FINAL DECISION
TransGrid transmission determination 2018 to 2023

Attachment 2 – Regulatory asset base

May 2018

AUSTRALIAN ENERGY REGULATOR

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Note

This attachment forms part of the AER's final decision on TransGrid's transmission determination for 2018–23. It should be read with all other parts of the final decision.

The final decision includes the following documents:

Overview

TransGrid transmission determination 2018–23

Attachment 1 – Maximum allowed revenue

Attachment 2 – Regulatory asset base

Attachment 5 – Regulatory depreciation

Attachment 6 – Capital expenditure

Attachment 8 – Corporate income tax

Attachment 9 – Efficiency benefit sharing scheme

Attachment 10 – Capital expenditure sharing scheme

Attachment A – Negotiating framework

Attachment B – Pricing methodology

Contents

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
DMIA	demand management innovation allowance
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
NSCAS	network support and control ancillary services
NSP	network service provider
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

Shortened form	Extended form
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

2 Regulatory asset base

Our revenue determination includes TransGrid's opening regulatory asset base (RAB) value as at 1 July 2018 and projected RAB value for the 2018–23 regulatory control period.[1] The value of the RAB substantially impacts TransGrid's revenue requirement, and the price consumers ultimately pay. Other things being equal, a higher RAB would increase both the return on capital and depreciation (return of capital) components of the revenue determination.[2]

2.1 Final decision

Opening RAB as at 1 July 2018

Our final decision is to determine an opening RAB value of $6371.2 million ($nominal) as at 1 July 2018 for TransGrid. This amount is $5.8 million (or 0.1 per cent) lower than TransGrid's revised proposal of $6377.0 million ($nominal). It reflects the update to the roll forward model (RFM) for 2017–18 actual inflation that is now available. This final decision is 0.02 per cent ($1.5 million) lower than our draft decision value for TransGrid's opening RAB of $6372.7 million ($nominal).

To determine the opening RAB as at 1 July 2018, we have rolled forward the RAB over the 2014–18 regulatory control period to determine a closing RAB value at 30 June 2018. Our approach to rolling forward the RAB generally involves an adjustment to account for the difference between actual capex and the estimate approved for the final year of the previous regulatory control period.[3] However, this adjustment is not required for establishing TransGrid's opening RAB as at 1 July 2018 as the approved opening RAB value of $6075.8 million at 1 July 2014 does not include any estimated capex. This is because 2014–15 was a transitional year for TransGrid and we were able to include the actual values for 2013–14 in our final decision for the 2014–18 regulatory control period.

In the draft decision, we reduced TransGrid's proposed opening RAB as at 1 July 2018 by correcting minor input issues and updating the actual 2016–17 CPI and the 2017–18 WACC inputs in the RFM.[4] We noted the roll forward of TransGrid's RAB included estimated capex for 2016–17 and 2017–18, and estimated inflation for 2017–18, because these actual values were not yet available.

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1 NER, cl. 6A.4.2 (3A) and (4)

2 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.

3 The end of period adjustment will be positive (negative) if actual capex is higher (lower) than the estimate approved at the 2014–18 determination.

4 AER, *Draft Decision: TransGrid transmission determination 2018–23, Attachment 2, Regulatory asset base*, September 2017, pp. 14–16.

In its revised proposal, TransGrid adopted our draft decision changes in full.[5] In addition, it has updated 2016–17 estimated capex with actuals and revised the 2017–18 estimate of capex with more up to date figures.[6] We have checked the 2016–17 actual capex in the revised proposal and are satisfied it reconciles with the values presented in TransGrid's regulatory accounts for that year. Further, we accept TransGrid's revision to the 2017–18 net capex estimate of $230.3 million ($nominal).[7] This amount is higher than in the initial proposal, reflecting more up-to-date data. We note that the financial impact of any difference between actual and estimated capex for 2017–18 will be accounted for at the next reset. Our final decision also updates the 2017–18 inflation input in the RFM with actual CPI for this year, which became available after TransGrid submitted its revised proposal.

We also consider the extent to which our roll forward of the RAB to 1 July 2018 contributes to the achievement of the capital expenditure incentive objective.[8] As discussed in the draft decision, the review period for this transmission determination is limited to 2015–16 capex.[9] Consistent with our draft decision, the overspending requirement for an efficiency review of past capex is not satisfied.[10] Accordingly, the capex incurred in that year is regarded as prudent and efficient, and included in the RAB—this is discussed further in attachment 6 of our draft decision.

For the purposes of this final decision, we have included TransGrid's actual capex for 2016–17 and estimated capex for 2017–18 in the RAB roll forward to 1 July 2018. At the next reset, the 2016–17 and 2017–18 capex will form part of the review period for whether past capex should be excluded for inefficiency reasons.[11] Our RAB roll forward applies the incentive framework approved in the previous transmission determination, which included the use of a forecast depreciation approach in combination with the application of the CESS.[12] As such, we consider that the 2014–18 RAB roll forward contributes to an opening RAB (as at 1 July 2018) that includes capex that reflects prudent and efficient costs, in accordance with the capital expenditure criteria.[13]

Table 2.1 sets out our final decision on the roll forward of TransGrid's RAB for the 2014–18 regulatory control period.

