



**Issues paper**  
**TransGrid**  
**TasNetworks (Transend)**  
**Directlink**

**Electricity transmission revenue proposals**  
**for the next regulatory control period**

July 2014

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AER reference: [53444/53445/53446]

## Request for submissions

Interested parties are invited to make written submissions to the Australian Energy Regulator (AER) on the transmission businesses revenue proposals by the close of business, **1 August 2014**.

The AER prefers that all submissions sent in an electronic format are in Microsoft Word or other text readable document form. Submissions should be sent electronically to:

- [TransGridrevenuereset@aer.gov.au](mailto:TransGridrevenuereset@aer.gov.au) for TransGrid
- [Transendrevenuereset@aer.gov.au](mailto:Transendrevenuereset@aer.gov.au) for Transend (TasNetworks)
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We prefer that all submissions be publicly available to facilitate an informed and transparent consultative process. Submissions will be treated as public documents unless otherwise requested. Parties wishing to submit confidential information are requested to:

- clearly identify the information that is the subject of the confidentiality claim
- provide a non-confidential version of the submission in a form suitable for publication.

All non-confidential submissions will be placed on our website at [www.aer.gov.au](http://www.aer.gov.au). For further information regarding our use and disclosure of information provided to us, see the ACCC/AER Information Policy, October 2008 available on our website.

Enquires about this paper, or about lodging submissions, should be directed to our Network Regulation branch on (03) 9290 1444.

### Next steps

We will consider and respond to submissions on this issues paper in the context of our regulatory determinations. Our draft decision is expected in November 2014.

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## Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
capex	capital expenditure
EBSS	efficiency benefit sharing scheme
kW	kilowatt
MAR	maximum allowed revenue
MW	megawatt
MWh	megawatt hour
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
opex	operating expenditure
RAB	regulatory asset base
RPPs	Revenue and pricing principles
STPIS	service target performance incentive scheme
TUOS	transmission use of system
WACC	weighted average cost of capital

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# 1 Introduction

TransGrid, Transend (now merged with the distribution network service provider and known as TasNetworks)<sup>1</sup> and Directlink (the transmission interconnector) are electricity transmission network supply businesses. The transmission businesses have submitted to us for assessment their revenue proposals for the next regulatory control period. These proposals will have a bearing on the price for electricity in NSW and Tasmania for the next period. If we, the Australian Energy Regulator (AER), were to accept these proposals without change, consumers could expect transmission prices to remain around current allowed levels in NSW, while transmission prices should fall in Tasmania.

Whether or not the proposals should be accepted or revised will be determined by our assessment of the proposals. However, we are keen to hear the views of electricity consumers and other stakeholder as these views will form a critical part of our assessment. We encourage consumers and stakeholders to tell us what you think about these proposals. This paper aims to draw to your attention some of the issues that we consider are likely to be important to our review. However, we will consider your submissions on any aspects of the revenue proposals.

In the first part of this paper, we provide a high level perspective on the transmission businesses proposals and our initial observations. We have identified several aspects of some of the proposals that we consider should be examined more closely.

Our initial observations about the revenue proposals take account of the circumstances in which the businesses are now operating. These circumstances are very different to when we last reviewed the revenue proposals for TransGrid and Transend (now TasNetworks). At that time, the global financial crisis created an uncertain environment which increased the expected cost of capital for capital-intensive businesses, like electricity transmission networks. Since then, we have seen ongoing levels of network investment and a continuation of high levels of network reliability. We have also seen a historically significant downturn in electricity consumption and slowing growth in peak demand. As well, the proposals have been submitted when financial markets are more certain and financing costs have moderated.

Our assessment will focus on whether these changed circumstances have been fully reflected in the transmission businesses' revenue proposals. We also seek the views of stakeholders on whether the transmission businesses revenue proposals adequately reflect these circumstances.

Further, Transend now TasNetworks has undergone a restructure to merge the corporate and operating functions of the distribution and transmission businesses. As a consequence of this restructure, TasNetworks has embedded expected efficiencies in its operating expenditure forecasts as part of its proposal. Overall, TasNetworks opex proposal provides for real reductions in operating expenditure for the next regulatory control period to service a higher asset base. We understand that the owner of TransGrid (the NSW Government) is also actively seeking tighter controls on the level of network prices, where any average consumer price changes should be within inflation.

There have also been significant changes to the regulatory framework we administer. The Australian Energy Market Commission (AEMC) finalised significant changes to the rules in November 2012. These changes resulted in a renewed emphasis on the long term interests of consumers. The appeal

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<sup>1</sup> Transend Networks Pty Ltd (Transend) which owns and operates the Tasmanian electricity transmission network merged with the Tasmanian electricity distribution network (Aurora Energy) on 1 July 2014 to form Tasmanian Networks Pty Ltd (TasNetworks).

process relating to our network determinations was also amended so that any appeals by the businesses must demonstrate that the changes sought would leave consumers better off. The revised rules also required us to develop new guidelines that set out how we propose to approach important aspects of our review.<sup>2</sup> For example, we have developed a suite of assessment tools (e.g. benchmarking techniques) to enable greater use of top down assessments of proposals.<sup>3</sup> We intend to use these assessment tools to conduct a first pass assessment of the expenditure proposals in terms of their relative efficiency with other businesses.

Another important change in the regulatory framework requires the transmission businesses to engage with consumers and to take into account any consumer preferences in developing the revenue proposals (e.g. proposed expenditure and the accompanying service levels).

The transmission businesses revenue proposals are available on our website ([www.aer.gov.au](http://www.aer.gov.au)). While your submission may refer to this issues paper, ideally it will be in response to the revenue proposals themselves. We have included in this paper some questions on issues arising from the revenue proposals that we consider are relevant. We invite you to respond to any or all of those questions. However, feel free also to send us your views on any aspect of the revenue proposals.

The attachments in this paper provide a more detailed discussion of the businesses revenue proposals. This detailed material examines the main components of the businesses total revenue proposals - capital expenditure (capex), operating expenditure (opex) and the rate of return. In addition, this paper highlights proposed changes to the pricing methodology which affects transmission charges.

See section 3 below for more details on what to include in your submission and key dates in our assessment process.

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<sup>2</sup> Our new guidelines are available on our website ([www.aer.gov.au](http://www.aer.gov.au)) under the 'better regulation' tab.

<sup>3</sup> The full suite of benchmarking tools will not be applied to Directlink due to the unique characteristics of the business.

## 2 Our initial observations

The following sections set out our initial observations on the proposals. We have included this material to guide stakeholders to the key issues that we have identified.

### How do the proposed revenue (and prices) changes compare to the recent past?

The transmission businesses are proposing revenues that vary noticeably from those in the current regulatory control period. For example, TasNetworks proposes a significant reduction in revenue from the approved allowances in the current regulatory control period which is expected to reduce prices. TransGrid is also proposing a revenue decrease from the current revenue allowances, whereas Directlink proposes a significant revenue (and price) increase from its current revenue allowance. In particular, TransGrid and TasNetworks are proposing a decrease in allowed revenue of 2 per cent and 18 per cent, respectively.<sup>4</sup> Directlink proposes an increase of 30 per cent above its current revenue allowance. We have provided in section 2 (attachment) more details regarding the drivers of these revenue changes, as submitted by each of the businesses. While the revenue proposals show the change in revenue from the current allowance to the proposed revenue allowance, we have compared the change in revenue adjusted to reflect actual costs to the proposed allowances. As a result, the revenue changes outlined in section 2 (attachment) differ from the changes identified above.

However, given the significant changes to the operating environment the businesses now face, we ask whether stakeholders consider the revenue changes proposed by the businesses adequately reflect current circumstances. We recognise that the recent growth in their regulatory asset bases (RABs) will have an upward pressure on their revenues. This investment base needs to be funded and this is adding to the cost of running the networks. However, other factors could be reducing pressure on the businesses required revenues and therefore on prices. These include less capex than expected in the 2009–14 regulatory control period for TransGrid and TasNetworks, reduced demand for electricity, opportunities for more efficient supply of services and a more certain investment climate, leading to lower funding costs, post the global financial crisis.

Figures 1 and figure 2 show the expected price paths derived from the businesses revenue proposals.<sup>5</sup> The solid lines represent actual average price changes and the dashed lines represent the average price path from our transitional decision<sup>6</sup> (which applies for 2014-15) and the changes proposed by the businesses over the next regulatory control period.

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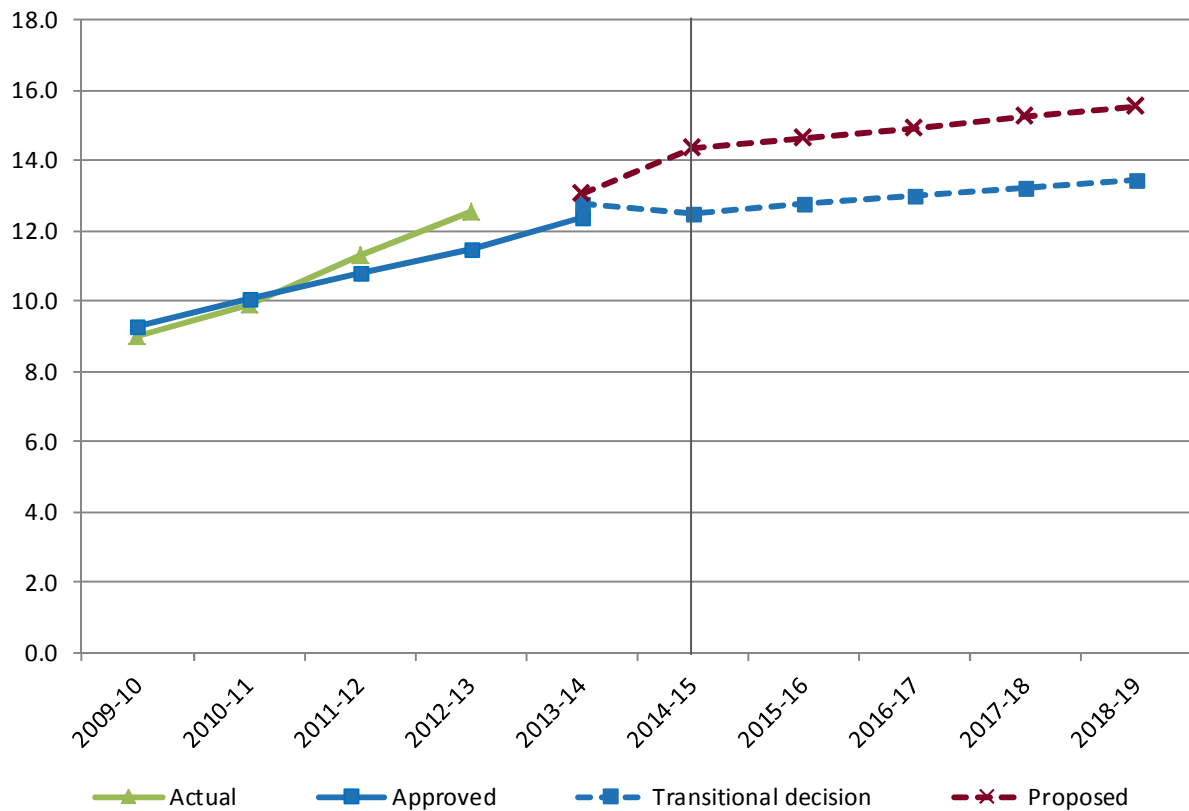
<sup>4</sup> Transend (TasNetworks) has under-recovered revenue of around \$26m in the current regulatory control period. Transend's current revenue allowance has been adjusted to reflect that Transend does not seek to recover this allowance in the future.

<sup>5</sup> The expected price path for Directlink is not shown as it does not directly charge customers- see section 1.2

<sup>6</sup> AER *Transitional determination, TransGrid, Transend*, 28 March 2014



**Figure 1** TransGrid–Indicative transmission price path from 2009–10 to 2018–19 (\$/MWh, nominal)<sup>7</sup>

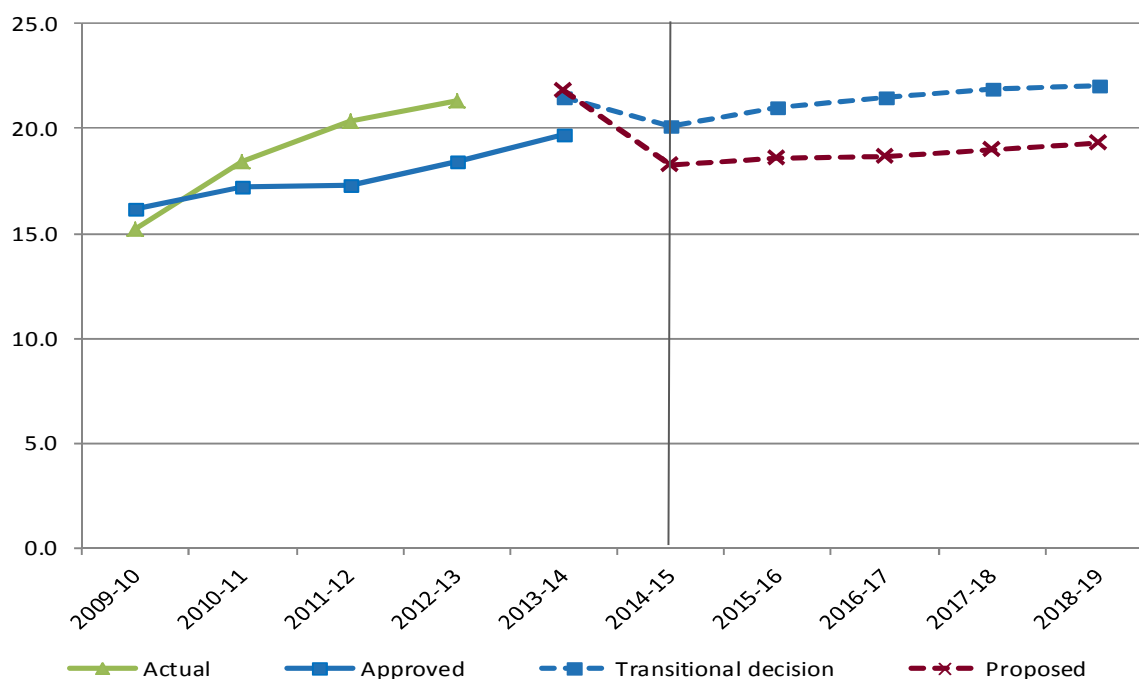


Source: AER, Final decision PTRM for TransGrid–Tribunal varied, 2009; TransGrid, Proposed PTRM, May 2014; TransGrid’s 2009-10 to 2012–13 annual regulatory accounts; AEMO, National Electricity forecasting reports 2012 and 2013; AER, TransGrid Transend Transitional determinations 2014–15, March 2014, p. 20; AER analysis.

Note: Actual prices for 2009–10 to 2012–13 are calculated by dividing actual annual revenue (as shown in TransGrid’s regulatory accounts) by actual annual energy delivered in NSW (as published by AEMO).

<sup>7</sup> TransGrid has proposed revenue allowances based on a five year and a four year regulatory control period. For the purposes of this price path analysis we have assumed a five year regulatory control period. We are required to determine the length of the regulatory control period as part of the determination.

**Figure 2 TasNetworks—Indicative transmission price path from 2009–10 to 2018–19 (\$/MWh, nominal)**



Source: AER, Final decision PTRM for Transend–Tribunal varied, 2009; Transend, Proposed PTRM, May 2014; Transend’s 2009-10 to 2012–13 annual regulatory accounts; AEMO, National Electricity forecasting reports 2012 and 2013; AER, TransGrid Transend Transitional determinations 2014–15, March 2014, p. 22; AER analysis.

Note: Actual prices for 2009–10 to 2012–13 are calculated by dividing actual annual revenue (as shown in Transend’s regulatory accounts) by actual annual energy delivered in Tasmania (as published by AEMO).

These proposed price paths are determined by proposed revenue (and expected energy demand) over the regulatory control period. In assessing the businesses total revenue proposals over the next regulatory control period we are required to assess the following components of their proposed revenue:

- The required rate of return - an allowance determined by the value of the transmission businesses’ asset base, multiplied by the required rate of return on these assets. The change in the asset base is influenced by expenditure (capex).
- The return of capital - an allowance for the asset value depreciation
- Operating expenditure (opex) - an allowance for the costs of operating and maintaining the network
- Tax - an allowance to cover the businesses tax liability.

