Draft Decision

Transgrid Transmission Determination 2023 to 2028

(1 July 2023 to 30 June 2028)

Attachment 2
Regulatory asset base

September 2022

AUSTRALIAN ENERGY REGULATOR

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601
Tel: 1300 585 165

AER reference: 202187

Note

This attachment forms part of the AER's draft decision on Transgrid's 2023–28 transmission determination. It should be read with all other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – Maximum allowed revenue

Attachment 2 – Regulatory asset base

Attachment 3 – Rate of return

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 6 – Operating expenditure

Attachment 7 – Corporate income tax

Attachment 8 – Efficiency benefit sharing scheme

Attachment 9 – Capital expenditure sharing scheme

Attachment 10 – Service target performance incentive scheme

Attachment 11 – Demand management innovation allowance mechanism

Attachment 12 – Pricing methodology

Attachment 13 – Pass through events

Contents

2 Regulatory asset base

The regulatory asset base (RAB) is the value of the assets used by Transgrid to provide prescribed transmission services.[1] Our revenue determination specifies the RAB as at the commencement of the regulatory control period and the appropriate method for the indexation of the RAB.[2] The indexation of the RAB is one of the building blocks that form the annual building block revenue requirement for each year of the 2023–28 regulatory control period.[3] We set the RAB as the foundation for determining a transmission network service provider's (TNSP's) revenue requirements, and use the opening RAB for each regulatory year to determine the return on capital and return of capital (regulatory depreciation) building blocks.[4]

This attachment presents our draft decision on the opening RAB value as at 1 July 2023 for Transgrid and our forecast of its RAB values over the 2023–28 period. It also presents our draft decision for establishing the RAB as at the commencement of the 2028–33 period using depreciation that is based on forecast capital expenditure (capex).[5]

2.1 Draft decision

We determine an opening RAB value of $9,228.7 million ($ nominal) as at 1 July 2023 for Transgrid. This value is $515.7 million (5.9%) higher than Transgrid's proposed opening RAB of $8,713.0 million as at 1 July 2022.[6] This increase is largely due to the updates we made to the consumer price index (CPI) inputs for 2021–22 and 2022–23 in the roll forward model (RFM) to reflect more up-to-date values:

- We have updated the estimated CPI for 2021–22 to 3.5%, reflecting the actual value based on the 2021 December quarter CPI published by the Australian Bureau of Statistics (ABS), which became available after Transgrid submitted its proposal. This compares to Transgrid's proposed input of 3.25%. The resulting indexation of the RAB for 2021–22 is $251.9 million in our draft decision, compared to the proposed $234.0 million.
- We have also updated the 2022–23 estimated CPI with the latest Reserve Bank of Australia (RBA) forecast published in its *Statement on Monetary Policy* to reflect the latest economic conditions.[7] For our draft decision, we adopt a CPI forecast of 7.8%, compared to Transgrid's proposal of 2.25%. This higher estimated value in our draft decision results in the indexation of the RAB for 2022–23 to be $618.6 million, compared to $177.5 million under Transgrid's proposal. This value will be updated again to reflect the actual CPI published by the ABS for our final decision.

1 NER, cl. 6A.6.1(a).

2 NER, cll. 6A.4.2(3A) and (4).

3 NER, cll. 6A.5.4(a)(1) and (b)(1).

4 NER, cll. 6A.5.4(a)(2) and (3).

5 NER, cl. 6A.14.1(5E).

6 Transgrid, *2023–28 Revenue proposal,* Jan 2022, p.123.

7 RBA, *Statement on Monetary Policy, Appendix: Forecasts*, August 2022.

As the RAB must be maintained in real terms by indexing for inflation,[8] the combined effect of our above amendments to CPI compared to Transgrid's proposal is a higher opening RAB value as at 1 July 2023 by $482.8 million (5.5%).

We largely accept Transgrid's proposed method for calculating the opening RAB. However, we have made the following revisions to Transgrid's other proposed inputs in the RFM:

- updated the nominal weighted average cost of capital (WACC) for 2022–23 and forecast straight-line depreciation values for 2018–23 following the most recent return on debt update in the 2018–23 post-tax revenue model (PTRM)
- removed capex in 2021–22 and 2022–23 relating to capitalised leases and instead included a lower amount representing the present value of the leases as at 1 July 2023 as a final year asset adjustment to reflect our approach to mid-period changes in capitalisation standards[9]
- included Software as a Service (SaaS) related expenditure as capex in 2021–22 and 2022–23 to be added to the RAB for the 2018–23 period, similarly reflecting our draft decision on changes in capitalisation standards[10]
- corrected an error in the capex and forecast depreciation inputs related to equity raising costs to reflect the 2022–23 return on debt updated PTRM for Transgrid's 2018–23 determination.

