises as a result of a de-rating.

In response to stakeholder submissions, the drafting of the rule on the reporting requirements is different to that in the draft rule to clarify that:

- all planned network asset retirements over the forward planning period are to be reported including those which result in a system limitation or network constraint and those that do not
- the reporting requirements apply on an asset basis and not a project basis.

No change to the draft rule was considered necessary to allow for the reporting of:

- network assets that the service provider plans to retire or de-rate and not the components of those assets too
- linear assets such as cables and conductors to be reported as one and not by section given these assets would be planned to be retired on this basis.<sup>167</sup>

As with the draft rule, an AER network retirement reporting guideline setting out the types of assets that must be reported on is not included in the rule. Nor does the rule include a cost threshold as proposed by network service providers.

In addition, the AER's proposed network retirement reporting guideline is not required by the rule because:

- Reporting of all asset retirements allows for the benefits of providing the information to be fully realised in a simpler and more efficient way. It also provides greater ongoing clarity on what information is to be reported. This approach also gives non-network providers, who are best placed, the opportunity to decide whether a non-network option is viable.
- It is difficult to specify the types of assets for which there will be no alternative options to the current network asset as it may not always be clear where there will be alternatives and where there will not.
- The development and potentially frequent updating of a guideline would impose an administrative burden on the AER and stakeholders. This is particularly

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<sup>167</sup> These issues were raised in second round submissions by Ausgrid, Energex and Ergon as set out in section 4.2.2 above.

relevant in the changing energy environment where there is an increasing possibility that an alternative to the current network asset may be viable.

Nor does the rule include an asset cost threshold as planned retirements and de-ratings of lower cost assets may also be of interest to non-network providers and other energy market stakeholders. The Commission considers that without a cost threshold, information will be available to all non-network providers accommodating a wide range of technology options. There is therefore a benefit in reporting this information in the annual planning reports.

As identified above, the rule provides that all asset retirements, including those which result in a system limitation or network constraint and those that do not, and all de-ratings that result in a system limitation or network constraint planned over the forward planning period must be included in the annual planning reports. However, in some cases the retirement or de-rating of an asset is part of a replacement program across a network (such as poles). These assets should be reported but it would reduce the regulatory burden and be more efficient if such assets were grouped together. To provide for this to occur the rule allows a network service provider to report assets together where assets of the same type are to be retired or de-rated across more than one location in the same calendar year and where the replacement cost of each individual asset is expected to have a capital cost of \$200,000 or less.<sup>168</sup>

The purpose of the cost threshold is to prevent network service providers from grouping together significant individual assets across multiple locations which may be replaceable with a non-network alternative. As there may be non-network alternatives to replacing these assets on an individual basis, the Commission considers there are benefits in these asset retirements and de-ratings being reported individually.

In the draft rule, the value of the replacement cost threshold was \$100,000. The Commission has increased this threshold to \$200,000 in the final rule as this will provide a better balance between reporting information and managing the regulatory burden. In particular, a \$200,000 replacement cost threshold is preferable for two reasons:

- It will provide for reporting of assets on an individual basis that have a greater potential to be replaced with a non-network alternative (information provided in stakeholder submissions indicates that assets below a replacement cost threshold of \$200,000 have less potential to be replaced with a non-network solution than those above this replacement cost threshold). An increased focus in the annual planning report on assets that have more potential to be replaced by a non-network alternative will make it easier for stakeholders to find the information they need.

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<sup>168</sup> Rule clauses 5.12.2(c)(1B) and Schedule 5.8(b2). The majority of service providers did not consider the use of calendar year as opposed to financial year problematic. This approach is therefore retained in the final rule. In addition, the threshold is not based on the total cost of replacing an asset including installation costs as proposed by SAPN as this would add unnecessary complexity.

- It will reduce the regulatory burden on network service providers thereby limiting the impact on prices for customers. For example, TransGrid submitted that an increase in the threshold from \$100,000 to \$200,000 would reduce the number of assets it would be required to individually report on from 1,867 to 605 for the 2018-19 to 2022-23 period.<sup>169</sup>

So that it remains appropriate and reflects changes in the costs of assets over time, the replacement cost threshold value will be subject to periodic review by the AER.<sup>170</sup>

In response to the draft rule, some network service providers supported extending this threshold such that it would apply to:

- all assets, not just those which are to be replaced as part of a replacement program or
- where the assets are reported in other publications as part of a major project.

The rule does not provide for these suggestions.

In response to the first of these two suggestions, extending this threshold to individual assets may not significantly reduce the regulatory burden for network service providers as planned asset retirements of an individual nature are generally of a higher replacement value. In addition, lower value assets to be retired individually and are not part of a replacement program may be suited to being replaced by a non-network alternative so it is appropriate that these assets are reported.

On the second, it is appropriate that all of the information is provided in one place as this makes it easier for stakeholders to find the information they need.

More generally, and consistent with the draft, the rule also does not require additional reporting on non-network replacement capital expenditure such as IT and communication systems as proposed by some consumer groups.<sup>171</sup> The reasons for this are twofold:

- This information would not benefit non-network providers seeking to invest in the network or other energy market stakeholders interested in the plans for the network.
- Information on IT and communication systems expenditure is primarily assessed in the revenue determination process and so is more appropriately collected and reported on by the AER. This approach is supported by the AER.<sup>172</sup>

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<sup>169</sup> TransGrid, second round submission, p. 5.

<sup>170</sup> Rule 5.15.3. This change from the draft rule is in response to a submission from the ENA.

<sup>171</sup> It should be noted that NER Schedule 5.8(m) requires DNSPs to report on metering or information technology. Some minor clarifications have been made to this clause in the rule. These are discussed in Chapter 6.

<sup>172</sup> AER rule change request, Attachment, p. 5.

The Commission has also considered whether network service providers should report on unplanned asset retirements and de-ratings that occurred in the preceding 12 months. Doing so would result in a complete picture of asset retirements and de-ratings. However, there are limited benefits for non-network providers from reporting unplanned retirements and de-ratings that have occurred given a solution would have been put in place. In addition, information on urgent and unforeseen investments will still be reported under existing provisions in the NER. This requirement includes sufficient information on unplanned retirements and de-ratings for the purpose of the annual planning reports.<sup>173</sup> Accordingly, the Commission has not included the suggested amendments in the rule.

In response to the draft rule, Ausgrid submitted that the additional reporting requirements should be reviewed by the AEMC in the future.

The Commission considers that reporting on asset retirements and de-ratings as set out above meets the NEO and that it is more appropriate and flexible to not specify a set review date in the NER but to consider changes in the future as the need arises. It should be noted that if, at any point, a stakeholder considers that the reporting requirements in the NER are not appropriate then it may submit a rule change request to the AEMC.

On a related but slightly separate matter, network service providers expressed concern that the AER may seek information on individual asset retirements and de-ratings in its distribution system limitation template. For example, the ENA commented that "member businesses have raised their concerns that the AER's draft system limitations template requires information in excess of that proposed in the Local Generation Network Credits final rule".<sup>174</sup>

Under the NER, the AER's distribution system limitation template is to facilitate the publication of information on system limitations referred to in their DAPRs in a useable, consistent, accessible format to assist third parties to propose alternative options to address system limitations.<sup>175</sup> The AER is required to develop the template in consultation with DNSPs and any other persons with an interest in the template.<sup>176</sup> Given that the template is to present information reported in the DAPR in a useable format it would not be appropriate to require a different threshold for the reporting of information in the template to that for the DAPR reporting requirements, as proposed by United Energy.<sup>177</sup> Similarly, the final rule does not make any changes to the information to be included in the template under the NER.

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<sup>173</sup> NER clause 5.12.2(c)(8) and S.5.8(g)(2).

<sup>174</sup> ENA, second round submission, p. 10.

<sup>175</sup> NER clause 5.13.3(b).

<sup>176</sup> NER clause 5.13.3(a).

<sup>177</sup> United Energy, second round submission, p. 2.

*Information on network needs arising from retirements and de-ratings and options to address these*

In its rule change request, the AER proposed that network service providers be required to provide certain information on network needs arising from each retirement and de-rating reported on in the annual planning report.

To address this, the rule:

- Aligns the reporting requirements for augmentation and replacement in transmission in relation to reporting on options considered as a result of a network constraint arising from a planned asset retirement or de-rating.<sup>178</sup>
- Does not provide additional requirements on DNSPs to provide information on options considered as a result of network needs arising from planned asset retirements and de-ratings. This is because the NER already requires DNSPs to report this information.<sup>179</sup>

The Commission considers that network service providers should report on any network needs arising from planned asset retirements and de-ratings as well as options to address these needs. Requiring this information will facilitate non-network providers and other energy market stakeholders to identify opportunities to invest in the network. It is also likely to assist connection applicants to identify efficient connection locations. The information required should be consistent with the requirements for the augmentation context for simplicity and clarity.

Information requirements on network needs, including those arising from asset retirements and de-ratings, and options to address these are already provided for in relation to distribution networks.<sup>180</sup> In particular, DNSPs are required to provide information on limitations and options to address these for sub transmission lines, zone substations and certain primary distribution feeders.<sup>181</sup>

The current arrangements are different for transmission networks. While the NER requires TNSPs to report on network needs including those arising from asset retirements and de-ratings, information on options to address these needs are slightly different to those for augmentation.<sup>182</sup> The rule therefore extends the relevant augmentation provisions to replacement such that the same information is required for augmentation and replacement investments.<sup>183</sup>

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<sup>178</sup> Rule clauses 5.12.2(c)4(iv), 5.12.2(c)5 and 5.12.2(c)6).

<sup>179</sup> NER clauses S5.8(c)&(d) 5.13.3(c).

<sup>180</sup> NER clauses S5.8(c)&(d) and 5.13.3(c).

<sup>181</sup> A network service provider is to report on limitations and options to address these limitations for a primary distribution feeder where it has been practicable to forecast maximum demand for the feeder and where the feeder is currently experiencing an overload, or is forecast to experience an overload in the next two years. NER clauses S.5.8(c)&(d) .

<sup>182</sup> NER clause 5.12.2(c)5).

<sup>183</sup> Rule clauses 5.12.2(c)4(iv), 5.12.2(c)5 and 5.12.2(c)6).

Specifically, the rule:

- Extends NER clause 5.12.2(c)(4)(iv) so that a TNSP is required to provide a statement of whether it plans to issue a request for proposals for replacements of network assets as a result of its annual planning review. Currently TNSPs are only required to provide this information for augmentations or non-network options.
- Extends NER clause 5.12.2(c)(5), which requires TNSPs to provide information on network needs and options to address these for all proposed augmentations to the network, to also cover all proposed replacements of network assets. The information to be provided under this clause is:
  - the project or asset name and the month and year in which it is proposed that the asset will become operational
  - the reason for the actual or potential constraint, if any, or inability, if any to meet the network performance requirements set out in Schedule 5.1 of the NER or relevant legislation or regulations of a participating jurisdiction, including load forecasts and all assumptions used
  - the proposed solution to the constraint or inability to meet the network performance requirements identified, if any
  - the total cost of the proposed solution
  - whether the proposed solution will have a material inter-network impact
  - other reasonable network options and non-network options considered to address the actual or potential constraint or inability to meet the network performance requirements, if any.
- Amends NER clause 5.12.2(c)(6) so that a TNSP is required to report on the manner in which proposed augmentations and proposed replacements relate to the most recent NTNDP. Currently, this clause only relates to proposed augmentations. This amendment aligns reporting requirements with the existing augmentation reporting requirements in the NER for transmission networks.<sup>184</sup>

The resulting information requirements for DNSPs and TNSPs are in line with those proposed by the AER with a few exceptions:

- All network service providers are only required to report on the cost of the proposed option, not the cost of each option it has considered as proposed by the AER. This is a more appropriate requirement because information on the proposed option is the most useful information for non-network providers. In addition, this approach minimises the regulatory burden on network service providers.

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<sup>184</sup> Rule clauses 5.12.2(c)(4)(iv), 5.12.2(c)(5) and 5.12.2(c)(6).

