



Draft Decision

Ausgrid distribution determination

2015–16 to 2018–19

Attachment 2: Regulatory asset base

November 2014

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Note

This attachment forms part of the AER's draft decision on Ausgrid's 2015–19 distribution determination. It should be read with other parts of the draft decision.

The draft 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

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Attachment 16 – Alternative control services

Attachment 17 – Negotiated services framework and criteria

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Attachment 19 – Pricing methodology

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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	aggregate service revenue requirement
augex	augmentation expenditure
capex	capital expenditure
CCP	Consumer Challenge Panel
CESS	capital expenditure sharing scheme
CPI	consumer price index
CPI-X	consumer price index minus X
DRP	debt risk premium
DMIA	demand management innovation allowance
DMIS	demand management incentive scheme
distributor	distribution network service provider
DUoS	distribution use of system
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

Shortened form	Extended form
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 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
WACC	weighted average cost of capital

2 Regulatory asset base

We are required to make a decision on Ausgrid's opening regulatory asset bases (RABs) as at 1 July 2014 for its distribution and transmission networks.¹ We use the RAB at the start of each regulatory year to determine the return of capital (regulatory depreciation) and return on capital building block allowances. This attachment presents our draft decision on the opening RAB values as at 1 July 2014 and roll forward of the forecast RAB values over the 2014–19 regulatory control period.

2.1 Draft decision

We do not accept Ausgrid's proposed opening RABs as at 1 July 2014 of \$12 279.8 million (\$ nominal) and \$2 090.9 million (\$ nominal) for its distribution and transmission networks respectively.² We have instead determined opening RAB values as at 1 July 2014 of \$12 251.7 million (\$ nominal) and \$2 035.7 million (\$ nominal) for its distribution and transmission networks respectively.

For Ausgrid's distribution network RAB, we have made the following adjustments:

- updated the 1 July 2009 opening RAB value to adopt the allocation of work-in-progress amounts approved in the 2009 decision
- updated the 2008–09 actual capex allocation to reflect the asset classes approved in the 2009 decision
- corrections to Ausgrid's actual net capex for errors associated with the value of disposals and capital contributions, including updates for the estimated value of capex for 2013–14
- reduced the proposed value for equity raising cost for 2009–10 by half year's inflation
- corrections to Ausgrid's reclassification of assets between distribution and transmission
- corrections to calculation and formula errors identified in the proposed roll forward model (RFM).

For Ausgrid's transmission network RAB, we have made the following adjustments:

- updated the nominal rate of return input for the 2004–08 regulatory control period to reflect the approved value
- reduced the proposed value for equity raising cost for 2009–10 by half year's inflation
- adjusted the proposed CPI for 2011–12 to 1.58 per cent from 1.63 per cent
- corrections to Ausgrid's actual net capex for errors associated with the value of capital contributions, including updates for the estimated value of capex for 2013–14
- corrections to Ausgrid's reclassification of assets between distribution and transmission.

To determine the opening RABs as at 1 July 2014, we have rolled forward the RABs over the 2009–14 regulatory control period to determine a closing RAB value at 30 June 2014. The roll forward of the distribution and transmission RABs include adjustments at the end of the 2009–14 period to account for the difference between actual 2008–09 capex and the estimate approved at the 2009

¹ NER, cl 6.12.1(6). See also NER cl 11.56.4(f).

² Ausgrid, *Regulatory proposal*, May 2014, Attachment 4.03 & Attachment 4.04.

determination.³ For the distribution RAB, from 1 July 2014, metering will be classified as an alternative control service and therefore metering assets are to be excluded from the standard control services RAB. The opening distribution and transmission RABs have been adjusted to reflect a change in classification of assets between distribution and transmission.⁴ The adjustment of \$9.2 million (\$ nominal) reflects the net value of assets moving from transmission and distribution.

Table 2-1 and Table 2-2 set out our draft decision on the roll forward of the RAB values over the 2009–14 regulatory control period for Ausgrid's distribution and transmission networks respectively.

Table 2-1 AER's draft decision on Ausgrid's RAB for the 2009–14 regulatory control period – distribution (\$ million, nominal)

	2009–10	2010–11	2011–12	2012–13	2013–14 ^a
Opening RAB	7297.2	8297.9	9531.2	10875.0	11681.6
Capital expenditure ^b	1129.2	1304.7	1390.9	1049.2	605.4
Inflation indexation on opening RAB	132.8	236.1	323.0	191.7	286.2
Less: straight-line depreciation	261.3	307.5	370.2	434.2	448.6
Closing RAB	8297.9	9531.2	10875.0	11681.6	12124.7
Difference between estimated and actual capex (1 July 2008 to 30 June 2009)					239.1
Return on difference for 2008–09 capex					145.9
Closing RAB as at 30 June 2014					12509.7
Dual function assets moved from transmission to distribution					9.2
Meters moved to alternative control services					267.2
Opening RAB as at 1 July 2014					12251.7

Source: AER analysis.

(a): Based on updated final capex, subject to auditing. We will update the RAB roll forward in the final decision.

(b): Net of disposals and capital contributions, and adjusted for CPI.

³ The end of period adjustment will be positive (negative) if actual capex is higher (lower) than the estimate approved at the 2009–14 determination.

⁴ The AER approved Ausgrid's revised CAM in May 2014. The reclassification of assets between Ausgrid's distribution and transmission network is compliant with clause 6.26(b) of NER, which requires the AER to divide the approved revenue of the DNSP into two portions based on the DNSPs approved CAM.

Table 2-2 AER's draft decision on Ausgrid's RAB for the 2009–14 regulatory control period – transmission (\$ million, nominal)

	2009–10	2010–11	2011–12	2012–13	2013–14 ^a
Opening RAB	1028.5	1264.1	1544.8	1862.1	2066.6
Capital expenditure ^b	235.4	276.1	340.3	216.4	86.3
Inflation indexation on opening RAB	29.7	42.1	24.5	46.6	60.5
Less: straight-line depreciation	29.5	37.5	47.5	58.5	63.3
Closing RAB	1264.1	1544.8	1862.1	2066.6	2150.1
Difference between estimated and actual capex (1 July 2008 to 30 June 2009)					–64.7
Return on difference for 2008–09 capex					–40.5
Closing RAB as at 30 June 2014					2045.0
Dual function assets moved from transmission to distribution					–9.2
Opening RAB as at 1 July 2014					2035.7

Source: AER analysis.

