



**FINAL DECISION**  
**Ausgrid distribution**  
**determination**  
**2015–16 to 2018–19**

**Attachment 5 – Regulatory**  
**depreciation**

April 2015

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## Note

This attachment forms part of the AER's final decision on Ausgrid's regulatory proposal 2015–19. It should be read with other parts of the final decision.

The final decision includes the following documents:

Overview

Attachment 1 - Annual revenue requirement

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 - Demand management incentive scheme

Attachment 13 - Classification of services

Attachment 14 - Control mechanism

Attachment 15 - Pass through events

Attachment 16 - Alternative control services

Attachment 17 - Negotiated services framework and criteria

Attachment 18 - Connection methodology

Attachment 19 - Pricing methodology

Attachment 20 - Analysis of financial viability

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## Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
DRP	debt risk premium
DMIA	demand management innovation allowance
DMIS	demand management incentive scheme
distributor	distribution network service provider
DUoS	distribution use of system
dx	distribution
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
Expenditure Assessment Guideline	expenditure forecast assessment Guideline for electricity distribution
F&A	framework and approach
MRP	market risk premium
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
NSP	network service provider
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
SAIDI	system average interruption duration index
SAIFI	system average interruption frequency index
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	service target performance incentive scheme
tx	transmission
WACC	weighted average cost of capital

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## 5 Regulatory depreciation

Depreciation is the allowance provided so that capital investors recover their investment over the economic life of the asset (return of capital). We are required to decide on whether to approve the depreciation schedules submitted by Ausgrid.<sup>1</sup> In doing so, we make determinations on the indexation of the regulatory asset base (RAB) and depreciation building blocks for Ausgrid's 2014–19 period. The regulatory depreciation allowance is the net total of straight-line depreciation (negative) less the indexation of the RAB (positive).

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

### 5.1 Final decision

We do not accept Ausgrid's revised proposed regulatory depreciation allowances of \$750.5 million (\$ nominal) and \$86.4 million (\$ nominal) for the 2014–19 period for its distribution and transmission networks respectively.<sup>2</sup> Instead we determine regulatory depreciation allowances of \$820.7 million and \$96.8 million (\$ nominal) respectively. This represents increases of 9.3 per cent and 12.0 per cent for Ausgrid's distribution and transmission networks respectively.

Our final decision on Ausgrid's regulatory depreciation allowances reflects our determinations on other components of Ausgrid's revised proposal which affect the forecast regulatory depreciation allowance—for example, the forecast inflation rate (attachment 3) and forecast capex allowance (attachment 6).

Table 5.1 and Table 5.2 set out our final decision on the annual regulatory depreciation allowances over the 2014–19 period for Ausgrid's distribution and transmission networks respectively.

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<sup>1</sup> NER, cl 6.12.1(8).

<sup>2</sup> Ausgrid, *Revised regulatory proposal - Attachment 4.08*; Ausgrid, *Revised regulatory proposal - Attachment 4.09*, January 2015.

**Table 5.1 AER's final decision on Ausgrid's depreciation allowance for the 2014–19 period – distribution (\$ million, nominal)**

	2014–15	2015–16	2016–17	2017–18	2018–19	Total
Straight-line depreciation	438.3	468.9	501.6	481.7	494.0	2384.6
Less: inflation indexation on opening RAB	291.6	302.3	313.4	323.0	333.6	1563.9
<b>Regulatory depreciation</b>	<b>146.7</b>	<b>166.5</b>	<b>188.2</b>	<b>158.8</b>	<b>160.5</b>	<b>820.7</b>

Source: AER analysis.

**Table 5.2 AER's final decision on Ausgrid's depreciation allowance for the 2014–19 period – transmission (\$ million, nominal)**

	2014–15	2015–16	2016–17	2017–18	2018–19	Total
Straight-line depreciation	63.0	67.2	72.5	72.7	73.5	348.8
Less: inflation indexation on opening RAB	48.5	48.8	49.7	52.1	53.1	252.0
<b>Regulatory depreciation</b>	<b>14.5</b>	<b>18.4</b>	<b>22.9</b>	<b>20.6</b>	<b>20.5</b>	<b>96.8</b>

Source: AER analysis.

