

## Attachment 4.07

### Nominated depreciation schedules

May 2014



## Introduction

Ausgrid's proposed depreciation component of the building blocks of each year of the 2014-19 period is set out in chapter 4 of our proposal. Clause S6.1.3(12) of the National Electricity Rules (the rules) further requires Ausgrid's building block proposal to include depreciation schedule nominated by Ausgrid for the purpose of clause 6.5.5 of the rules

Further, the Regulatory Information Notice issued by the AER requires the following in respect of Ausgrid's depreciation schedule.

- 28.1 Provide Ausgrid's calculation of the depreciation amounts for the relevant distribution system in respect of standard control services for each regulatory year of:
  - (a) the current regulatory control period using the AER's roll forward model, which is to be submitted as part of the regulatory proposal
  - (b) the forthcoming regulatory control period using the AER's post-tax revenue model, which is to be submitted as part of the regulatory proposal.
- 28.2 Provide details of any departure from the underlying methods in the AER's roll forward model and post-tax revenue model for the calculations referred to in 28.1 and the reasons for that departure.
- 28.3 Identify any changes to standard asset lives for existing asset classes from the previous determination. Explain the reason/s for the change and provide relevant supporting information.
- 28.4 For any proposed new asset classes, explain the reason/s for using these new asset classes and provide relevant supporting information on their proposed standard asset lives.
- 28.5 If existing asset classes from the previous determination are proposed to be removed and their residual values to be reallocated to other asset classes, explain the reason/s for the change and provide relevant supporting information. This should include a demonstration of the materiality of the change on the forecast depreciation allowance.
- 28.6 Describe the method used to calculate the remaining asset lives for existing asset classes as at 1 July 2014 (the start of the forthcoming regulatory control period) and provide supporting calculations if the approach differs from that in the roll forward model.

The purpose of this attachment is to address the above requirements. This attachment outlines:

1. The depreciation schedule nominated by Ausgrid for the purpose of clause 6.5.5 of the rules.
2. Our response to the RIN.

### **Ausgrid's depreciation schedules for the 2014-19 period**

In accordance with Schedule 6.1.3(12) of the rules, the depreciation schedules are outlined in Tables 1, 2 and 3 below. The depreciation schedules have been categorised into well accepted asset classes. These are the same asset classes as those of the AER's final determination for the 2009-14 regulatory period.

The inputs and values used in the calculation of the forecast depreciation for the 2009-14 period are:

- value of the regulatory asset base for each asset class as at the beginning of each regulatory year over 2009-14 period and 2014-19 period.
- the remaining lives used for depreciating opening asset base.
- the standard lives for depreciating capex added to the RAB.

The inputs and values are provided in Attachments 4.01 to 4.04 of Ausgrid's regulatory proposal.

Ausgrid has used the AER's post-tax revenue model to calculate forecast depreciation over the 2014-19 regulatory period. In accordance with clause 6.5.5(1) of the National Electricity Rules, depreciation for each regulatory year has been calculated on the value of the opening value of the assets as at the beginning of that regulatory year.

This approach calculates real straight line depreciation by dividing on the opening value of the regulatory asset base as at 1 July 2014 by the remaining lives estimated for each asset class. Real straight line depreciation on

capex added to the RAB over the 2014-19 period is calculated by dividing the value of capex added to the RAB by the standard life of the relevant asset class.<sup>1</sup>

The forecast depreciation are developed on the basis that the sum of the real value for any asset over its economic life (such value being calculated as at the time the value of that asset was first included in the RAB.<sup>2</sup> Ausgrid's proposed forecast depreciation is therefore calculated using depreciation method and rates that are consistent with those determined for the same assets on a prospective basis in the distribution determination for that period.<sup>3</sup> This is further demonstrated in Ausgrid's PTRMs provided as Attachments 4.01 and 4.02<sup>4</sup>

To calculate the depreciation forecast for the 2014-19 period, Ausgrid has used the same standard life for each asset class as those approved by the AER for Ausgrid's assets in its determination for the current regulatory period of 2009 to 2014. Moreover,, the standard asset lives used to calculate depreciation on capex over the 2014-19 results in depreciation that reflect the nature of the assets over the economic life of the relevant assets.