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5 TransGrid, *Revised revenue proposal*, December 2017, p. 143.

6 TransGrid, *Revised revenue proposal*, December 2017, p. 143; TransGrid, *Roll Forward Model - 1 December 2017*

7 This amount includes a half-WACC allowance to compensate for the six month period before capex is added to the RAB.

8 NER, cl. 6A.14.2(b).

9 AER, *Draft Decision: TransGrid transmission determination 2018–23, Attachment 2, Regulatory asset base*, September 2017, pp. 15.

10 TransGrid's actual capex incurred in 2015–16 is below the forecast allowance set at the previous transmission determination; NER, cl. S6A.2.2A(c).

11 Here, 'inefficiency' of past capex refers to three specific assessments (labelled the overspending, margin and capitalisation requirements) detailed in NER, cl. S6A.2.2A. The details of our ex post assessment approach for capex are set out in AER, *Capital expenditure incentive guideline*, November 2013, pp. 12–20.

12 AER, *TransGrid transmission determination 2015–18*, April 2015, p. 18.

13 NER, cll. 6A.5A(a), 6A.6.7(a), 6A.6.7(c) and 6A.14.2(b).

Table 2.1 AER's final decision on TransGrid's RAB for the 2014–18 regulatory control period ($ million, nominal)

	2014–15	2015–16	2016–17	2017–18 [a]
Opening RAB	6075.8	6190.6	6284.9	6286.0
Capital expenditure [b]	254.6	251.7	188.0	230.3
Inflation indexation on opening RAB	104.4	104.5	92.8	120.0
Less: straight-line depreciation [c]	244.2	261.9	279.7	265.0
Closing RAB	6190.6	6284.9	6286.0	6371.2
Closing RAB as at 30 June 2018				**6371.2** [d]

Source: AER analysis.

(a) Based on estimated capex provided by TransGrid.

(b) As incurred, net of disposals, and adjusted for actual CPI.

(c) Adjusted for actual CPI. Based on as-commissioned capex.

(d) There is no true-up required for 2013–14 capex as the approved opening RAB value of $6075.8 million at 1 July 2014 does not include any estimated capex. This is because 2014–15 was a transitional year for TransGrid and we were able to include the actual capex values for 2013–14 in our final decision for the 2014–18 regulatory control period.

Forecast closing RAB as at 30 June 2023

Once we have determined the opening RAB as at 1 July 2018, we roll forward that RAB by adding forecast capex and inflation, and reducing the RAB by depreciation to arrive at a forecast closing value for the RAB at the end of the 2018–23 regulatory control period.

For this final decision, we determine a forecast closing RAB as at 30 June 2023 of $7097.3 million for TransGrid. This is $341.0 million (or 4.6 per cent) lower than TransGrid's revised proposal of $7438.3 million ($nominal). Our final decision on the forecast closing RAB reflects the amended opening RAB as at 1 July 2018, and our final decisions on the expected inflation rate (section 2.2 of the Overview), forecast depreciation (attachment 5) and forecast capex (attachment 6).

We do not accept TransGrid's revised proposal to roll-in $25.7 million ($2017–18) to its RAB in 2018–19 for assets relating to the provision of network support and control ancillary services (NSCAS).[14] In our draft decision, we determined that the NSCAS assets should be rolled into the RAB in 2018–19 at a zero value.[15] TransGrid's revised proposal did not adopt our draft decision and has added the $25.7 million into its

14 These assets were originally procured by AEMO under a commercial arrangement with TransGrid to provide NSCAS from 4 February 2013 to 30 June 2019.

15 AER, *Draft decision: TransGrid determination 2018–23, Attachment 2—Regulatory asset base*, September 2017, p. 16.

revised proposed forecast RAB.[16] As discussed in attachment 6, we accept TransGrid's revised proposal to transfer these assets into the RAB on the basis that these assets are required to provide prescribed transmission services in the 2018–23 regulatory control period. However, we do not accept the revised proposal to transfer these assets into the RAB at a depreciated value of $25.7 million. We have instead included these assets into the RAB at a zero value in our alternative estimate of overall total capex consistent with our draft decision. We consider that a zero capital value reflects the capex criteria. See attachment 6 for further discussion on the revised proposed roll-in of the NSCAS assets.

Table 2.2 sets out our final decision on the forecast RAB for TransGrid over the 2018–23 regulatory control period.

Table 2.2 AER's final decision on TransGrid's RAB for the 2018–23 regulatory control period ($million, nominal)

	2018–19	2019–20	2020–21	2021–22	2022–23
Opening RAB	6371.2	6494.2	6652.7	6809.1	7004.4
Capital expenditure [a]	224.2	277.3	288.2	329.5	237.5
Inflation indexation on opening RAB	156.1	159.1	163.0	166.8	171.6
Less: straight-line depreciation [b]	257.3	278.0	294.7	300.9	316.2
Closing RAB	**6494.2**	**6652.7**	**6809.1**	**7004.4**	**7097.3**

Source: AER analysis.