(a): Based on updated final capex, subject to auditing. We will update the RAB roll forward in the final decision.

(b): Net of disposals and capital contributions, and adjusted for CPI.

We determine forecast closing RAB values at 30 June 2019 of \$13 850.9 million (\$ nominal) and \$2323.0 million (\$ nominal) for Ausgrid's distribution and transmission networks respectively. This represents reductions of \$1890.4 million (or 12 per cent) and \$282.1 million (or 11 per cent) from Ausgrid's proposal for its distribution and transmission networks respectively. Our draft decision on the forecast closing RABs reflect the amended opening RABs as at 1 July 2014, and our draft decision on forecast capex (attachment 6) and forecast regulatory depreciation (attachment 5).

Table 2-3 and Table 2-4 set out our draft decision on the forecast RAB values over the 2014–19 regulatory control period for Ausgrid's distribution and transmission networks respectively.

Table 2-3 AER's draft decision on Ausgrid's RAB for the 2014–19 regulatory control period – distribution (\$ million, nominal)

	2014–15	2015–16	2016–17	2017–18	2018–19
Opening RAB	12251.7	12611.9	12948.1	13226.5	13553.2
Capital expenditure ^a	492.8	489.4	452.3	470.3	442.7
Inflation indexation on opening RAB	306.3	315.3	323.7	330.7	338.8
Less: straight-line depreciation	438.8	468.5	497.6	474.2	483.8
Closing RAB	12611.9	12948.1	13226.5	13553.2	13850.9

Source: AER analysis.

(a): Net of forecast disposals and capital contributions.

Table 2-4 AER's draft decision on Ausgrid's RAB for the 2014–19 regulatory control period – transmission (\$ million, nominal)

	2014–15	2015–16	2016–17	2017–18	2018–19
Opening RAB	2035.7	2119.4	2196.4	2237.1	2286.6
Capital expenditure ^a	95.8	92.1	59.0	65.2	51.6
Inflation indexation on opening RAB	50.9	53.0	54.9	55.9	57.2
Less: straight-line depreciation	63.0	68.1	73.2	71.5	72.5
Closing RAB	2119.4	2196.4	2237.1	2286.6	2323.0

Source: AER analysis

(a): Net of forecast disposals and capital contributions.

We determine that the forecast depreciation approach is to be used to establish the opening RABs for Ausgrid's distribution and transmission networks at the commencement of the 2019–24 regulatory control period.⁵ This will apply to the 2014–19 period, including the 2014–15 transitional regulatory control period. We consider this approach will provide sufficient incentives for Ausgrid to achieve capex efficiency gains over those periods. Ausgrid is not currently subject to a capital expenditure efficiency scheme (CESS), but we will apply the CESS to Ausgrid over the subsequent (2015–19) regulatory control period.

2.2 Ausgrid's proposal

Ausgrid used our roll forward model (RFM) to establish the opening RABs as at 1 July 2014 for its distribution and transmission networks and our post-tax revenue model (PTRM) to roll forward these RABs over the 2014–19 regulatory control period.

Ausgrid proposed opening RAB values as at 1 July 2009 of \$7 297.2 million (\$ nominal) and \$1 028.5 million (\$ nominal) for its distribution and transmission networks respectively. Rolling forward these RABs using depreciation based on actual capex, Ausgrid proposed closing RABs as at 30 June 2014 of \$12 595 million (\$ nominal) and \$2 094 million (\$ nominal) for its distribution and transmission networks respectively. The proposed closing RABs have been adjusted for reclassification of dual function assets. The adjustments reflect a net movement in assets from transmission to distribution.

⁵ NER, cl 6.12.1(8).

Table 2-5 and Table 2-6 present Ausgrid's proposed roll forward of its RABs over the 2009–14 regulatory control period for its distribution and transmission networks respectively. The removal of metering assets from its distribution RAB at 1 July 2014 resulted in a proposed opening RAB as at 1 July 2014 of \$12 279.8 million (\$ nominal) for its distribution network.⁶

Table 2-5 Ausgrid's proposed RAB for the 2009–14 regulatory control period (\$million, nominal) – distribution

	2009–10	2010–11	2011–12	2012–13	2013–14 ^a
Opening RAB	7297.2	8297.8	9527.5	10867.4	11655.3
Capital expenditure ^b	1130.1	1302.2	1388.2	1 031.5	654.9
Inflation indexation on opening RAB	132.8	236.1	322.9	191.6	285.5
Less: straight-line depreciation	262.3	308.6	371.2	435.2	448.0
Closing RAB	8297.8	9527.5	10867.4	11655.3	12147.7
Difference between estimated and actual capex (1 July 2008 to 30 June 2009)					242.0
Return on difference for 2008–09 capex					147.7
Closing RAB as at 30 June 2014					12537.4
Meters moved to alternative control services					–260.8
Dual function assets moved from transmission to distribution					3.2
Opening RAB as at 1 July 2014					12279.8

Source: Ausgrid, *Regulatory proposal*, May 2014, Attachment 4.03.

(a): Based on estimated capex.

(b): Net of disposals and capital contributions, and adjusted for CPI.

⁶ From 1 July 2014 metering will be treated as an alternative control service and therefore metering assets are to be excluded from the standard control services RAB.

Table 2-6 Ausgrid's proposed RAB for the 2009–14 regulatory control period (\$ million, nominal) – transmission

	2009–10	2010–11	2011–12	2012–13	2013–14 ^a
Opening RAB	1028.5	1264.2	1545.0	1862.9	2062.9
Capital expenditure ^b	235.5	276.1	340.3	211.9	150.0
Inflation indexation on opening RAB	29.7	42.1	25.1	46.6	51.6
Less: straight-line depreciation	29.5	37.5	47.5	58.6	63.3
Closing RAB	1264.2	1545.0	1862.9	2062.9	2201.2
Difference between estimated and actual capex (1 July 2008 and 30 June 2009)					–66.1
Return on difference for 2008–09 capex					–41.0
Closing RAB as at 30 June 2014					2094.1
Dual function assets moved from transmission to distribution					–3.2
Opening RAB as at 1 July 2014					2090.9

Source: Ausgrid, *Regulatory proposal*, May 2014, Attachment 4.04.