## 5.2 Ausgrid's revised proposal

Ausgrid's revised proposal for the 2014–19 period forecasts total regulatory depreciation allowances of \$750.5 million and \$86.4 million (\$ nominal) for its distribution and transmission networks respectively. Ausgrid'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, Ausgrid's revised proposal used:<sup>3</sup>

- the straight-line depreciation method employed in the AER's post-tax revenue model (PTRM)
- the draft decision closing RAB values as at 30 June 2014 derived from the AER's roll forward model (RFM)
- the remaining asset lives as at 1 July 2014 accepted in the draft decision for depreciating existing assets in the closing RAB as at 30 June 2014
- the revised proposed forecast capex for the 2014–19 period
- the standard asset lives accepted in the draft decision for depreciating new assets associated with forecast capex for the 2014–19 period.

<sup>3</sup> Ausgrid, *Revised regulatory proposal - Attachment 4.08*; Ausgrid, *Revised regulatory proposal - Attachment 4.09*, January 2015.

Further, Ausgrid's revised proposal noted that it would consider proposing shorter standard asset lives and remaining asset lives at the next determination.<sup>4</sup>

Table 5.3 and Table 5.4 set out Ausgrid's revised proposed depreciation allowances for the 2014–19 period for its distribution and transmission networks respectively.

**Table 5.3 Ausgrid's revised proposed depreciation allowance for the period 2014–19 – distribution (\$ million, nominal)**

	2014–15	2015–16	2016–17	2017–18	2018–19	Total
Straight-line depreciation	438.8	472.8	510.4	494.9	511.0	2427.9
Less: inflation indexation on opening RAB	306.3	320.5	336.3	350.0	364.3	1677.4
<b>Regulatory depreciation</b>	<b>132.6</b>	<b>152.3</b>	<b>174.1</b>	<b>144.9</b>	<b>146.7</b>	<b>750.5</b>

Source: Ausgrid, *Revised regulatory proposal - Attachment 4.08*, January 2015.

**Table 5.4 Ausgrid's revised proposed depreciation allowance for the period 2014–19 – transmission (\$ million, nominal)**

	2014–15	2015–16	2016–17	2017–18	2018–19	Total
Straight-line depreciation	53.0	67.7	74.1	75.3	76.7	356.9
Less: inflation indexation on opening RAB	50.9	51.6	53.2	56.7	58.0	270.4
<b>Regulatory depreciation</b>	<b>12.2</b>	<b>16.1</b>	<b>20.9</b>	<b>18.6</b>	<b>18.6</b>	<b>86.4</b>

Source: Ausgrid, *Revised regulatory proposal - Attachment 4.09*, January 2015.

### 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.<sup>5</sup>

### 5.4 Reasons for final decision

We determine regulatory depreciation allowances of \$820.7 million and \$96.8 million (\$ nominal) for Ausgrid's distribution and transmission networks respectively. In determining these allowances we accept Ausgrid's revised proposed standard and remaining asset lives as at 1 July 2014. However, we increased Ausgrid's proposed distribution and transmission forecast regulatory depreciation allowances by \$70.1 million (or 9.3 per cent) and \$10.4 million (or 12.0 per cent), respectively. Our amendments are mainly driven by our determinations on other components of

<sup>4</sup> Ausgrid, *Revised regulatory proposal*, January 2015, p.63.

<sup>5</sup> AER, *Draft decision - Ausgrid distribution determination attachment 5 - Regulatory depreciation*, November 2014, pp. 9-11.

Ausgrid's revised proposal—for example, the forecast inflation rate (attachment 3) and forecast capex (attachment 6)—affecting the forecast regulatory depreciation allowance. 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.

### 5.4.1 Standard asset lives

Consistent with our draft decision, we accept Ausgrid's proposed standard asset lives for its existing asset classes. This is because they are consistent with our approved standard asset lives for the 2009–14 regulatory control period. We are satisfied the standard asset lives reflect the nature of the assets over the economic lives of the asset classes.<sup>6</sup>

In the draft decision, we allocated the opening values as at 1 July 2014 of the 'Emergency spares (major plant, excludes inventory)' and 'Transmission & zone emergency spares' asset classes to other suitable asset classes.<sup>7</sup> The value of the 'emergency spares' asset classes were assigned a value of zero and allocated to the 'Substations' and 'Transmission substation equipment asset classes' for Ausgrid's distribution and transmission networks respectively. Ausgrid's revised proposal PTRMs adopted our draft decision reallocation of these asset values.<sup>8</sup>

Table 5.5 and Table 5.6 set out our final decision on Ausgrid's standard asset lives for the 2014–19 period for its distribution and transmission networks respectively.