- The level of reporting on network limitations and options to address these is slightly different in the rule to the proposed rule for DNSPs. As set out above, the rule retains the existing NER requirements for the reporting of this information for sub transmission lines, zone substations and certain primary distribution feeders. In contrast, the AER proposed that information on network limitations and options to address these be provided for all proposed asset retirements and de-ratings. However, the existing level of reporting this information is appropriate in distribution due to the nature of a distribution network.<sup>185</sup> Consequently, no change to the NER is therefore required to meet the intent of the rule change request. In addition, this approach retains the consistent reporting of information between augmentation and replacement.
- The rule does not include a requirement for a TNSP to report when it intends to commence a RIT consultation process for replacement projects, if required, as proposed by the AER. To do so would result in different reporting requirements for replacement projects to augmentation projects which is not appropriate. The Commission cannot amend the NER to require network service providers to report when it intends to commence a RIT consultation process for augmentation projects as this is out of scope of this rule change request.
- TNSPs are required to report on constraints over one, three and five years in transmission as opposed to over the forward planning period (ten years) as proposed in the AER's rule change request. The Commission considers reporting on constraints over a five year period is sufficient and consistent with the purpose of the annual planning reports. In addition, under the rule where a TNSP proposes to replace an asset it must provide certain information including information on the constraint related to the replacement.<sup>186</sup> This information must be provided for the ten year forward planning period.<sup>187</sup>

In addition to these amendments, the rule:

- Removes NER clause 5.12.2(c)(7) which requires TNSPs to provide certain information on all proposed replacement transmission network assets. The information required by this clause will instead be required under NER clause 5.12.2(c)(5) of the rule.
- Removes NER clause 5.5.8(g)(1) which requires DNSPs to provide a summary of all committed investments to be carried out within the forward planning period with an estimated capital cost of \$2 million or more (as varied by a cost threshold determination) that are to address a refurbishment or replacement need. This clause has been removed as this information is required by other NER clauses.<sup>188</sup>

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<sup>185</sup> DNSPs may not measure constraints on the low voltage network and to require them to do so would be costly.

<sup>186</sup> Rule clause 5.12.2(c)(5).

<sup>187</sup> Rule clause 5.12.2(c)(5).

<sup>188</sup> NER clauses 5.5.8(c)&(d) and 5.13.3(c).

In addition, replacement and refurbishment expenditure is no longer excluded from the RIT-D under the rule.<sup>189</sup>

In submissions during the rule change process, some network service providers noted the information on network issues was available in the network opportunity maps developed by the Institute of Sustainable Futures.<sup>190</sup>

Given the value of the information to providers of non-network solutions, the Commission views that publishing this information in the annual planning reports should be a mandatory requirement. The rule does not prevent network service providers and other stakeholders from developing a complementary mechanism, or continuing to publish a resource such as the network opportunities maps. However, these maps are only one example of the way the information contained in the annual planning reports can be used. The annual planning reports will allow the development of other tools that will build upon and operate in concert with the annual planning reports; if the market determines that there is the need for such tools. By the same token, network service providers can voluntarily publish more information than they are required to include in the annual planning reports. The Commission is aware that some are already doing that.

To assist stakeholders, Figure 4.1 below sets out the annual planning reporting requirements for distribution and transmission networks prior to and following the introduction of this rule.

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<sup>189</sup> NER clause S.5.8(g)(1) was introduced because the RIT-D did not apply to replacement and refurbishment expenditure. See AEMC, *Review of national framework for electricity distribution network planning and expansion*, final report, 23 September 2009.

<sup>190</sup> First round submissions: Ausgrid, p. 6; ENA, pp. 3 & 6; Citipower and Powercor, p. 2; Ergon, p. 2. ENA, second round submission, p. 5.

**Figure 4.1 Annual planning report requirements before and after the introduction of the rule**

	Before rule change	After rule change
<b>TAPR</b>	Forecast loads	Forecast loads
	Planning proposals for connection points	Planning proposals for connection points
	Forecast of constraints	Forecast of constraints
	Proposed augmentations and relation to NTNDP	Proposed augmentations and replacements and relation to NTNDP
	Proposed replacement transmission network assets	Description of planned network asset retirements and de-ratings, including reasons and timeframe Asset management approach
<b>DAPR</b>	Forecast loads	Forecast loads
	Forecast connection points, sub transmission lines and zone substations	Forecast connection points, sub transmission lines and zone substations
	Factors that may impact network	Factors that may impact network
	System limitations for sub transmission lines, zone substations and certain primary distribution feeders	System limitations for sub transmission lines, zone substations and certain primary distribution feeders
	Committed replacement or refurbishment investments over \$2m	Asset management approach
	Asset management approach	Demand management activities
	Demand management activities	Description of planned network asset retirements and de-ratings, including reasons and timeframe
	Investments in metering or I.T.	Investments in I.T. and communications
	System limitation template: must include information on options to address limitation and cost of proposed option	System limitation template: must include information on options to address limitation and cost of proposed option

Note: Red dotted line indicates amended or new information in the final rule.  
Source: NER and amending rule.

### *AER guideline on the approach to asset management*

Consistent with the draft rule, the rule does not require the AER to develop a guideline to prescribe the principles a network service provider must follow when deciding on whether to retire or de-rate assets as proposed by the AER. The Commission does not consider it is necessary for the AER to develop this guidance.

Firstly, there could be more than one asset management approach which represents best practice and this may change over time – there is no one size fits all approach to making retirement and de-rating decisions. The Commission considers that requiring a network service provider to provide information on the reasons including the methodology and assumptions for deciding that it is necessary or prudent for the asset to be retired or de-rated is important and this is included in the rule. However, the Commission does not consider that the method must be the same for all network service providers. In addition, there are international standards in relation to asset management. The Commission would expect any network service provider undertaking its activities consistent with good industry practice would have regard to these.

Secondly, a network service provider is best placed to make decisions about asset retirements and de-ratings in light of its particular circumstances and other relevant factors such as jurisdictional and safety requirements. Prescribing a particular approach could prohibit network service providers from meeting their needs or jurisdictional requirements as well as trying new and potentially better methods.

Finally, a guideline is not necessary as the economic regulatory framework provides incentives for a network service provider to make efficient retirement and replacement decisions. If a network service provider fails to retire or de-rate its assets efficiently, then it does not get to recover inefficient costs from consumers.

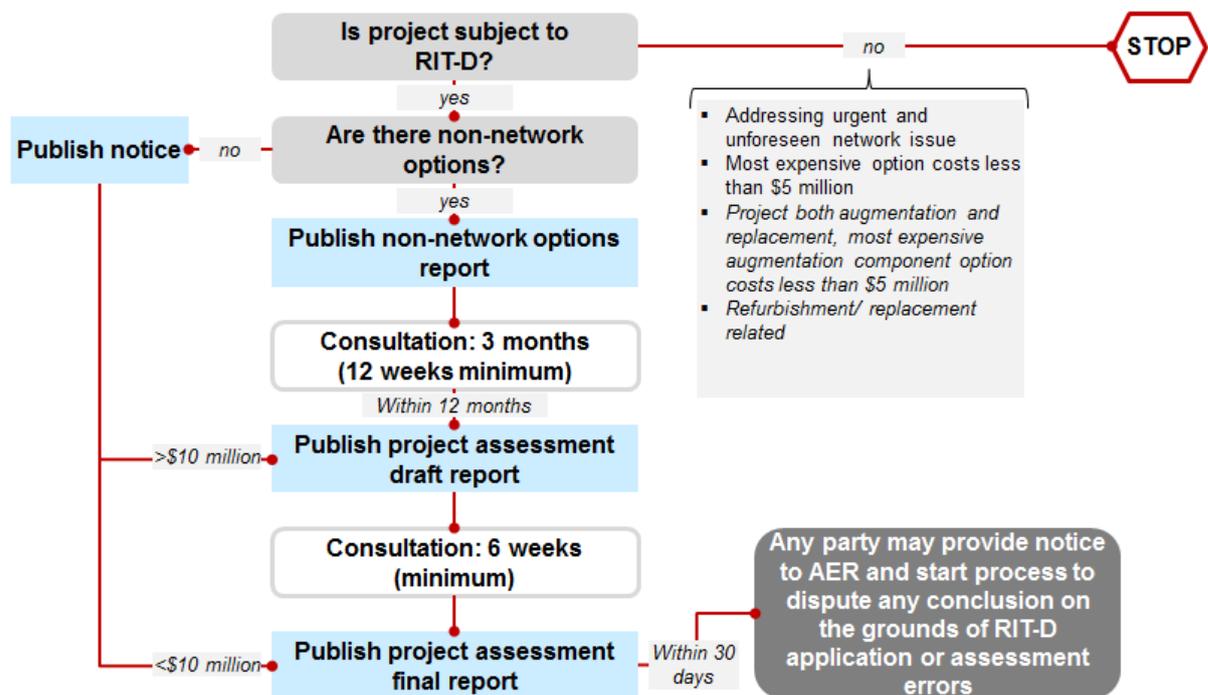
## 5 Regulatory investment tests

This chapter considers the AER’s proposal to extend the regulatory investment tests to replacement expenditure.

### 5.1 AER's view

Currently, regulatory investment tests only apply to augmentation capital projects.<sup>191</sup> Replacement expenditure is currently explicitly excluded from the regulatory investment tests. In addition, refurbishment expenditure is explicitly excluded from the RIT-D and maintenance expenditure is explicitly excluded from the RIT-T. The current regulatory investment test processes are set out in Figure 5.1 and Figure 5.2. The box on the right hand side of each figure sets out investments which are explicitly excluded from the tests.

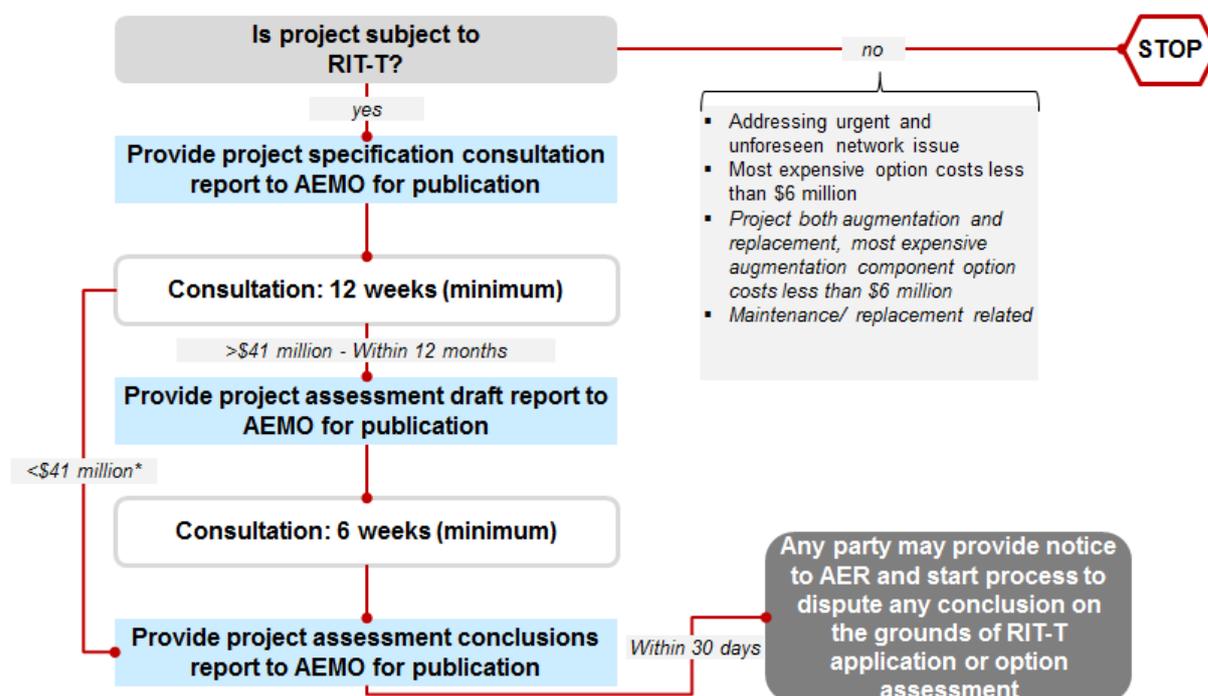
**Figure 5.1 Current RIT-D process**



Source: NER clause 5.17.

<sup>191</sup> NER clauses 5.16.3 and 5.17.3. Further information about the current regulatory investment tests can be found in Appendix B.2.

**Figure 5.2 Current RIT-T process in NER**



\*Other requirements are: no material market benefit, the TNSP has identified its preferred option in the consultation report, and submissions on the consultation report did not identify any additional credible options which could deliver a market benefit.

Source: NER clause 5.16.

In light of the changing energy environment discussed in Chapter 3, the AER proposed to extend the application of the regulatory investment tests to replacement projects.<sup>192</sup>

Consistent with the current tests, the AER proposed that a network service provider would not be required to undertake the relevant test (transmission or distribution) where a replacement project is expected to be less than a specified cost threshold. In relation to this, the AER proposed that the same thresholds apply for replacement projects as currently apply for augmentation projects. The thresholds are currently defined by the estimated capital cost of the most expensive credible option. The current thresholds are \$6 million for transmission investments and \$5 million for distribution investments.<sup>193</sup>

In addition, the AER proposed a network service provider would not have to undertake the relevant test where it has determined on reasonable grounds that the only viable alternative is "like-for-like" replacement.<sup>194</sup> In these circumstances, to remove itself from the requirement to apply a regulatory investment test, a network service provider would have to publish on its website an "exemption report". This

<sup>192</sup> AER rule change request, pp. 16-19.