(a): Based on estimated capex.

(b): Net of disposals and capital contributions, and adjusted for CPI.

Ausgrid proposed forecast closing RABs as at 30 June 2019 of \$15 741.3 million (\$ nominal) and \$2 605.1 million (\$ nominal) for its distribution and transmission networks respectively. These values reflect its proposed opening RAB, forecast capex, forecast inflation and depreciation (based on forecast capex) over the 2014–19 regulatory control period. Its projected distribution and transmission RABs over the 2014–19 regulatory control period are shown in Table 2-7 and Table 2-8, respectively.

Table 2-7 Ausgrid's proposed RAB for the 2014–19 regulatory control period (\$ million, nominal) – distribution

	2014–15	2015–16	2016–17	2017–18	2018–19
Opening RAB	12279.8	13035.9	13797.1	14466.4	15139.6
Capital expenditure ^a	879.4	905.2	834.5	823.6	765.7
Inflation indexation on opening RAB	307.0	325.9	344.9	361.7	378.5
Less: straight-line depreciation	430.3	470.0	510.1	512.0	542.5
Closing RAB	13035.9	13797.1	14466.4	15139.6	15741.3

Source: Ausgrid, *Regulatory proposal*, May 2014, Attachment 4.01.

(a): Net of disposals and capital contributions.

Table 2-8 Ausgrid's proposed RAB for the 2014–19 regulatory control period (\$ million, nominal) – transmission

	2014–15	2015–16	2016–17	2017–18	2018–19
Opening RAB	2090.9	2236.4	2378.7	2457.2	2544.7
Capital expenditure ^a	157.9	158.0	97.9	103.6	78.5
Inflation indexation on opening RAB	52.3	55.9	59.5	61.4	63.6
Less: straight-line depreciation	64.7	71.6	78.8	77.6	81.8
Closing RAB	2236.4	2378.7	2457.2	2544.7	2605.1

Source: Ausgrid, *Regulatory proposal*, May 2014, Attachment 4.02.

(a): Net of disposals and capital contributions.

Ausgrid proposed to apply a forecast depreciation approach to establish the RABs at the commencement of 2019–24 regulatory control period, consistent with the approach set out in our Stage 2 framework and approach.⁷

2.3 AER's assessment approach

We are required to roll forward the service provider's RAB during the 2009–14 regulatory control period to establish the opening RAB at 1 July 2014. This value can be adjusted for any differences in the forecast and actual capex, disposals and capital contributions. It may also be adjusted to reflect any changes in the use of the assets, with only assets used in the provision of standard control services to be included in the RAB.⁸

To determine the opening RAB, we have developed an asset base RFM in accordance with the requirements of the NER.⁹ A service provider must use the RFM in preparing its regulatory proposal. The RFM rolls forward the RAB from the beginning of the final year of the 2004–09 regulatory control period, through the 2009–14 regulatory control period, to the beginning of the next period. The five regulatory years between 2014–19 are split over two regulatory control periods (a transitional regulatory control period from 2014–15 and then a subsequent regulatory control period from 2015–19). However, the NER expressly provides that when we determine the opening value of the RAB for this five year period we should do so as if the two periods were combined.¹⁰ The roll forward occurs for each year by:

- Adding an inflation (indexation) adjustment to the opening RAB for the relevant year. This adjustment must be consistent with the inflation factor used in the control mechanism.¹¹
- Adding capex to the RAB for the relevant year.¹² In future determinations, the NER allows us to review a service provider's past capex and exclude inefficient past capex from being rolled into the RAB.¹³ We note that under the transitional rules, the review of past capex does not apply to Ausgrid prior to 1 July 2015.¹⁴ Therefore, for the purposes of this draft decision, we will add Ausgrid's actual or estimated capex in the 2009–14 regulatory control period to the RAB. We check actual capex amounts against audited annual reporting regulatory information notice (RIN)

⁷ Ausgrid, *Regulatory proposal*, May 2014, p. 19.

⁸ NER, cl S6.2.1.

⁹ NER, cl 6.5.1.

¹⁰ NER, cls 11.56.4(c)(4)-(6) and (f)

¹¹ NER, cl 6.5.1(e)(3).

¹² NER, cl S6.2.1(e)(4).

¹³ NER, cl S6.2.2A.

¹⁴ NER, cls 11.56.5 and 11.62.

data and generally accept the capex reported in those RINs in rolling forward the RAB. However, there may be instances where adjustments are required to the annual reporting RIN data because it is not fit for purpose due to a particular issue.

- Subtracting depreciation from the RAB for the relevant year calculated in accordance with the relevant distribution determination for that year.¹⁵ Depreciation based on forecast or actual capex can be used to roll forward the RAB.¹⁶ By default the RFM applies the depreciation approach based on actual capex, although this can be modified to apply a depreciation approach based on forecast capex if necessary. For this draft decision, we use depreciation based on actual capex for rolling forward Ausgrid's RAB values over the 2009–14 regulatory control period.¹⁷
- Subtracting any disposals and capital contributions from the RAB for the relevant year.¹⁸ We will check these amounts against annual reporting RIN data.

These annual adjustments give the closing RAB for any particular year, which then becomes the opening RAB for the following year. Through this process the RFM rolls forward the RAB to the end of the 2009–14 regulatory control period. The PTRM used to calculate the annual revenue requirement for the 2014–19 period generally adopts the same RAB roll forward approach as the RFM, although the annual adjustments to the RAB are based on forecasts, rather than actual amounts.