Ausgrid has applied the AER's preferred approach to estimating remaining asset lives as set out in the AER's roll forward model for transmission published in December 2010. This method calculates remaining asset lives via rolling forward the value of assets as at 1 July 2009, adjusted for actual and forecast net capital expenditure, and depreciation to 30 June 2014. The remaining life of assets existing as at 1 July 2009 and the remaining life of assets included in the RAB over the 2009-14 period are weighted by the depreciated value of these assets as at 1 Jul 2014.

Whilst we have adopted the AER's preferred approach (and therefore our proposed depreciation schedule should be acceptable to the AER. We however note that the AER's method over-estimates the remaining lives as new assets are given more weighting. We are investigating this issue further, but from preliminary analysis, the AER's preferred approach to calculating remaining asset lives significantly over-weights new assets and therefore over-estimates the remaining life of assets on our network. This is currently resulting in under-compensation for depreciation expense. One indicator of remaining asset lives is that used for accounting purposes. For depreciable assets as at 1 July 2014, Ausgrid has a weighted average remaining life of 36.6 years according to the AER's approach, but an actual weighted average remaining life for accounting purposes of 25.7 years.

### **Specific response to the RIN**

**28.1(a)** – Ausgrid's calculation of the depreciation amounts for distribution standard control services and for transmission standard control services for the current 2009-14 period are provided in Ausgrid's roll forward model which are Attachments 4.03 and 4.04 to Ausgrid's proposal.

**28.1(b)** - Ausgrid's calculation of the depreciation amounts for distribution standard control services and for transmission standard control services for the 2014-19 period are provided in Ausgrid's post tax revenue model which are Attachments 4.01 and 4.02 to Ausgrid's proposal.

**28.2** - For the purposes of 28.1, Ausgrid has not departed from the underlying methods in the AER's roll forward model and post-tax revenue model.

**28.3** - There have been no changes to standard asset lives for existing asset classes from the previous determination.

**28.4** - Ausgrid has not proposed any new asset classes.

**28.5** - Ausgrid has not proposed the removal of any existing asset classes of the previous determination

**28.6** - As noted above, Ausgrid has used the same method to calculate remaining asset lives as set out in the Transmission roll-forward model published in December 2010.

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<sup>1</sup> Clause S6.1.3(7)(i) of the rules.

<sup>2</sup> Clause 6.5.5(b)(2) of the rules.

<sup>3</sup> Clause 6.5.5(b)(3) of the rules.

<sup>4</sup> Clause S6.1.3(7)(ii) of the rules.