Our analysis of the transmission businesses revenue proposals will necessarily consider each of the building blocks components and any inter-relationships between these components as we must decide the businesses revenues as a whole. In particular, in 2012 and 2013, the National Electricity Law (NEL) and National Electricity Rules (NER) were changed to provide greater emphasis on the National Electricity Objective (NEO) and greater discretion to us.<sup>8</sup> The amended Rules allow and

<sup>8</sup> AEMC, Rule Determination National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012, National Gas Amendment (Price and Revenue Regulation of Gas Services) Rule 2012 p. 32 and 36

encourage us to approach decision making more holistically to meet overall objectives consistent with the NEO and RPPs.<sup>9</sup> These changes also sought to give consumers a clearer and more prominent role in the decision making process.<sup>10</sup>

Indeed, our decision is guided by the NEL which requires us to specify the manner in which revenue components relate to each other. We must also specify how we have taken those interrelationships into account.

## Relative efficiency of the transmission businesses

Both TransGrid and TasNetworks have provided information which they submit demonstrates that they are relatively cost efficient compared to other transmission businesses.

TransGrid state that its benchmarking analysis is based on average cost performance against selected categories of operating costs and is not attempting to establish whether these businesses are on the frontier of efficient performance.<sup>11</sup> TransGrid indicates that for areas where cost performance does not compare favourably with other transmission businesses, it has undertaken some initiatives to reduce costs in the next period (e.g. payroll, corporate costs).

As outlined in our expenditure assessment guideline<sup>12</sup> and in our Framework and Approach Paper, we intend to apply a range of assessment techniques as part of our assessment of the cost efficiency of the businesses. These include benchmarking (economic techniques and category analysis), the use of partial indicators, predictive models as well as detailed project reviews (including engineering review). TasNetworks has undertaken some econometric analysis to support the efficiency of its past opex. TransGrid comments that it has not attempted high level economic benchmarking, due to the small number of transmission businesses in the National Electricity Market, the lumpiness of capex and the difficulties of measuring outputs. While these concerns were raised by the industry in the development of our expenditure assessment guideline, we consider that economic benchmarking will provide valuable information regarding the relative total cost efficiency of the businesses.

We will publish our first annual benchmarking report on 30 September 2014 and we will take into account the results from this report as part of our assessment of the proposed expenditure of each business.

## Capital expenditure in 2009-14 for TransGrid and TasNetworks has been lower than expected

TransGrid and TasNetworks have underspent their capex allowances in the 2009-14 regulatory control period. This means that their opening RABs for the 2014–19 regulatory control period, while increasing, did not increase as much as was expected in the AER's previous decision, which would generate lower future revenues than otherwise. It also suggests that the previous allowances were higher than necessary. This lower actual spending compared to the allowances we approved in part reflects that, for the first time in many years, demand for electricity has diminished. We have seen slower growth in peak demand and significant falls in total electricity consumption in recent periods and this trend has continued. This ongoing trend reduction in demand should mean lower overall capex requirements for the next regulatory control period.

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<sup>9</sup> AEMC, Rule Determination National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012, National Gas Amendment (Price and Revenue Regulation of Gas Services) Rule 2012 pp. xi, 10, 19, 32 and 35

<sup>10</sup> AEMC, Rule Determination National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012, National Gas Amendment (Price and Revenue Regulation of Gas Services) Rule 2012 esp pp. 166-170

<sup>11</sup> TransGrid, *Revenue proposal*, p.143

<sup>12</sup> AER, *Expenditure assessment guideline*, November 2013

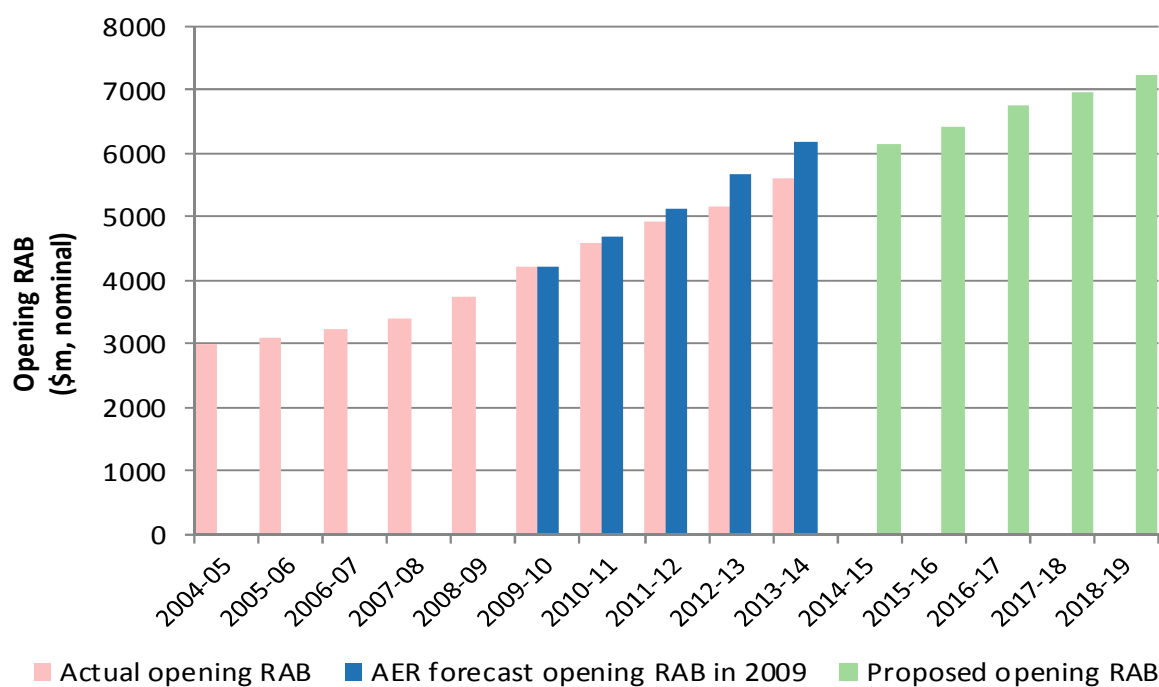
This has led to TransGrid and TasNetworks proposing much lower demand driven capex for the next regulatory control period.

TransGrid has proposed a significant increase in expenditure to replace existing assets on the basis that a significant proportion of assets are reaching the end of their lives. At the same time, TransGrid has proposed increases in maintenance costs. Given the lower level of expected demand we will scrutinise proposed higher capex to replace existing assets. For example, we would consider whether any of these assets should be replaced by smaller assets (i.e. with a lower capacity) to deliver existing service levels.

TasNetworks has indicated that it has reduced proposed expenditure on replacing assets from the current regulatory control period which was undertaken to clear a backlog of projects. In addition, TasNetworks proposed extending the serviceable life of some assets in the next period. TasNetworks proposes expenditure on business operational support that reflects the deferral of some projects to derive synergies from the merged transmission and distribution business.

Directlink submits it has overspent on its capex allowance for the 2006-2015 regulatory control period mainly due to the need to replace assets and allocation of asset management costs to Directlink.<sup>13</sup> Figures, 3, 4 and 5 show the growth in TransGrid, TasNetworks and Directlink's RAB values over the last 10 years and their proposed further growth for the next regulatory control period.

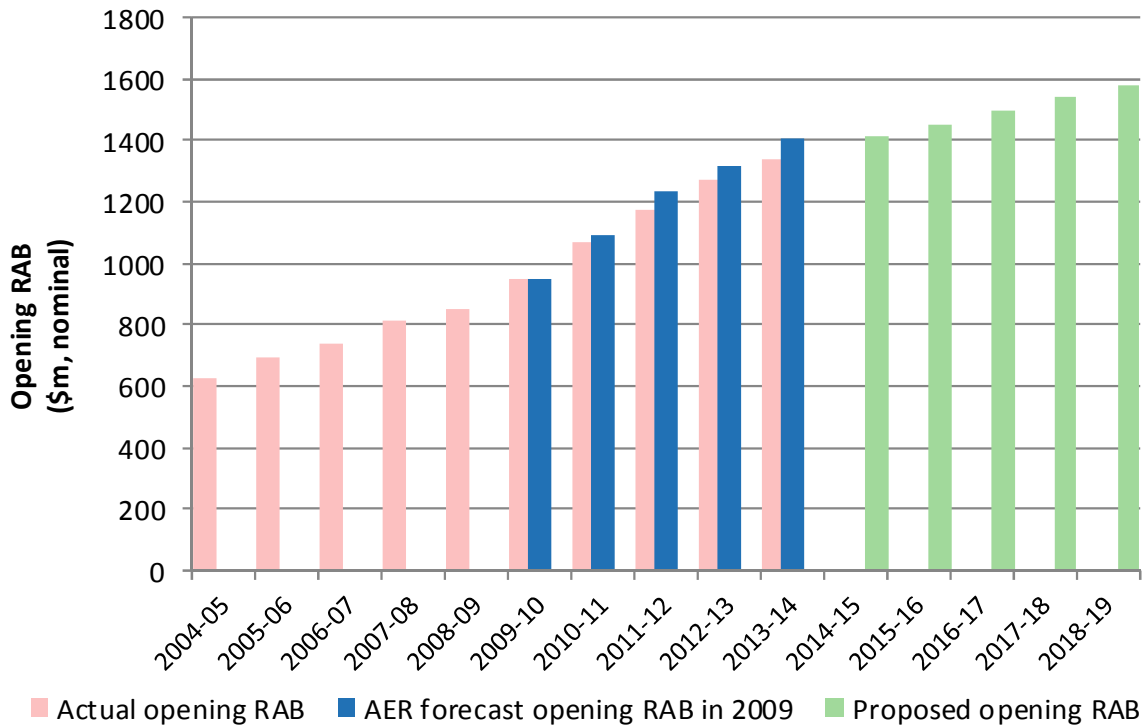
**Figure 3 TransGrid - Regulatory Asset Base values (\$ nominal)**



Source: AER, Final decision PTRM for TransGrid–Tribunal varied, 2009; AER, Final decision RFM for TransGrid, 2009; TransGrid, Proposed PTRM, May 2014; TransGrid, Proposed RFM, May 2014; TransGrid's annual regulatory accounts; AER analysis.

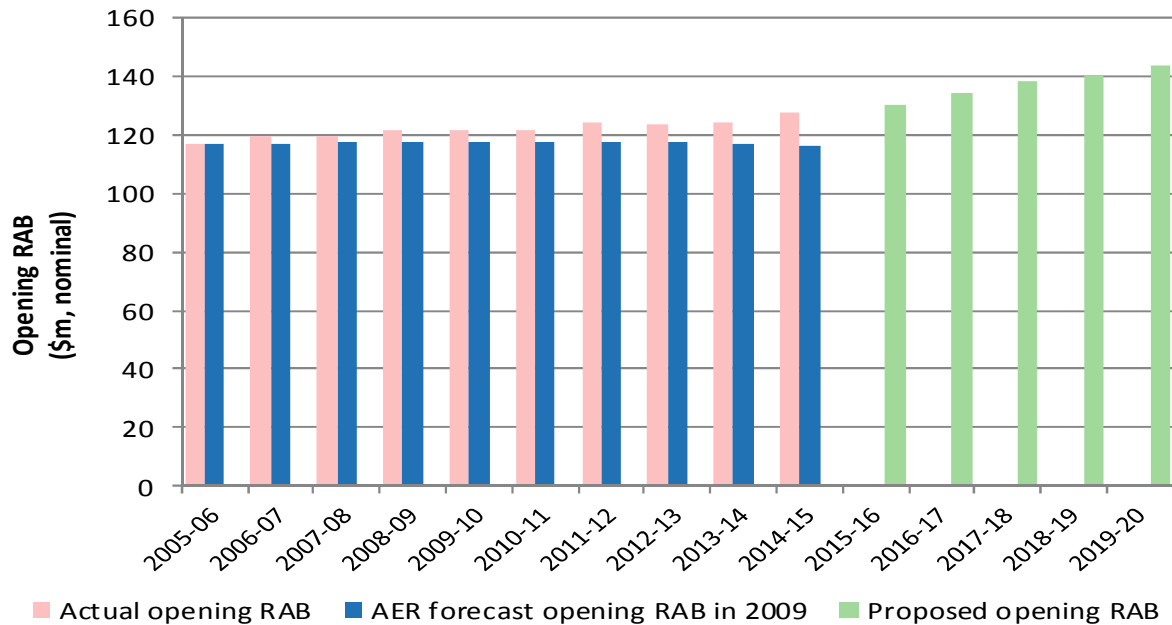
<sup>13</sup> Directlink, *Revenue proposal*, pp.24-25

**Figure 4 TasNetworks - Regulatory Asset Base values (\$ nominal)**



Source: AER, Final decision PTRM for Transend-Tribunal varied, 2009; AER, Final decision RFM for Transend, 2009; Transend, Proposed PTRM, May 2014; Transend, Proposed RFM, May 2014; Transend's annual regulatory accounts; AER analysis.

**Figure 5 Directlink - Regulatory Asset Base values (\$ nominal)**



Source: AER, Final decision PTRM for Directlink, 2005; Directlink, Proposed PTRM, May 2014; Directlink, Proposed RFM, May 2014; Directlink's annual regulatory accounts; AER analysis.

## Is the proposed level of opex efficient?

TransGrid and Directlink have proposed higher opex for the next regulatory control period compared to the current regulatory control period. TransGrid and TasNetworks have spent less than their opex allowances over the current regulatory control period resulting in a significant carryover of opex efficiencies into the next regulatory control period. However, TransGrid's proposed increase in forecast opex outweighs the reduction in opex attributable to those efficiencies. We will closely scrutinise the basis for this significant increase and seek stakeholder comments on this aspect of TransGrid's proposal.

TransGrid has also proposed a significant increase in forecast maintenance costs, at the same time that it has proposed to replace a significant proportion of assets. TransGrid has proposed this asset replacement program in order to maintain the average asset life of its assets over the next regulatory control period. We seek stakeholder views on these aspects of TransGrid's opex forecasts and whether these forecasts are supported by its proposal.

Directlink has forecast additional opex primarily as a result of introducing new processes and procedures and for increased costs of insurance following a fire at its Mullumbimby convert station in 2012.<sup>14</sup>

TasNetworks is proposing an 11 per cent real reduction in opex between the current and the next regulatory control periods. This is despite the growing asset base which requires TasNetworks to service more assets (incurring additional maintenance and operating costs).

## Regulated rate of return

The regulated rate of return for each business is what we calculate each business needs to adequately fund its investments. After extensive consultation, we have developed a guideline on how to determine the required rate of return.<sup>15</sup>

TasNetworks has proposed to apply our rate of return guideline to calculate the required rate of return. TransGrid and Directlink have used methods other than those set out in our rate of return guideline. The required rate of return of 8.83 per cent and 8.06 per cent proposed by TransGrid and Directlink respectively is lower than what they received in the current regulatory control period (10.02 per cent for TransGrid and 8.32 per cent for Directlink). We are interested in your views about what approach would best achieve the rate of return objective—to provide a rate of return commensurate with a benchmark efficient entity with a similar risk profile to a distributor.<sup>16</sup> While we consider our guideline sets out an appropriate approach, we do not wish to preclude submissions proposing alternative approaches to both our guideline and the distributors' proposals.

The investment environment has substantially improved since our last reset decision for TransGrid and TasNetworks, made during 2008 and early 2009. These decisions were made during the height of uncertainty surrounding the global financial crisis. The result was historically high rates of return set for TransGrid and TasNetworks for the 2009–14 regulatory control period. These allowed rates of return reflected the risks perceived across the broader economy in the wake of significant turmoil in global financial markets. Since the last reset for TransGrid and TasNetworks, interest rates and perceptions of economy wide risk have eased. As a consequence, lower rates should now be sufficient to attract needed investment to the electricity network sector.

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<sup>14</sup> Directlink, *Revenue proposal*, pp.62-64, 73-74

<sup>15</sup> AER, *Rate of return guideline*, December 2013.

<sup>16</sup> NER, cl. 6.5.2(c).

## Proposed initiatives to reduce volatility and unpredictability in transmission charges

For, Transmission charges typically account for around 12 to 14 per cent of a residential customers total electricity bill in NSW and Tasmania.<sup>17</sup> However, for large customers transmission charges can account for a more significant proportion on the total bill. We must approve the methodology of each business for setting transmission charges. TransGrid has proposed a number of changes on the basis that these changes will result in more cost reflective prices to customers and at the same time reduce the volatility in annual charges. In particular, TransGrid proposes to cap the change in transmission charges by CPI+3 per cent and allocating costs to locational charges on the basis of network peak demand.<sup>18</sup> TransGrid has sought views on whether transmission charges for customers should be fixed over the regulatory control period. Under this approach, this could lead to large changes in customer charges at the commencement of every regulatory control period. TasNetworks has also sought some changes to ensure the methodology is more flexible in dealing with changes in a customers' load and to improve price signals to customers regarding the cost of using of the network.