We are required to decide whether depreciation for establishing the service provider's RAB as at the commencement of the 2019–24 regulatory control period is to be based on actual or forecast capex.¹⁹

The opening RAB for the 2019–24 regulatory control period can be determined using depreciation based either on forecast or actual capex incurred during the 2014–19 period. To roll forward the RAB using depreciation based on forecast capex, we would use the forecast depreciation contained in the PTRM for the 2014–19 period, adjusted for actual inflation. If the approach to roll forward the RAB using depreciation based on actual capex was adopted, we would recalculate the depreciation based on actual capex incurred during the 2014–19 period.

Our decision on whether to use actual or forecast depreciation must be consistent with the capex incentive objective. We must have regard to:²⁰

- any other incentives the service provider has to undertake efficient capex
- substitution possibilities between assets with different lives
- the extent of overspending and inefficient overspending relative to the allowed forecast
- the capex incentive guideline
- the capital expenditure factors.

2.3.1 Interrelationships

The RAB is an input into the determination of the return on capital and depreciation (return of capital) building block allowances.²¹ Factors that influence the RAB will therefore flow through to these

¹⁵ NER, cl S6.2.1(e)(5).

¹⁶ NER, cl 6.12.1(8).

¹⁷ The use of actual depreciation is consistent with the depreciation approach established in the 2009 distribution determinations for NSW service providers.

¹⁸ NER, cl S6.2.1(e)(6).

¹⁹ NER, cl S6.2.2B.

²⁰ NER, cl. S6.2.2B(c).

building block components and the annual revenue requirement. Other things being equal, a higher RAB increases both the return on capital and depreciation allowances.

The RAB is determined by various factors, including;

- the opening RAB (meaning the value of existing assets at the beginning of the regulatory control period)
- net capex²²
- depreciation
- indexation adjustment – so the RAB is presented in nominal terms, consistent with the rate of return.

The opening RAB depends on the value of existing assets and will depend on actual net capex, actual inflation outcomes and depreciation in the past.

The RAB when projected to the end of the regulatory control period increases due to both forecast new capex and the indexation adjustment. The size of the indexation adjustment depends on expected inflation (which also affects the nominal rate of return or WACC) and the size of the RAB at the start of each year.

Depreciation reduces the RAB. The depreciation allowance depends on the size of the opening RAB and the forecast net capex. By convention, the indexation adjustment is also offset against depreciation to prevent double counting of inflation in the RAB and rate of return, which are both presented in nominal terms. This reduces the apparent depreciation building block that feeds into the annual revenue requirement.

Figure 2-1 shows the key drivers of the change in the distribution RAB over the 2014–19 period as proposed by Ausgrid. Overall, the closing RAB at the end of the 2014–19 period would be 28 per cent higher than the opening RAB at the start of that period based on the proposal, in nominal terms. The proposed forecast net capex increases the RAB by about 34 per cent, while inflation increases it by about 14 per cent. Depreciation, on the other hand, reduces the RAB by about 20 per cent.

Figure 2-2 shows the key drivers of the change in the transmission RAB over the 2014–19 period as proposed by Ausgrid. Overall, the closing RAB at the end of the 2014–19 period would be 25 per cent higher than the opening RAB at the start of that period based on the proposal, in nominal terms. The proposed forecast net capex increases the RAB by about 29 per cent, while inflation increases it by about 14 per cent. Depreciation, on the other hand, reduces the RAB by about 18 per cent.

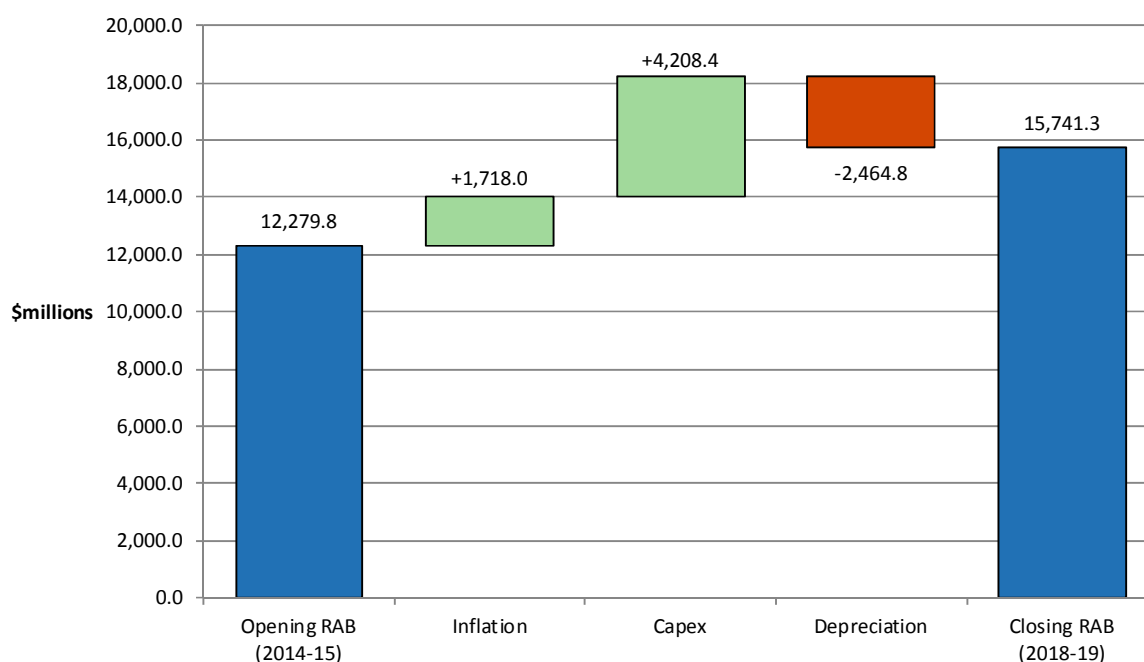
The RABs would rise in real terms over the 2014–19 period based on Ausgrid's proposal. We consider the depreciation amounts to be generally reasonable, given that it largely depends on the opening RABs (which in turn depends on capex in the past). However, we do have concerns with the size of the forecast net capex. Figure 2-1 and Figure 2-2 show forecast net capex is the largest driver of the increase in the distribution and transmission RABs, and we have considered whether it is

²¹ The size of the RAB also impacts the benchmark debt raising cost allowance. However, this amount is usually relatively small and therefore not a significant determinant of revenues overall.