<sup>193</sup> *ibid.* pp. 18-19.

<sup>194</sup> The AER did not provide a definition of like-for-like in its rule change request.

report would be required to set out the reasons why a like-for-like replacement of an asset is the only viable option to address the network need that is forecast to occur.<sup>195</sup> Interested parties would be able to raise a formal dispute on the conclusions of the exemption report with the AER.<sup>196</sup>

In its proposed rule, the AER also removed the explicit exclusion of projects related to the refurbishment or maintenance of assets.<sup>197</sup> Projects related to the refurbishment of assets are currently explicitly excluded from the RIT-D and projects related to the maintenance of assets are currently explicitly excluded from the RIT-T.<sup>198</sup>

The AER also proposed to remove provisions in the NER which clarify that a network service provider is to consider the augmentation component of an investment where replacement, refurbishment or maintenance expenditure also relates in augmentation to the network.<sup>199</sup>

Figure 5.3 sets out what the RIT-D process would be under the AER's proposed rule.

The key proposed change by the AER to the existing RIT-D process can be seen within the dotted area on the right hand side of the figure. Importantly, where a replacement project is above the \$5 million capital cost threshold and the network service provider publishes an exemption report determining the network need can only be addressed by a like-for-like replacement, then the project is excluded from the RIT-D. A party can raise a dispute on the DNSPs decision that a like-for-like replacement is the only viable option.

All other replacement projects above the cost threshold would be subject to the existing RIT-D process. These projects would be subject to the same RIT-D process as augmentation projects.

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<sup>195</sup> The AER identified specific information to be provided in the regulatory investment test exemption reports. See AER proposed rule drafting, pp. 9 & 13.

<sup>196</sup> AER rule change request, p. 18.

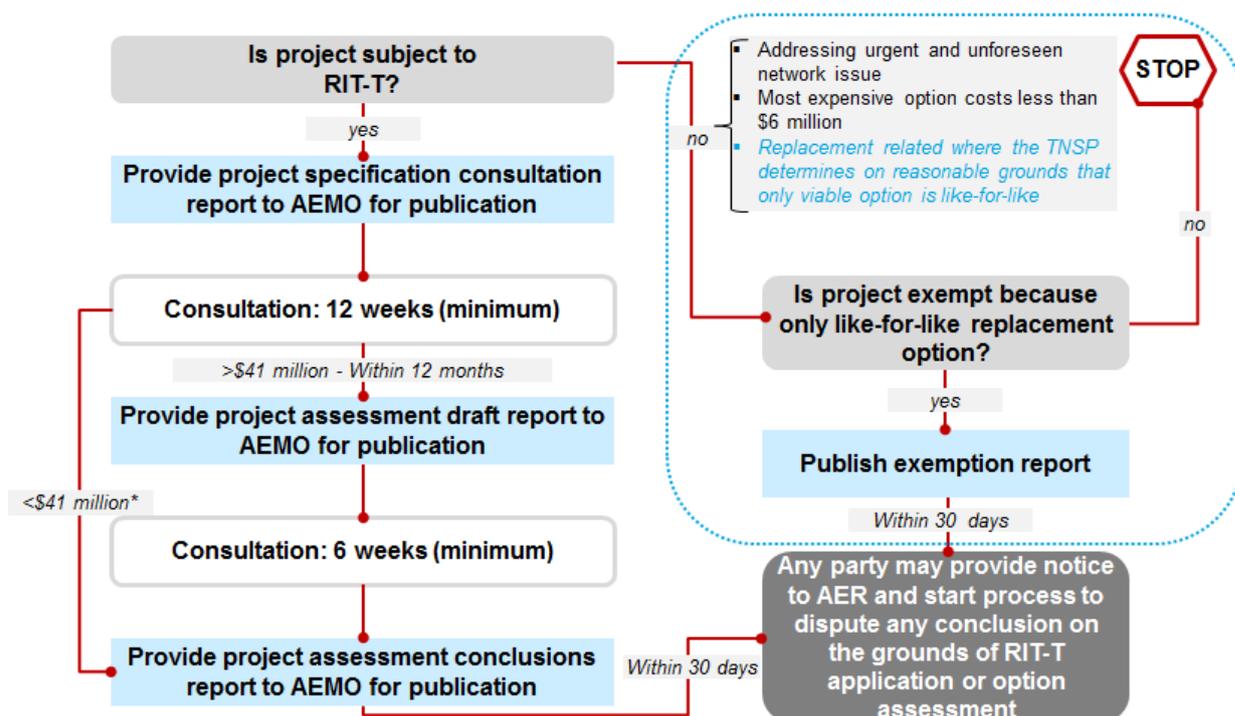
<sup>197</sup> AER proposed rule drafting, pp. 8&12.

<sup>198</sup> NER clauses 5.17.3(a)(5) and 5.16.3(a)(3).

<sup>199</sup> AER proposed rule drafting, pp. 8 & 12.



**Figure 5.4 AER proposed rule RIT-T process**



\*Other requirements are: no material market benefit, the TNSP has identified its preferred option in the consultation report, and submissions on the consultation report did not identify any additional credible options which could deliver a market benefit.

Source: AER rule change request.

## 5.2 Stakeholder views

### 5.2.1 First round submissions

Many network service providers supported extending the regulatory investment tests to replacement in principle but noted there is a need to balance any benefits with the compliance burden.<sup>200</sup> However, others did not consider that the benefits of extending the regulatory investment tests would outweigh the costs of doing so.<sup>201</sup>

In contrast, non-network providers, retailers and consumer groups supported extending the regulatory investment tests to replacement expenditure.<sup>202</sup> AEMO also supported extending the regulatory investment tests to replacement expenditure.<sup>203</sup>

<sup>200</sup> First round submissions: ENA, p. 12; TransGrid, p. 3; Ausgrid, p. 9; SA Power Networks, pp. 1-2.

<sup>201</sup> First round submissions: CitiPower and Powercor, p. 4; Jemena, Attachment 1, pp. 4-5; Ergon, pp. 10-11; Energex, p. 12.

<sup>202</sup> First round submissions: Energy Consumers Australia, p. 3; AGL, p. 6; EnerNOC, p. 5; EUAA, p. 5; TEC, p. 4.; MEU, p. 9; PIAC, p. 1; RES, p. 4; Red Energy and Lumo, p. 1.

<sup>203</sup> AEMO, first round submission, p. 6.

### *Cost threshold*

If the regulatory investment tests were to be extended to replacement, the majority of network service providers considered the cost thresholds for replacement expenditure should be the same as those for as augmentation.<sup>204</sup> They also supported the existing thresholds of \$5 million for distribution investments and \$6 million for transmission investments.<sup>205</sup> Ergon sought clarification on how the cost threshold would be applied to the regulatory investment test where a project entailed a combination of replacement and augmentation expenditure.<sup>206</sup>

Other stakeholders also considered that the cost thresholds for replacement and augmentation should be the same.<sup>207</sup> However, a number of these stakeholders expressed support for a lower cost threshold for the regulatory investment tests more generally.<sup>208</sup> EUAA considered a \$3 million cost threshold for transmission investments and \$2 million for distribution investments would be appropriate.<sup>209</sup> PIAC recommended a cost threshold in the range \$500,000 to \$1 million with a "mini RIT" process for smaller projects.<sup>210</sup> This idea was supported by CUAC.<sup>211</sup> The TEC expressed a similar view.<sup>212</sup>

### *Exemptions*

A number of other comments were made in relation to limiting the scope or application of the regulatory investment test processes:

- Network service providers considered it appropriate that they be exempt from the requirement to undertake a regulatory investment test where a network service provider considers a like-for-like replacement is the only viable option given the compliance cost.<sup>213</sup> Similarly, AEMO considered network service providers should be exempt from the regulatory investment test if there is no alternative to a like-for-like investment, so long as there is a rigorous and transparent process associated with the decision.<sup>214</sup>
- While the Energy and Water Ombudsman South Australia supported exempting replacement projects where a like-for-like replacement was the only viable

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204 First round submissions: ENA, pp. 12-13; Ergon, p. 12; Energex, p. 13; Jemena, Attachment 1, p. 5.

205 First round submissions: Energex, p. 13; Jemena, p. 2; SA Power Networks, p. 2; Ausgrid, p. 11.

206 Ergon, first round submission, pp. 11-12.

207 First round submissions: AEMO, p. 7; EUAA, p. 5; RES, p. 5.

208 First round submissions: AGL, pp. 6-7; PIAC, p. 3; EUAA; p. 5; Red Energy and Lumo, p. 1.

209 EUAA, first round submission, p. 5.

210 PIAC, first round submission, p. 3.

211 CUAC, first round submission, pp. 4-5.

212 TEC, first round submission, pp. 4-5.

213 First round submissions: ENA, p. 13; Ausgrid, p. 11; Ergon, p. 12; CitiPower and Powercor, p. 5; Jemena, Attachment 1, p. 5.

214 AEMO, first round submission, p. 8.

option, AGL, CUAC and EUAA did not.<sup>215</sup> AGL and CUAC considered all projects above the cost threshold should be subject to the regulatory investment tests without exception.<sup>216</sup>

There were mixed views from stakeholders on the AER's proposed exemption report process as a means of excluding projects where there is only one a like-for-like replacement option. Some stakeholders supported this process.<sup>217</sup> CitiPower and Powercor, Ausgrid and Ergon did not.<sup>218</sup>

Some network service providers raised concerns that the proposed exemption reporting and associated appeals process could lead to uncertainty and unnecessary delay in undertaking necessary replacement expenditure.<sup>219</sup> Energex queried the need for the exemption report process given existing processes.<sup>220</sup> Non-network providers, retailers and consumer groups supported the proposal for the exemption report to be subject to dispute.<sup>221</sup>

A number of stakeholders put forward alternative methods to the AER's exemption report process:

- Ausgrid submitted that categories of assets which are exempt from regulatory investment tests could be defined up front.<sup>222</sup> It considered this would provide greater regulatory certainty, reduce compliance costs and avoid extensive disputes.<sup>223</sup>
- CitiPower and Powercor suggested that like-for-like exemptions be summarised in annual planning reports. They noted that the reports provide an overview of planned large replacement projects including explanations for not considering other options where that is the case.<sup>224</sup> This stakeholder also submitted this would mean that all the information is kept in the same report and as part of a bigger picture.<sup>225</sup> The ENA also noted the information already provided in the annual planning reports was relevant.<sup>226</sup>
- RES supported the requirement for network service providers to provide public notification if exemption is sought. However, it proposed that a simplified

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215 First round submissions: EWOSA, p. 1; AGL, p. 7; EUAA, p. 6.

216 First round submissions: AGL, p. 7; CUAC, pp. 3-4.

217 First round submissions: Jemena, Attachment 1, p. 5; EnerNOC, pp. 5-6; AEMO, pp. 8-9; EUAA, pp. 6-7; AGL, p. 7

218 Ergon, p. 13; Ausgrid, pp. 11-12; CitiPower and Powercor, p. 5.

219 First round submissions: Ausgrid, p. 11; TransGrid, pp. 3-4

220 Energex, first round submission, p. 14.

221 First round submissions: RES, p. 5; AGL, p. 8; EUAA, pp. 6-7.

222 Ausgrid, first round submission, p. 12.

223 *ibid.*

224 CitiPower and Powercor, first round submission, p. 5.

225 *ibid.*

mechanism such as an exemption register, be established with the intent of reducing administrative burden.<sup>227</sup> It considered that, if implemented efficiently, the establishment of an exemption register would ensure that innovative solutions are not excluded from the market on the basis of incorrect assumptions.<sup>228</sup>

- TransGrid submitted that the RIT-T should only be extended to high value network asset replacement projects that would likely result in some change in the market or on competition.<sup>229</sup> To give effect to this, it recommended consideration of a gateway test that delineates projects that are likely to impact on the market or on competition from those that will not, raising the cost threshold and/or limiting the extension of the RIT-T to assets on major flow paths, consistent with the identified flow paths outlined in AEMO's NTNDP.<sup>230</sup> TransGrid also submitted that the AEMC could consider a model in which a network service provider identifies the assets which should be exempt from the RIT-T in its regulatory determination process.<sup>231</sup>

Stakeholders commented on the types of replacement expenditure that should or should not fall within the scope of a regulatory investment test process:

- AEMO and Ausgrid considered it was not clear how a large number of small projects within a renewal or replacement program across multiple sites would be treated under the proposed rule.<sup>232</sup> Ausgrid's view was that the regulatory investment tests should not extend to capture programs of work as "this would undermine the effectiveness" of these processes.<sup>233</sup> This issue was also raised by network service providers in subsequent stakeholder discussions on the rule change request.
- Ausgrid considered the scope of exemptions from the regulatory investment tests should be extended to include safety, duty of care, and environmental considerations given the nature of replacement.<sup>234</sup>

In its rule change request, the AER proposed to remove the current explicit exclusion of expenditure related to asset maintenance and refurbishment.<sup>235</sup> This is in addition to the removal of the current exclusion of replacement expenditure from the regulatory investment tests in the NER.