We are interested in stakeholder views on these proposals.

### Our next steps

These observations will be a focus of our in–depth assessment to be undertaken over the coming months. Our draft decision for each business will present our findings within the context of the broader economic environment and the specific circumstances of the businesses themselves. Your submission on the revenue proposals will greatly assist us in preparing our draft decision.

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<sup>17</sup> AEMC, *Retail Electricity Price Movements 2012*, March 2013

<sup>18</sup> TransGrid, *Revenue proposal*, appendix AH

### 3 Consumer engagement

Consumer engagement is a key issue for our transmission determinations. When assessing the revenue proposals we will have regard to how a business engaged with its consumers and accounted for their long term interests.

#### Questions

Please provide your comments on the consumer engagement conducted by the businesses in preparing their regulatory proposals, particularly with respect to:

- accessibility of information provided
- clarity about your role and the objectives of the engagement activity or activities
- how much time was provided between the engagement activity and submission to us of the businesses' regulatory proposal?

If you were consulted as part of the consumer engagement undertaken by any of the businesses, were you given options for expenditure? If yes, for each option were you asked to give preferences? For each option were you given cost and price information? Did the options cover operating expenditure and capital expenditure?

Please provide your comments on how effective you believe the consumer engagement conducted by the business was in responding to consumer concerns, with examples where possible (i.e. can you see how your concerns have had an effect on the proposal).

Please note that consumer engagement is ongoing and will form an integral part of the AER's decision-making process.

#### 1.1 Consumer engagement in the NER

Under the NER, consumer engagement is a factor we can consider when making our revenue determinations.<sup>19</sup> We will examine whether and how well a transmission business considered and responded to consumer views, equipped consumers to participate in consultation, made issues tangible and obtained a cross-section of views. We will make our assessment on a case-by-case basis, considering whether it would have been reasonable to engage on a particular issue. We will monitor consumer engagement activities through our consumer challenge panel and by our ongoing engagement with stakeholders. We may publicly comment on any shortcomings in a businesses' consumer engagement that we identify from a regulatory proposal.

#### 1.2 Our consumer engagement guideline

Our consumer engagement guideline for network service providers sets out a framework for electricity and gas network service providers to better engage with consumers.<sup>20</sup> It aims to help the businesses develop strategies to engage systematically, consistently and strategically with consumers on issues that are significant to both parties. The guideline sets out our expectations when considering service provider consumer engagement activities:

<sup>19</sup> NER, cl. 6A.6.6(e)(5a), cl. 6A6.7(e)(5A).

<sup>20</sup> AER, *Consumer engagement guideline for network service providers*, November 2013; [www.aer.gov.au/Better-regulation-reform-program](http://www.aer.gov.au/Better-regulation-reform-program)



- **Priorities**—we expect service providers to identify consumer cohorts, and the current views of those cohorts and their service provider; outline their engagement objectives; and discuss the processes to best achieve those objectives.
- **Delivery**—we expect service providers to address the identified priorities via robust and thorough consumer engagement.
- **Results**—we expect service providers to articulate the outcomes of their consumer engagement processes and how they measure the success of those processes reporting back to us, their business and consumers
- **Evaluation and review**—we expect service providers to periodically evaluate and review the effectiveness of their consumer engagement processes.

Below, we summarise the businesses submitted approach to consumer engagement. For details, we encourage readers to review the revenue proposals and supporting documentation. As a guide, we have referenced below where each business has included consumer engagement content in their revenue proposal package of materials.

## TransGrid

TransGrid submitted that it has undertaken a range of consumer engagement activities. These include consumer roundtables, consumer focussed website, deliberative forums, consumer surveys. Further details are available in TransGrid's revenue proposal.<sup>21</sup>

## TasNetworks (Transend)

TasNetworks submitted that it has undertaken a number of engagement activities of an ongoing nature as well as on the revenue proposal. Engagement related to the revenue proposal included face to face meetings with customers, meetings with customers and their consultants and representative groups, briefings and information sessions.<sup>22</sup>

## Directlink

Directlink advises that it has not been able to engage with consumers. In particular, Directlink advises that it invited consumer groups to raise any issues with a view to addressing any issues raised in its revenue proposal. However, Directlink comments that it cancelled a proposed consumer workshop on the basis that few groups were able to attend the workshop.<sup>23</sup>

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<sup>21</sup> TransGrid, *Overview*, p.13

<sup>22</sup> Transend, *Revenue Proposals*, p.31

<sup>23</sup> Directlink, *Revenue proposal*, pp.14-15

## 4 Your submission and key dates

Your submission will be of greater value to us if it is supported by evidence and analysis. Submissions that address specific issues, supported by evidence and analysis, can be very useful.

If you consider a certain aspect of the revenue proposal is not justified, you should state why you consider it is not justified. You should also state what further information you consider the business should provide to justify that aspect of its proposal.

When considering the questions on which we would like feedback, it is useful to keep in mind that we must comply with the NEL and NER. The objective of the regulatory framework is to efficiently and reliably deliver services in the long term interests of consumers. Under the NER, we must assess the proposed expenditure forecasts to determine the efficient expenditure required to meet this objective. A transmission businesses capital expenditure capex and opex forecasts must be aimed at meeting expected demand and all regulatory obligations as well as maintaining the safety and reliability of the system. If there are no new regulatory obligations in relation to quality, reliability and security of supply, a business is to maintain existing levels.

We are primarily interested in receiving submissions on the transmission businesses proposed approaches to customer engagement, pricing (relevant to TransGrid and TasNetworks), opex, capex and the expected rate of return. However, we will consider submissions on any aspect of the proposals. Key dates for our assessment process are set out in Table 1.

### Timelines

Table1 sets out the key dates for the review process.

**Table 1 Key dates for the electricity transmission review process**

Task	Date
TNSP revenue proposal submitted to AER	2 June 2014
Publish revenue proposal and supporting documents	20 June 2014
Stakeholder forums	9-10 July 2014 <sup>24</sup>
Stakeholder submissions close	1 August 2014
Draft decision	30 November 2014
Revised revenue proposal	January 2015
Final decision	30 April 2015

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<sup>24</sup> TasNetworks on 9 July 2014; TransGrid and Directlink on 10 July 2014

## **AER annual benchmarking report**

The NER provide that the AER must publish its first benchmarking report for transmission and distribution by 30 September 2014. The purpose of this report is to describe, in reasonably plain language, the relative efficiency of each network service provider over a 12 month period. The AER will consult on the annual benchmarking report in a separate process. We will take into account the results and analysis in this report as part of our draft and final decisions.<sup>25</sup>

## **Review of Service Target Incentive Performance Scheme**

The AER provides an incentive for the business to improve network reliability and performance by providing an increment or decrement to revenue where the business improves reliability or where reliability deteriorates, respectively. This increment or decrement to revenue is applied and reflected in transmission prices on an annual basis.

The AER intends to apply the current version of the STPIS to the businesses. However, Directlink has not been operating at full capacity. We are currently consulting on amendments to the STPIS to take into account the Directlink's recent operating experience. Submissions on these proposed amendments are due by 20 July 2014. Any amended STPIS would apply as part of this reset.

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<sup>25</sup> Directlink will not be included in this report.

## Attachments

# 1 Background to our assessment

The following section provides information about us and the transmission businesses. If you are familiar with our processes and the businesses, then refer straight to section 2 (Regulatory framework).

The NEL and NER set out the regulatory framework for the NEM. Chapter 6A of the NER contains timelines and processes for the regulation of transmission businesses. It provides that regulated transmission businesses must periodically apply to us to assess their revenue requirements. Typically, this happens every five years. The revenue proposal as submitted by each business starts a process often referred to as a revenue reset, or simply a 'reset'.

## 1.1 The Australian Energy Regulator

We are Australia's national energy market regulator and an independent statutory authority. Our functions are set out in national energy market legislation and rules, and mostly relate to energy markets in eastern and southern Australia. These functions include:

- setting the prices charged for using energy networks (electricity poles and wires and gas pipelines) to transport energy to customers
- monitoring wholesale electricity and gas markets so suppliers comply with the legislation and rules, and taking enforcement action where necessary
- publishing information on energy markets, including the annual State of the Energy Market report and more detailed market and compliance reporting, to assist participants and the wider community
- assisting the Australian Competition and Consumer Commission with energy-related issues arising under the Competition and Consumer Act, including enforcement, mergers and authorisations.
- Specific to this review, we are responsible for the economic regulation of all transmission/distribution/gas networks in eastern and southern Australia.

The NEL and NER set out the regulatory framework for the NEM.

We are required to exercise our functions in a manner that will advance the NEO. The NEO in turn is supported through the revenue and pricing principles and the various objectives, criteria and elements within the rules. The NEO is:<sup>26</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.

We consider that the NEO is most likely to be advanced where consumers are offered a reasonable level of service at the lowest sustainable price. In most industries, this outcome is achieved through the operation of competition. However, in the electricity network industry the usual competitive disciplines do not operate. The electricity network businesses are natural monopolies and the

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<sup>26</sup> NEL, s.7

products they offer are essential services for most consumers. Consequently, consumers have little choice but to accept the service quality and price offered by the businesses.

The NEL and NER aim to reflect the competitive process by empowering us, as regulator, to make determinations that are in the long term interests of consumers. In short, we may require the businesses to offer their services at a higher quality and lower price than they would choose themselves. This requires the exercise of careful judgement. We must form a view after considering the interests of all parties. Further, there is no single precise answer.

There are potentially a range of outcomes that might advance the NEO. However, there are also a range of outcomes that are unlikely to advance the NEO to a satisfactory extent. For example, we do not consider that the NEO would be advanced if prices are so high that the businesses earn excessive returns or that large numbers of consumers significantly reduce their usage, nor if prices are so low that investors are unwilling to supply the service. We are also mindful that electricity supply is an important input for downstream economic activity. We would like to hear views on how the NEO is best reflected in our decision.

## 1.2 Who are the transmission businesses?

### TransGrid

TransGrid is a NSW government owned corporation that owns, operates and manages the electricity transmission network in New South Wales and the Australian Capital Territory. TransGrid's network stretches along the east coast of Australia from Queensland to Victoria, then inland to Broken Hill, making it the backbone of the NEM. It connects major generation sources in the Central Coast, Hunter Valley, Lithgow area and Snowy Mountains, and is interconnected with the Victorian and Queensland networks. TransGrid's network also connects to four distribution businesses (in NSW and ACT). TransGrid operates more than 12,600 circuit kilometres of transmission lines and cables, along with 91 substations, with nominal voltages of 500 kV, 330 kV, 220 kV and 132 kV.<sup>27</sup>

### TasNetworks (previously Transend)

TasNetworks (Transend) is the transmission network service provider in the Tasmanian region of the national electricity market (NEM). TasNetworks owns, operates, maintains and manages Tasmania's high-voltage 220 kV and 110 kV transmission network and lower-voltage 44, 33, 22, 11 and 6.6 kV connection assets that together form the transmission system. It owns 48 substations and eight switching stations and 3,600 circuit kilometres of transmission lines.<sup>28</sup>

### Directlink

The Directlink interconnector is a 59 km, 180 MW High Voltage Direct Current (HVDC) interconnect connecting the NSW and Queensland markets. Directlink first came into operation on 25 July 2000 as an unregulated Market Network Service Provider, earning revenue from the National Electricity Market by providing a market network service between the NSW and Queensland power grids. In March 2006, Directlink converted to a regulated interconnector (i.e. a prescribed service) following

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<sup>27</sup> See <http://www.transgrid.com.au/aboutus/Pages/default.aspx>; AER, *Transmission network service provider performance report 2010-11*, July 2013, p. 32

<sup>28</sup> Transend, *Transitional revenue proposal, Regulatory control period 1 July 2014–30 June 2015*, January 2014, p. 21; AER, *Transmission network service provider performance report 2010-11*, July 2013, p. 29.

application for conversion and an AER determination allowing conversion of Directlink to a regulated interconnector.<sup>29</sup>

Directlink collects its revenues from TransGrid, acting in the role of coordinating TNSP under the NER. As a result of the conversion to a regulated interconnector, Directlink is registered with the AEMO as a TNSP. The link is dispatched by AEMO, in a similar manner to a generator, to control flows between the NSW and Queensland regions of the NEM and thereby minimise the costs of generation in the NEM. Under these arrangements, Directlink provides the asset to be available to AEMO for dispatch as required. Directlink is not required to derive its allowed revenue over load or demand served and therefore does not establish tariffs for the provisions of its service. Accordingly, there is no need for Directlink to forecast load or peak demand as would be the case for other regulated transmission businesses.

## 1.1 Regulatory framework

The NSW and Tasmanian transmission businesses operate under the NEL and NER.

### 1.1.1 Applicable version of the National Electricity Rules

We must assess the TNSP's regulatory proposals under version 58 of the NER as modified by transitional rules (set out in chapter 11 of the NER) — Version 58 is available at the Australian Energy Market Commission (AEMC) website.<sup>30</sup> This version of the NER includes the result of significant changes made by the AEMC in November 2012. Under our Better Regulation program, during 2013 we developed, through an extensive process, a number of guidelines. The objective of this program was to refine our approach to regulation and to accommodate changes to the NEL and NER. The result was a suite of guidelines that set out approaches we consider are most likely to advance the NEO:

- **Expenditure forecast assessment guideline**

Assessing expenditure proposals from businesses.

- **Rate of return guideline**

Determining the allowed rate of return businesses earn on their investments.

- **Expenditure incentives guideline**

Creating the right incentives to encourage efficient spending by businesses.

- **Consumer engagement guideline for network service providers**

Implementing consumer engagement strategies that are effective for all stakeholders.

- **Shared asset guideline**

Sharing the revenue networks earn from shared assets with consumers.

- **Confidentiality guideline**

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<sup>29</sup> Directlink, *Revenue proposal*, pp.7-9

<sup>30</sup> [www.aemc.gov.au/Australias-Energy-Market/Market-Legislation/Relevant-Legislation-Electricity](http://www.aemc.gov.au/Australias-Energy-Market/Market-Legislation/Relevant-Legislation-Electricity)

Managing confidential information for an effective regulatory determination process.

We consulted extensively in developing the guidelines. This was very important for testing our views and hearing from a range of interested parties. In particular, we made a special effort to engage consumers in the process through our Consumer Reference Group.<sup>31</sup> We consider the guidelines provide a solid foundation for our decision making.

One of the themes that emerged from our consultation was a desire from stakeholders for clarity about the approach we would take in our decisions. In particular, many stakeholders observed that greater clarity would aid investment in the sector. To address this issue we set out our intended approaches in detail in the guidelines.

In the process established by the NER, the businesses have the first opportunity to propose a price/service offering. The transmission businesses application, or revenue proposal, starts a process often referred to as a revenue reset, or simply a 'reset'. We will assess that proposal against the NEO and NER to form a view on whether each of the proposals made by the businesses is in the long term interests of consumers. Where it is not, we will not accept the proposal, and instead impose our own decision.

### **1.1.2 The transitional regulatory year**

Our revenue determination process for TransGrid and TasNetworks was due to be completed in 2014. However, the process was delayed so consumers would receive the benefit of the new network rules and we could focus on developing and applying the Better Regulation guidelines.

Consequently, the AEMC separated the regulatory control period into:

- the transitional regulatory control period (1 July 2014 to 30 June 2015)
- the subsequent regulatory control period (beginning 1 July 2015).

We made our transitional decision for the TransGrid and TasNetworks (covering the transitional regulatory control period) as outlined in section 1.1.3. Our transitional decisions set out the placeholder revenue allowances and application of the regulatory framework for each transmission business for the transitional regulatory control period. Ultimately, these placeholder revenue allowances will be replaced by the revenue allowances we approve in our full determinations to be published by 30 April 2015. Directlink's revenue determination process was always due to be completed in 2015 so there was no need for a transitional determination.

### **1.1.3 Our transitional determination**

On 28 March 2014, we issued transitional determinations for TransGrid and Transend (TasNetworks) for the 2014-15 regulatory control period. These decisions determine transmission prices for NSW and Tasmanian customers in this one year period. Any discrepancies between our transitional determinations and our full determinations will be balanced up over the remaining years of the next regulatory control period.