²² Net capex is gross capex less disposals and capital contributions. The rate of return or WACC also influences the size of the capex. This is because the capex is not depreciated in the year it is first incurred, but added to the RAB at the end of the year. Instead, the capex amount is escalated by half a WACC to arrive at an end of year value. It then begins depreciating the following year.

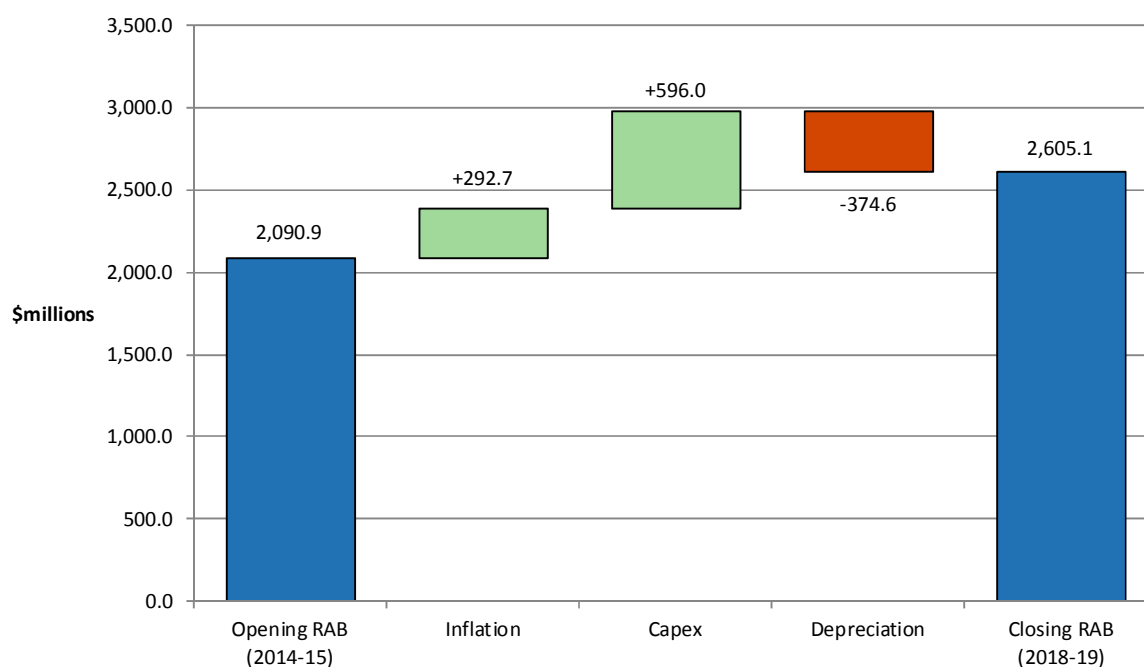
appropriate that the forecast net capex exceed depreciation as Ausgrid has proposed. Refer to attachment 6 for the discussion on forecast capex.

Figure 2-1 Key drivers of changes in RAB – distribution (\$ million, nominal)



Source: AER analysis

Figure 2-2 Key drivers of change in RAB – transmission (\$ million, nominal)



Source: AER analysis

A ten per cent increase in the opening RAB causes revenues to increase by about 6.4 per cent. However, the impact on revenues of the annual change in RAB depends on the source of the RAB change, as some drivers affect more than one building block cost.²³

2.4 Reasons for draft decision

We have determined Ausgrid's opening distribution and transmission RABs to be \$12 251.7 million and \$2 035.7 million (\$ nominal) respectively, as at 1 July 2014. This represents decreases of \$28.1 million or 0.2 per cent and \$55.2 (\$ nominal) or 2.6 per cent from the proposed values respectively. We have forecast closing distribution and transmission RAB values of \$13850.9 million and \$2323.0 million (\$ nominal) respectively, as at 30 June 2019. This represents reductions of \$1890.4 million or 12.0 per cent and \$282.1 million (\$ nominal) or 10.8 per cent compared to Ausgrid's proposal respectively. The reasons for our decision are discussed below.

2.4.1 Opening RAB as at 1 July 2014

To determine the opening RABs as at 1 July 2014 we have rolled forward the distribution and transmission RABs over the 2009–14 regulatory control period to determine closing RAB values at 30 June 2014. As metering is to be classified as alternative control services from 1 July 2014, the metering assets must be removed from the closing distribution RAB as at 30 June 2014 to determine the standard control services opening RAB as at 1 July 2014. Ausgrid's transmission RAB does not include any metering assets and therefore no adjustment is required. The opening distribution and transmission RABs have been adjusted to reflect a change in classification of dual functions assets. The adjustment of \$9.2 million (\$ nominal) reflects the net value of assets moving from transmission to distribution.

We approve opening RAB values of \$12 251.7 million for Ausgrid's distribution network and \$2035.7 million (\$ nominal) for its transmission network, as at 1 July 2014.

Distribution

We do not accept Ausgrid's proposed opening RAB of \$12 279.8 million (\$ nominal) as at 1 July 2014. Instead we have determined an opening RAB value of \$12 251.7 million (\$ nominal) as at 1 July 2014, a decrease of \$28.1 million (\$ nominal) or 0.2 per cent from Ausgrid's proposal. This is because we amended Ausgrid's RAB roll forward for the following:

- Reallocation of work-in-progress amounts as at 30 June 2009 across Ausgrid's system assets to be consistent with those approved in the 2009 determination.
- Reallocation of actual capex for 2008–09 into certain asset classes that were consistent with those approved for that period.
- Reduced the proposed value of equity raising cost for 2009–10 to remove half year's inflation.
- Updated the proposed actual net capex to correct for reporting errors in the value of asset disposals and capital contributions.

²³ If capex causes the RAB increase, return on capital, depreciation, and debt raising costs all increase too. If a reduction in depreciation causes the RAB increase, revenue could increase or decrease. In this case, the higher return on capital is offset (perhaps more than offset) by the reduction in depreciation allowance. Inflation naturally increases the RAB in nominal terms. However, the real impact from changing the inflation forecast is inconsequential as revenues are updated annual by actual inflation and the X factor, which is generally unaffected by the assumed forecast inflation rate.