**Table 1 – Total depreciation schedule (\$m, 2013/14)**

<b>Year</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Real Asset Values</b>						
Real Straight-line Depreciation	<b>482.91</b>	<b>515.54</b>	<b>546.83</b>	<b>534.13</b>	<b>551.81</b>	
<i>Sub-transmission lines and cables</i>	42.4	46.1	49.2	51.3	52.9	
<i>Cable tunnel (dx)</i>	1.9	1.9	1.9	1.9	1.9	
<i>Distribution lines and cables</i>	68.0	69.9	71.7	73.9	75.8	
<i>Substations</i>	98.7	104.4	109.9	114.7	119.6	
<i>Transformers</i>	22.4	23.6	24.8	25.9	26.9	
<i>Low Voltage Lines and Cables</i>	39.8	42.5	45.4	48.5	51.6	
<i>Customer Metering and Load Control</i>	2.5	2.5	2.5	2.5	2.5	
<i>Customer Metering (digital)</i>	-	-	-	-	-	
<i>Communications (digital) - dx</i>	3.6	3.6	3.6	3.6	2.3	
<i>Total Communications</i>	6.3	6.3	6.2	-	-	
<i>System IT (dx)</i>	50.9	54.7	58.2	60.7	63.1	
<i>Ancillary substation equipment (dx)</i>	7.5	10.5	12.9	14.8	17.0	
<i>Land and Easements</i>	-	-	-	-	-	
<i>Emergency Spares (Major Plant, Excludes Inventory)</i>	-	-	-	-	-	
<i>Furniture, fittings, plant and equipment</i>	3.7	4.2	4.6	5.0	5.4	
<i>Land (non-system)</i>	-	-	-	-	-	
<i>Other non system assets</i>	10.0	10.0	10.0	10.0	10.0	
<i>IT systems</i>	34.3	37.8	41.3	17.9	16.2	
<i>Motor vehicles</i>	19.3	20.0	20.6	21.2	21.9	
<i>Buildings</i>	7.7	8.5	10.0	11.1	11.7	
<i>Equity raising costs</i>	0.8	0.8	0.8	0.8	0.8	
<i>Transmission &amp; Zone land &amp; easements</i>	-	-	-	-	-	
<i>Transmission buildings 132/66kV</i>	1.3	1.7	2.1	2.3	2.4	
<i>Zone buildings 132/66kV</i>	2.6	2.6	2.6	2.6	2.6	
<i>Transmission transformers 132/66kV</i>	1.1	1.2	1.4	1.5	1.5	
<i>Zone transformers 132/66kV</i>	0.9	1.0	1.2	1.3	1.3	
<i>Transmission substation equip 132/66kV</i>	5.8	5.9	6.2	6.3	6.5	
<i>Zone substation equip 132/66kV</i>	10.0	10.6	11.1	11.4	12.0	
<i>Transmission &amp; Zone emergency spares</i>	0.1	0.1	0.1	0.1	0.1	
<i>Ancillary substation equipment (tx)</i>	3.6	4.2	5.0	5.3	5.8	
<i>132kV tower lines</i>	1.1	1.2	1.2	1.3	1.3	
<i>132kV concrete &amp; steel pole lines</i>	0.9	0.9	0.9	0.9	0.9	
<i>132kV wood pole lines</i>	1.3	1.3	1.4	1.4	1.5	
<i>132kV feeders underground</i>	16.2	17.2	17.8	18.3	18.7	
<i>Cable tunnel (tx)</i>	0.2	0.2	0.2	0.2	0.2	
<i>Network control &amp; com systems</i>	1.2	1.2	1.2	1.2	1.2	
<i>Communications (digital) - tx</i>	0.1	0.1	0.1	0.1	0.1	
<i>System IT (tx)</i>	4.4	5.4	6.4	7.1	7.4	
<i>IT systems</i>	7.9	8.5	9.1	3.4	2.7	
<i>Furniture, fittings, plant and equipment</i>	0.5	0.6	0.6	0.7	0.8	
<i>Motor vehicles</i>	2.5	2.6	2.7	2.8	2.9	
<i>Buildings</i>	1.2	1.4	1.6	1.8	1.9	
<i>Land (non-system)</i>	-	-	-	-	-	
<i>Other non system assets</i>	0.1	0.1	0.1	0.1	0.1	
<i>Equity raising costs</i>	0.2	0.2	0.2	0.2	0.2	
Nominal Straight-line Depreciation	291.74	346.06	418.76	493.73	511.25	
Inflation on Opening RAB	162.52	278.23	348.07	238.19	337.17	
Nominal Regulatory Depreciation	129.22	67.83	70.70	255.55	174.09	