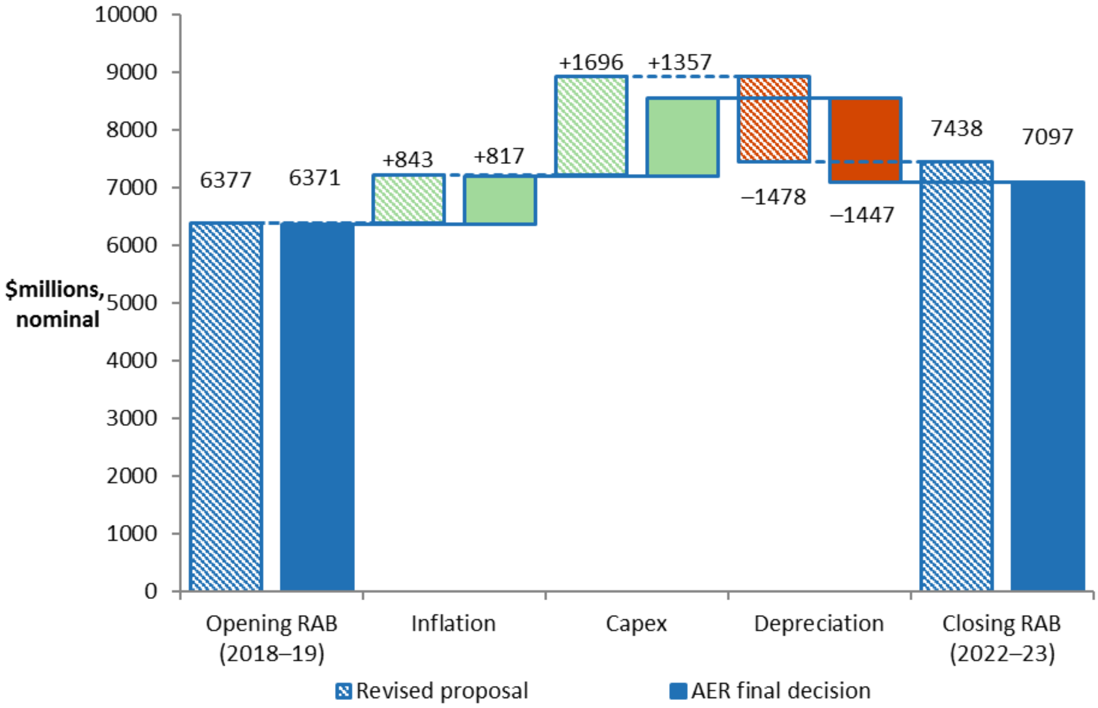
(a) As incurred and net of forecast disposals. In accordance with the timing assumptions of the post-tax revenue model (PTRM), the capex includes a half-WACC allowance to compensate for the six month period before capex is added to the RAB for revenue modelling.

(b) Based on as-commissioned capex.

Figure 2.1 shows the key drivers of the change in TransGrid's RAB over the 2018–23 regulatory control period for this final decision. Overall, the closing RAB at the end of the 2018–23 regulatory control period is forecast to be 11.4 per cent higher than the opening RAB at the start of that period, in nominal terms. The approved forecast net capex increases the RAB by 21.3 per cent, while expected inflation increases it by 12.8 per cent. Forecast depreciation, on the other hand, reduces the RAB by 22.7 per cent.

[16] TransGrid, *Revised Revenue Proposal 2018/19 – 2022/23*, 1 December 2017, p. 149.

Figure 2.1 Key drivers of changes in the RAB ($million, nominal)



Source: AER analysis.

Application of depreciation approach in RAB roll forward for next reset

When we roll forward TransGrid's RAB for the 2018–23 regulatory control period at the next reset we must adjust for depreciation. For this final decision, we determine that the depreciation approach to be applied to establish the RAB at the commencement of the 2023–28 regulatory control period will be based on the depreciation schedules (straight-line) using forecast capex at the asset class level approved for the 2018–23 regulatory control period. We consider this approach will provide sufficient incentives for TransGrid to achieve capex efficiency gains over the 2018–23 regulatory control period.

As discussed in the overview to this final decision, we will apply the CESS to TransGrid over the 2018–23 regulatory control period. We consider that the CESS will provide sufficient incentives for TransGrid to achieve capex efficiency gains over that period. We are satisfied that the use of a forecast depreciation approach in combination with the application of the CESS and our other ex post capex measures are sufficient to achieve the capex incentive objective.[17] Further, this approach is consistent with our draft decision, TransGrid's initial proposal and the *Framework and approach*.[18]

2.2 Assessment approach

We did not change our assessment approach for the RAB from our draft decision. Attachment 2 section 2.3 of our draft decision details that approach.

17 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 and 20–21. The guideline also sets out how all our capex incentive measures are consistent with the capex incentive objective.

18 AER, *Draft decision – Attachment 2 – Regulatory asset base*, September 2017, p. 17; TransGrid, *Regulatory proposal*, January 2017, p.113; AER, *Final decision: Framework and approach paper for TransGrid – Regulatory control period commencing 1 July 2018*, July 2016, pp. 18-22.