- Updated the proposed estimated value of capex for 2013–14 to reflect actuals, subject to auditing. We will receive the audited numbers in late 2014 and check them before making our final decision.
- The proposed net movement of dual function assets between distribution and transmission was updated due to an error identified by Ausgrid in its the original proposal.
- Removed an updated amount of metering assets from the RAB as at 30 June 2014.

These adjustments are discussed further below.

Opening RAB as at 1 July 2009

The AER's RFM calculates the approved forecast RAB to be updated for actual capex, depreciation and inflation. The 2009 decision approved an estimated opening RAB of \$7 297.2 million (\$ nominal) as at 1 July 2009. We agree with Ausgrid's proposed estimated opening RAB value as at 1 July 2009. However, there are notable differences in Ausgrid's approach to calculating this value that affects how the value of the opening RAB has been rolled forward. We updated Ausgrid's proposed RFM for its distribution network consistent with our 2009 determination and to improve the transparency of the roll forward calculations, including:

- The adjustment for the difference in actual and estimated capex in 2003–04, the final year of the previous regulatory control period.
- The approach to allocating work-in-progress amounts at the end of 2008–09 to transition from recognition of capex from as-commissioned to as-incurred approach.
- Updating the RAB for actual capex in 2008–09, the final year of the current regulatory control period.

The 2009 determination involved transitioning Ausgrid to recognise capex from as-commissioned to as-incurred basis. The recognition of capex on an as-incurred basis required that outstanding work-in-progress amounts be allocated to existing asset classes.²⁴ We approved this allocation as set out in the 2009 determination model. Ausgrid's proposed RFM reallocated the work-in-progress amounts across all asset classes to roll forward the RAB from 1 July 2009 to 30 June 2014, which differed from the allocation set out in the 2009 determination. We therefore adjusted Ausgrid's RFM to reflect the approved allocation of work-in-progress amounts to Ausgrid's system assets.²⁵ Our adjustment to the opening value of asset classes affects the depreciation in the RFM and final closing RAB because Ausgrid's reallocation of work-in-progress amounts was across shorter lived non-system assets. Our adjustment increases the proposed opening RAB as at 1 July 2014 by \$0.8 million (\$ nominal) because of the lower actual depreciation. Our adjustment for the allocation of the work-in-progress amounts maintains the value of the opening RAB as approved in the 2009 decision²⁶ and that depreciation to reduce the RAB is in accordance with the 2009 decision.²⁷

Our other adjustment is to reallocate the 2008–09 actual capex to be consistent with the approved asset classes for the 2004–09 regulatory control period.²⁸ The 2008–09 regulatory accounts report actual capex of \$23.9 million (\$ nominal) against the 'Customer metering and load control' asset class,

²⁴ Our 2009 determination approved the allocation of work-in-progress amounts as at 30 June 2009 across existing assets classes applied to the following system asset classes: Sub-transmission lines and cables, Cable tunnel (dx), Distribution lines and cables, Substations, Transformers, Low voltage lines and cables, and Total communications.

²⁵ Ausgrid was advised of this adjustment and did not object to it. Ausgrid, *Email response to AER information request AER AUSGRID 004 - RFM WIP allocation*, 14 July 2014

²⁶ NER, cl. S6.2.1(e).

²⁷ NER, cl. S6.2.1(e)(5).

²⁸ Ausgrid (EnergyAustralia) was previously regulated by IPART for the 2004–05 to 2008–09 regulatory control period.

and actual capex of \$37.6 million (\$ nominal) against the 'Communications' asset class. Our adjustment provides that at the end of the roll forward period (30 June 2014) the value of the approved asset classes are adjusted for the difference between forecast and actual capex (and the return on that difference) consistent with the 2009 determination.²⁹

Actual capex for 2009–10 to 2012–13

We have updated Ausgrid's proposed RFM to correct for errors that affect the value of actual net capex from 2009–10 to 2012–13.³⁰ This included updates to the value of actual capex (gross), the value of disposals and capital contributions. We reviewed Ausgrid's proposed actual capex against its regulatory accounts and annual regulatory information notices (RIN) for the period from 2008–09 to 2012–13. We identified the following discrepancies and errors in Ausgrid's proposed actual capex inputs:

- the value of equity raising cost
- the value of asset disposals
- the value of capital contributions.

We do not accept Ausgrid's proposed value of equity raising cost for 2009–10 of \$26.7 million (\$ nominal). The 2009 decision PTRM recognised capex as end of year value in real 2008–09 dollar terms. The AER's RFM requires the input of capex in nominal dollars terms. Ausgrid's proposed value of equity raising cost includes a full year's of inflation to convert from end of year real 2008–09 value to middle of year nominal 2009–10 value. To convert the equity raising cost to a nominal mid-year value (as required by the RFM), only six months of inflation is required to be applied. We consider the revised equity raising cost better represents the value as approved in the 2009 determination.

We do not accept Ausgrid's proposed value of disposals used to roll forward the RAB over the 2008–13 period. We reviewed the proposed level of disposals against Ausgrid's regulatory accounts and annual RINs for that period and found several discrepancies. We asked Ausgrid about these discrepancies. It advised that the written down value of assets were reported as disposals in the annual RINs from 2010–11 to 2012–13. Ausgrid provided the gross proceeds from sale as the revised value of disposals for the period from 2010–11 to 2013–14.³¹ We have adopted these revised values for the purposes of the draft decision. We consider that gross proceeds from sale should generally be used in the RAB roll forward. This means that any loss on sale of the assets against the written down value of assets will be recovered from customers (with the unrecovered proportion of residual value remaining in the RAB), while any profit will be offset against the RAB for the benefit of customers. This ensures that the service provider recovers no more or less than the real value of the asset when it was first included in the RAB.³²

We do not accept Ausgrid's proposed value of capital contributions used to roll forward the RAB over the 2009–13 period. We identified inconsistencies in the value of capital contributions reported between the annual RIN, reset RIN and proposed RFM and requested further information from Ausgrid. Ausgrid advised the proposed RFM incorrectly included amounts of depreciated capital contributions in relation to government grants allocated to the provision of standard control services. Ausgrid's proposed depreciated value for capital contributions relates to its accounting treatment of government grants that recognises the grant as revenue over the life of the related assets. For

²⁹ NER, cl. 6.2.1(e)(3).

