Cost Thresholds Review for the Regulatory Investment Test for Transmission

Issues paper

July 2012

Inquiries about this review should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001
Tel: (03) 9290 1444
Fax: (03) 9290 1457
Email: AERInquiry@aer.gov.au

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Shortened forms

AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
APR	annual planning report
DNSP	distribution network service provider
Electricity Rules	National Electricity Rules
MCE	Ministerial Council on Energy
NEM	National Electricity Market
NSP	network service provider
NTNDP	National Transmission Network Development Plan
NTPA	National Transmission Planning Arrangement
RIT-D	regulatory investment test for distribution
RIT-T	regulatory investment test for transmission
TNSP	transmission network service provider

1 Purpose

The regulatory investment test for transmission (RIT-T) is a cost-benefit test that transmission companies must apply before building electricity transmission infrastructure. The test applies for only transmission investments above certain cost thresholds. The purpose of this Issues Paper is to commence a review of those costs thresholds.

2 Introduction

The Australian Energy Regulator (AER) is responsible for the economic regulation of electricity transmission and distribution services in the national electricity market (NEM) as well as some gas transportation services. The AER also monitors compliance in the wholesale electricity and gas markets and is responsible for enforcement of the National Electricity Rules (Electricity Rules) and National Gas Rules.

The purpose of this paper is to initiate a review of changes in input cost in relation to the replacement of transmission network assets and transmission investment associated with the annual network planning process and RIT-T. The results of the review will then be used to determine whether the cost thresholds in the Electricity Rules are appropriate. The review is being conducted in accordance with clause 5.6.5E of the Electricity Rules.

The RIT- T is a cost-benefit analysis used to identify the transmission investment option (the preferred option) that maximises the net economic benefits and, where applicable, meets the relevant jurisdictional Rule based reliability standards.[1]

All transmission investment is subject to both the RIT-T and RIT-T consultation procedures unless exempted by clause 5.6.5C of the Electricity Rules. Several of the categories of exemption exclude a class of transmission investment where the estimated capital cost does not exceed a cost threshold. The relevant categories are where:

a. the estimated capital cost of the most expensive option to address the relevant identified need which is technically and economically feasible is less than $5 million.[2]

b. the maintenance, or replacement expenditure results in an augmentation to the network and the estimated capital cost for the augmentation component of the proposed expenditure is less than $5 million.[3]

c. the proposed transmission investment is an investment undertaken by a Transmission Network Service Provider which:

   i. re-routes one or more paths of the network for the long term; and

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1 The existing regulatory test applies to projects which address a need on the distribution network. The Ministerial Council on Energy, now referred to as the Standing Council on Energy and Resources (SCER), proposed a new project assessment process for distribution, the regulatory investment test for distribution (RIT-D). This rule change proposal is currently being considered c by the AEMC, with a Final Rule Determination due in September 2012. If introduced, the proposed RIT-D will replace the regulatory test for distribution network service providers.

2 cl. 5.6.5C(2) National Electricity Rules.

3 cl. 5.6.5C(4) National Electricity Rules.

ii. has a substantial primary purpose other than the need to augment the network;

and which the relevant Transmission Network Service Provider reasonably estimates to have an estimated capital cost of less than $5 million.[4]

Similarly, the definition of replacement transmission network asset and transmission investment as referred to in the definition of new network investment include cost thresholds of $5 million as part of their definition.

Further, where transmission investment is subject to the RIT-T and the preferred option does not exceed a cost threshold of $35 million, the network service provider preparing the RIT-T may be exempted from parts of the RIT-T consultation procedures.[5]

The AER must review the appropriateness of these cost thresholds every three years by assessing changes in input costs. The Electricity Rules require the first review to commence on 31 July 2012.

3 Rule requirements

Clause 5.6.5E of the Electricity Rules states:

(a) Every 3 years the AER must undertake a review (the cost threshold review) of the changes in the input costs used to calculate the estimated capital costs in relation to replacement transmission network assets and in relation to transmission investment as referred to in the definition of new network investment and referred to in clauses 5.6.2A(b)(6), 5.6.5C(a)(2), (4) and (5) and 5.6.6(y)(1) for the purposes of determining whether the amounts:

(1) in relation to replacement transmission network assets;

(2) of less than $5 million referred to in clause 5.6.5C(a)(2);

(3) of less than $5 million referred to in clause 5.6.5C(a)(4);

(4) of less than $5 million referred to in clause 5.6.5C(a)(5);

(5) of less than $35 million referred to in clause 5.6.6(y)(1); and

(6) in excess of $5 million in relation to transmission investment as referred to in the definition of new network investment,

(each a cost threshold) need to be changed to maintain the appropriateness of the cost thresholds over time by adjusting those cost thresholds to reflect any increase or decrease in the input costs since 1 July 2009 in respect of the first cost threshold review and since the date of the previous review in respect of every subsequent cost threshold review.