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226 ENA, first round submission, p. 13.

227 RES, first round submission, p. 5.

228 *ibid.*

229 TransGrid, first round submission, p. 3.

230 *ibid.*

231 *ibid.*, p. 4.

232 First round submissions: AEMO p. 10; Ausgrid, p. 2.

233 Ausgrid, first round submission, p. 2.

234 *ibid.*, pp. 9-10.

A number of stakeholders supported extending the regulatory investment tests to refurbishment expenditure.<sup>236</sup> Energex considered the regulatory investment tests may be applicable for refurbishment expenditure above a cost threshold and where viable options are a potential alternative to like-for-like replacement.<sup>237</sup> However, some network service providers did not support extending the regulatory investment test to refurbishment expenditure on the basis that this would lead to additional administrative burden with no benefit.<sup>238</sup>

There were differing views from stakeholders on whether maintenance expenditure should be subject to the regulatory investment test process with some supporting its inclusion and others not.<sup>239</sup>

CUAC considered the regulatory investment tests should be extended to include non-network capital expenditure such as that related to business IT and communication systems.<sup>240</sup> It submitted that investment in improved information technology and communication systems should yield productivity gains. Consequently, extending the regulatory investment tests to this capital expenditure would provide greater transparency of this expenditure.<sup>241</sup>

More generally, PIAC commented that in its view there is a lack of independent oversight of the regulatory investment tests.<sup>242</sup> To address this concern, it recommended that the AER be given authority to do a full assessment of the merit of a regulatory investment test.<sup>243</sup> The TEC had a similar view.<sup>244</sup> The TEC and PIAC also proposed that the AER be required to develop and maintain a central register of processes.<sup>245</sup>

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235 Maintenance expenditure is currently explicitly excluded from the RIT-T and refurbishment expenditure is currently explicitly excluded from the RIT-D in the NER.

236 First round submissions: Energy and Water Ombudsman of South Australia, p. 1; AGL, p. 6; PIAC, p. 4.

237 Energex, first round submission, p. 12.

238 First round submissions: Jemena, Attachment 1, p. 5; CitiPower and Powercor, p. 5

239 First round submissions in support of extending the regulatory investment tests to maintenance: AGL, p. 6; EWOSA, p. 1; PIAC, p. 4; First round submissions not in support of extending the regulatory investment tests to maintenance: ENA, p. 12; Energex, p. 12; Ausgrid, p. 10; Ergon, p.11; Jemena, Attachment 1, p. 5; CitiPower and Powercor, p. 5.

240 CUAC, first round submission, p. 3.

241 *ibid.*

242 PIAC, first round submission, pp. 4-5.

243 *ibid.*

244 TEC, first round submission, p. 5.

245 First round submissions: TEC, p. 4; PIAC, p. 5.

## 5.2.2 Second round submissions

Where they commented, the majority of network service providers supported the approach taken in the draft rule to extending the regulatory investment tests to replacement expenditure.<sup>246</sup>

However, APA considered where there is no alternative to the replacement of the existing equipment with the same, or modern equivalent, equipment a project should be exempt from the regulatory investment tests. It considered this on the basis there would be, in its view, no customer benefit from undertaking the test in the scenario.<sup>247</sup> It proposed that the AER be given the ability to determine whether a project is granted an exemption from the regulatory investment test process on application from network service providers.<sup>248</sup>

Energex and Ergon reiterated that replacement programs should be exempt from the tests as they considered there would be little value in using a regulatory investment test process for these replacements.<sup>249</sup>

Some network service providers considered any projects that address state government safety obligations should be excluded from the regulatory investment tests. The Electricity Safety (Bushfire Mitigation) Amendment Regulations 2016 (Vic) was identified as a current example of such safety requirements.<sup>250</sup>

SAPN also suggested a change to the draft rule. It stated that comparisons of different options in a regulatory investment test must be based on total project costs noting that there are costs which are unique to replacement resulting from the disposal of existing assets.<sup>251</sup> It suggested that such costs can be material in some instances.<sup>252</sup>

The ENA requested that the NER require the AEMC to conduct a review of the costs and benefits of the regulatory investment tests relating to replacement expenditure after a three year period to confirm that the intended benefits for customers have been realised.<sup>253</sup>

Stakeholders other than network service providers were supportive of the approach taken in the draft rule to extending the regulatory investment tests to replacement expenditure.<sup>254</sup> While expressing their broad support for the draft rule, some

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246 Second round submissions, CitiPower and Powercor, p. 3; Endeavour Energy, p. 3; SAPN, pp. 1-4.

247 APA, second round submission, p. 5.

248 *ibid.*

249 Energex and Ergon, second round submission, pp. 9-10.

250 Second round submissions: ENA, p. 15; AusNet, p. 5; CitiPower and Powercor, p. 3.

251 SAPN, second round submission, pp. 3-4.

252 *ibid.*

253 ENA, second round submission, p. 3.

254 AGL, p. 2; TEC, p. 2; EUAA, p. 1; AER, p. 1; MEU, p. 2; AEC, p. 2; CEC, p. 2; PIAC, p. 1.

reiterated their view for a lower cost threshold for the regulatory investment tests to apply to both augmentation and replacement expenditure.<sup>255</sup>

### 5.3 Analysis and conclusions

#### *Summary*

The rule:

- Extends the regulatory investment tests to replacement and refurbishment expenditure while acknowledging that maintenance expenditure is excluded.
- Provides that the existing regulatory investment test capital cost thresholds in the NER will apply to replacement and refurbishment expenditure. These thresholds will remain at the current levels of \$5 million for distribution investments and \$6 million for transmission investments. As a result, there will be one cost threshold for all augmentation and replacement capital expenditure to determine whether a project should be subject to a regulatory investment test process.
- Provides that the current processes are to apply to all replacement and refurbishment capital expenditure above the capital cost threshold without exception including the publication of information at key stages.
- Allows the existing dispute resolution arrangements in the NER that apply to the regulatory investment tests to continue to apply without amendment.

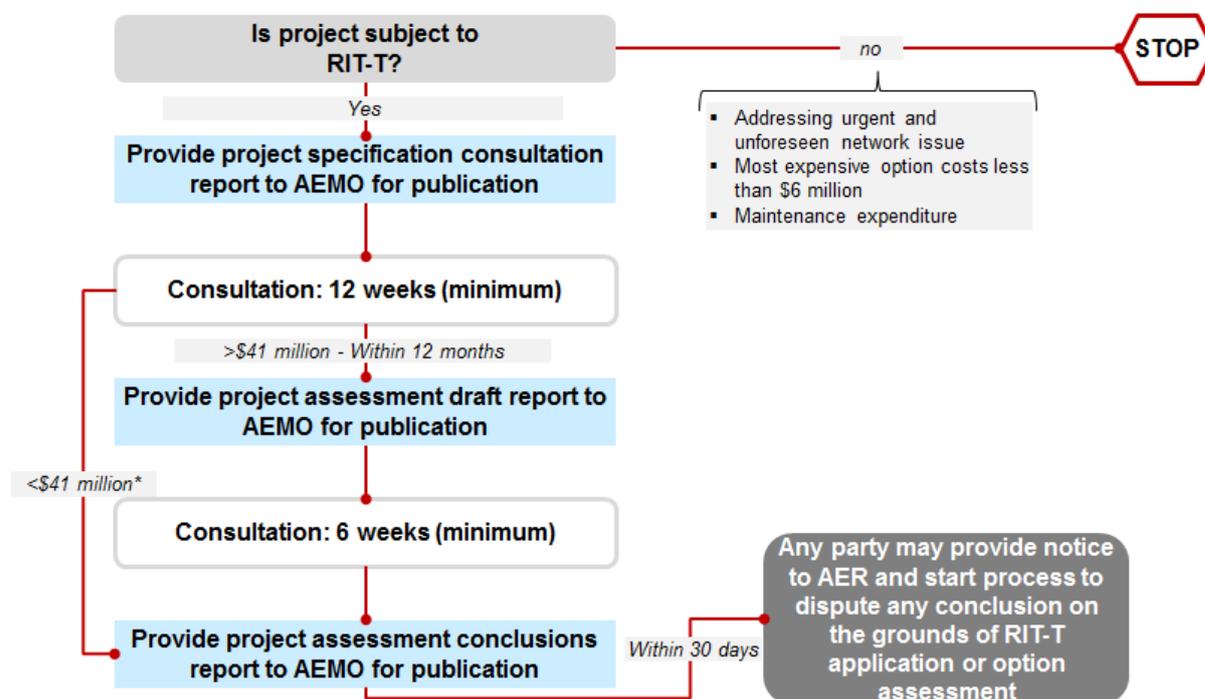
Figure 5.5 sets out the RIT-D process under the rule. The amendments resulting from the rule can be seen in the box on the right hand side of Figure 5.5 that sets out the projects that may be exempt from undertaking the RIT-D. In comparison to the current process (Figure 5.1) and that under the proposed rule (Figure 5.3), the available exceptions are limited.

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<sup>255</sup> Second round submissions: AGL, p. 3; MEU, p. 2; PIAC, p. 1.



**Figure 5.6 Final rule RIT-T process**



Source: Amending rule.

\*Other requirements are: no material market benefit, the TNSP has identified its preferred option in the consultation report, and submissions on the consultation report did not identify any additional credible options which could deliver a market benefit.

*Should the regulatory investment tests be extended to replacement expenditure*

As set out in Chapter 2, the regulatory investment tests provide a transparent process for the identification of efficient network planning options for projects above a certain size. In this way, the process facilitates engagement by energy market stakeholders in the network planning process and in the decision making processes followed to make efficient network investment. In light of these benefits and the changing energy environment discussed in Chapter 3, the scope of the existing regulatory investment tests has been extended to apply to replacement projects as proposed by the AER.

Making this change to the NER also provides a single process for considering potential capital investment. That is, there is not different treatment based on the driver of the investment. This is reinforced by the rule which does not distinguish between augmentation and replacement expenditure: all are considered within one process.

In addition, the rule does not extend the regulatory investment tests to assets which do not form part of the network such as IT and communications systems as was suggested by some consumer groups. The purpose of the process is to identify the efficient network option by facilitating engagement with energy market stakeholders such as non-network providers. It is not designed for general business capital expenditure such as IT and communication systems which is appropriately assessed by the AER as part of the revenue determination processes. In addition, it should be noted that DNSPs are

required to report on information technology and communication systems in their DAPRs.<sup>256</sup>

In a submission on the draft rule, SAPN stated that there are costs which are unique to replacement resulting from the disposal of existing assets and that these costs, which can be material, needed to be recognised in undertaking a RIT process.<sup>257</sup>

The Commission considers that the AER could provide additional guidance on this in the regulatory investment tests and associated application guidelines if considered necessary.

*What should be the cost thresholds for replacement expenditure*

As supported by stakeholders, the same cost threshold should apply to replacement projects and augmentation projects. Given the purpose of the regulatory investment tests, the driver of the need to invest is not a relevant consideration for what cost threshold should apply. In addition, different cost thresholds for replacement and augmentation projects would likely create complexity and uncertainty, as identified by the AER.<sup>258</sup> It would also create a difference between augmentation and replacement expenditure that does not provide a benefit that outweighs the compliance cost.

In a submission to the rule change request, Ergon sought clarification on how the cost threshold would be applied to the regulatory investment test when a project entailed a combination of replacement and augmentation expenditure.<sup>259</sup> This was also raised in stakeholder discussions with the AEMC.

The rule provides for one cost threshold for investments in each of the RIT-T and RIT-D as the underlying need for a network investment will be either augmentation or replacement. The AEMC understands this is consistent with the AER's approach on drivers of investment. To the extent that a network service provider takes a view that an investment is driven by a combination of replacement and augmentation then the total cost of the potential capital investment is used to determine whether the regulatory investment test cost threshold is met. The AER may provide further clarity on this issue in its regulatory investment test application guidelines.<sup>260</sup>

As currently provided for, the AER must regularly update the RIT-T and RIT-D cost thresholds to reflect changes in input costs of network investment.<sup>261</sup>

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256 NER Schedule 5.8(m).

257 SAPN, second round submission, pp. 3-4.

258 AER rule change request, 30 June 2016, p. 19.

259 Ergon, first round submission, pp.11-12.

260 AER, *Regulatory investment test for transmission application guidelines*, 29 June 2010; AER, *Regulatory investment test for distribution application guidelines*, August 2013.