Our transitional determinations provide, for the 2014–15 regulatory control period:<sup>32</sup>

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<sup>31</sup> See our website for our assessment of the Consumer Reference Group: [www.aer.gov.au/node/19166](http://www.aer.gov.au/node/19166)  
<sup>32</sup> [www.aer.gov.au/node/11482](http://www.aer.gov.au/node/11482)



- TransGrid will be able to recover \$845.4 million (\$nominal), which is 9.1 per cent lower than it proposed in its transitional proposal.
- Transend (TasNetworks) will be able to recover \$205.1 million (\$nominal), which is 4.8 per cent lower than it proposed in its transitional proposal.

#### 1.1.4 Our framework and approach papers

We released our Framework and Approach (F&A) papers on 23 January 2014. The F&A papers set out our intended application of the regulatory framework (e.g. application of incentive schemes). The purpose of this paper was to facilitate early public consultation on relevant issues and assist the businesses to prepare their revenue proposals.

In general, the positions set out in the F&A paper in relation to the regulatory control period beginning 1 July 2015, are not binding on the businesses. This means it is open to us to change our position on matters set out in the F&A paper for the subsequent regulatory control period where there is a reason to change, for example due to changes in circumstances.

#### 1.1.5 Maximum allowed revenue

The transmission businesses recover their revenue from its customers via their network tariffs. Their pricing methodology prescribes the way they recover this revenue. To determine the transmission businesses revenue for the next regulatory control period, we assess the total revenue required to provide prescribed transmission services for each year of the period. This annual revenue requirement reflects the efficient costs of providing prescribed transmission services across the NSW and Tasmanian electricity transmission networks.

In accordance with the NER, we use the building block approach to determine the annual revenue requirement. That revenue requirement is determined by estimating the efficient costs that the businesses are likely to incur in providing prescribed transmission services. The underlying cost elements include:

- a return on the regulatory asset base (return on capital)
- depreciation of the regulatory asset base (return of capital)
- forecast operating expenditure (opex)
- increments or decrements resulting from the efficiency benefit sharing scheme (EBSS)
- the estimated cost of corporate income tax.

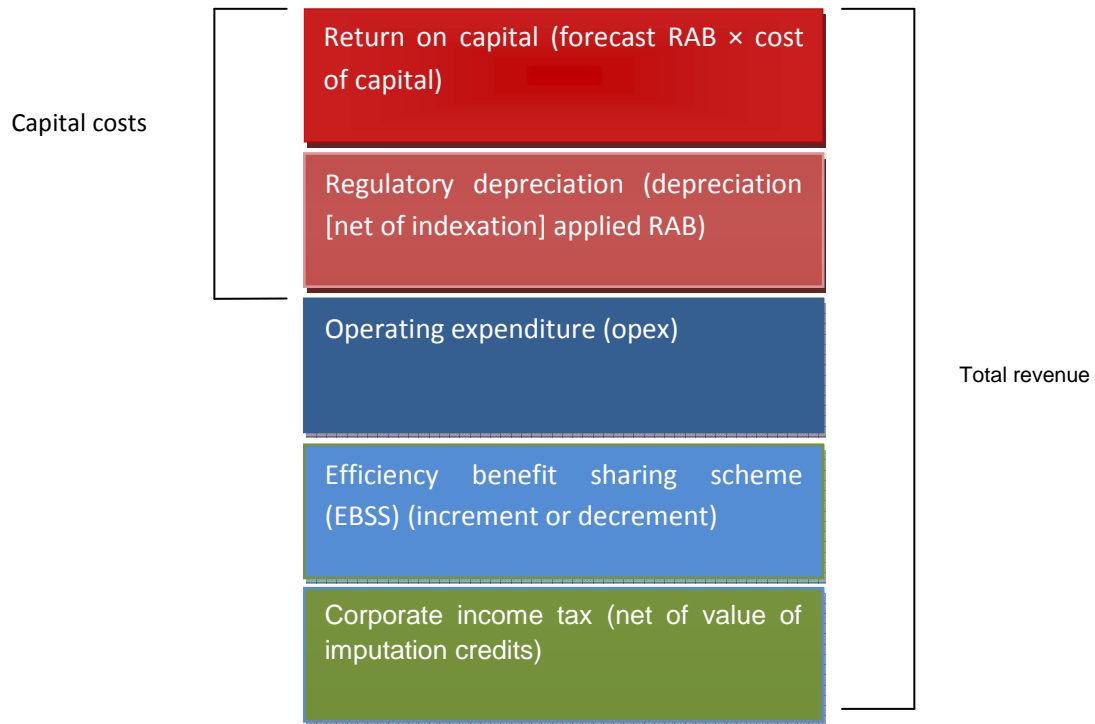
Our assessment of capital expenditure (capex) directly affects the size of the regulatory asset base and therefore the return on capital and return of capital building blocks.

Our assessment of the distributors' proposals will consider each of the building blocks. However, we must decide the distributors' revenues as a whole. This leads us to consider the interrelationships between the components.<sup>33</sup> The NEL requires us to describe how the components of our decision relate to each other. We must also describe how we have taken those interrelationships into account.

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<sup>33</sup> NEL, s. 16(1)(c).

**Figure 6 The building block approach to determining total revenue**



The key drivers of these cost elements in the revenue proposals are discussed in attachments 3, 4 and 5.

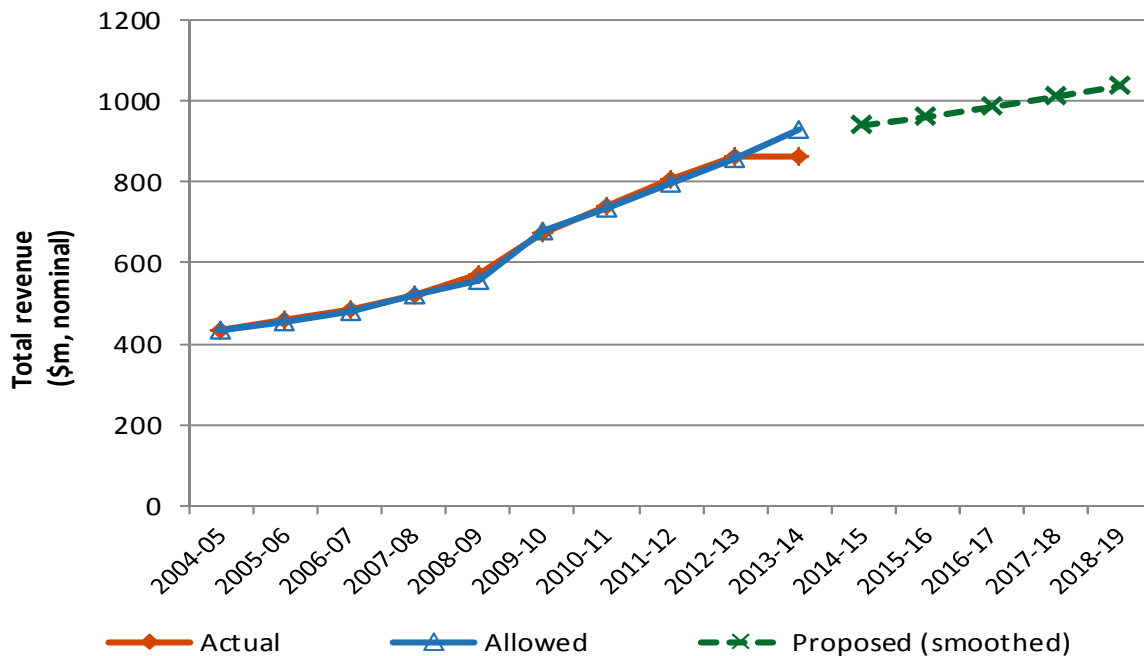
## 2 Total revenue proposals

The revenue proposals cover many issues relevant to our responsibilities as an economic regulator. Primarily though, they set out the proposed maximum allowed revenue for the next regulatory control period as submitted by each business. This chapter discusses the revenue proposals in total.

TransGrid has proposed a real revenue decrease of 2.13 per cent from the allowed revenue in 2013-14 followed by an annual change of zero per cent over the remainder of the regulatory control period.<sup>34</sup> TasNetworks has proposed an initial real revenue decrease of 26.5 per cent from the allowed revenue in 2013-14, followed by an annual 0.5 per cent real decrease over the remainder of the regulatory control period. Directlink has proposed an initial 25 per cent real increase from the current allowed revenue compared to the allowed revenue in 2014-15 followed by an annual real increase of 2 per cent over the remainder of the next regulatory control period.

The proposed revenues are outlined in Figures 7, 8 and 9, respectively.

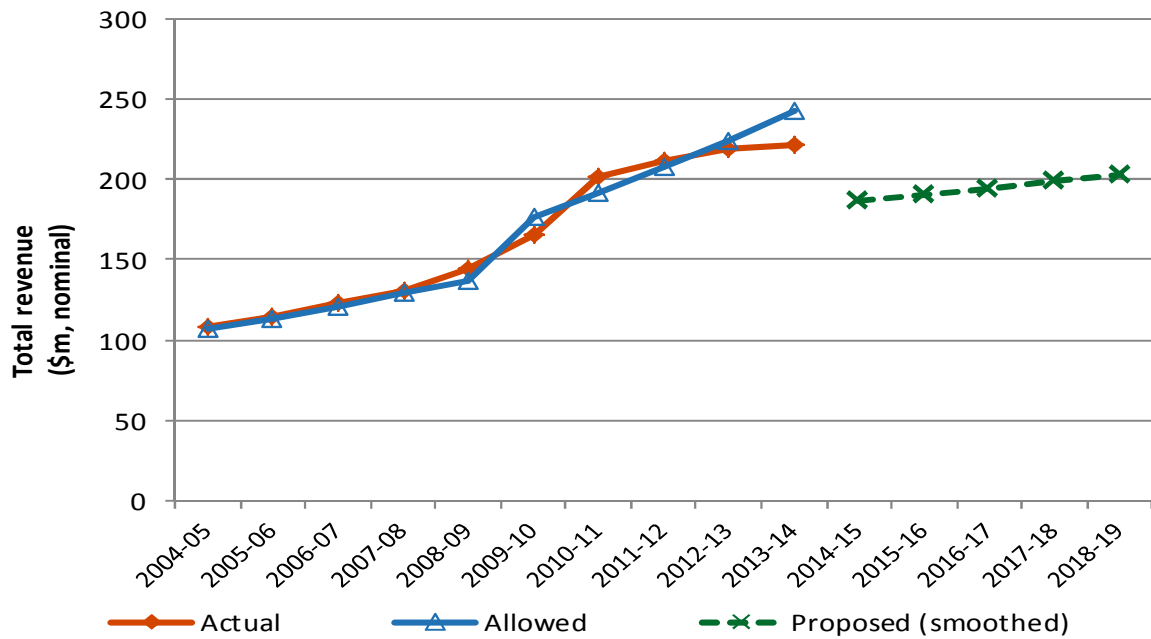
**Figure 7 TransGrid regulated transmission revenue (\$m, nominal)**



Source: AER, Final decision PTRM for TransGrid–Tribunal varied, 2009; TransGrid, Proposed PTRM, May 2014; TransGrid’s annual regulatory accounts; AER analysis.

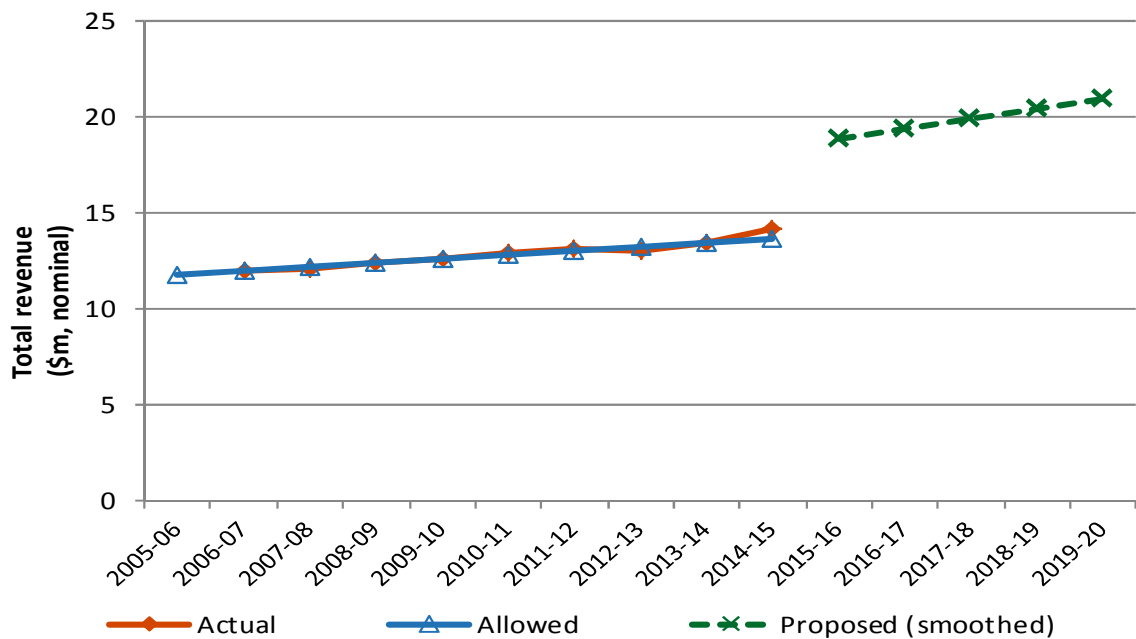
<sup>34</sup> This is based on a five year regulatory control period. TransGrid has proposed a four year regulatory control period which we have to consider in our determination.

**Figure 8 TasNetworks regulated transmission revenue (\$m, nominal)**



Source: AER, Final decision PTRM for TransGrid–Tribunal varied, 2009; TransGrid, Proposed PTRM, May 2014; TransGrid’s annual regulatory accounts; AER analysis.

**Figure 9 Directlink regulated transmission revenue (\$m, nominal)**

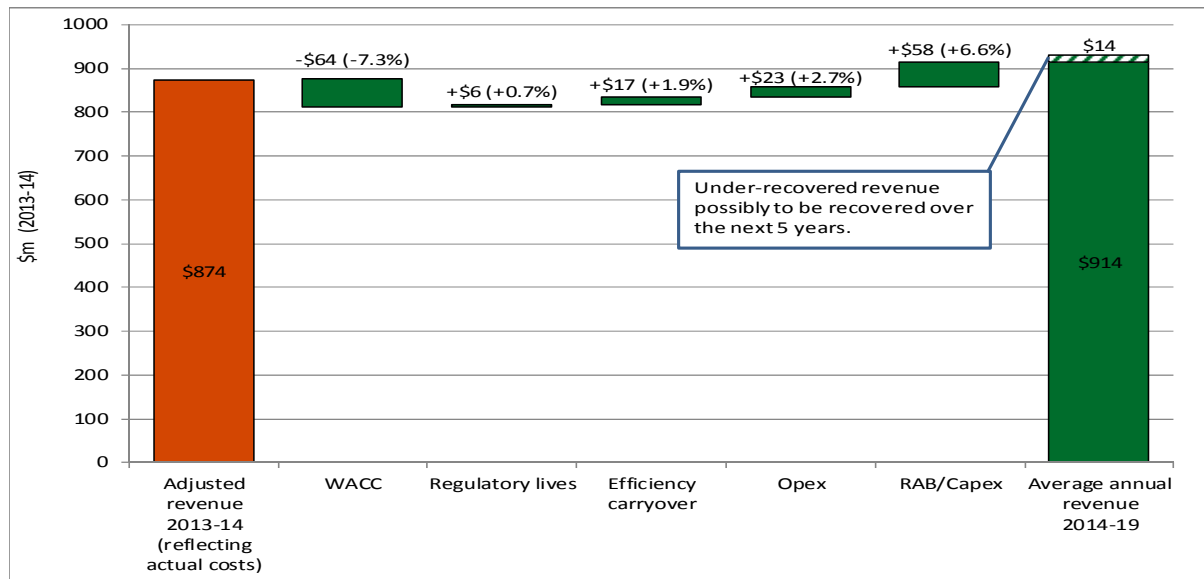


Source: AER, Final decision PTRM for Transend–Tribunal varied, 2009; Transend, Proposed PTRM, May 2014; Transend’s annual regulatory accounts; AER analysis.