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4 cl. 5.6.5C(5) National Electricity Rules.

5 cl. 5.6.6(y)(1) National Electricity Rules.

(b) Each cost threshold review is to be commenced by the AER on 31 July of the relevant year, with the first such review to be initiated in 2012.

(c) Within 6 weeks following the commencement of a cost threshold review, the AER must publish a draft determination outlining:

(1) whether the AER has formed the view that any of the cost thresholds need to be amended to reflect increases or decreases in the input costs to ensure that the appropriateness of the cost thresholds is maintained over time;

(2) its reasons for determining whether the cost thresholds need to be varied to reflect increases or decreases in the input costs;

(3) if there is to be a variation in a cost threshold, the amount of the new cost threshold and the date the new cost threshold will take effect; and

(4) its reasons for determining the amount of the new cost threshold.

(d) At the same time as it publishes the draft determination under paragraph (c), the AER must publish a notice seeking submissions on the draft determination and which specifies the period within which written submissions can be made (the cost threshold consultation period) which must be no less than 5 weeks from the date of the notice.

(e) The AER must consider any written submissions received during the cost threshold consultation period in making its final determination in respect of the matters outlined in paragraph (c).

(f) The final determination must be made and published by the AER within 5 weeks following the end of the cost threshold consultation period (the cost threshold determination).

4 Invitation for submissions

Interested parties are invited to review the matters raised in this issues paper and provide written submissions. Interested parties are also welcome to provide submissions on relevant issues not discussed in the paper.

The AER prefers that all submissions be publicly available to facilitate an informed and transparent consultative process. Submissions will therefore be treated as public documents unless otherwise requested and all non-confidential submissions will be placed on the AER's website. Parties wishing to submit confidential information are requested to:

- clearly identify the information that is subject of the confidentiality claim
- provide a non-confidential version of the submission, in addition to a confidential one (the AER does not accept documents or parts of documents which are redacted or 'blacked-out')

The AER does not generally accept blanket claims for confidentiality over the entirety of the information provided and such claims should not be made unless all information is truly

regarded as confidential. The identified information should genuinely be of a confidential nature and not otherwise publicly available.

For further information regarding the AER's use and disclosure of information see the ACCC/AER Information Policy, October 2008, which is available on the AER's website.

Any submissions must be received by close of business 21 August 2012. Submissions should be titled 'Submission on Cost Threshold Review for the Regulatory Investment Test for Transmission' and should be addressed to:

Mr Tom Leuner
General Manager
Wholesale Markets
Australian Energy Regulator
GPO Box 520
MELBOURNE VIC 3001
Email: tom.leuner@aer.gov.au

5 Changes in input costs

Clause 5.6.5E requires the AER to consider the change in inputs costs, since the last review, to determine whether the cost thresholds should be changed. This section of the issues paper outlines possible approaches to determining whether there has been a change in input costs.

Indexation based on historical data may be the most appropriate tool to assess whether there has been any change in input costs. In contrast, when determining operational expenditure in revenue determinations, the AER has calculated the material cost escalation values from primary input costs which are weighted to reflect any future cost increases born by the TNSP. For the purposes of this cost thresholds review, it is unlikely to be appropriate to take a forward looking forecast approach. Rather, indexation based on historical data will most likely better reflect the change in input costs which have occurred since 1 July 2009.

The AER is open to considering alternative methodologies to assess the changes in input costs and welcomes stakeholders' submissions on this issue.

In developing an indexation based approach, indexes such as the Producer Price index (PPI) or the Consumer Price index (CPI) may be used to reflect changes in the input costs used to calculate the estimated capital cost of transmission investment. The Producer Price index (PPI) appears to be a more appropriate indicator of cost movements in the electricity transmission sector for the last 3 years compared to the CPI.