³⁰ We have actual expenditure data reported in annual RINs submitted by Ausgrid up to the 2012–13 regulatory year. At this stage, Ausgrid has provided estimates of actual expenditure for 2013–14 regulatory year. The audited annual reporting RIN is to be received in late 2014. Therefore, we will update the actual capex for 2013–14 in the final decision.

³¹ Ausgrid, *Email response to AER information request AER AUSGRID 024*, 20 August 2014.

³² NER, cl.6.5.5(b)(2).

regulatory purposes, however, such grants are to be removed from the RAB immediately.³³ Ausgrid provided revised values of capital contributions and actual gross capex for the 2009–13 period.³⁴ We accept these revised values because the adjusted actual gross capex includes the corrected value of capital contributions.

Estimated capex for 2013–14

In response to our queries on the proposed RFM, Ausgrid also provided revised estimates of inputs for 2013–14 reflecting actual capex, disposals and capital contributions. We have adopted these values in the RFM for the draft decision and will treat them as revised estimates. The revised net capex for 2013–14 changes to \$577.2 million (\$ nominal) from \$624.4 million (\$ nominal). We will check these values with the audited annual reporting RIN to be received in late 2014 as part of the final decision.

Dual function assets

We accept Ausgrid's proposed reclassification of dual function assets between distribution and transmission. It reflects Ausgrid's revised cost allocation methodology (CAM) approved by the AER in May 2014. The revised CAM took effect from 1 July 2014. However, Ausgrid advised that it identified an error in the proposed allocation of dual function assets as at 1 July 2014. Table 2-9 presents Ausgrid's proposed and revised allocation of dual function assets.

Table 2-9 Ausgrid's movement in dual function assets

	Moved from transmission to distribution	Moved from distribution to transmission	Net change
Ausgrid's proposed movement	54.5	57.7	3.2
Ausgrid's revised movement	60.6	51.3	9.3

Source: Ausgrid, *Regulatory proposal - Attachments 4.03 and Attachment 4.04*, June 2014.
Ausgrid, *Email response to AER AUSGRID 024*, received 29 August 2014.

We also reviewed the other key inputs into Ausgrid's proposed RFM, such as CPI, rate of return, and asset lives. We found these were correct and they reconcile with relevant data sources such as ABS data, annual reporting RIN data and the 2009–14 decision models.

Removal of metering assets as at 1 July 2014

We do not accept Ausgrid's proposed adjustment of \$260.8 million (nominal) to remove metering assets from the closing distribution RAB as at 30 June 2014. Our adjustments to Ausgrid's distribution RAB discussed above altered the closing value of asset classes and therefore affected the amount of metering assets to be removed due to the change in classification of metering services to alternative control services. In response to our enquiries regarding the distribution RAB roll forward Ausgrid provided a revised adjustment of \$267.2 million (nominal) to remove metering assets from the distribution RAB.³⁵ We have reviewed the appropriateness of Ausgrid's revised allocation of distribution assets to be moved to metering alternative control services and will adopt this for the purposes of the draft decision. Refer to attachment 16 for further discussion on our decision regarding Ausgrid's metering alternatives control services.

³³ Ausgrid, *Email response to AER information request AER AUSGRID 018*, 6 August 2014.

³⁴ Ausgrid, *Email response to AER information request AER AUSGRID 024*, 29 August 2014.

³⁵ Ausgrid, *Email response to AER AUSGRID 024*, received 29 August 2014.

Transmission

We do not accept Ausgrid's proposed opening RAB of \$2 090.9 million (\$ nominal) as at 1 July 2014. Instead we have determined an opening RAB value of \$2 035.7 million (\$ nominal) as at 1 July 2014, a decrease of \$55.2 million (\$ nominal) or 2.6 per cent from Ausgrid's proposal. This is because we amended Ausgrid's RAB roll forward for the following:

- Updated the proposed actual net capex to correct for reporting errors in the value of asset disposals and capital contributions.
- Reduced the proposed value for equity raising cost for 2009–10 by half year's inflation
- Updated Ausgrid's proposed estimated value of capex for 2013–14.
- Updated the nominal rate of return input for the 2004–08 regulatory control period to reflect the approved value.
- Adjusted the proposed CPI for 2011–12 to 1.58 per cent from 1.63 per cent.

These adjustments are discussed further below.

Actual capex for 2009–10 to 2012–13

We do not accept Ausgrid's proposed values of actual capex, disposals and capital contributions. Ausgrid provided revised values of capital contributions and actual gross capex for the 2009–10 to 2012–13 period. We accept Ausgrid's revised values of actual gross capex for this period because they include the corrected the values of capital contributions.³⁶

However, we do not accept Ausgrid's proposed value of capital contributions for the 'Buildings' assets class for 2012–13. Ausgrid advised that the proposed RFM incorrectly attributed capital contributions to the 'Buildings' asset class for 2012–13. It stated the capital contribution of \$0.82 million (\$ nominal) was from a government grant Ausgrid received in a previous period, and IPART included the value of the grant in the distribution RAB at zero value.³⁷ Therefore, the capital contribution should not have been included in the proposed transmission RFM.

We also do not accept Ausgrid's proposed value of disposals used to roll forward the RAB over the 2009–13 period. For the same reasons as discussed above for Ausgrid's distribution RAB, we have amended the value of disposals from that proposed by Ausgrid to reflect the value attributable to proceeds from sale. We therefore adopt the revised value of disposals Ausgrid provided for its transmission network for the 2009–13 period.³⁸

Equity raising cost capex

We do not accept Ausgrid's proposed value of equity raising cost for 2009–10 of \$6.3 million (\$ nominal). For the same reasons as discussed above for Ausgrid's distribution RAB we have amended the equity raising cost value to \$6.2 million (\$ nominal) to better represent the value as approved in the 2009 determination.

