



FINAL DECISION
TransGrid transmission
determination
2015–16 to 2017–18

Attachment 5 – Regulatory
depreciation

April 2015

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or publishing.unit@acc.gov.au.

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: (03) 9290 1444

Fax: (03) 9290 1457

Email: AERInquiry@aer.gov.au

AER reference: 53444

Note

This attachment forms part of the AER's final decision on TransGrid's revenue proposal for 2015–18. It should be read with other parts of the final decision.

The final decision includes the following documents:

Overview

Attachment 1 – maximum allowed revenue

Attachment 2 – regulatory asset base

Attachment 3 – rate of return

Attachment 4 – value of imputation credits

Attachment 5 – regulatory depreciation

Attachment 6 – capital expenditure

Attachment 7 – operating expenditure

Attachment 8 – corporate income tax

Attachment 9 – efficiency benefit sharing scheme

Attachment 10 – capital expenditure sharing scheme

Attachment 11 – service target performance incentive scheme

Attachment 12 – pricing methodology

Attachment 13 – pass through events

Attachment 14 – negotiated services

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Shortened forms

Shortened form	Extended form
AARR	aggregate annual revenue requirement
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ASRR	annual service revenue requirement
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
MAR	maximum allowed revenue
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider

Shortened form	Extended form
NTSC	negotiated transmission service criteria
opex	operating expenditure
PPI	partial performance indicators
PTRM	post-tax revenue model
RAB	regulatory asset base
RBA	Reserve Bank of Australia
repex	replacement expenditure
RFM	roll forward model
RIN	regulatory information notice
RPP	revenue and pricing principles
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
TNSP	transmission network service provider
TUoS	transmission use of system
WACC	weighted average cost of capital

5 Regulatory depreciation

The AER is required to decide on the indexation of the regulatory asset base (RAB) and depreciation building blocks for TransGrid's 2014–18 period.¹ We use regulatory depreciation to model the nominal asset values over the regulatory control period, and set the depreciation allowance in the annual building block revenue requirement. The regulatory depreciation allowance (or return of capital) is the net total of the straight-line depreciation (negative) and the indexation of the RAB (positive).

This attachment sets out our final decision on TransGrid's regulatory depreciation allowance. It also presents our final decision on the revised proposed depreciation schedules, including the revised proposed standard and remaining asset lives to be used for forecasting depreciation allowances.

5.1 Final decision

We determine TransGrid's regulatory depreciation allowance is \$ 451.0 million (\$ nominal) for the 2014–18 period, which is an increase of \$27.3 million (or 6.4 per cent) from its revised proposal.

We accept TransGrid's proposed depreciation method set out in its revised proposal. However, our final decision on TransGrid's regulatory depreciation allowance for the 2014–18 period differs from its revised proposal. This is because of our:

- updates to TransGrid's remaining asset lives as at 1 July 2014 to reflect actual capex in 2013–14 (section 5.4.2)
- determinations on other components of TransGrid's revised proposal which affect the forecast regulatory depreciation allowance—for example, the opening RAB value (attachment 2), forecast inflation (attachment 3) and forecast capex (attachment 6). In particular, the lower forecast inflation rate used in this final decision means the resulting regulatory depreciation allowance (which nets out the inflation indexation on the opening RAB) is higher than proposed.

Table 5-1 sets out our final decision on the annual regulatory depreciation allowance for TransGrid's 2014–18 period.

¹ NER, cl. 6A.5.4(a)(1) and (3).

Table 5-1 AER's final decision on TransGrid's depreciation allowance for the 2014–18 period (\$ million, nominal)

	2014–15	2015–16	2016–17	2017–18	Total
Straight-line depreciation	242.9	261.8	281.2	268.4	1054.3
Less: inflation indexation on opening RAB	144.6	148.5	153.5	156.6	603.3
Regulatory depreciation	98.3	113.3	127.7	111.8	451.0

Source: AER analysis.