Although CPI is a key measure of cost inflation, it is designed to provide a general measure of price inflation for the Australian household sector as a whole. It captures changes in the price of a fixed basket of goods and services acquired by household consumers. These items are clearly not representative of the costs facing the electricity transmission sector.

The PPI is formulated to measure changes in the price of inputs to, or outputs of, a particular economic sector. There are a range of potential PPI indexes which may reflect the changes in

input costs for the construction of transmission assets. The most relevant indexes appear to be:

- Building construction
- Non-residential building construction
- Metallic materials used in the fabricated metal products industry (Copper, Aluminium and Steel)
- Copper materials used in power and distribution transformers

The percentage changes from June 2009 to June 2012 in each of these indexes are summarised in the table below.

PPI category	Percent changes from June 2009 – June 2012 (%)*
Iron and Steel	-13.5
Aluminium	12.9
Copper and brass	12.6
Copper materials in distribution transformers	13.6
Copper materials in power transformers	31.6
Building construction in Australia	4.2
Non residential building construction in Australia	3.0

* Data from the Australian Bureau of Statistics latest PPI data set. This is available on its website:

http://www.abs.gov.au/ausstats/abs@.nsf/mf/6427.0

Issues for consideration

Q1. Are the indexes listed above a relevant and accurate reflection of input price changes?

Q2. Should the AER rely on one PPI or a number of PPI to determine whether there has been any change in input costs estimated capital costs?

Q3. If a number of PPI should be used, which PPI should be used and what weighting should be applied to these indexes to reflect the changes in input costs over the last 3 years?

Q4. Is the PPI the best tool to assess changes in input costs? Is there an alternative method which is more appropriate?

Q5. Do stakeholders consider there has been a change in input costs since 1 July 2009? If so, what is the extent of this change and how has this been determined?

6 Appropriateness of cost thresholds

The cost thresholds review requires the AER to consider whether it needs to adjust the cost threshold to reflect changes in input costs to maintain the appropriateness of the cost thresholds. This section outlines possible approaches to assessing whether, in light of any change to input costs, a cost threshold should be changed to maintain the appropriateness of the threshold.

The AER notes there is no guidance in the Electricity Rules on what the purpose of the cost thresholds are or the factors it should consider in determining whether the cost thresholds are still appropriate. Thus, the issues paper has looked back at the AEMC's RIT-T rule change determination and National Transmission Planning Arrangements (NTPA) Review to determine what the purpose of the cost thresholds are and consider what factors might be considered when deciding whether to adjust the cost thresholds and how much of an adjustment should be made.

$5 million cost threshold in clause 5.6.5C

Clause 5.6.5C lists the projects which are exempt from a RIT-T assessment. Several of the exemptions are defined in part by the estimated capital cost of the project having a cost threshold of less than $5 million.

In its final report on the NTPA, the AEMC considered that the rationale for the $5 million cost threshold for projects to be subject to the RIT-T was to exempt small scale projects where there is less profit potential and hence less incentive on the TNSP in favour of uneconomic solutions.[6] The exemption would prevent a disproportionate use of resources and present unnecessary delays in the investment process.[7]

The AEMC concluded in the final report that the cost threshold for projects to be subject to the RIT-T be set at $5 million to ensure that 'an appropriate balance between the regulatory burden placed on TNSPs and ensuring that transmission investment proceeds in a timely manner'.[8] In reaching this conclusion, the AEMC noted that smaller scale projects should not entirely fall outside the scope of the RIT-T as:

> 'there is no simple rule of thumb threshold to classify accurately whether a project has a credible non-network alternatives and/or market benefits can be made. Relatively low investments can have far-reaching market impact in some instances... such market impacts should be considered under the new project assessment process'.[9]

Thus the following factors appear to be relevant in determining the appropriateness of the cost thresholds in clauses 5.6.5C(a)(2), 5.6.5C(a)(4) and 5.6.5C(a)(5):

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6 AEMC, *National Transmission Planning Arrangements – Final Report to the MCE*, June 2008, p.49.
7 Ibid, p.50.
8 Ibid, p.49.
9 Ibid, p.50.