261 NER clause 5.15.3.

The AEMC notes that the cost threshold for augmentation is out of scope of this rule change request process given the framing of the request and its intent to focus on the inclusion of replacement expenditure in the planning and investment frameworks.

*Should there be any specific exemptions from the regulatory investment tests for replacement expenditure*

The Commission's view is that all replacement expenditure above the existing capital cost thresholds should be subject to the current regulatory investment test processes with no exception. Importantly, this approach means that all network capital investments are treated the same, providing greater clarity and certainty for all stakeholders including the AER who must check for compliance of the rule.

The rule does not include the AER's proposal to allow a network service provider to exempt itself from a regulatory investment test if it considers that a like-for-like asset replacement is the only viable replacement option. The Commission has concluded that this exclusion is not necessary as the regulatory burden of undertaking a regulatory investment test where a like-for-like replacement is the only viable solution is unlikely to be significant.

Firstly, the framework already accommodates shorter processes under certain conditions. For example, where there are no non-network solutions to a network need and the project is less than \$10 million then a DNSP does not have to publish and consult on a non-network options report or draft assessment report – it can go straight to the final report as set out in Figure 5.5. Similarly, where a project is less than \$41 million and meets other certain requirements in the NER, a TNSP does not have to publish and consult on a project assessment draft report – it only has to publish a consultation report and the project assessment conclusions report as set out in Figure 5.6.

Secondly, the amount of work to be undertaken for a final report would not be significant where there is only one viable option. It would not require a significant amount of work to calculate the costs and benefits where there is only one option, for example. A network service provider is expected to undertake some of this work in making an investment decision anyway.

Finally, the use of an exemption report that can be challenged creates another new process on top of the existing processes. The Commission is concerned that such a change would create additional regulatory burden that may not be warranted by its potential benefits.

There were some alternative ideas put forward by stakeholders to the exemption report process. These were: prescribing assets to be exempt in the NER; the AER determining assets to be exempt in a revenue determination process; network service providers identifying like-for-like exemptions in the annual planning reports or in an exemptions register and network service providers seeking approval from the AER for exemption on a project by project basis.

In considering these alternatives, the Commission notes that exclusions to the regulatory investment tests are not necessary as the regulatory burden of undertaking a regulatory investment test where a like-for-like replacement is the only viable solution is unlikely to be significant. Prescribing excluded assets in the NER or through the revenue determination process is therefore unnecessarily burdensome and does not make the overall process more efficient. The Commission takes the same view on the proposal for the AER to determine whether projects should be exempt on a case by case basis. In addition, given there are no exclusions to report on under the rule, the need for network service providers to report on these through the annual planning reports or an exemption register is not required.

Separate to the question of an exclusion process is the question of potential exempt assets.

Some network service providers considered assets that are replaced in multiple locations at the same time as part of a replacement "program" such as poles or protection systems should be excluded from the regulatory investment tests.

Such an explicit exclusion of asset replacement "programs" from the regulatory investment tests has not been included in the rule. Consistent with the existing arrangements for augmentation, the rule provides that replacements that address the same identified need, an objective that is identified by a network service provider, are to be considered together when determining whether the cost threshold is met.

As a result, any program of capital expenditure that includes a number of possible cost items that all go to address one need are considered together for the question of whether the regulatory investment test threshold is met. This applies equally to both augmentation and replacement contexts.

However, the regulatory burden of undertaking a regulatory investment test may not be significant where multiple assets across more than one location are replaced. For assets such as poles, protection systems and instrument transformers this is because there is only likely to be one viable option for these replacements.

In addition, if a network service provider plans to replace multiple assets of the same type across more than one location in the same year it may not trigger the capital cost threshold if these assets are addressing more than one identified need.<sup>262</sup> The AER may provide more guidance on the treatment of asset replacement programs in its regulatory investment test application guidelines.<sup>263</sup>

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<sup>262</sup> An identified need is defined in the NER as the objective a network service provider seeks to achieve by investing in the network. NER clause 5.10.2.

<sup>263</sup> AER, *Regulatory investment test for transmission application guidelines*, 29 June 2010; AER, *Regulatory investment test for distribution application guidelines*, August 2013.

Another exclusion category was raised by Ausgrid. It considered the scope of exemptions from the regulatory investment tests should include "safety, duty of care, and environmental considerations" given the nature of replacement.<sup>264</sup>

Under the existing arrangements, where safety, duty of care and environmental issues would prevent a network service provider from operating its network appropriately and put the reliability of the network at risk then a regulatory investment test would not be required to be undertaken. This is because the NER exempts a network service provider from undertaking a regulatory investment test where a project is required to address an urgent and unforeseen network issue that would otherwise put at risk the reliability of the network.<sup>265</sup>

Similarly, in second round submissions some network service providers considered any projects that address state government safety obligations should be excluded from the regulatory investment tests. The Electricity Safety (Bushfire Mitigation) Amendment Regulations 2016 (Vic) was identified as a current example.<sup>266</sup>

The rule does not exclude replacement projects to address safety related obligations.<sup>267</sup> These projects should be treated the same as other capital expenditure as there may be alternative options for addressing these obligations which should be explored through the regulatory investment test process. To the extent that capital expenditure required to meet safety obligations is not replacement expenditure then this is out of scope of this rule change.

#### *Refurbishment and maintenance expenditure*

In its proposed rule, the AER removed the explicit exclusion of projects related to the refurbishment or maintenance of assets.<sup>268</sup>

Refurbishment expenditure is a form of capital expenditure as it involves extending the life of an asset beyond its original useful life.<sup>269</sup> The rule removes the current specific exclusion of refurbishment expenditure from the RIT-D in the NER. This is an appropriate change as there are benefits in undertaking a regulatory investment test process for refurbishment. It also has the advantage of aligning the RIT-D with the existing RIT-T.

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<sup>264</sup> Ausgrid, first round submission, pp. 1-2, 9-10.

<sup>265</sup> NER clauses 5.17.3(a)(1) and 5.16.3(a)(1).

<sup>266</sup> Second round submissions: ENA, p. 15; AusNet, p. 5; CitiPower and Powercor, p. 3.

<sup>267</sup> However, replacement projects undertaken by Victorian DNSPs relating to compliance with parts of the Electricity Safety (Bushfire Mitigation) Regulations 2013 (Vic) are exempted from the RIT-D under the rule's transitional arrangements as set out in section 7.2.3.

<sup>268</sup> AER proposed rule drafting, pp. 8 & 12.

<sup>269</sup> For example, the AER considers asset refurbishment as "the non-demand driven capital expenditure to restore an asset to its former functionality where the asset has reached the end of its economic life. The works undertaken must result in a material extension in the expected life of the asset." AER 2017, AER Melbourne, viewed 11 July 2017, <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/expenditure-fo-recast-assessment-guideline-regulatory-information-notices-for-category-analysis-2014>.

The rule retains the current specific exclusion of maintenance expenditure from the RIT-T in the NER as this expenditure should not be subject to a regulatory investment test. For consistency between the RIT-T and RIT-D exemptions, maintenance expenditure will also be specifically excluded from the RIT-D process by the insertion of a new clause in the rule (clause 5.17.3(5)). Maintenance relates to preserving the existing condition of assets. It is appropriately assessed by the AER within the revenue determination process and is subject to general and explicit incentives. This is consistent with the purpose of the regulatory investment test which is to identify the efficient investment option for an electricity network.

#### *Regulatory burden*

There will be some increase in regulatory burden from extending the regulatory investment tests to replacement expenditure. An assessment of a small sample of annual planning reports indicates that a network service provider may need to undertake approximately six additional processes each year under the rule.<sup>270</sup> This would be expected to vary across network service providers and be dependent on the needs of each network at any point in time. However, the use of the regulatory investment tests as set out in the rule is expected to facilitate stakeholder engagement in the planning and decision making process and result in efficient network investment. The expected regulatory burden is unlikely to outweigh the benefits of having transparent, and consistent regulatory investment test processes for all replacement capital expenditure.

In a submission to the rule change request, the ENA requested that the NER require the AEMC to conduct a review of the costs and benefits of the regulatory investment tests relating to replacement expenditure after a three year period to confirm that the intended benefits for customers have been realised.<sup>271</sup>

As identified above, the Commission considers that extending the regulatory investment tests to replacement expenditure meets the NEO. It is more appropriate and flexible to not specify a review date in the NER but to consider changes in the future as the need arises. Should a stakeholder, at any point, consider that the NEO would be met in a different way then it may submit a rule change request to the AEMC.

#### *A general review of the regulatory investment tests*

Consideration of the regulatory investment test processes in general is out of scope of this rule change request.<sup>272</sup> The AER's rule change request is specifically framed to address the intent of including replacement expenditure in the scope of the RIT-T and RIT-D. The AEMC notes that the COAG Energy Council RIT-T review recommended

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<sup>270</sup> The annual planning reports that were assessed were those that were available in November 2016.

<sup>271</sup> ENA, second round submission, p. 3.

<sup>272</sup> This includes the publication of regulatory investment test reports by the AER as proposed by some consumer groups.

that the AER would explore extending existing RIT-D requirements to the RIT-T to improve the level and accessibility of information relating to transmission networks.<sup>273</sup>

The regulatory investment tests are also in scope of the contestability of energy services – demand response and network support rule change request currently being considered by the AEMC.<sup>274</sup>

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<sup>273</sup> COAG Energy Council, *Review of the regulatory investment test for transmission*, RIT-T review, 6 February 2017.

<sup>274</sup> AEMC 2007, AEMC viewed 11 July 2017, <http://www.aemc.gov.au/Rule-Changes/Contestability-of-energy-services-demand-response>.

## 6 Other related issues

This chapter sets out the Commission's view on some related secondary amendments proposed by the AER in its rule change request. These relate to:

- requiring network service providers to notify registered participants and AEMO of any technical limits that will be exceeded arising from planned asset retirements or de-ratings
- requiring TNSPs to provide information on their asset management approach in their TAPRs and
- requiring TNSPs to reapply the RIT-T where there has been a material change in circumstances since the RIT-T was undertaken and the preferred option identified in the final project assessment report is no longer the preferred option
- clarifying the existing requirement for DNSPs to provide information on IT and communication systems in their DAPRs.

Each of these is discussed in turn below.<sup>275</sup>

### 6.1 Notification of network limitations

#### 6.1.1 AER's view

Currently, clause 5.11.2(b) of the NER requires a network service provider to notify any affected registered participants and AEMO of technical limits that will be exceeded from annual analysis of forecast information as well as the expected time for addressing the problem.

In its rule change request, the AER proposed to amend this clause to explicitly require network service providers to notify any registered participants and AEMO of the above information where a network problem arises as a result of planned asset retirements or de-ratings.<sup>276</sup>

#### 6.1.2 Stakeholder views

##### *First round submissions*

Network service providers generally accepted that information on potential system technical limits that will be exceeded from planned asset retirements and de-ratings

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<sup>275</sup> In response to submissions, some stakeholders also commented on the balance between capital and operating expenditure incentives under the regulatory framework as well as appropriate network pricing. These issues are out of scope of this rule change request.

<sup>276</sup> AER rule change request, Attachment: AER proposed amendments to Chapter 5, p. 1.

may be useful for registered participants.<sup>277</sup> However, they also noted that this information may already be available by other mechanisms.<sup>278</sup> In contrast, AEMO, RES and EUAA supported the amendments to NER clause 5.11.2 proposed by the AER.<sup>279</sup>

#### *Second round submissions*

Stakeholders did not comment on this issue in second round submissions.

### **6.1.3 Analysis and conclusions**

The Commission has decided not to amend NER clause 5.11.2 as it does not consider it is necessary to do so. Firstly, this clause currently captures all exceeded technical limits, regardless of whether they result from asset retirements, de-ratings or some other cause. Accordingly, a specific reference to asset retirements and de-ratings is not needed. Second, as the information required to be reported in this clause is also required to be provided in the annual planning reports then the additional notification required by this clause has limited benefit. In practice, the requirements may be met by the publication of annual planning reports.

## **6.2 Reporting information on asset management approach**

### **6.2.1 AER's view**

The AER proposed to require TNSPs to provide certain information on their asset management approach in their TAPRs noting the information is already required to be provided by distribution networks.

The information the AER proposed that TNSPs provide:

- a summary of the asset management strategy employed by the TNSP
- a summary of any issues that may impact on the system limitations identified in the TAPR that have been identified through carrying out asset management and
- information about where further information on the asset management strategy is available.

The AER noted that asset management is increasingly important in both transmission and distribution.<sup>280</sup>

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277 First round submissions: ENA, p. 14; Ausgrid, p. 13; Ergon, p.15.