5.2 TransGrid's revised proposal

TransGrid's revised proposal submitted a forecast regulatory depreciation allowance over the 2014–18 period of \$423.8 million (\$ nominal). TransGrid's methodology for determining its regulatory depreciation allowance is unchanged from its initial proposal. We accepted the approach in our draft decision. To calculate the depreciation allowance, TransGrid's revised proposal used:²

- The straight-line depreciation method employed in the AER's post-tax revenue model (PTRM).
- The revised closing RAB value as at 30 June 2014 derived from the AER's roll forward model (RFM).
- The revised weighted average remaining asset lives of assets in existence as at 30 June 2014 derived from the RFM.
- The revised proposed forecast capex for the 2014–18 period.
- The standard asset lives accepted in the draft decision for depreciating new assets associated with forecast capex for the 2014–18 period.

TransGrid's revised proposal adopted our draft decision inflation forecast method used to index the RAB over the 2014–18 period.³

Table 5-2 sets out TransGrid's revised proposed depreciation allowance for the 2014–18 period.

² TransGrid, *Revised revenue proposal*, pp. 126–127.

³ TransGrid, *Revised revenue proposal*, p. 127.

Table 5-2 TransGrid's revised proposed depreciation allowance for the 2014–18 period (\$ million, nominal)

	2014–15	2015–16	2016–17	2017–18	Total
Straight-line depreciation	243.2	264.3	287.3	277.7	1072.5
Less: inflation indexation on opening RAB	151.9	158.6	166.4	171.2	648.1
Regulatory depreciation	91.3	105.8	120.9	105.8	423.8

Source: TransGrid, *Revised revenue proposal*, January 2015, p. 127.

5.3 AER's assessment approach

We did not change our assessment approach for the regulatory depreciation allowance from our draft decision. Section 5.3 of our draft decision details that approach.

5.4 Reasons for final decision

We accept TransGrid's proposed depreciation method set out in its revised proposal. However, we increased TransGrid's revised proposed forecast regulatory depreciation allowance by \$27.3 million (or 6.4 per cent) to \$451.0 million (\$ nominal). Our amendment is driven by our:

- updates to the remaining asset lives (section 5.4.2)
- determinations on other components of TransGrid's revised proposal, such as the opening RAB value (attachment 2), forecast inflation (attachment 3), and forecast capex (attachment 6), which affect the forecast regulatory depreciation allowance. In particular, the use of a lower forecast inflation rate means that the resulting regulatory depreciation allowance (which nets out the inflation indexation on the opening RAB) is higher than proposed.

5.4.1 Standard asset lives

Consistent with our draft decision, we accept TransGrid's proposed standard asset lives, which include the following changes to the standard asset lives for:

- 'Underground cables 2014–18' asset class (to 45 years from 50 years).
- 'Secondary systems 2014–18' asset class (to 15 years from 35 years).
- 'Communications 2014–18' asset class (to 10 years from 35 years).
- The new asset class 'Transmission line life extension' of 25 years.

We are satisfied these proposed standard asset lives reflect the nature of the assets over the economic lives of the asset classes.⁴

⁴ NER, cl. 6A.6.3(b)(1).

We note that the Energy Markets Reform Forum's (EMRF) submission raised concerns with the scale of some of the standard asset class changes, in particular with the 'Secondary systems' asset classes.⁵ Consistent with our draft decision, we are satisfied that TransGrid's proposed standard asset lives are comparable with those approved in our recent transmission determinations for other TNSPs. In the case of the 'Secondary systems' asset class, we consider our decision is appropriate because the new assets allocated to this class comprise of modern digital electronic protection and control devices which have a shorter economic life than their electromechanical predecessors.

The EMRF raised a second concern relating to the introduction of the 'Transmission line life extension' asset class. It submitted that the residual (undepreciated) amount of the underlying transmission line assets, subject to life extension works, should be depreciated at the extended life.