- whether an increase in the cost threshold would exempt smaller scale projects which may have market impact. A material market impact in this sense may mean:
  - there may be a credible non-network option alternative to the project or
  - the project or one of its alternative options may have significant market benefits.
- whether a decrease in the cost threshold would mean smaller scale projects which are not likely to have any material market are not exempt from the RIT-T
- the regulatory burden on TNSPs and possible flow-on effects in terms of the timeliness of investments

$5 million cost threshold in relation to the definition of replacement transmission network asset

The Electricity Rules define replacement transmission network asset as a new asset intended to replace any existing element of the transmission network with an estimated capital cost in excess $5 million.[10] Replacement transmission network asset projects are exempt from the RIT-T.[11] However, TNSPs are required in their annual planning report to list all proposed replacement transmission network asset projects. For each project, the annual planning report (APR) must contain a project description, estimated capital cost, date of operation, purpose of the project and a list of reasonable network or non-network options considered to be an alternative by the TNSP to the replacement transmission network asset project.[12]

One of the purposes of the APR reporting requirements for replacement transmission network asset projects is to outline why projects are being classified as such and thereby exempt from the RIT-T. The AEMC noted in its final report on the NTPA that while it was unnecessary to apply the RIT-T to projects where 'like for like' replacement expenditure was the only option, if alternatives to replacement expenditure exist which may deliver greater market benefits, then a RIT-T assessment should apply.[13] Thus, it appears that the cost threshold in the definition of replacement transmission network assets should be consistent with the RIT-T exemption cost thresholds. This is to ensure projects driven by a need to replace transmission network assets are appropriately assessed based on their potential to have a market impact.

$5 million cost threshold in relation to transmission investment as referred to in the definition of new network investment

The Electricity Rules define transmission investment as referred to in the definition of new network investment as network augmentation designed to address distribution network limitations under cl.5.6.2(e)(2) and which have an estimated capital cost greater than $5 million. Under the current rules, projects which fall under this definition would be subject to a regulatory test assessment and not a RIT-T assessment.

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10 Chapter 10 Glossary National Electricity Rules.
11 cl. 5.6.5C(3) National Electricity Rules.
12 cl. 5.6.2A(b)(6) National Electricity Rules.
13 *AEMC*, *National Transmission Planning Arrangements – Final Report to the MCE*, June 2008, p.51.

Despite the differences between the RIT-T and the regulatory test, it appears similar considerations to those outlined above for the RIT-T exemption cost thresholds apply when considering whether to change the cost threshold for the definition of new network investment.

$35 million cost threshold in clause 5.6.6(y)

Clause 5.6.6(y) exempts a NSP from publishing a project assessment draft report under the RIT-T consultation procedures if the estimated capital cost of the preferred option is less than $35 million and none of the credible options have any material market benefits.

The AEMC in the final report on the NTPA considered this exemption should apply as the RIT-T should not result in an inefficient use of resources and unnecessary delays in straight forward projects.[14] The AEMC stated this exemption should only apply in limited circumstances and not preclude extensive analysis and consultation being undertaken for options that deliver material market benefits.[15]

Thus, in considering whether it is appropriate to change the cost threshold in clause 5.6.6(y), relevant factors may be whether:

- an increase in the cost threshold of $35 million would be needed to ensure that straight forward projects will not be unnecessarily delayed or have a disproportionate regulatory burden.
- a decrease in the cost threshold of $35 million would be needed to ensure that more complex projects will not be exempt from undergoing the full RIT-T consultation process.

Issues for consideration

Q6. Do stakeholders agree with the suggested approach to the assessment of whether cost thresholds outlined above should be changed to maintain their appropriateness? In particular:

a. Do stakeholders agree with the suggested approach to assessing the $5 million cost thresholds for RIT-T exemptions in cl. 5.6.5C?

b. Do stakeholders agree with the suggested approach that the cost thresholds in the definition of replacement transmission network asset be consistent with the cost thresholds for RIT-T exemptions in cl. 5.6.5C?

c. Do stakeholders agree with the suggested approach to assessing the cost threshold in relation to transmission investment as referred to in the definition of new network investment?

d. Do stakeholders agree with the suggested approach to assessing the $35 million cost threshold in cl.5.6.6(y)?

[14] Ibid, p.58-59.
[15] Ibid, p.59.

Q7. If stakeholders do not agree with the suggested approach to assessing any of the cost thresholds, what approach should the AER take in the assessment of whether the cost thresholds need to be changed to maintain their appropriateness?

Q8. Are there any other factors the AER should consider when assessing whether the cost thresholds outlined above should be changed in light of changes to input costs to maintain their appropriateness?

Q9. For administrative simplicity, should the AER ensure that the cost thresholds are rounded to the nearest $100,000 or $500,000?