## 2.1 Revenue impact by building block revenue component

The proposed revenue changes identified above show the change in revenue from the current revenue allowances approved by the AER in the current revenue determinations. The analysis in section 2.1 compares the change in revenue from the actual revenue recovered by each business (reflecting actual costs).<sup>35</sup> This results in a different revenue impact to that shown above. We have separated the businesses proposed changes in revenue into the various proposed building block elements and showed the impact of this as if they were to all occur in the first year. By doing so, we can see more clearly the key drivers of the revenue change. The revenue decomposition for the key elements of the building blocks is outlined below.

**Figure 10 TransGrid - change in 2013-14 revenue to proposed average revenue allowance for 2014-19 - by revenue component**



Source: AER analysis

Note: the \$14m represents the average annual amount of under-recovered revenue of \$71m

Figure 10 decomposes TransGrid's proposed change in revenue by key building block (revenue component) from the end of the current regulatory control period to next regulatory control period. The total change in revenue is estimated to be an increase of 4.6 per cent (before inflation). This analysis indicates that the proposed rate of return (WACC) component reduces revenue by 7.3 per cent. This reduction is more than offset by proposed increases in opex and the RAB (including forecast capex). It also indicates that increases in capex and opex make the biggest contribution to the increase in total revenue.

TransGrid has also under-recovered its allowed revenue by an amount of \$71m in the current regulatory control period.<sup>36</sup> This under-recovery has arisen from TransGrid's decision to 'freeze' revenue in 2013-14. TransGrid is allowed to recover in the next regulatory control period any shortfalls in revenue that are below the approved revenue allowances. Any decision by TransGrid to

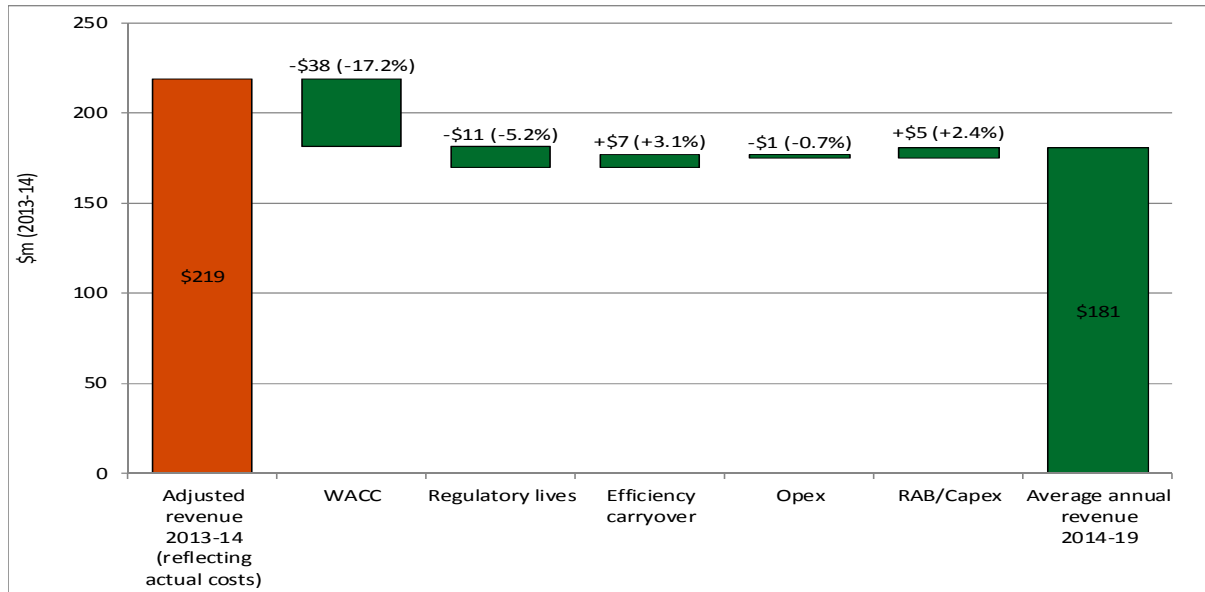
<sup>35</sup> The businesses actual revenue in 2013-14 (2014-15 for Directlink) has been adjusted to reflect any under or over recovery against the approved smoothed revenue allowance, the opex and capex allowances. Transend and TransGrid's actual revenue also reflects an under-recovery by TasNetworks of \$26m and \$71m for TransGrid in the current period, respectively.

<sup>36</sup> TransGrid, *Transitional revenue proposal 2014/15*, January 2014, p.65

recover this revenue would affect transmission prices for its customers independently of our revenue determination.

Figure 11 shows the decomposition for the key elements of the building block components for TasNetworks. The total change in revenue is estimated to be a decrease of 17.5 per cent (before inflation). This analysis indicates that the proposed rate of return will result in the most significant changes in revenue (revenue reduction).

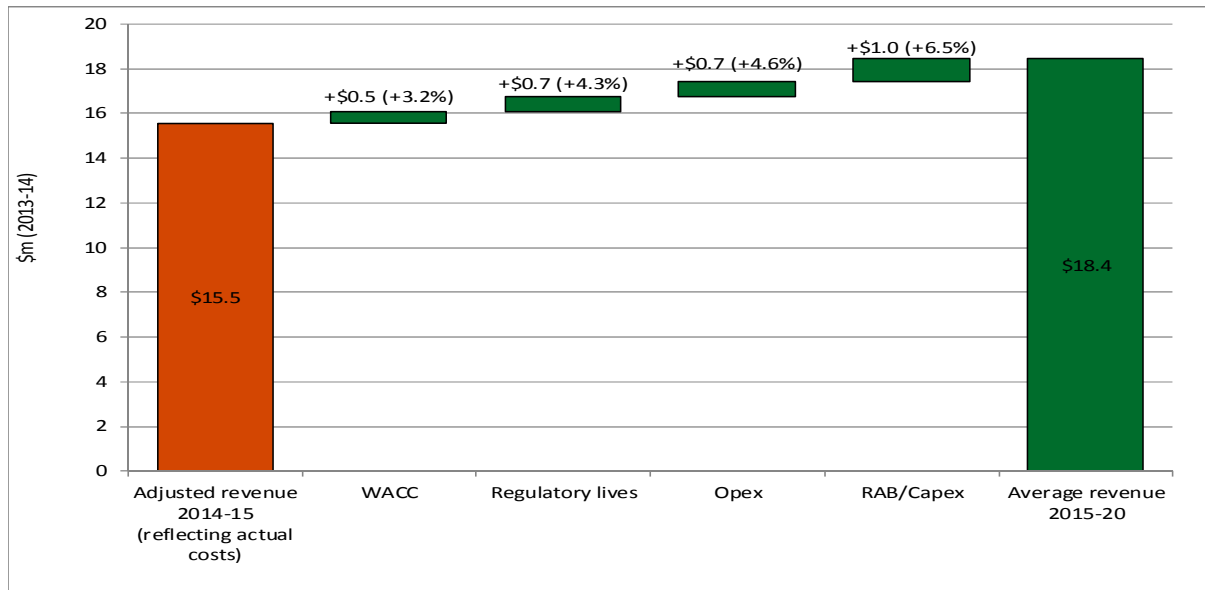
**Figure 11 TasNetworks - change in 2013-14 revenue to proposed average revenue allowance for 2014-19 - by revenue component**



Source: AER analysis

Figure 12 shows Directlink's proposed total change in revenue is estimated to be an increase of 18.5 per cent (before inflation). This analysis indicates that all elements of the Directlink's building block revenue are contributing to the proposed increase in revenue. This analysis indicates that opex and capex are the most significant drivers of Directlink's revenue proposal.

**Figure 12 Directlink - change in 2014-15 revenue to proposed average revenue allowance for 2015-20 - by revenue component**



Source: AER analysis

These key revenue components are further discussed in the following sections.

### 3 Capital expenditure

**Questions (please include reasons in your responses)**

1. Are the reasons for the capex proposals of each business well supported by their revenue proposals and/or consumer engagement activities?
2. What are your views about the cost drivers the businesses we have identified?
3. Do you consider the transmission businesses have accurately reflected customer preferences for reliability outcomes and their proposed capex to maintain existing levels of performance?

Capex is added to the regulatory asset base and so forms part of the capital costs of the building blocks used to determine service providers total required revenue. We must accept the proposed forecasts of total capex if we are satisfied they reasonably reflect capex criteria. We must have regard to the capex factors in the NER when making that decision.

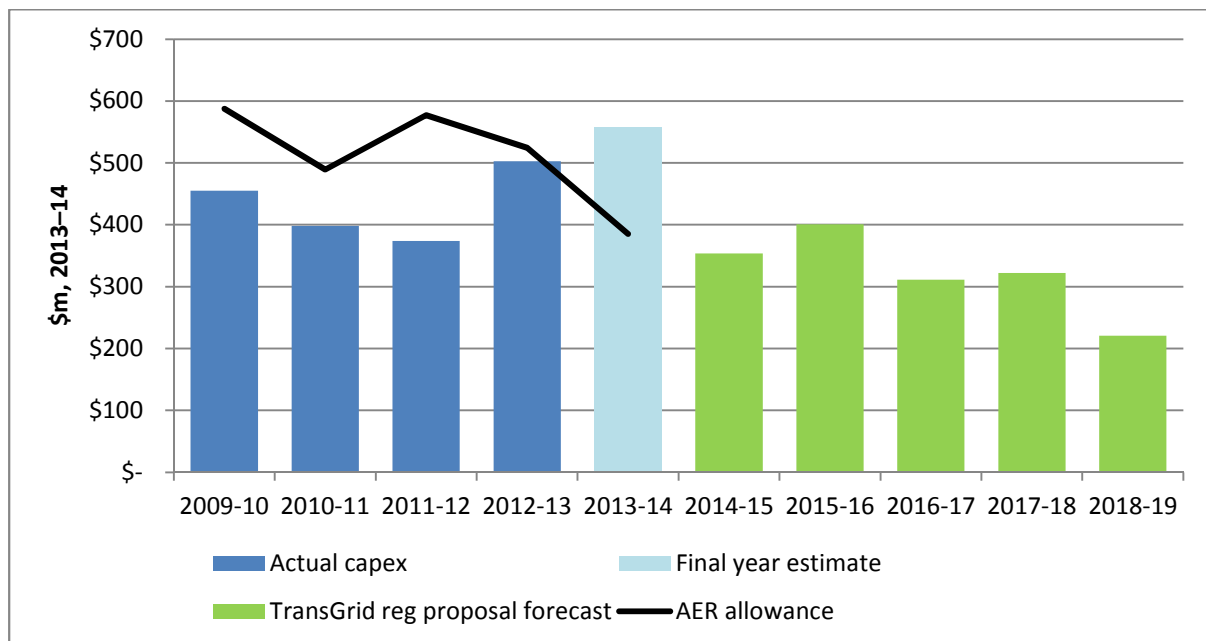
If we are not satisfied that a capex proposal reasonably reflects the capex criteria, we must not accept the forecast. In that case, we must estimate the total required capex that, in our view, does reasonably reflect the capex criteria taking into account the capex factors.

#### 3.1 Transmission businesses capital expenditure proposals

The proposed total capex forecasts, compared to historic levels and capex allowances, are outlined in figures 13 to 15.

Figure 13 shows that TransGrid is proposing to spend around 28 per cent less than actual expenditure (or 10 per cent less than the allowance) in the current regulatory control period.

**Figure 13 TransGrid—actual and proposed capex (\$ million 2013-14)**

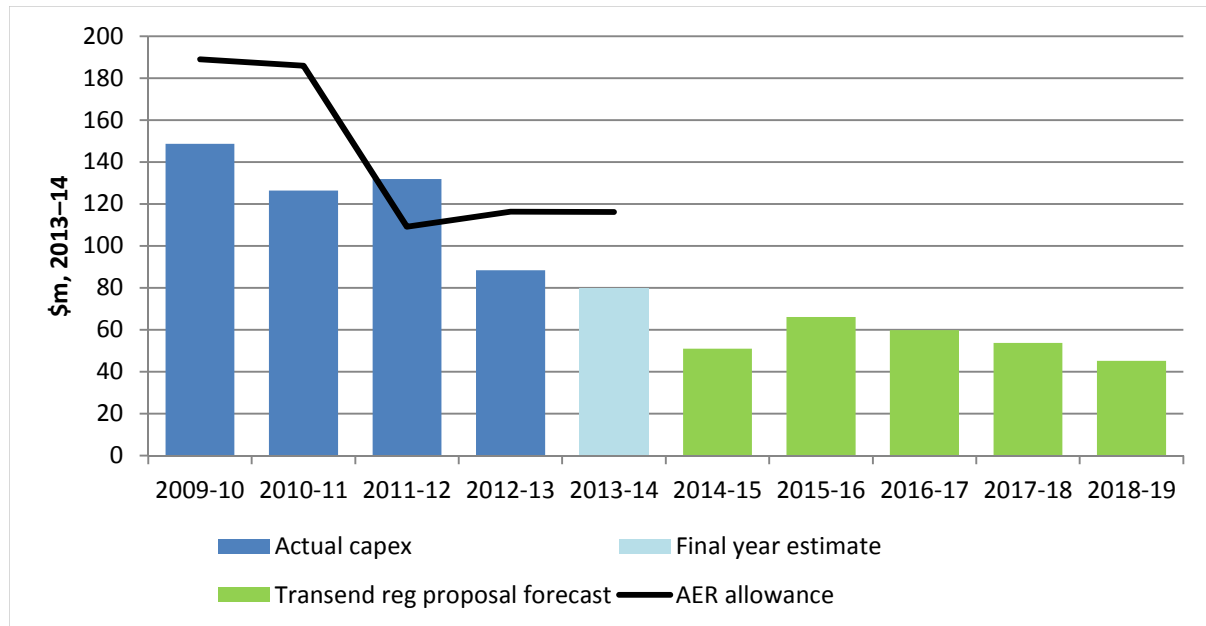


Source: RIN, AER analysis



Figure 14 shows that TasNetworks is proposing to spend around 52 per cent less than actual expenditure (or 61 per cent less than the allowance) in the current regulatory control period.

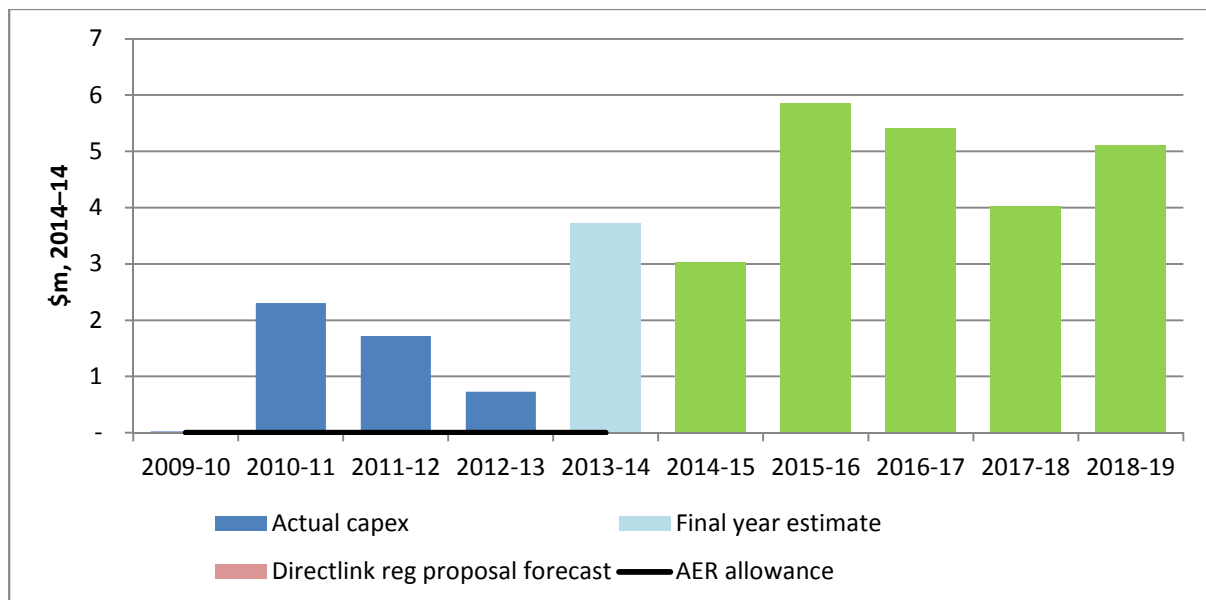
**Figure 14 TasNetworks—actual and proposed capex (\$ million 2013-14)**



Source: RIN, AER analysis

Figure 15 shows that Directlink is proposing to spend around 175 per cent more than actual expenditure in the current regulatory control period.