### 5.4.2 Remaining asset lives

Consistent with our draft decision, we accept Ausgrid's revised proposed remaining asset lives as at 1 July 2014. No further revisions are required for this final decision.

In the draft decision, we accepted Ausgrid's proposed weighted average method for calculating the remaining asset lives as at 1 July 2014. The proposed method is consistent with our preferred approach. We adjusted the remaining asset lives to reflect our adjustments to actual net capex in the RAB roll forward. This was because the actual net capex values are inputs for calculating the weighted average remaining asset lives.<sup>9</sup>

Ausgrid's revised proposal adopted our draft decision adjustments to the remaining asset lives.<sup>10</sup>

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<sup>6</sup> NER, cl 6.5.5(b)(1).

<sup>7</sup> AER, *Draft decision - Ausgrid distribution determination attachment 5 - Regulatory depreciation*, November 2014, pp. 17-18.

<sup>8</sup> Ausgrid, *Revised regulatory proposal - Attachment 4.08*, January 2015; Ausgrid, *Revised regulatory proposal - Attachments 4.08 and 4.09*, January 2015.

<sup>9</sup> AER, *Draft decision - Ausgrid distribution determination attachment 5 - Regulatory depreciation*, November 2014, pp. 11-15.

<sup>10</sup> Ausgrid, *Revised regulatory proposal*, January 2015, pp.62–63.

Table 5.5 and Table 5.6 set out our final decision on Ausgrid's remaining asset lives for the 2014–19 period, for its distribution and transmission networks respectively.

**Table 5.5 AER's final decision on Ausgrid's standard and remaining asset lives as at 1 July 2014 (years) – distribution**

Asset class	Standard asset life	Remaining asset life as at 1 July 2014
Sub-transmission lines and cables	46.3	32.9
Cable tunnel (dx)	70.0	67.4
Distribution lines and cables	58.0	46.8
Substations	46.8	34.8
Transformers	45.9	30.5
Low voltage lines and cables	52.1	40.0
Customer metering and load control	25.0	14.5
Communications (digital) - dx	10.0	5.6
Total communications	10.2	3.1
Systems IT (dx)	7.0	4.9
Ancillary substation equipment (dx)	15.0	12.4
Land and easements	n/a	n/a
Furniture, fittings, plant and equipment	17.4	12.5
Land (non-system)	n/a	n/a
Other non-system assets	29.4	7.7
IT systems	5.0	3.3
Motor vehicles	10.2	6.3
Buildings	35.9	30.0
Equity raising costs	47.4	43.4

Source: AER analysis.

n/a: not applicable.

**Table 5.6 AER's final decision on Ausgrid's standard and remaining asset lives as at 1 July 2014 (years) – transmission**

Asset class	Standard asset life	Remaining asset life as at 1 July 2014
Transmission & zone land and easements	n/a	n/a
Transmission buildings 132/66kV	60.0	45.9
Zone buildings 132/66kV	60.0	50.0
Transmission transformers 132/66kV	50.0	36.9
Zone transformers 132/66kV	50.0	34.0
Transmission substation equipment 132/66kV	45.0	34.0
Zone substation equipment 132/66kV	45.0	37.7
Ancillary substation equipment (tx)	15.0	13.9
132kV tower lines	60.0	42.5
132kV concrete & steel pole lines	55.0	46.8
132kV wood pole lines	45.0	30.2
132kV feeders underground	45.0	36.6
Cable tunnel (tx)	70.0	60.1
Network control & com systems	37.2	17.5
Communications (digital) - tx	10.0	7.9
Systems IT - (tx)	7.0	4.8
IT systems	5.0	3.3
Furniture, fittings, plant & equipment	17.4	12.5
Motor vehicles	10.2	6.3
Buildings	35.9	30.0
Land (non-system)	n/a	n/a
Other non-systems assets	29.4	7.6
Equity raising costs	45.7	41.7

Source: AER analysis.

n/a: not applicable.