278 First round submissions: ENA, p. 14; Ausgrid, p. 13.

279 First round submissions: RES, p. 6; EUAA, pp. 7-8; AEMO, p. 10.

280 AER rule change request, p. 16.

## 6.2.2 Stakeholder views

### *First round submissions*

Only two stakeholders commented on this proposal. Both expressed support for the AER's proposal to require TNSPs to provide information on their asset management approach in their TAPRs.<sup>281</sup> RES considered the information to be useful.<sup>282</sup> While AGL considered this proposed change to be appropriate, it submitted the information could be reported at longer intervals such as once every three years or following the occurrence of a significant event rather than annually.<sup>283</sup>

### *Second round submissions*

Stakeholders did not comment on this issue in second round submissions.

## 6.2.3 Analysis and conclusions

The rule amends the NER to require TNSPs to provide information on their asset management practices in their TAPRs.<sup>284</sup>

The information the rule requires TNSPs to provide is:

- a summary of the asset management strategy employed by the TNSP
- a summary of any issues that may impact on any network constraints identified in the TAPR that have been identified through asset management
- where further information on the asset management strategy and methodology adopted by the TNSP is available.<sup>285</sup>

The information required to be provided by the rule is the same as that proposed by the AER with a minor drafting change.<sup>286</sup>

Requiring TNSPs to report this information will provide greater transparency of their asset management practices. This will give energy market stakeholders context for TNSPs' replacement decisions and therefore more confidence in these decisions. In addition, TNSPs should readily have the information available so there will not be a significant increase in regulatory burden from this requirement. This change will also provide consistency between transmission and distribution on this issue.

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281 First round submissions: AGL, p. 8; EUAA, pp. 7-8; Ergon, p. 15, RES, p. 6.

282 RES, first round submission, p. 6.

283 AGL, first round submission, p. 8.

284 Rule clause 5.12.2(c)(7).

285 Rule clause 5.12.2(c)(7)(iii).

286 The AER proposed network service providers provide a summary of any issues that may impact on "limitations" which is a term that is not used in the TAPR requirements. The rule substitutes this term with the equivalent term ("constraints") which is already used in the TAPR requirements in the NER.

It is appropriate that the proposed information on asset management practices be reported annually following a TNSP's annual planning review consistent with other planning reporting requirements.

## **6.3 Re-application of the RIT-T**

### **6.3.1 AER's view**

To address potential uncertainty as to whether a TNSP should proceed with a preferred option in a RIT-T where there has been a material change in circumstances, the AER proposed to require TNSPs to reapply the RIT-T where there has been a material change in circumstances since the RIT was undertaken and the preferred option identified in the final project assessment report is no longer the preferred option.

The proposed rule also provided that if a TNSP considered it would be inappropriate for it to re-apply the test, it can seek a determination from the AER to waive this requirement. The AER noted these requirements already exist in the RIT-D and its proposed changes would promote consistency between the RIT-T and RIT-D.<sup>287</sup>

### **6.3.2 Stakeholder views**

#### *First round submissions*

While generally in support of this change, AEMO considered that a TNSP should not be required to repeat the whole RIT-T process. Instead it suggested that a TNSP only be required to repeat those elements of the RIT-T process which are materially affected by the change in circumstances. AEMO submitted that it may otherwise become difficult for a TNSP to finalise its decision.<sup>288</sup>

Ergon stated that it did not oppose the proposed change.<sup>289</sup> No other network service providers commented on this issue.

Where other stakeholders commented, they supported the AER's proposed change.<sup>290</sup> RES considered the existing requirement in the RIT-D has been useful.<sup>291</sup>

#### *Second round submissions*

Stakeholders did not comment on this issue in second round submissions.

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287 AER proposed rule drafting, p. 10.

288 AEMO, first round submission, p. 10.

289 Ergon, first round submission, p. 15.

290 First round submissions to rule change request: EUAA, pp. 7-8; RES, p. 6.

291 RES, first round submission, p. 6.

### 6.3.3 Analysis and conclusions

The rule requires a TNSP to undertake the RIT-T for a project again where:

- a final project assessment conclusions report for the project is published
- a TNSP still wishes to address the identified need
- there has been a material change in circumstances which means that, in the opinion of the TNSP, the preferred option in the final project assessment conclusions report is no longer the preferred option.<sup>292</sup>

However, where these circumstances are met a TNSP may seek a determination from the AER that it does not have to undertake the process again.<sup>293</sup> In making such a determination the rule requires the AER to have regard to:

- the credible options (other than the preferred option) identified in the final project assessment conclusions report
- the change in circumstances identified by the RIT proponent
- whether a failure to promptly undertake the project is likely to materially affect the reliability and secure operating state of the transmission network or a significant part of that network.<sup>294</sup>

In considering these matters, the AER may conclude that:

- all of the RIT-T process should be carried out
- certain elements of the RIT-T be re-run or
- the RIT process is not required.

Under the existing distribution rules and the rule for transmission, all of these options are feasible conclusions for the AER.

The rule also sets out that a material change in circumstances includes a change to the key assumptions used in identifying the identified need or credible options in the final project assessment conclusions report.<sup>295</sup>

The Commission considers it is appropriate that a TNSP be required to undertake the RIT-T again where there has been a material change in circumstances and the preferred option identified in the final project assessment report is no longer the preferred option. It will facilitate stakeholder engagement in the identification of the efficient option and provide clarity for TNSPs as to what to do in this scenario.

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<sup>292</sup> Rule clause 5.16.4(z3).

<sup>293</sup> Rule clauses 5.16.4(z3) and (z5).

<sup>294</sup> Rule clause 5.16.4(z5)

<sup>295</sup> Rule clause 5.16.4(z4).

It is also appropriate to provide flexibility so that a TNSP does not have to reapply the RIT-T in circumstances where it may not be efficient to do so. For example, where a previously considered option becomes the preferred option and the change in circumstances has not impacted on the key inputs into the RIT-T final project assessment conclusions report. The rule provides for this flexibility. Where key assumptions in the RIT-T have changed it is appropriate that the RIT be undertaken again in full.

The rule mirrors the same provision in the RIT-D, making the two tests consistent with one another. It is also consistent with the AER's proposed rule.

## **6.4 DNSP information on IT and communications**

### **6.4.1 AER's view**

Currently, Schedule 5.8(m) of the NER requires a DNSP to provide information in its DAPR on its investments in metering or information technology systems related to management of network assets which occurred in the preceding year. A DNSP is also required to report planned investments in metering or information technology in the forward planning period.

The AER has proposed to:

- remove the requirement in this clause to provide information on metering
- clarify that information technology systems includes communication systems.<sup>296</sup>

The AER did not provide reasons for this proposed amendment in its rule change request.

### **6.4.2 Stakeholder views**

#### *First round submissions*

Stakeholders did not comment on this issue in first round submissions.

#### *Second round submissions*

SAPN supported the draft rule which clarified Schedule 5.8(m) of the NER as proposed by the AER.<sup>297</sup> No other stakeholders commented on this issue in second round submissions.

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<sup>296</sup> AER proposed rule drafting, p. 5.

<sup>297</sup> SAPN, second round submission, p. 2.

### 6.4.3 Analysis and conclusion

The rule clarifies Schedule 5.8(m) of the NER as proposed by the AER. Under the rule a DNSP must provide information in its DAPR on:

- the DNSP's investments in information technology and communication systems related to management of network assets which occurred in the preceding year
- planning investments in information technology and communication systems in the forward planning period.<sup>298</sup>

It is appropriate to remove the requirement for DNSPs to report on metering as metering services will become contestable from 1 December 2017 under the expanding competition in metering and related services final rule.<sup>299</sup>

It is also appropriate to clarify that DAPR requirements for a DNSP to report on information technology includes communication systems as these are related investments.

There is no existing corresponding requirement for transmission networks. The Commission has not added this reporting requirement for transmission networks as it does not consider it appropriate. This is because the information would be of limited use to energy market stakeholders such as non-network providers to make efficient investment decisions relating to the network.

Information on information technology and communications would be of value to the AER and stakeholders for the purpose of determining network service provider revenues. However, the AER can seek this information through its information gathering powers under the NEL for this purpose, namely regulatory information orders and regulatory information notices.

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<sup>298</sup> Rule Schedule 5.8(m).

<sup>299</sup> AEMC, *Rule determination, Expanding competition in metering and related services*, 26 November 2015. However, the Department of Environment, Land, Water and Planning advised by email to stakeholders on 16 March 2016 that the Victorian Government has determined to defer the adoption of metering competition in Victoria.

## 7 Implementation

This chapter sets out the AER's view, stakeholder views and the Commission's analysis in relation to:

- implementation specific to Victoria
- the timing of implementing a rule.

### 7.1 Issues specific to Victoria

Under the current NER, there is recognition that AEMO and AusNet Services (the main declared network system operator in Victoria) both have a role in planning and investing in transmission network assets in Victoria. AEMO's role is to plan augmentations to the transmission network. AusNet Services owns and operates most of the electricity transmission network in Victoria. In practice, the two parties work together to meet the relevant rule requirements.

#### 7.1.1 AER's view

The AER stated that the implementation of the proposed rule would not impact on the transmission planning arrangements between AEMO and AusNet Services in Victoria. It has proposed that the arrangements that currently exist in relation to augmentations also be applied to the proposed amendments. It stated:<sup>300</sup>

“... the proposed amendments would result in AusNet Services being responsible for conducting replacement expenditure assessments, but this would require in some cases a RIT-T to be undertaken for replacement projects.”

While this suggests that the AER considers AusNet Services should carry out replacement expenditure related RIT-T processes, it does not clarify which party should have the responsibility for the proposed new annual planning report requirements.

#### 7.1.2 Stakeholder views

##### *First round submissions*

AEMO noted that in its role of Victorian transmission planner, it "is responsible for planning and procuring new transmission capacity and for connecting generators and customers to the declared shared transmission network – this includes augmentation RIT-Ts".<sup>301</sup> Having regard to the existing arrangements, AEMO suggested that AusNet Services be responsible for "both the additional reporting requirements and for

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<sup>300</sup> AER rule change request, p. 19.

<sup>301</sup> AEMO, first round submission, p. 9.

conducting the replex RIT-Ts".<sup>302</sup> AEMO noted that it and AusNet Services currently co-ordinate and share information to meet their respective obligations. It commented: "AEMO and AusNet are working together to consider how the proposed Rule could apply in practice".<sup>303</sup>

AusNet Services responded to the consultation paper, stating:<sup>304</sup>

"... AusNet Services is the appropriate party to conduct the RIT-T, on account of the allocation of responsibilities in Victoria, and consider that AEMO's Victorian Transmission Annual Planning Report (TAPR) is the appropriate avenue for the additional reporting requirements. This would be consistent with current practice ..."

AusNet Services also commented that it has the responsibility to provide a safe, efficient and reliable transmission network in Victoria. This makes AusNet Services accountable to make asset replacement decisions within an asset management strategy although it does consult with AEMO and DNSPs. Having regard to these obligations, AusNet Services considered that it would be appropriate for it to be responsible for carrying out a RIT-T process for their asset replacements. Consultation with, and modelling from, AEMO would be required for these tasks consistent with existing liaison practices.<sup>305</sup>

A number of other stakeholders also commented on this issue. Noting that AEMO is currently responsible for preparing the TAPR in relation to the Victorian transmission network, stakeholders suggested that it would be appropriate for AEMO to carry out this role in regard to the proposed rule.<sup>306</sup>

In regard to the responsibility for undertaking a RIT-T related to replacement expenditure, Jemena suggested that this be AEMO as it is the network planner. It did acknowledge that AEMO would require advice from AusNet Services to carry out the process.<sup>307</sup> A preference for AEMO was shared by RES and the EUAA.<sup>308</sup>

In contrast, the ENA suggested that AusNet Services conduct any RIT-T process related to the replacement of assets as this would be consistent with the existing separation of responsibilities in Victoria.<sup>309</sup> AGL also supported this arrangement although it also suggested that an alternative arrangement could be joint responsibility.<sup>310</sup>

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302 *ibid.*

303 *ibid.*

304 AusNet Services, first round submission, p. 1.

305 *ibid.*, pp. 3-5.

306 First round submissions: Jemena, p. 9; RES, p. 6; EUAA, p. 7; ENA, p. 14; AGL, p. 8.

307 Jemena, first round submission, p. 9.

308 First round submissions: RES, p. 6; EUAA, p. 7.

309 ENA, first round submission, p. 14.

310 AGL, first round submission, p. 8.

### *Second round submissions*

While supporting the overall assignment of responsibilities in Victoria, AEMO and AusNet provided some amendments to the draft rule to reflect the arrangements in Victoria.<sup>311</sup> These drafting suggestions fell into three categories.