³⁶ Ausgrid, *Email response to AER AUSGRID 024*, received on 6 August 2014.

³⁷ Ausgrid, *Email response to AER AUSGRID 018*, received on 29 August 2014.

³⁸ Ausgrid, *Email response to AER AUSGRID 024*, received on 29 August 2014.

Estimated capex for 2013–14

For the same reasons as discussed above for Ausgrid's distribution RAB we have adopted the revised values of estimated capex, disposals and capital contributions for 2013–14 provided by Ausgrid.³⁹ The revised net capex for 2013–14 changes to \$82.1 million (\$ nominal) from \$142.9 million (\$ nominal). We will check these values with the audited annual reporting RIN to be received in late 2014 as part of the final decision.

Rate of return and inflation input amendments

We do not accept the proposed rate of return input for 2008–09 of 9.67 per cent. On 21 December 2007, the AER reopened and substituted a previous ACCC's decision, and set a revised nominal rate of return of 9.08 per cent.⁴⁰ Therefore, we have amended Ausgrid's proposed RFM to reflect this rate of return input.

We do not accept Ausgrid's proposed actual inflation input for 2011–12. We have amended Ausgrid's proposed value of CPI for 2011–12 to 1.58 per cent from 1.63 per cent. Our amended value is the inflation rate consistent with that used for pricing purposes in accordance with the control mechanism formula.⁴¹

2.4.2 Forecast closing RAB as at 30 June 2019

We forecast closing RAB values of \$13850.9 million and \$2323.0 million by 30 June 2019 for Ausgrid's distribution and transmission network, respectively.

For Ausgrid's distribution RAB our decision results in a reduction of \$1890.4 million (\$ nominal) or 12.0 per cent compared to Ausgrid's proposal. To determine Ausgrid's forecast distribution RAB value, we amended the following PTRM inputs:

- We reduced Ausgrid's proposed opening RAB as at 1 July 2014 by \$28.1 million (\$ nominal) or 0.2 per cent.
- We reduced Ausgrid's proposed forecast capex allowance by \$1860.9 million (\$ nominal) or 44 per cent (attachment 6).
- We increased Ausgrid's proposed forecast regulatory depreciation allowance by \$1.4 million (\$ nominal) or 0.2 per cent (attachment 5).

For Ausgrid's transmission RAB our decision results in a reduction of \$282.1 million (\$ nominal) or 10.8 per cent compared to Ausgrid's proposal. To determine Ausgrid's forecast transmission RAB value, we amended the following PTRM inputs:

- We reduced Ausgrid's proposed opening RAB as at 1 July 2014 by \$55.2 million (\$ nominal) or 2.6 per cent.
- We reduced Ausgrid's proposed forecast capex allowance by \$232.3 million (\$ nominal) or 39.0 per cent (attachment 6).

³⁹ Ausgrid, *Email response to AER AUSGRID 024*, received on 29 August 2014.

⁴⁰ AER, *Application by EnergyAustralia to re-open its 2004/05 – 2008/09 revenue cap - Decision*, 21 December 2007, pp. 6–7.

⁴¹ The inflation measure applied is the CPI weighted average of Australia's eight capital cities specified in the form of control used to adjust prices. The form of control formula for Ausgrid's transmission network applies a March to March quarter measure of CPI, whereas Ausgrid's distribution network applies average CPI based on the sum of four quarters from December to December.

- We reduced Ausgrid's proposed forecast regulatory depreciation allowance by \$5.4 million or 6.6 per cent (attachment 5).

2.4.3 Application of depreciation approach in RAB roll forward for next reset

Consistent with our Stage 2 framework and approach paper and Ausgrid's proposal, we determine that the forecast depreciation approach is to be used to establish the RAB at the commencement of Ausgrid's 2019–24 regulatory control period.⁴² This approach will apply to both the transitional and subsequent regulatory control periods for Ausgrid.⁴³ We consider this approach will provide sufficient incentives for Ausgrid to achieve capex efficiency gains over the relevant regulatory control periods.

We had regard to the relevant factors in the NER in developing the approach to choosing the depreciation approach set out in our capex incentives guideline.⁴⁴ Our approach is to apply forecast depreciation except where:

- there is no CESS in place and therefore the power of the capex incentive may need to be strengthened, or
- a service provider's past capex performance demonstrates evidence of persistent overspending or inefficiency, thus requiring a higher powered incentive.

In making our decision on whether to use actual depreciation in either of these circumstances we have considered:

- the substitutability between capex and opex and the balance of incentives between these
- the balance of incentives with service outcomes
- the substitutability of assets of different asset lives.

We have chosen forecast depreciation because, in combination with the CESS, it will provide a 30 per cent reward for capex underspends and 30 per cent penalty for capex overspends, which is consistent for all asset classes. In developing our capex incentives guideline, we considered this to be a sufficient incentive for a service provider to achieve efficiency gains over the regulatory control period in most circumstances.

As discussed in attachment 10, Ausgrid is not currently subject to a CESS but we will apply the CESS to Ausgrid from 1 July 2015. The CESS does not apply to Ausgrid for the 2014–15 transitional regulatory control period.⁴⁵ We consider the use of a forecast depreciation approach in combination with the application of CESS and our other ex post capex measures are sufficient to achieve the capex incentive objective.⁴⁶

⁴² AER, *Stage 2 framework and approach paper*, January 2014, p. 37.

⁴³ The transitional regulatory control period for Ausgrid is 2014–15. Ausgrid's subsequent regulatory control period is from 2015–16 to 2017–19.

⁴⁴ AER, *Capital expenditure incentive guideline for electricity network service providers*, November 2013, p.12.

⁴⁵ NER, cl 11.56.3(a)(3).

⁴⁶ Our ex post capex measures are set out in the capex incentives guideline, AER, *Capital expenditure incentive guideline for electricity network service providers*, November 2013, pp. 13–19, 20–21. The guideline also sets out how all our capex incentive measures are consistent with the capex incentive objective.