We consider this a valid point. In reviewing TransGrid's proposed transmission line assets targeted for life extension, we note that the majority (11 out of 13) of the underlying transmission lines are fully depreciated.⁶ The other two underlying transmission lines are close to being depreciated. Therefore, revising the remaining asset lives for these two lines in the manner suggested by EMRF would not have a material impact on the depreciation calculations in this case.⁷ Given this, we have decided not to adjust the remaining asset lives for the undepreciated amounts associated with the two underlying transmission line assets.

Table 5-3 sets out our final decision on TransGrid's standard asset lives as at 1 July 2014.

5.4.2 Remaining asset lives

For this final decision, we have updated TransGrid's revised proposed remaining asset lives as at 1 July 2014.

In the draft decision, we accepted TransGrid's proposed weighted average method to calculate the remaining asset lives as at 1 July 2014. The proposed method is consistent with our preferred approach. We noted that the remaining asset lives would be updated for the final decision because TransGrid's revised proposal would include revisions for 2013–14 actual capex. This is because the 2013–14 capex values are used to calculate the weighted average remaining asset lives in the RFM. Based on the further change to the 2013–14 capex as discussed in attachment 2 we have updated the remaining asset lives as at 1 July 2014 for this final decision.

⁵ EMRF

⁶ TransGrid, *Response to information request AER TransGrid Depreciation R1 – Life extension*, 9 March 2015, pp. 1–2.

⁷ Further, there are practical implementation issues to consider for revising the remaining asset lives to the two underlying transmission line assets. This is because the RAB is categorised at an asset class level rather than an individual asset level.

Table 5-3 sets out our final decision on TransGrid's remaining asset lives as at 1 July 2014.

Table 5-3 AER's final decision on TransGrid's standard and remaining asset lives as at 1 July 2014 (years)

Asset class	Standard asset life	Remaining asset life as at 1 July 2014
Transmission lines (pre 2004-05)	n/a	18.1
Underground cables (pre 2004-05)	n/a	30.3
Substations including buildings (pre 2004-05)	n/a	16.5
SCADA and communications (pre 2004-05)	n/a	1.8
Non-network assets (pre 2004-05)	n/a	1.0
SMHEA assets (pre 2004-05)	n/a	3.0
Transmission lines (2004-09)	n/a	44.1
Underground cables (2004-09)	n/a	36.4
Substations including buildings (2004-09)	n/a	33.8
SCADA and communications (2004-09)	n/a	8.8
Non-network assets (2004-09)	n/a	3.4
Transmission lines & cables (2009-14)	n/a	48.6
Substations (2009-14)	n/a	38.2
Secondary systems (2009-14)	n/a	33.5
Communications (2009-14)	n/a	33.4
Business IT (2009-14)	n/a	3.0
Minor plant, motor vehicles & mobile plant (2009-14)	n/a	6.2
Equity raising costs (2009-14)	n/a	36.6
Transmission lines (2014-18)	50.0	n/a
Underground cables (2014-18)	45.0	n/a
Substations (2014-18)	40.0	n/a
Secondary systems (2014-18)	15.0	n/a
Communications (short life) (2014-18) ^a	10.0	n/a
Business IT (2014-18)	4.0	n/a
Minor plant, motor vehicles & mobile plant (2014-18)	8.0	n/a
Transmission line life extension (2014-18)	25.0	n/a
Equity raising costs (2014-18) ^b	n/a	n/a
Land and easements	n/a	n/a

Source: AER analysis.

n/a: Not applicable. The asset classes ending with '(pre 2004-05)'; '(2004-09)'; and '(2009-14)' do not have assigned standard asset lives because forecast capex is no longer allocated to them.

(a) As discussed in our draft decision attachment 5, we have changed the name of this asset class to 'Communications (short life) 2014–18' to better reflect the nature of the assets allocated to this asset class.

(b) For this final decision, TransGrid does not satisfy the requirements to incur benchmark equity raising costs associated with its forecast capex for the 2014–18 period. Therefore, a standard asset life for equity raising costs (2014–18) is not required.