First, they considered a DTSO should provide AEMO with information to enable AEMO to comply with the new annual reporting requirements and associated planning review requirements.<sup>312</sup>

Secondly, they submitted that the NER should require AEMO to undertake the market benefits assessment part of the RIT-T.<sup>313</sup> The parties considered AEMO was best placed to undertake this assessment; that this would facilitate a consistent approach to market benefits assessments in Victoria; and it would allow these activities to be adequately funded.<sup>314</sup> In relation to undertaking a regulatory investment test for a replacement expenditure project, AEMO and AusNet also proposed that the NER require the long term needs of the declared transmission system be taken into account.<sup>315</sup>

More generally, AEMO and AusNet also proposed a requirement for AEMO and a DTSO to use their best endeavours to conduct joint planning in relation to proposed retirements, de-ratings and replacements to enable AEMO to provide shared transmission services.<sup>316</sup> AusNet commented that this is "consistent with current practice and would be consistent with the enhanced processes for asset replacement planning intended by the rule change."<sup>317</sup>

AEMO and AusNet provided suggested rule drafting that reflected their proposals.<sup>318</sup>

No other stakeholders commented on the issue of responsibilities for complying with the rule in Victoria in second round submissions.

### **7.1.3 Analysis and conclusions**

The Commission has considered the allocation of responsibilities arising from the rule in the context of the current approach. It notes the nature of the tasks required by the NER necessitate some co-ordination and co-operation between AEMO and AusNet Services (or any other owner of transmission network assets in Victoria). The

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311 Second round submissions: AEMO, pp. 1-3; and Attachments 1 and 2; AusNet, pp. 1-5 and Attachments 1 and 2.

312 Second round submissions: AEMO, pp. 1-2; AusNet, p. 2.

313 Second round submissions: AEMO, p. 2; AusNet, p. 3.

314 Second round submissions: AEMO, p. 2; AusNet, p. 2-3.

315 Second round submissions: AEMO, p. 2 and Attachment 1, p. 15; AusNet, Attachment 1, p. 15.

316 Second round submissions: AEMO, Attachment 1, p. 14; AusNet, pp. 2-3 and Attachment 1, p. 14.

317 AusNet, second round submission, p. 3.

318 Second round submissions: AEMO, Attachment 1; AusNet, Attachment 1.

Commission is not aware of any issues arising from these arrangements that impact on compliance with the current NER requirements.

Accordingly, the Commission has concluded that arrangements consistent with the existing division of responsibilities should apply to replacement-related planning and investment:

- AEMO will be responsible for producing annual planning reports for the Victorian transmission network (as it is currently) which will now include information on all planned network asset retirements, certain planned de-ratings and information on the asset management approach taken by the service provider. AEMO will also be responsible for the associated requirement to consider the condition of assets and the potential for replacements or non-network options to replacements that are likely to provide a net economic benefit to all those who produce, consume and transport electricity in the market in undertaking an annual planning review.
- AusNet Services (or any other owner and operator of the transmission network in Victoria) is to be responsible for carrying out any regulatory investment test processes for Victorian transmission replacement expenditure.

This arrangement of responsibilities, while not limiting any co-ordination and co-operation between the parties, is reflected in clause 5.1.2(f) and (f1) of the rule. This clause refers to 'relevant declared transmission system operator' rather than AusNet Services by name in recognition that AusNet Services is not the sole owner and operator of transmission network assets in Victoria.

In addition, in response to stakeholder submissions from AEMO and AusNet on the draft rule the final rule amends the NER to further clarify the arrangements in Victoria.

First, to recognise that AEMO is reliant on information from a DTSO to comply with the new annual reporting and associated obligations the final rule provides that a DTSO must provide to AEMO, within a reasonable period of receiving a request, such information as reasonably requested by AEMO to enable it to comply with these obligations.<sup>319</sup>

Secondly, the rule allows a DTSO to request assistance and information from AEMO as reasonably required for it to consider and conduct market benefits assessments as part of a RIT-T process for replacement expenditure.<sup>320</sup> This recognises that there would be benefits in using consistent assumptions for determining the market benefits of all network investments in Victoria. However, it also recognises that responsibility for all aspects of a RIT-T process for replacement expenditure projects should rest with the party that is responsible for deciding on these investments, that being the DTSO. In considering the market benefits and costs of credible options it is inherent in the

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<sup>319</sup> Rule 5.12.2(d).

<sup>320</sup> Rule 5.16.4(z3A).

regulatory investment test process that the long term needs of the declared shared network will be taken into account.

Thirdly, the rule requires AEMO and the relevant DTSO to conduct joint planning in respect of a proposed retirement or de-rating if an identified need arises from that proposed retirement or de-rating. In particular, it requires AEMO and the relevant DTSO to use best endeavours to work together to identify the most efficient options to address an identified need.<sup>321</sup> This recognises that there may be instances where an option for addressing an identified need arising from a retirement or de-rating may be to augment the network and that AEMO should be involved in this decision making process.

While the arrangements in the rule are in line with those provided, the drafting of the rule is different to that suggested by AEMO and AusNet.

## **7.2 Transitional arrangements to implement a rule**

Network service providers and the AER need time to implement processes to be able to comply with the new provisions of the NER. The final rule therefore includes specific clauses on the timing of when certain obligations should be met.

### **7.2.1 AER's view**

The AER did not include any transitional arrangements in its proposed rule. Nor did it provide any comment or policy view on what it considered to be appropriate transitional arrangements.

### **7.2.2 Stakeholder views**

#### *First round submissions*

The ENA noted that the AER's rule change request did not include any guidance on the implementation of the proposed rule. It commented that it was therefore concerned that network service providers would be required to comply with the new regulatory investment test in relation to projects that had already commenced. The ENA suggested that for projects where consultation had already been undertaken, the new regulatory investment test requirements should not apply.<sup>322</sup>

The ENA also stated that network service providers would need a transition of at least six months following the publication of the proposed AER network retirement guideline.<sup>323</sup>

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<sup>321</sup> Rule 5.14A.

<sup>322</sup> ENA, first round submission, pp. 14-15.

<sup>323</sup> *ibid.* p. 15.

Similar comments were made by Energex and Ausgrid.<sup>324</sup> Although Ausgrid suggested that the transitional time for the proposed AER guideline and then network service provider compliance should total at least 18 months.

Ergon did not suggest a time period but did suggest an appropriate process would be the transitional process used following the distribution planning and expansion rule in 2012. This approach would allow any current committed projects to be exempt from the new process.<sup>325</sup>

Other stakeholders commented that it would take some time to prepare for the application of the proposed rule. Jemena stated:<sup>326</sup>

“Transition arrangements need to ensure committed investments on asset replacements that are scheduled to occur over the next 2 years are excluded from any rule change that arises from the AER’s rule change request.

The DNSPs would need time to implement the proposed new annual information reporting requirements. Accordingly, the new annual information reporting requirements should only commence one year after the AER has published the guideline.”

Although not agreeing with the proposed rule, CitiPower and Powercor commented that if a rule were to be made then "it should apply to the next determination period as the increased financial, administrative and operational burden of the APRs and the RIT-Ds cause delays in the implementation of already planned projects".<sup>327</sup>

AEMO commented that on the assumption that a rule is made in mid-2017, the new annual planning report requirements could take effect for the following round of reports in 2018. Similarly, it suggested that the new regulatory investment test requirements could be applied to replacement investment decisions made after 30 June 2018. AEMO noted that network service providers could be permitted to initiate their regulatory investment test process before 30 June 2018.<sup>328</sup>

While network service providers expressed some concern on the implementation of the proposed rule and the time needed to meet the proposed new obligations, other stakeholders suggested that it would be important to have a new regime commence as soon as possible. EUAA commented:<sup>329</sup>

“Given the large potential benefits in terms of the NEO, the EUAA believes that the transitional arrangements should ensure the changes are implemented as quickly as possible. ... The networks should have no

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324 First round submissions: Energex, p. 17; Ausgrid, p. 13.

325 Ergon, first round submission, p. 15.

326 Jemena, first round submission, p. 10.

327 CitiPower and Powercor, first round submission, p. 6.

328 AEMO, first round submission, p. 10.

329 EUAA, first round submission, p. 8.

concerns with their ability to meet the guidelines assuming, as noted above, they have best practice planning procedures already in place in their organisations.”

Similarly, AGL noted the importance of replacement expenditure for network service providers and that it would be important for the new regime to apply as soon as possible.<sup>330</sup>

An alternative transitional approach was put forward by RES. It suggested that projects which are valued at more than \$20 million should not have any transitional arrangements and that projects valued at between \$5 million and \$20 million could be transitioned over three years.<sup>331</sup>

#### *Second round submissions*

Network service providers generally considered that they should be provided a minimum of six months to comply with the new annual planning reporting requirements. That is, that the information required by the rule would be reported in annual planning reports published in June, September and December 2018.<sup>332</sup> However, Ausgrid was comfortable with the December 2017 timeframe for reporting the information required by the rule.<sup>333</sup> AusNet also supported the timetable for transitioning to the new rules in the draft rule determination.<sup>334</sup> It was noted that Energex and Ergon are required to publish their distribution annual planning reports in September.<sup>335</sup>

In relation to the regulatory investment tests, network service providers considered it appropriate that network replacement projects committed to before 1 July 2018 should not be subject to a regulatory investment test process.<sup>336</sup> They did not support an earlier cut-off date.<sup>337</sup>

In contrast, the AER, the EUAA and the MEU considered that the rule should commence immediately on its publication and that only replacement projects that are committed on the day the rule commences should be exempt from the tests.<sup>338</sup> They submitted this approach would exclude projects that are well advanced from the requirement to conduct a regulatory investment test but would also prevent a "rush" of

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330 AGL, first round submission, p. 8.

331 RES, first round submission, p. 6.

332 Second round submissions: ENA, pp. 11-12; United Energy, p. 2; SAPN, p. 5; Jemena, p. 2.

333 Ausgrid, second round submission, Attachment, p. 3.

334 AusNet, second round submission, p. 2.

335 Second round submissions: ENA, p. 12; Energex and Ergon, p. 11.

336 Second round submissions: Ausgrid, Attachment, p. 3; United Energy, p. 2; SAPN, p. 4; Endeavour Energy, p. 3; Jemena, pp. 2-3; Energex and Ergon, p. 11-12; Transgrid, p. 3; AusNet, p. 4; ENA, pp. 12-13; CitiPower and Powercor, pp. 3-4.

337 Second round submissions: SAPN, p. 4; Endeavour Energy, p. 3; Jemena, p. 3; Energex and Ergon, p. 12; AusNet, p. 4; ENA, p. 13.

338 Second round submission, AER, p. 1; MEU, p. 4; EUAA, p. 1

projects being committed in order to avoid the scrutiny of the test.<sup>339</sup> In support of this argument, the AER commented that it was notified of over 50 projects when the RIT-D was introduced.<sup>340</sup>

The AER, EUAA and the MEU also considered that network service providers need minimal time, if any, to amend internal processes to accommodate the extension of the regulatory investment tests to replacement expenditure projects.<sup>341</sup>

In light of concerns about gaming of the transitional approach to the regulatory investment tests in the draft rule by service providers, the TEC proposed that projects committed to before 31 December 2017 should be exempt from the RIT process.<sup>342</sup> AGL also commented on the transitional arrangements in second round submissions. It supported the arrangements in the draft rule.<sup>343</sup>

There was some support from network service providers to use the process that was adopted when the RIT- D was first introduced in order to transition service providers to the extended regulatory investment tests.<sup>344</sup> ENA commented:<sup>345</sup>

“Should the AEMC consider that oversight is required; the final rule could include a provision requiring NSPs to submit to the AER a list of replacement projects, which have commenced assessment under the current arrangements. Unless otherwise determined by the AER, these projects would then be exempt from the regulatory investment test.”

On a more specific matter, Citipower and Powercor considered that a requirement to undertake a RIT-D for the second stage of a rapid earth fault current limiter installation program required under the Electricity Safety (Bushfire Mitigation) Amendment Regulations 2016 may result in them not being able to comply with the timeframes set in these regulations. The service providers noted that there are significant financial penalties if they do not comply with the regulations.<sup>346</sup> CitiPower and Powercor submitted that the second stage of this rapid earth fault current limiter installation program should therefore be exempt from the RIT-D process should there be no general exemption for safety programs include in the NER.<sup>347</sup> AusNet also noted that

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339 Second round submission, AER, p. 1; MEU, p. 3; EUAA, p. 1.

340 AER, second round submission, p. 1. When the RIT-D was introduced, DNSPs were required to submit to the AER a list of projects that had already commenced assessment under the previous process as a transitional measure.