**Figure 15 Directlink—actual and proposed capex (\$ million 2014-15)**



Source: RIN, AER analysis

The key issues impacting forecast total capex for each business are outlined below.

### 3.1.1 Key drivers of the capital expenditure proposals

The transmission businesses have identified a number of drivers affecting forecast capex. A summary of the main drivers each business has identified is outlined below in Tables 2 to 4.

**Table 2 TransGrid—Drivers of capex forecast**

Cost driver	Description
Demand related capex	TransGrid has proposed augmentation and connection expenditure of \$77m. This is significantly lower than the current period based on lower forecast growth rates for state wide maximum demand published by AEMO in 2013 and connection point maximum demand forecasts developed by the NSW/ACT distribution businesses covering the 2014–19 regulatory control period. TransGrid indicates that these lower demand forecasts reflect projections of solar installations, demand reduction from energy efficient initiatives and changes to consumer behaviour. <sup>37</sup>
Asset replacement capex	<p>TransGrid has proposed replacement expenditure of \$1174m. This is significantly higher than \$703m estimated to be spent in the current regulatory control period. TransGrid states that this significant increase is driven by the need to replace assets built in the 1950s and 1960s that are considered to be reaching the end of their serviceable lives<sup>38</sup>and includes:</p> <ul style="list-style-type: none"> <li>▪ substation renewal (\$374m)</li> <li>▪ secondary systems renewal (\$290m) (i.e. metering, control and protection systems)</li> <li>▪ communications upgrade and replacement (\$121m)</li> <li>▪ transmission line life extensions (\$120m).</li> </ul>
Security/compliance	TransGrid have proposed expenditure of \$101m to raise transmission line clearances based on aerial surveys. The forecast expenditure reflects projects to address low spans on priority lines.
Property acquisitions	TransGrid has proposed expenditure of \$120m to acquire land or easements for future use for projects beyond the next regulatory control period.
Support the business	TransGrid have proposed expenditure of \$190m. This expenditure includes information technology, accommodation, and vehicles.
Labour cost, commodity cost and property cost escalation	TransGrid forecasts real increases in labour costs above inflation (CPI). This in part reflects labour cost increases consistent with its current Enterprise Bargaining Agreement (EBA). For the period subsequent to the expiry of the EBA it reflects advice provided by a consultant about likely forecast increases. <sup>39</sup> For the majority of its materials, TransGrid has forecast real price increases based on advice from a consultant about likely forecast increases. Further, TransGrid's escalation of property values exceeds inflation for the majority of property types (e.g. residential, rural) based on advice provided by a consultant.
Contingent projects	The regulatory framework allows a transmission business to propose projects above a defined financial threshold, but where there is significant uncertainty as to the need and timing of these projects such that these projects are not included in the proposed initial revenue allowance (and prices). However, pre-defined events or circumstances (e.g. unexpected growth in load) that would trigger the need for this project during the regulatory control period may be included in our decisions. In the event that these projects are subsequently required during the regulatory control

<sup>37</sup> TransGrid, *Revenue proposal*, p.4

<sup>38</sup> TransGrid, *Revenue proposal*, p7

<sup>39</sup> TransGrid, *Revenue proposal*, pp. 136-137

period (subject to AER approval), the transmission business is allowed to recover these additional investments within the regulatory control period. TransGrid have proposed the following contingent projects:

- 'Powering Sydney's Future': this project has an estimated cost of \$430 million
- Reinforcement of Capacity in Southern NSW: this project has an estimated cost of \$308.9 million.<sup>40</sup>

**Table 3 TasNetworks—Drivers of capex forecast**

Cost driver	Description
Demand related capex	TasNetworks has proposed augmentation and connection expenditure of \$56m. This is significantly lower than the amount spent in current period of \$260m. This lower forecast is based on lower forecast growth rates for state wide maximum demand and connection point maximum demand forecasts updated in March 2014 covering the 2014–19 regulatory control period. <sup>41</sup>
Asset replacement capex	<p>TasNetworks has proposed replacement expenditure of \$207m. This is lower than the amount spent (\$285m) in the current regulatory control period. TasNetworks states that it has cleared a backlog of asset replacement projects in the current regulatory control period such that asset replacement expenditure is expected to return to business as usual levels. TasNetwork's major asset renewal expenditure includes:</p> <ul style="list-style-type: none"> <li>▪ replacement of transmission line insulator assemblies to maintain service levels, safety and for bushfire mitigation</li> <li>▪ renewal of telecommunication assets that have reached the end of their serviceable lives; and</li> <li>▪ increased expenditure on operational support systems that partially reflects the deferral of projects to derive synergies from the merged network business.</li> </ul>
Labour cost and property escalation	TasNetworks forecast real increases in labour costs above CPI from 2015-16 based on advice from a consultant. TasNetworks has also forecast property costs to also exceed CPI based on advice from consultants. <sup>42</sup>
Cost estimation risk factor	In developing its forecast capex TasNetworks has applied a cost estimation risk factor of 1.65 per cent. TasNetworks states that this risk factor is applied to recognise the uncertainties in the cost estimating process and that there is generally a higher probability that costs will increase rather than decrease, due to unforeseen factors.

<sup>40</sup> TransGrid, *Revenue proposal* p. 81-83

<sup>41</sup> Transend, *Revenue proposal* p. 78; TransGrid, *Revenue proposal*, p. 66

<sup>42</sup> Transend, *Revenue proposal*, appendix 12 and appendix 13

**Table 4**      **Directlink—Drivers of capex forecast**

Cost driver	Description
Asset replacement capex	Directlink has proposed expenditure of 10m to refurbish auxiliary equipment nearing the end of its useful life.
Reliability related expenditure	Directlink has also proposed expenditure of \$23m to improve the reliability of the interconnector. This includes an upgrade of the control system (\$13m) in 2020 on the basis that the necessary components are no longer supported by the manufacturer.

## 4 Operating expenditure

### Questions (please include reasons in your responses)

1. Are the opex proposals of each business justified? Please identify any specific areas you consider are not justified.
2. What are your views about the cost drivers the businesses have identified?
3. Are the benefits to electricity network consumers resulting from revealed efficiencies in opex sufficient to warrant the rewards proposed by the businesses under the EBSS?
4. Are the reasons for the opex proposals of each business clear from their regulatory proposals and/or consumer engagement activities?

Operating expenditure (opex) refers to the operating, maintenance and other non-capital expenditure incurred in the provision of network services. It is one of the building blocks used to determine the total revenue requirement for each business (see section 1.1.5). We must accept the proposed forecasts of total opex if we are satisfied they reasonably reflect the opex criteria.<sup>43</sup> We must have regard to the opex factors when making that decision.<sup>44</sup>

If we are not satisfied an opex proposal reasonably reflects the opex criteria, we must not accept it.<sup>45</sup> We must estimate the total required opex that, in our view, does reasonably reflect the opex criteria taking into account the opex factors. The approach we will adopt to assess the forecasts of total opex is outlined in our expenditure forecast assessment guideline.

To encourage a business to become more efficient we typically apply an Efficiency Benefit Sharing Scheme (EBSS) for opex. The EBSS rewards a business for efficiency gains it makes during a regulatory control period and penalises a business for efficiency losses. TasNetworks and TransGrid operated under the EBSS released in September 2007.<sup>46</sup> They will receive any rewards or penalties gained during the 2014–19 period. Directlink was not subject to an EBSS in the 2006–15 regulatory control period.

### 4.1 Transmission business operating expenditure proposals

Figures 18 and 17 show Directlink and TransGrid have forecast increases in opex when compared to the actual opex incurred in the previous regulatory control period. Figure 16 shows that TasNetworks has forecast a decrease in opex when compared to the opex it incurred in the 2009-14 regulatory control period.

In particular, figure 16 shows that TasNetworks is proposing to spend around 11 per cent less than actual expenditure (or 24 per cent less than the allowance) in the current regulatory control period.

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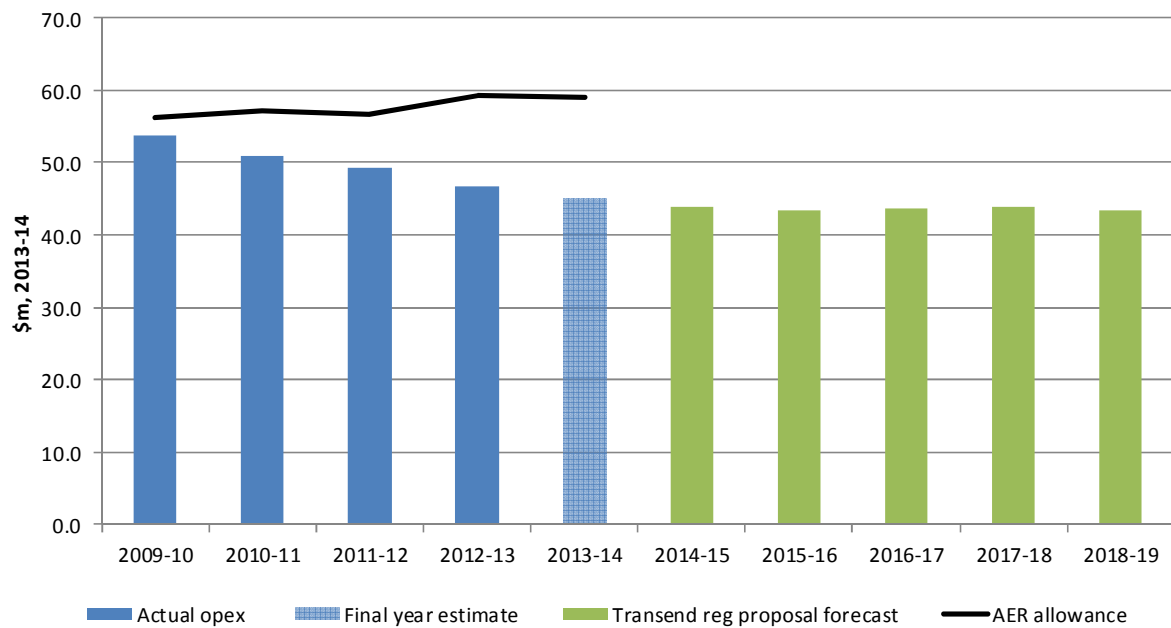
<sup>43</sup> NER, cl. 6A.6.6(c).

<sup>44</sup> NER, cl. 6A.6.6(e).

<sup>45</sup> NER, cl. 6A.6.6(d).

<sup>46</sup> AER, *Electricity Transmission network service providers - Efficiency Benefit Sharing Scheme*, September 2007

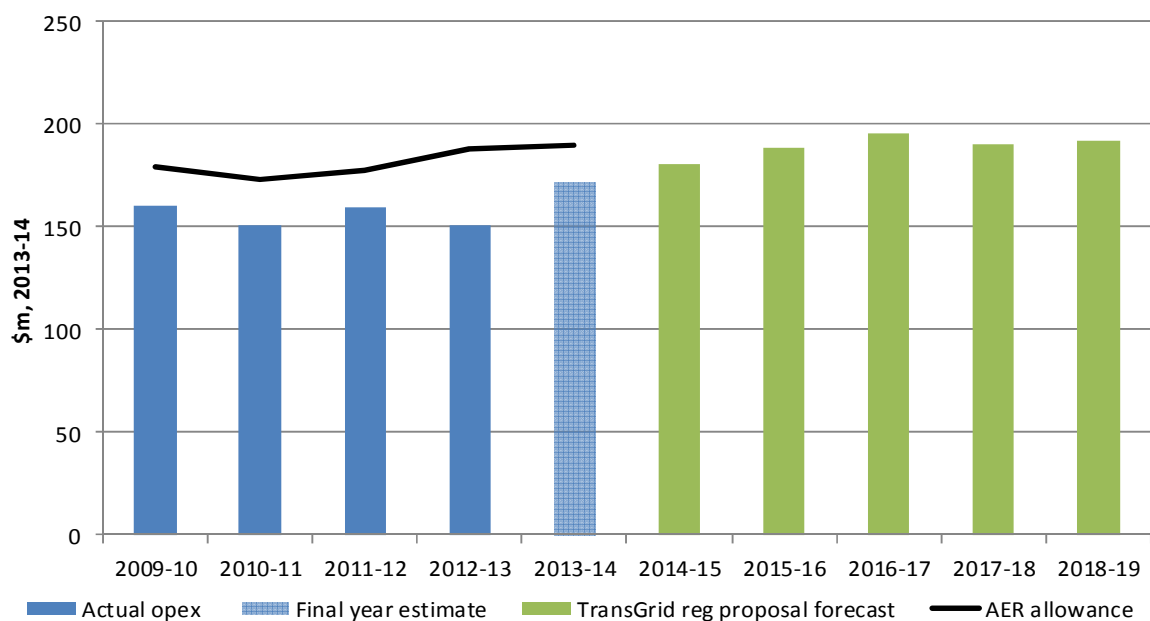
**Figure 16 TasNetworks—actual and proposed opex (\$million, 2013-14)**



Source: RIN, AER analysis

Figure 17 shows that TransGrid is proposing to spend around 19 per cent more than actual expenditure (or 4 per cent more than the allowance) in the current regulatory control period.

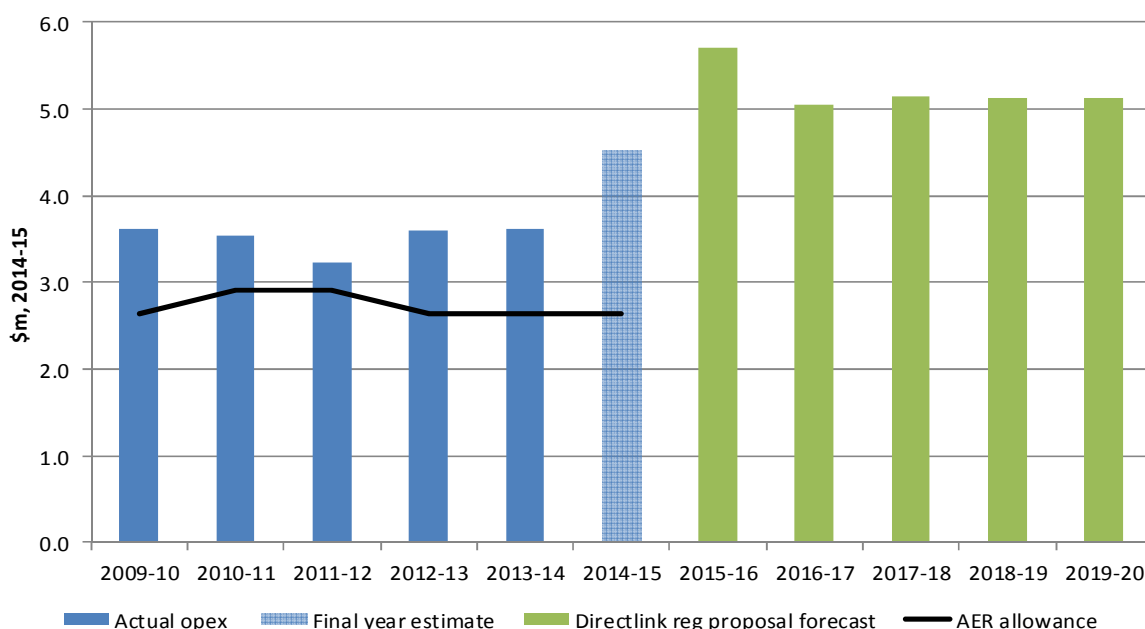
**Figure 17 TransGrid—actual and proposed opex (\$million, 2013-14)**



Source: RIN, AER analysis

Figure 18 shows that Directlink is proposing to spend around 41 per cent more than actual expenditure (or 90 per cent more than the allowance) in the final five years of the current regulatory control period.

**Figure 18 Directlink—actual and proposed opex (\$million 2014-15)**



Source: RIN, AER analysis

## 4.2 Key drivers of the operating expenditure proposals

The transmission businesses have identified a number of drivers affecting forecast opex. A summary of the main drivers each business has identified is outlined below in Tables 5 to 7.