**Table 2 – Depreciation schedule for distribution standard control services (\$m, 2013/14)**

<b>Year</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Inflation Assumption (CPI % increase)	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Cumulative Inflation Index (CPI end period)	100%	102.5%	105.1%	107.7%	110.4%	113.1%
<b>Real Asset Values</b>						
Real Straight-line Depreciation	419.78	447.35	473.64	463.85	479.49	
<i>Sub-transmission lines and cables</i>	42.4	46.1	49.2	51.3	52.9	
<i>Cable tunnel (dx)</i>	1.9	1.9	1.9	1.9	1.9	
<i>Distribution lines and cables</i>	68.0	69.9	71.7	73.9	75.8	
<i>Substations</i>	98.7	104.4	109.9	114.7	119.6	
<i>Transformers</i>	22.4	23.6	24.8	25.9	26.9	
<i>Low Voltage Lines and Cables</i>	39.8	42.5	45.4	48.5	51.6	
<i>Customer Metering and Load Control</i>	2.5	2.5	2.5	2.5	2.5	
<i>Customer Metering (digital)</i>	-	-	-	-	-	
<i>Communications (digital) - dx</i>	3.6	3.6	3.6	3.6	2.3	
<i>Total Communications</i>	6.3	6.3	6.2	-	-	
<i>System IT (dx)</i>	50.9	54.7	58.2	60.7	63.1	
<i>Ancillary substation equipment (dx)</i>	7.5	10.5	12.9	14.8	17.0	
<i>Land and Easements</i>	-	-	-	-	-	
<i>Emergency Spares (Major Plant, Excludes Inventory)</i>	-	-	-	-	-	
<i>Furniture, fittings, plant and equipment</i>	3.7	4.2	4.6	5.0	5.4	
<i>Land (non-system)</i>	-	-	-	-	-	
<i>Other non system assets</i>	10.0	10.0	10.0	10.0	10.0	
<i>IT systems</i>	34.3	37.8	41.3	17.9	16.2	
<i>Motor vehicles</i>	19.3	20.0	20.6	21.2	21.9	
<i>Buildings</i>	7.7	8.5	10.0	11.1	11.7	
<i>Equity raising costs</i>	0.8	0.8	0.8	0.8	0.8	
Nominal Straight-line Depreciation	430.3	470.0	510.1	512.0	542.5	
Nominal Regulatory Depreciation	123.3	144.1	165.1	150.3	164.0	

**Table 3 - Depreciation schedule for transmission standard control services (\$m, 2013/14)**

<b>Year</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Inflation Assumption (CPI % increase)	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Cumulative Inflation Index (CPI end period)	100%	102.5%	105.1%	107.7%	110.4%	113.1%
<b>Real Asset Values</b>						
Real Straight-line Depreciation	63.13	68.19	73.19	70.28	72.32	
<i>Transmission &amp; Zone land &amp; easements</i>	-	-	-	-	-	-
<i>Transmission buildings 132/66kV</i>	1.3	1.7	2.1	2.3	2.4	
<i>Zone buildings 132/66kV</i>	2.6	2.6	2.6	2.6	2.6	
<i>Transmission transformers 132/66kV</i>	1.1	1.2	1.4	1.5	1.5	
<i>Zone transformers 132/66kV</i>	0.9	1.0	1.2	1.3	1.3	
<i>Transmission substation equip 132/66kV</i>	5.8	5.9	6.2	6.3	6.5	
<i>Zone substation equip 132/66kV</i>	10.0	10.6	11.1	11.4	12.0	
<i>Transmission &amp; Zone emergency spares</i>	0.1	0.1	0.1	0.1	0.1	
<i>Ancillary substation equipment (tx)</i>	3.6	4.2	5.0	5.3	5.8	
<i>132kV tower lines</i>	1.1	1.2	1.2	1.3	1.3	
<i>132kV concrete &amp; steel pole lines</i>	0.9	0.9	0.9	0.9	0.9	
<i>132kV wood pole lines</i>	1.3	1.3	1.4	1.4	1.5	
<i>132kV feeders underground</i>	16.2	17.2	17.8	18.3	18.7	
<i>Cable tunnel (tx)</i>	0.2	0.2	0.2	0.2	0.2	
<i>Network control &amp; com systems</i>	1.2	1.2	1.2	1.2	1.2	
<i>Communications (digital) - tx</i>	0.1	0.1	0.1	0.1	0.1	
<i>System IT (tx)</i>	4.4	5.4	6.4	7.1	7.4	
<i>IT systems</i>	7.9	8.5	9.1	3.4	2.7	
<i>Furniture, fittings, plant and equipment</i>	0.5	0.6	0.6	0.7	0.8	
<i>Motor vehicles</i>	2.5	2.6	2.7	2.8	2.9	
<i>Buildings</i>	1.2	1.4	1.6	1.8	1.9	
<i>Land (non-system)</i>	-	-	-	-	-	
<i>Other non system assets</i>	0.1	0.1	0.1	0.1	0.1	
<i>Equity raising costs</i>	0.2	0.2	0.2	0.2	0.2	
Nominal Straight-line Depreciation	64.7	71.6	78.8	77.6	81.8	
Nominal Regulatory Depreciation	12.4	15.7	19.3	16.1	18.2	