341 Second round submissions: AER, p. 2, EUAA, p. 1; MEU, pp. 2-3.

342 TEC, second round submission, p. 3.

343 AGL, second round submission, p. 2.

344 Second round submissions: ENA, p. 15; Endeavour Energy, second round submission, p. 3.

345 ENA, second round submission, p. 15.

346 Citipower and Powercor, second round submission, p. 5.

347 *ibid.*

it also has plans in place to comply with the requirements under the Electricity Safety (Bushfire Mitigation) Amendment Regulations 2016 (Vic).<sup>348</sup>

The draft rule provided time for the AER to update its regulatory investment test documents, namely the regulatory investment tests and the associated application guidelines.

In response, the AER and MEU stated that they considered there would be no changes required of the regulatory investment tests and only minimal changes required to the application guidelines.<sup>349</sup> However, other parties do expect changes to the regulatory investment test documents to occur. SAPN considered that the AER should be required to use the existing consultation process in the NER for amending the RIT application guidelines to take into account the rule.<sup>350</sup> Similarly, the ENA expressed concern that the AER's guidelines would be hastily developed with insufficient consultation.<sup>351</sup>

### 7.2.3 Analysis and conclusions

This section sets out the Commission's analysis and conclusions in relation to the introduction of the two elements of the rule, those being:

- the new annual planning report requirements and
- the regulatory investment test for replacement expenditure.

The arrangements to allow for the introduction of the new rules are set out in clause 2 and Schedules 1 and 3 of the amending rule.

#### *Annual planning report requirements*

The new annual planning report requirements are to apply to the next annual planning reports for all network service providers except Energex and Ergon's next reports. As Energex and Ergon are required to publish their annual planning reports by 30 September each year, there would not be enough time for the new information to be included in their next (2017) reports.<sup>352</sup> These network service providers are therefore required to adopt the new reporting requirements in their 2018 reports.

Table 1 below sets out the timing of the annual planning report which the new reporting requirements will apply to for each network service provider. The Commission considers these arrangements give network service providers sufficient time to include the new information in their reports.

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<sup>348</sup> AusNet, second round submission, p. 4.

<sup>349</sup> Second round submissions: AER, p. 2; MEU, p. 2.

<sup>350</sup> SAPN, second round submission: p. 4.

<sup>351</sup> ENA, second round submission, p. 13.

<sup>352</sup> Section 2.2.1 of the Electricity Distribution Network Code (Queensland) requires Energex and Ergon to publish their annual planning reports by 30 September.

**Table 1: Timing of application of new reporting requirements**

<b>Network service provider</b>	<b>New annual planning reporting requirements will apply</b>
All DNSPs except for Energex, Ergon and TasNetworks	For 31 December 2017 annual planning reports
All TNSPs and TasNetworks (distribution)	For 30 June 2018 annual planning reports
Energex and Ergon	For 30 September 2018 annual planning reports

Note: Energex and Ergon are required to publish their annual planning reports by 30 September under section 2.2.1 of the Electricity Distribution Network Code (Queensland). TasNetworks is required to publish its DAPR by 30 June under clause 8.3.2 of Tasmanian Electricity Code.

Source: Rule 11.99.3 and clause 2 of the amending rule.

#### *Regulatory investment tests for replacement expenditure*

In order for the regulatory investment tests for replacement expenditure to commence, the AER's regulatory investment tests and regulatory investment test application guidelines (regulatory investment test documents) need to be consistent with the new rules. The AER considers there would be no changes required of the regulatory investment tests and only minimal changes required to the application guidelines as a result of the rule. However, the Commission understands this view is not held by a number of network service providers.

In considering these views, the Commission notes:

- The NER must allow the AER to amend its regulatory investment test documents to be consistent with the newly amended rules before the new regulatory investment test requirements commence.
- The changes that are essential for the regulatory investment test documents to be consistent with the NER are not significant and the AER is committed to amending the documents soon after the rule is finalised.<sup>353</sup>
- Additional changes that could be made to the regulatory investment test documents, such as clarifying examples to address questions identified by network service providers, can be made through the upcoming consideration of the regulatory investment tests arising from a related COAG Energy Council review.<sup>354</sup> This provides the benefit of more significant changes being subject to a standard consultation process.
- Many stakeholders wish to see the new NER provisions take effect as soon as practicable.

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<sup>353</sup> AER, second round submission, 27 June 2017, p. 2.

<sup>354</sup> COAG Energy Council, *Review of the regulatory investment test for transmission*, 6 February 2017.

In balancing these points, the Commission has made a rule that requires:

- the AER to amend its regulatory investment test documents to the extent required to take into account the rule
- the AER to consult with network service providers and any other persons the AER considers appropriate in amending the regulatory investment test documents (however, the standard consultation process is not required to be followed)
- the update of the regulatory investment test documents to be completed by 18 September 2017.<sup>355</sup>

Once the AER's regulatory investment test documents are updated to be consistent with the new requirements, the rule provides that the new regulatory investment test for replacement expenditure projects will commence. In particular, the rule requires the new regulatory investment test requirements to commence on 18 September 2017.<sup>356</sup> It is appropriate that a date be specified for commencement of the requirements.<sup>357</sup>

However, it is appropriate that replacement projects that are well advanced on the day the regulatory investment test rules commence should be excluded from the tests. The rule therefore excludes replacement projects that are committed to by the network service provider on or prior to 30 January 2018.<sup>358</sup> This mechanism strikes an appropriate balance between requiring the regulatory investment test process to apply to as many projects as soon as possible and not causing a delay to projects such that the reliability of supply or safety of the network is compromised. In light of the particular nature of the definition of a "committed" project in the rule, that is using the definition in the AER's regulatory investment test for distribution and regulatory investment test for transmission, the Commission does not consider there to be a significant risk that network service providers will rush to commit to a number of projects before 30 January 2018 as suggested by the AER and consumer groups.

Replacement projects relating to the second stage of a program to install rapid earth fault current limiters by Victorian DNSPs under the Electricity Safety (Bushfire Mitigation) Regulations 2013 (Vic) are also exempted from the RIT-D through this rule's transitional arrangements.<sup>359</sup>

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355 Rule 11.99.4.

356 Clause 2 of the amending rule.

357 In a second round submission received by the Commission on 27 June 2017, the AER suggested that the rule should take effect once amendments to the regulatory investment test documents have been made by the AER.

358 Rule 11.99.5(b). The rule has adopted the current definition of a "committed project" in the AER's regulatory investment test for distribution and regulatory investment test for transmission. Projects that satisfy this definition by 30 January 2018 are identified in the transitional rules as excluded projects (clause 11.99.1).

359 Rule 11.99.5(b).

There is an explicit exemption for these projects because:

- they may not be committed by 30 January 2018
- there is a risk that the requirement to undertake a RIT-D could result in delays to these projects such that the timeframes required by the regulations may not be met which may result in significant financial penalties for the affected DNSPs.

To provide transparency regarding both exemptions, each relevant network service provider is to publish and maintain a list of projects that are excluded from the regulatory investment test on its website on the basis the project satisfies the definition of "excluded project" or "Victorian bushfire mitigation project" in clause 11.99.1 of the rule.<sup>360</sup> These lists are required to be maintained until the completion of those projects. For each excluded project on the list a service provider must include the name and description of the project and its scheduled completion date.<sup>361</sup>

The process for introducing the regulatory investment test for replacement expenditure is illustrated in Figure 7.1 below.

**Figure 7.1 Process to introduce new regulatory investment test requirements**



Source: Clause 2 and Schedule 3 of the amending rule.

<sup>360</sup> Rule 11.99.5.

<sup>361</sup> Rule 11.99.5.

## Abbreviations

AEC	Australian Energy Council
AEMC or Commission	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CEC	Clean Energy Council
CUAC	Consumer Utilities Advocacy Centre
DAPR	distribution annual planning report
DNSP	distribution network service provider
DTSO	declared transmission system operator
ECA	Energy Consumers Australia
ENA	Energy Networks Australia
EUAA	Energy Users Association of Australia
EWOSA	Energy and Water Ombudsman South Australia
MEU	Major Energy Users
NEL	National Electricity Law
NEM	national electricity market
NEO	national electricity objective
NER	National Electricity Rules
NTNDP	national transmission network development plan
PIAC	Public Interest Advocacy Centre
RES	RES Australia
RIT-D	regulatory investment test for distribution
RIT-T	regulatory investment test for transmission

TAPR	transmission annual planning report
TEC	Total Environment Centre
TNSP	transmission network service provider

## **A Legal requirements under the NEL**

This appendix sets out the relevant legal requirements under the NEL for the AEMC to make this final rule determination.

### **A.1 Final rule determination**

In accordance with s. 102 of the NEL the Commission has made this final rule determination in relation to the rule proposed by the AER.

The Commission's reasons for making this final rule determination are set out in Chapters 2 to 7.

A copy of the more preferable rule is attached to and published with this final rule determination. Its key features are described in Chapter 2 and Chapters 4 to 7.

### **A.2 Power to make the rule**

The Commission is satisfied that the more preferable rule falls within the subject matter about which the Commission may make rules. The more preferable rule falls within s. 34 of the NEL as it relates to:

- regulating the operation of the national electricity system for the purposes of the safety, security and reliability of that system (s. 34(1)(a)(ii))
- the activities of persons (including registered participants) participating in the national electricity market or involved in the operation of the national electricity market (s. 34(1)(a)(iii)).

Further, the more preferable rule falls within the matters set out in Schedule 1 to the NEL as it relates to:

- item 11 – the operation of generating systems, transmission systems, distribution systems or other facilities
- item 30E – the declared network functions.

### **A.3 Commission's considerations**

In assessing the rule change request the Commission considered:

- the Commission's powers under the NEL to make the rule
- the rule change request
- submissions and other information received during the first and second round of consultation

- various discussions with stakeholders during the rule change process
- interactions with other relevant rule changes and review recommendations
- the Commission's analysis as to the ways in which the proposed rule will or is likely to, contribute to the NEO.

There is no relevant Ministerial Council on Energy (MCE) Statement of Policy Principles.<sup>362</sup>

#### **A.4 Declared system functions**

The Commission may only make a rule that has effect with respect to an adoptive jurisdiction if satisfied that the proposed rule is compatible with the proper performance of AEMO's declared network functions.<sup>363</sup> The Commission is satisfied that the more preferable rule is compatible with, and does not impact, AEMO's declared network functions. In particular, the rule provides that the declared transmission system operator rather than AEMO is required to perform RIT-Ts for replacement network assets.

#### **A.5 Allocation of powers, functions and duties**

The Commission may only make a rule that affects the allocation of powers, functions and duties between AEMO and the declared transmission system operator if AEMO has provided its consent to the making of the rule.<sup>364</sup> The more preferable rule affects the allocation of functions between AEMO and the declared transmission system operator.

In particular, under the rule:

- The Victorian transmission annual planning report prepared by AEMO is to include planned asset retirement, de-rating and replacement information as well as asset management information. The relevant DTSO is to provide AEMO with information as required by AEMO to comply with these requirements.
- The relevant DTSO will be allocated the function of undertaking a regulatory investment test for transmission to address an identified need arising from a retirement or de-rating of network assets and a credible option is replacement of network assets. This allocation of functions is considered consistent with the current role of DTSOs in making planning and investment decisions regarding

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<sup>362</sup> Under s. 33 of the NEL the AEMC must have regard to any relevant MCE Statement of Policy Principles in making a rule. The MCE is referenced in the AEMC's governing legislation and is a legally enduring body comprising the Federal, State and Territory Ministers responsible for energy. On 1 July 2011 the MCE was amalgamated with the Ministerial Council on Mineral and Petroleum Resources. The amalgamated Council is now called the COAG Energy Council.

<sup>363</sup> Section 91(8) of the NEL.

<sup>364</sup> Section 91(9) of the NEL.

replacements of assets. However, because to date in Victoria, regulatory investment tests have been performed by AEMO (in its capacity as a transmission network service provider in Victoria and its role in making planning and investment decisions for augmentations of the declared shared network in Victoria) the effect of the final rule will be to affect the allocation of functions and duties between AEMO and DTSOs in Victoria.

- AEMO is allocated the function of providing the relevant DTSO assistance in undertaking a market benefit assessment as part of the regulatory investment test for transmission regarding replacement expenditure projects when reasonably requested by the relevant DTSO.
- AEMO and the relevant DTSO must undertake joint planning in respect of a proposed retirement or de-rating if an identified need arises from that proposed retirement or de-rating. In particular, AEMO and the DTSO must use best endeavours to work together to identify the most efficient options to address an identified need.

As such, the AEMC received consent to the making of the rule from AEMO on 4 July 2017.<sup>365</sup>

## **A.6 Civil penalties**

The more preferable rule does not amend any clauses that are currently classified as civil penalty provisions under the NER or the National Electricity Regulations. The Commission does not recommend to the COAG Energy Council that any of the proposed amendments made by the rule be classified as civil penalty provisions.

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<sup>365</sup> Section 91(9) of the NEL.