**Table 5 TransGrid—Drivers of opex forecast**

Cost driver	Description
Corporate and Regulatory Management	<p>TransGrid is forecasting additional opex on Corporate and Regulatory Management of \$67 million (\$2013-14) in the 2014-19 regulatory control period compared to the 2009-14 regulatory control period.<sup>47</sup></p> <p>We understand the forecast increase in opex in this category is related to a forecast increase in opex for employee entitlements such as defined benefits superannuation and long service leave.<sup>48</sup> TransGrid's reported historical opex is based on the provisions it recorded for these entitlements. Its forecast opex is based on the forecast cash it will incur relating to these entitlements.</p>
Step changes	<p>TransGrid forecasts additional opex of \$41 million (\$2013-14) in the 2014-19 regulatory control period for</p>

<sup>47</sup> TransGrid, *Revenue proposal*, p. 118, p. 156

<sup>48</sup> TransGrid, *Revenue proposal*, p. 139

	step changes.
	The largest proposed step changes are for an increase in demand management of \$13 million (\$2013-14) and for increased consumer engagement activities of \$11 million (\$2013-14). <sup>49</sup>
Labour cost escalation	TransGrid forecasts real increases in labour costs above CPI. This in part reflects labour cost increases consistent with its current Enterprise Bargaining Agreement (EBA). For the period subsequent to the expiry of the EBA it reflects advice provided by a consultant about likely forecast increases. <sup>50</sup> It estimates that forecast real price changes will increase its opex by \$25 million (\$2013-14) over the 2014-19 regulatory control period. <sup>51</sup>
Output growth	TransGrid forecasts increased opex for growth in the size of the network. This reflects the increase in maintenance requirements arising from growth and subsequent increase in other activities. TransGrid's forecast output growth net of productivity increases is \$16 million (2013-14) over the regulatory control period. <sup>52</sup>

**Table 6 TasNetworks—Drivers of opex forecast**

Cost driver	Description of driver
Efficiency improvements	TasNetworks forecasts to deliver efficiency improvements through its merger with Aurora distribution networks. It forecasts efficiency savings through reduced staffing levels, rationalisation of duplicate systems and improved ways of delivering services to customers. TasNetworks forecasts efficiency improvements will reduce its forecast opex by \$30 million (2013-14) over the regulatory control period. <sup>53</sup>
Labour cost escalation	TasNetworks forecasts real increases in labour costs above CPI from 2015-16. It forecasts this will add \$6 million (2013-14) to its opex forecast over the regulatory control period. <sup>54</sup>
Step changes	TasNetworks forecasts step changes in opex relating to new obligations relating to consumer engagement, and data to facilitate the AER's benchmarking of NSPs. TasNetworks forecasts these two step changes will add \$4 million (2013-14) to its opex over the regulatory control period. <sup>55</sup>

**Table 7 Directlink—Drivers of opex forecast**

Cost driver	Description of driver
Changes to perceived risk levels	Directlink engaged a consultant to review its operation and maintenance procedures following a fire at its Mullumbimby converter station in August 2012. The consultant found the asset was being operated in a manner not inconsistent with a definition

<sup>49</sup> TransGrid, *Revenue proposal*, pp. 126-129  
<sup>50</sup> TransGrid, *Revenue proposal*, pp. 136-137  
<sup>51</sup> TransGrid RIN, Table 2.14.1  
<sup>52</sup> TransGrid, RIN, Table 2.14.1  
<sup>53</sup> Transend, *Revenue proposal*, pp. 86-87  
<sup>54</sup> Transend, *Regulatory proposal*, p. 86  
<sup>55</sup> Transend, *Regulatory proposal*, pp. 84-85



of good industry practice appropriate to the risks as understood prior to the fire.<sup>56</sup>

However, following the fire Directlink has re-evaluated what it considers to be good industry practice. The consultant recommended introducing new processes and procedures as well as amending existing ones. Directlink has forecast the expenditure required to address these recommendations using a bottom up forecasting methodology.<sup>57</sup>

Forecast price changes

Directlink expects its internal and contract labour costs to increase.

in real terms over the 2015–20 regulatory period. It proposed that its labour costs be escalated by the forecast labour price increases determined by the AER for the NSW transmission and distribution businesses. Because these are not yet known its proposed forecast capital and operating costs reflect zero real cost escalation for labour and materials costs.<sup>58</sup>

Insurance

The fire that occurred at the Mullumbimby converter station in 2012 impacted the perception of the risks associated with this asset. This caused insurance premiums to rise to reflect the claims experience and the insurer's view of the risk of insuring the Directlink assets.<sup>59</sup>

Directlink proposed insurance costs based on an estimate of the stand-alone insurance costs attributable to it determined by insurance experts Marsh.<sup>60</sup>

### 4.3 Cost pass throughs

The NER permit the businesses to apply to us, during a regulatory control period, for their prices to be adjusted because of material and an unexpected cost rises or, in some cases, if actual costs are different to the allowances included in our original determination

Pass throughs are only permitted if they are for events defined in the businesses' transmission determinations. Once a determination has been finalised, we are required to approve a cost pass through application from a business if it satisfies the relevant requirements in our determination. For the next regulatory control period, TransGrid, TasNetworks and Directlink have proposed pass the following throughs for:

- insurance cap event (TransGrid, TasNetworks, Directlink)
- natural disaster event (TransGrid and TasNetworks, Directlink)
- terrorism event (TransGrid and TasNetworks, Directlink)
- insurer's credit risk event (TransGrid and Directlink).

<sup>56</sup> Directlink, Revenue proposal, p. 62

<sup>57</sup> Directlink, Revenue proposal, pp. 62–63

<sup>58</sup> Directlink, Revenue proposal, p. 19

<sup>59</sup> Directlink, Revenue proposal, pp. 73–74

<sup>60</sup> Directlink, Revenue proposal, p. 73

- Cyber-related external attack event (TransGrid)
- Gradual environmental contamination event (TransGrid)
- Carbon cost event (Directlink).

In our recent transmission determination for SP AusNet we approved pass through events for insurance caps, natural disasters and terrorism.<sup>61</sup>

We seek your views on the pass through events nominated by the transmission networks. In particular, should they be recovered as part of a cost pass through if such events occur, or is it more appropriate for these potential impacts to be reflected in the distributors' allowances.

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<sup>61</sup> AER, Final decision - SP AusNet transmission determination 2014–15 to 2016–17, January 2014, p. 54.

## 5 Rate of return

### Questions (please include reasons in your responses)

1. Do you have any comments on the businesses proposed departures from our guideline?
2. Do you consider the approach in our guideline of transitioning into the new benchmark approach to the return on debt, or TransGrid and Directlink's proposal for an immediate transition, is appropriate?
3. Do you consider the value in the AER's guideline and TasNetworks proposal (0.5) or TransGrid's and Directlink's proposals (0.25) provide a more appropriate approach to estimating the value of imputation credits?

The allowed rate of return is the forecast cost of funds a transmission business requires to invest in the network. To estimate this cost, we consider the cost of the two sources of funds for investments—equity and debt. The return on equity is the return shareholders of the business require to attract new investment. The return on debt is the interest rate the business pays when it borrows money to invest in capex. We consider that efficient transmission network businesses would fund their investments by borrowing 60 per cent of the required funds, while raising the remaining 40 per cent from equity.

We published our Rate of Return guideline in December 2013.<sup>62</sup> It sets out the method we propose to use to estimate the allowed rate of return for electricity and gas network businesses. The Rate of Return guideline is not binding, but if a business seeks to depart from it, the business must include reasons in its proposal for doing so. If the AER seeks to depart from its guideline when making its draft or final decision, the AER must also include reasons for doing so.

### 5.1 Businesses proposed overall return on capital

Table 8 summarises the rate of return proposals submitted by each business. In Table , the first row shows the overall rate of return, or weighted average cost of capital (WACC), proposed by each of the three businesses. The following rows show the businesses proposed values for the individual components that, when combined, make up the WACC. These are the return on equity, return on debt, gearing ratio and level of imputation credits.

**Table 8** Businesses proposed rates of return (per cent)

	TransGrid	TasNetworks	Directlink
Overall WACC	8.83	7.58	8.06
Return on equity	10.50	8.70	8.90
Return on debt	7.72	6.84	7.50
Gearing	60	60	60
Imputation credits	25%	50%	25%

<sup>62</sup> AER, *Rate of return guideline*, December 2013.

Note: The return on debt numbers apply only for the first regulatory year. All the TNSPs proposed to annually update the return on debt. We expect Directlink's proposed rate of return to be higher than 8.06 per cent because its proposed return on debt of 7.50 per cent is only a place holder. In fact, Directlink's calculation based on the trailing average suggests return on debt estimate of 8.03 per cent.

In the sections below, we discuss the proposed values for the WACC parameters and the methods used by the businesses for calculating these. We have also briefly described how the proposed approaches are consistent with, or differ from, the approaches set out in our Rate of Return Guideline.

### 5.1.1 Return on equity

Recognising there is not one perfect model to estimate the return on equity, our rate of return guideline approach draws on a variety of models and information which we have assessed as relevant. Our starting point is the standard capital asset pricing model (CAPM)—our 'foundation model.' We then use a range of models, methods, and information to inform our return on equity estimate. We use this information to either set the range of inputs into the CAPM foundation model or assist in determining a point estimate within the range of estimates of overall return on equity resulting from the CAPM foundation model.

We propose to use the Sharpe–Lintner capital asset pricing model (SLCAPM) as the foundation model, which runs as follows:

- The SLCAPM is estimated by adding to the risk free rate the product of the equity beta and market risk premium (MRP).
  - Our approach is to estimate the risk free rate based on market conditions that prevail as close as possible to the commencement of the regulatory control period.
  - Our point estimates for equity beta is 0.7.
  - As at December 2013, our point estimate for MRP is 6.5.
- The range and point estimate for the expected return on equity is calculated based on the range and point estimates from the corresponding input parameters. For example, the lower bound of the expected return on equity range is calculated by applying the point estimate for the risk free rate and the lower bound estimates of the equity beta and MRP. A probability will not be assigned to values within the range, but it will not be assumed that all values within the range are equally probable.

Directlink proposes to apply our foundation model in accordance with the Rate of Return Guideline.<sup>63</sup>

TasNetworks adopts the parameter values identified by the AER in its Rate of Return Guidelines on the basis that it balances the competing interest of sustainable prices for consumers and what its expert considers to be the true cost of equity.<sup>64,65</sup>

TransGrid does not support the application of our foundation model as set out in the Rate of Return Guidelines.<sup>66</sup> TransGrid has instead applied a multi model approach to estimating the allowed return on equity.<sup>67</sup> TransGrid establish their return on equity within a range of empirical estimates that

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<sup>63</sup> Directlink, *Revenue proposal*, pp.35-36

<sup>64</sup> Transend, *Revenue proposal*, p.107

<sup>65</sup> Transend, *Revenue proposal*, p.10

<sup>66</sup> Transgrid, *Revenue proposal*, pp.186-187

<sup>67</sup> Transgrid, *Revenue proposal*, pp.186-187

includes the SLCAPM.<sup>68</sup> Deviations from the AER’s foundation model include using the following information to develop its range of estimates for the allowed return on equity:<sup>69</sup>

- the mid-point of the gamma adjusted return on equity Grant Samuel used to value Envestra Pty Ltd in 2014
- an empirical cost of equity estimate from the Black CAPM
- an empirical cost of equity estimates from the Fama-French three-factor model (FFM)
- an empirical estimate from the dividend growth model (DGM).

Table 9 sets out the businesses proposed return on equity and their proposed values for the risk free rate, equity beta and MRP.

**Table 9 Businesses proposed return on equity**

	TransGrid	TasNetworks	Directlink
Overall return on equity	10.50	8.70	8.90
Risk free rate	4.14	4.11	4.30
Equity beta	0.58	0.70	0.70
MRP	7.26	6.50	6.50

Note: Implied beta estimates from TransGrid's regulatory proposals range from 0.48 to 1.00, but these betas are implied from TransGrid's multi-model approach are not all are intended for use in a SLCAPM model. Only a beta of 0.58 was applied in the SLCAPM framework.

Source: TNSP revenue proposals

Consistent with the guideline, TasNetworks and Directlink set out indicative risk free rates for the return on equity estimated with an averaging period of 20 business days. They noted the indicative averaging period would be updated to reflect the most recent data at the time the AER makes its determination.<sup>70</sup>

Inconsistent with the guideline, Directlink stated that it reserves the right to nominate an alternative averaging period to what it had agreed upon with the AER in advance. Directlink proposed this would be in the event that market conditions within the proposed averaging period appear abnormal.<sup>71</sup>

In departing from the foundation model approach, TransGrid did not directly propose a risk free rate.<sup>72</sup> This is because TransGrid estimated the return on equity using a qualitative assessment of several asset pricing models (including the SLCAPM), a DGM and an independent expert's report. However, TransGrid adopted the return on equity estimates of its consultant, NERA. NERA recommended the SLCAPM be estimated using prevailing estimates of the risk free rate and provided indicative estimates of the risk free rate using a 20 business day averaging period.<sup>73</sup>

TasNetworks proposed to adopt the parameter values identified by the AER in the guideline.<sup>74</sup> While this includes a MRP of 6.5 per cent, we note that this was a point in time estimate at December 2013,

<sup>68</sup> Transgrid, *Revenue proposal*, p.189

<sup>69</sup> Transgrid, *Revenue proposal*, pp.189-190

<sup>70</sup> Transend, *Revenue proposal*, p. 108; Directlink, *Revenue proposal*, p. 36

<sup>71</sup> Directlink, *Revenue proposal*, pp. 36–37

<sup>72</sup> See TransGrid, *Revenue proposal*, pp. 175–199

<sup>73</sup> NERA, Return on Capital of a Regulated Electricity Network: A report for Ashurst, May 2014, p. 86

<sup>74</sup> Transend, *Revenue proposal*, p. 107

and will be updated using the approach set out in the guideline. Directlink has also proposed to apply the guideline for estimating the return on equity.<sup>75</sup>

In departing from the foundation model approach, TransGrid did not directly propose a MRP. This is because TransGrid estimated the return on equity using a qualitative assessment of several asset pricing models, a DGM and an independent expert's report. However, TransGrid adopted the return on equity estimates of its consultant, NERA. In its report, NERA considered 7.26 per cent to be the best estimate of a prevailing MRP.<sup>76</sup>

TasNetworks and Directlink adopted the Rate of Return Guideline equity beta estimate of 0.7.<sup>77</sup>

TransGrid did not propose a specific value for equity beta. Instead, it estimated a number of relevant risk parameters applicable under different return on equity models. For example, it specified an equity beta of 0.58 across a number of CAPM specifications.<sup>78</sup> TransGrid submits that the Rate of Return Guideline equity beta estimate of 0.7 is insufficient to correct for potential shortcomings associated with empirically implementing the SLCAPM.<sup>79</sup>

### 5.1.2 Return on debt

To estimate the return on debt, our rate of return guideline proposes a ten year trailing average portfolio approach, with annual updates, after a period of transition. Our proposed transitional arrangement recognises the importance of transitioning from one benchmark approach to another benchmark approach. We consider a benchmark efficient entity would refinance its debt on a staggered basis, consistent with the trailing average approach. That is, a benchmark efficient transmission business would refinance ten per cent of its total debt each year over a ten year period. Our proposed transitional arrangements provide a ten period for regulated network service providers to restructure their debt to match our proposed long term approach.

Under our proposed transitional arrangement, we would set 100 per cent of the allowed return on debt for the first year of the next regulatory period based on current observed corporate bond yields. For the second year, we would set 90 per cent of the allowed return on debt based on then-current corporate yields. For the third year we would set 80 per cent of the allowed return based on then-current corporate yields. And so on. For each of those ten years, progressively more of the allowed return on debt would be based on our proposed ten year trailing average portfolio approach. After the ten year transition period, 100 per cent of the allowed return on debt would be based on the ten year trailing average portfolio.

The businesses proposed return on debt approach is consistent with the approach in our guideline, apart from one significant departure by two of the businesses.<sup>80</sup> TransGrid and Directlink have departed from the guideline by proposing immediate transition.<sup>81</sup> The implementation of transitional arrangements is therefore one of the key issues on return on debt. TransGrid states that a transition is not appropriate for its circumstances. This is because of its lack of access to hedging markets due to its size, and its current financing strategy which already resembles a staggered debt portfolio.

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<sup>75</sup> Directlink, *Revenue proposal*, p. 35

<sup>76</sup> NERA, *Return on Capital of a Regulated Electricity Network: A report for Ashurst*, May 2014, p. 96

<sup>77</sup> Transend, *Revenue proposal*, May 2014, p. 108. Directlink, *Revenue proposal*, May 2014, p. 36

<sup>78</sup> TransGrid, *Revenue proposal*, May 2014, pp. 185–195. TransGrid's proposal is based on a report by NERA. NERA, *Return on capital of a regulated electricity network*, May 2014. NERA's report considers multiple financial models and other evidence to determine the return on equity.

<sup>79</sup> TransGrid, *Revenue proposal*, May 2014, pp. 185, 194

<sup>80</sup> TransGrid, *Revenue proposal*, May 2014, pp. 178–179; Directlink, *Revenue proposal*, May 2014, pp. 37–38; Transend, *Revenue proposal*, May 2014, pp. 107–108.

<sup>81</sup> TransGrid, *Revenue proposal*, May 2014, pp. 178–179; Directlink, *Revenue proposal*, May 2014, pp. 37–38.

Directlink, on the other hand, states that applying a transition is complex and not required due to the availability of high quality data.

Whether or not transitional arrangements are adopted is likely to have a substantial revenue impact. For example, the largest business—TransGrid— estimated this could have a \$141 million (\$ nominal) impact on its revenue over the regulatory control period.<sup>82</sup>

## Implementation

In our rate of return guideline we proposed to apply the published yields from an independent third party data service provider for estimating the prevailing return on debt for each service provider during the averaging period. All the businesses adopted a benchmark 10 year term of debt and the use of published yields from an independent third party data service provider—the Reserve Bank of Australia (RBA).<sup>83</sup>

On 7 April 2014, the AER released an issues paper seeking submissions on which third party data service provider it should use to estimate the return on debt. Stakeholders should read the April issues paper for more details on this matter. The issues paper and submissions on the issues paper are available on the AER's website. We will consider and respond to submissions on this separate issues paper in the context of our November draft decisions on current distribution and transmission determinations.

Our guideline also sets a benchmark credit rating of BBB+, based on the median credit rating for a sample of Australian utilities over the period 2002 to 2012. All the TNSPs have adopted our benchmark credit rating.<sup>84</sup> We note that the two possible data series providers available (the RBA and Bloomberg) both publish broad BBB rated data series.

## 5.2 Value of imputation credits

Under the Australian taxation system, investors can receive an 'imputation credit' for income tax paid at the company level. For investors that meet certain eligibility criteria, this credit can be used to offset their tax liabilities. If the value of the imputation credit exceeds an eligible investor's tax liability, that investor can receive a cash refund of the balance. Imputation credits are, therefore, a benefit to investors in addition to any cash dividend or capital gains from owning shares.

The NER accounts for the value of imputation credits through an adjustment the cost of company income tax building block allowance. The lower the value of imputation credits, the larger the revenue allowance for the regulated business. Our guideline proposes that the value of imputation credits would be estimated as a market-wide parameter, rather than estimating this on an industry or business specific basis. Specifically, it would be determined as the product of:

- a payout ratio, which represents the proportion of imputation credits generated by the benchmark entity that are distributed to investors

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<sup>82</sup> TransGrid's proposed trailing average cost of debt, as calculated by NERA, uses the RBA data. NERA computed an annual yield as a simple average of observed yields over 12 months; it then estimated TransGrid's proposed cost of debt for the first regulatory year as an average yield over ten historical years. Our issues paper published in April 2014 sought submissions on the choice of a third party data provider and implementation of third party data to estimating the allowed cost of debt. We will assess the appropriateness of TransGrid proposed data source (RBA) and implementation during the regulatory determination.

<sup>83</sup> TransGrid, *Revenue proposal*, May 2014, pp. 178–179; Directlink, *Revenue proposal*, May 2014, pp. 37–38; Transend, *Revenue proposal*, May 2014, pp. 107–108.

<sup>84</sup> Ibid.

- a utilisation rate, which is the extent to which investors can use the imputation credits they receive to reduce their tax or to get a refund.

The payout ratio would be estimated using the cumulative payout ratio approach. This approach uses ATO tax statistics to calculate the proportion of imputation credits generated (via tax payments) that have been distributed by companies since the start of the imputation system. At the time of the guideline's publication, this approach produced an estimate of 0.7 for the payout ratio.

The utilisation rate would be estimated using the body of relevant evidence with regards to its strengths and limitations, checked against a range of supporting evidence. The body of evidence includes:

- the equity ownership approach—this considers the proportion of investors in the Australian market that are expected to fully redeem imputation credits
- tax statistic estimates—these indicate the actual value of imputation credits redeemed
- implied market value studies—these seek to measure the value attributed to imputation credits by investors through considering the difference between the market price of a security with and without an entitlement to imputation credits
- the conceptual goalposts approach—this proposes that a reasonable estimate of the utilisation rate is one that contributes to a return on equity that lies between two theoretical extremes: the return on equity in an Australian market that is completely segmented from the rest of the world, and the return on equity in an Australian market that is completely integrated with the rest of the world.

In particular, we have higher regard to those approaches that:

- accord with the our interpretation of the nature of the utilisation rate parameter in the conceptual framework provided by Officer and Monkhouse (while acknowledging that interpretation of this framework is a matter of debate)
- are simpler and more transparent
- produce reasonable estimates in light of empirical realities and conceptual considerations; namely, that most (but not all) investors are eligible to redeem imputation credits, and that eligible investors in the possession of imputation credits have the incentive to redeem them.

In the guideline, our assessment of this evidence produced an estimate of 0.7 for the utilisation rate. The guideline therefore proposed an estimate of 0.5 for the value of imputation credits, based on a payout ratio of 0.7 and a utilisation rate of 0.7.

All of the transmission businesses support a payout ratio of 0.7, but some do not support our approach to interpreting and estimating the utilisation rate. TransGrid and Directlink consider that  $\gamma$  is the product of a payout ratio and the value of distributed credits to investors per dollar of imputation credit received. They consider also that the best estimate of this parameter comes from an implied market value study performed by SFG Consulting. These businesses therefore propose an estimate of 0.25 for the value of imputation credits. On the other hand, TasNetworks proposes a 0.5 value for imputation credits, consistent with our guideline.

TransGrid's and Directlink's proposed estimate for the value of imputation credits is consistent with the findings of the Australian Competition Tribunal in 2011. However, since that Tribunal decision we



have re-evaluated the conceptual task of estimating the value of imputation credits and this is reflected in the approach set out in the guideline. An important issue in determining the value of imputation credits for the next regulatory control period is the interpretation and estimation of this second parameter.

## 6 Pricing methodology

### Questions (please include reasons in your responses)

1. TransGrid has proposed an alternative pricing structure for locational prices. That is, rather than putting forward a structure expressly permitted in the pricing methodology guidelines, it has proposed its own alternative (20-day peak method). The pricing methodology guidelines allow for alternative pricing structures where they give effect to the NER, improve on the permitted pricing structures, and contribute to the national electricity objective. Do stakeholders consider the '20-day peak method' which TransGrid has proposed meets those requirements?
2. Do you support the specific proposals by TransGrid to promote greater stability in annual transmission charges?
3. TasNetworks has proposed the introduction of standby provisions in its pricing methodology. Do stakeholders have any comments regarding those arrangements and the process by which TasNetworks has stated it will agree to them?

The transmission businesses provide prescribed transmission services and negotiated services. We set the revenue which the businesses can recover for providing prescribed transmission services and approve a pricing methodology that prescribes how that revenue is recovered.<sup>85</sup>

The pricing methodology must accord with the principles and other requirements of the Rules. These are set out in Part J ("Prescribed Transmission Services - Regulation of Pricing") of Chapter 6A and the Pricing Methodology Guidelines published by the AER. The Pricing Methodology must be approved by the AER before it is applied by the business.

The costs of the prescribed transmission services are recovered based on a maximum allowed revenue (MAR) set every five years by the Australian Energy Regulator (AER). The MAR is adjusted to derive an Aggregate Annual Revenue Requirement (AARR) for transmission companies. This is the revenue that relates to the costs of prescribed transmission services only ('negotiated' and unregulated services are excluded).

The process governing cost allocation, revenue recovery and pricing is shown diagrammatically in figure 19. There are four categories of regulated or 'prescribed' transmission services:

- **Prescribed entry services** - (entry services which include assets that are directly attributable to serving a generator or a group of generators at a single connection point);
- **Prescribed exit services** - (exit services include assets that are directly attributable to serving a transmission customer or group of transmission customers at a single connection point);
- **Prescribed common transmission services** - (which are services that provide equivalent benefits to all transmission customers without any differentiation based on their location, and therefore cannot be reasonably allocated on a locational basis) - \$/MW/day (contract demand) or \$/MWh (historical demand); and

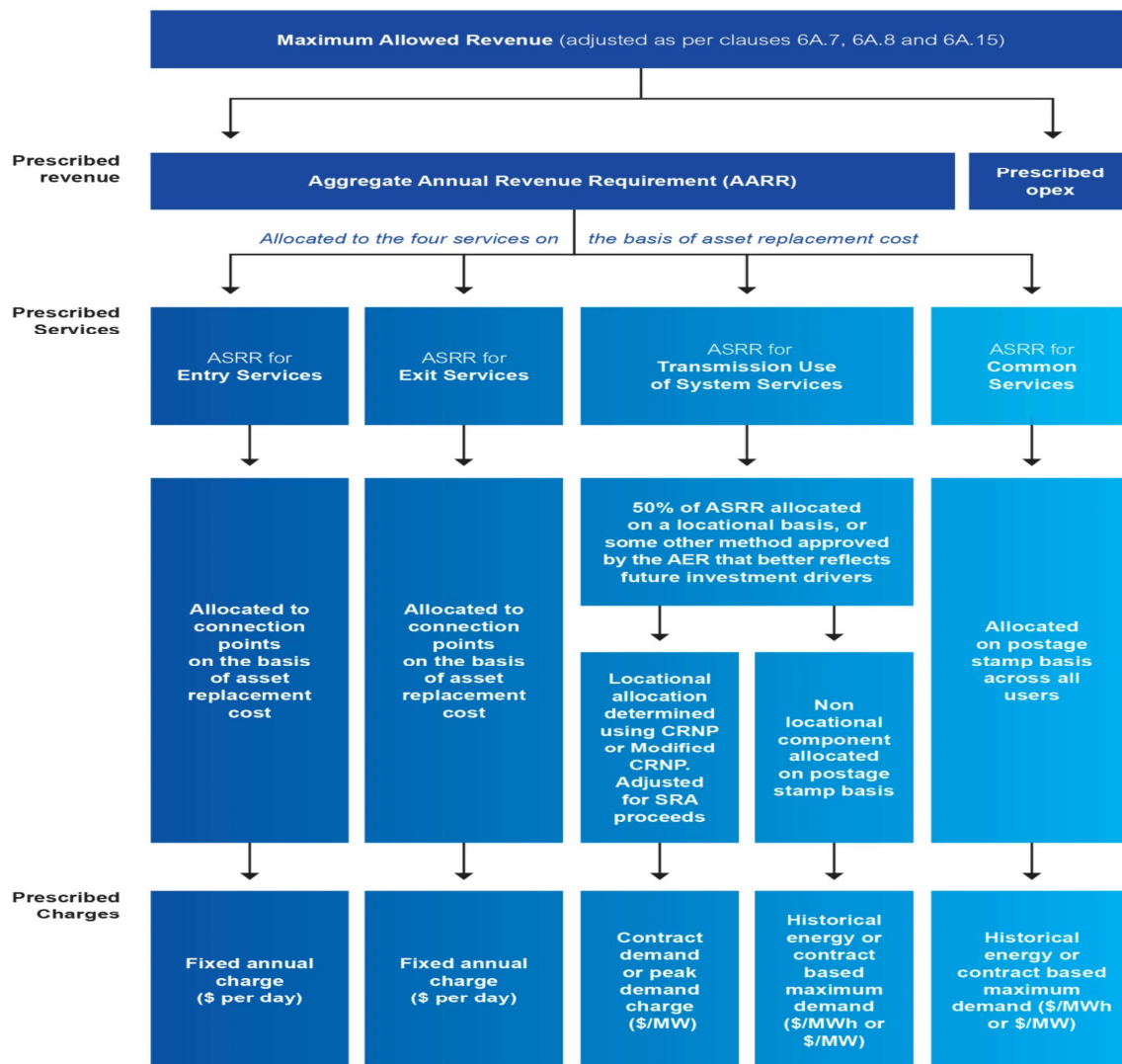
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<sup>85</sup> NER, clause 6A.24.1(b)(1) and (2).

- **Prescribed transmission use of system services/ TUOS** - (which include services that provide benefits to transmission customers depending on their location within the transmission system, that are shared by a greater or lesser extent by all users across the transmission system and are not prescribed common transmission services, prescribed entry services or prescribed exit services) - \$/MW/day (contract demand) or \$/MWh (historical demand).

The transmission pricing issues arise in relation to each of those different categories of transmission services. In addition, as transmission networks in different regions are interconnected, the users in one region may affect the costs of providing transmission services in another region. It is therefore important to consider the costs of providing transmission services both within a region and also between regions. This latter issue has recently been addressed through a rule change relating to inter-regional transmission use of system (TUOS) charges in February 2013.<sup>86</sup> Under the rules, a new inter-regional transmission charge will be levied between TNSPs in neighbouring regions. The businesses will recover this charge from individual consumers through the locational component of their prescribed TUOS.

**Figure 19 Process for allocating transmission costs and determining charges**



<sup>86</sup> AEMC, Rule Determination: National Electricity Amendment (Inter-regional transmission charging) Rule, 28 February 2013.

As noted above, for a proposed pricing methodology to be approved it must comply with the pricing principles in the rules and the pricing methodology guidelines.<sup>87</sup> The Rules are 'principles-based'.<sup>88</sup> That is, they do not prescribe the requirements of a pricing methodology, but are comprised of high level 'principles' intended to provide the businesses with the scope to develop innovative pricing arrangements over time.<sup>89</sup>

The pricing methodology guidelines set out more specific requirements for a pricing methodology. Among other things, the pricing methodology guidelines specify:

- the permissible pricing structures for the recovery of the locational component of prescribed TUOS services is either:
  - the current contract agreed maximum demand (prevailing at the time transmission prices are published) as negotiated in a transmission customer's connection agreement or the transmission customer's maximum demand in the previous 12 months if the transmission customer has exceeded its current contract agreed maximum demand, expressed as \$/MW/day; or
  - the average of the transmission customer's half-hourly maximum demand recorded at a connection point on the 10 weekdays when system demand was highest between the hours of 11:00 and 19:00 in the local time zone during the previous 12 months, expressed as \$/MW/day
- the permissible postage stamp pricing structures for the recovery of the adjusted non-locational component of prescribed TUOS services and prescribed common transmission services is any of:
  - contract agreed maximum demand or historical energy; or
  - maximum demand; or
  - an alternative pricing structure proposed by the business.

TransGrid has proposed a number of changes to the current pricing methodology which seek to provide for cost reflective prices and to provide greater certainty of pricing outcomes to customers/consumers. These proposed changes include to:<sup>90</sup>

- modify the current methodology to take into account network utilisation locational prices which vary by connection point to be more focused on peak demand (over a 20 day period), rather than over a 12 month period
- set the common service charge according to peak demand and no longer base it on energy consumption
- cap annual changes in transmission charges for any directly connected customer or a large distribution customer at CPI+3 per cent; and
- fix transmission charges for the duration of the regulatory control period.

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<sup>87</sup> NER, clause 6A.10.1(e)(1)-(2).

<sup>88</sup> AEMC, Rules determination: National electricity amendment (Pricing of prescribed transmission services) Rule 2006 No. 22, 21 December 2006, p. 26.

<sup>89</sup> AEMC, Rules determination: National electricity amendment (Pricing of prescribed transmission services) Rule 2006 No. 22, 21 December 2006, p. 26.

<sup>90</sup> TransGrid, *Revenue proposal*, appendix AH

TasNetworks submits that it acknowledges that customer feedback has indicated that unpredictable and volatile transmission prices from year to year, is a concern for customers/consumers. TasNetwork's proposed changes to the current pricing methodology include:

- allowing any reduction in maximum demand that is agreed with the customer to be applied in the prevailing financial year, where the reduction is not temporary in nature; and
- including standby provisions to encourage customers to better manage their peak demand and reduce their demand on the network at times of peak congestion.<sup>91</sup>

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<sup>91</sup> Transend, *Revenue proposal*, appendix 23 - proposed pricing methodology