To determine the opening RAB as at 1 July 2023, we have rolled forward the RAB over the 2018–23 period to determine a closing RAB value at 30 June 2023 in accordance with our RFM.[11] This roll forward process includes an adjustment at the end of the 2018–23 period to account for the difference between actual 2017–18 capex and the estimate approved in the 2018–23 determination.[12] All other adjustments are applied as part of the final year adjustments as at 30 June 2023 to establish the opening RAB value at 1 July 2023.[13]

Table 2.1 sets out our draft decision on the roll forward of Transgrid's RAB over the 2018–23 period.

8 NER, cll 6A.5.4(b)(1) and 6A.6.1(e)(3).

9 Details of our approach is discussed further in section 2.4.1 and Attachment 8.

10 This is consistent with our approach for leases (Attachment 8). Costs related to SaaS will begin being treated as opex from the start of the forecast 2023–28 period.

11 AER, *Electricity transmission network service providers: Roll forward model (version 4.1)*, May 2022.

12 The end of period adjustment will be positive (negative) if actual capex is higher (lower) than the estimate approved at the 2018–23 determination.

13 Transgrid did not propose any final year asset adjustments. However, our draft decision includes an adjustment for capitalised leases to be rolled into the RAB at the end of the 2018–23 period.

Table 2.1 AER's draft decision on Transgrid's RAB for the 2018–23 regulatory control period ($ million, nominal)

	2018–19	2019–20	2020–21	2021–22[a]	2022–23[b]
Opening RAB	6,371.2	6,463.9	6,638.7	7,201.1	7,930.5
Capital expenditure[c]	235.0	330.9	795.2	769.0	992.3
Inflation indexation on opening RAB[d]	113.7	119.0	57.1	251.9	618.6
Less: straight-line depreciation[e]	256.0	275.1	290.0	291.5	316.7
Interim closing RAB	6,463.9	6,638.7	7,201.1	7,930.5	9,224.7
Difference between estimated and actual capex in 2017–18					–0.1
Return on difference for 2017–18 capex					–0.1
Final year asset adjustment[f]					4.2
Closing RAB as at 30 June 2023					**9,228.7**

Source: AER analysis.

(a) Based on estimated capex provided by Transgrid. We will update the RAB roll forward with actual capex in the final decision.

(b) Based on estimated capex provided by Transgrid. We expect to update the RAB roll forward with a revised capex estimate in the final decision, and true-up the RAB for actual capex at the next reset.

(c) As incurred, net of disposals, and adjusted for actual CPI and half-year WACC.

(d) We will update the RAB roll forward for actual CPI for 2022–23 in the final decision.

(e) Adjusted for actual CPI. Based on forecast as commissioned capex.

(f) Includes the addition of capitalised leases as at 30 June 2023.

We determine a forecast closing RAB value as at 30 June 2028 of $10,532.2 million ($ nominal). This is $606.3 million (6.1%) higher than the amount of $9,925.8 million proposed by Transgrid. This increase is primarily driven by our draft decision on the rate of return (Attachment 3). Our draft decision on the forecast closing RAB also reflects the amended opening RAB as at 1 July 2023, and our draft decisions on the expected inflation rate (Attachment 3), forecast depreciation (Attachment 4) and forecast capex (Attachment 5).[14]

Table 2.2 sets our draft decision on the forecast RAB values for Transgrid over the 2023–28 period.

[14] Capex enters the RAB net of forecast disposals. It includes equity raising costs (where relevant) and the half-year WACC to account for the timing assumptions in the PTRM. Therefore, our draft decision on the forecast RAB also reflects our amendments to the rate of return for the 2023–28 period (Attachment 3).

Table 2.1 AER's draft decision on Transgrid's RAB for the 2023–28 regulatory control period ($ million, nominal)

	2023–24	2024–25	2025–26	2026–27	2027–28
Opening RAB	9,228.7	9,890.8	10,167.8	10,294.4	10,401.3
Capital expenditure[a]	735.3	370.6	255.7	241.3	279.8
Inflation indexation on opening RAB	276.8	296.7	305.0	308.8	312.0
Less: straight-line depreciation[b]	350.0	390.2	434.1	443.1	460.8
Closing RAB	**9,890.8**	**10,167.8**	**10,294.4**	**10,401.3**	**10,532.2**

Source: AER analysis.

(a) As incurred, and net of forecast disposals. In accordance with the timing assumptions of the PTRM, the capex includes a half-year 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.

We determine that the forecast depreciation approach is to be used to establish the opening RAB at the commencement of the 2028–33 period for Transgrid.[15] We consider this approach is consistent with the capex incentive objective in that it will provide sufficient incentives for Transgrid to achieve capex efficiency gains over the 2023–28 period. This approach is also consistent with Transgrid's proposal[16] and our *Framework and Approach* paper.[17]

2.2 Transgrid's proposal

Transgrid used our RFM to establish an opening RAB as at 1 July 2023 and version 5 of our PTRM to roll forward the RAB over the 2023–28 period.[18]

Transgrid proposed an opening RAB value as at 1 July 2018 of $6,371.2 million ($ nominal). Rolling forward this RAB and using depreciation based on forecast capex (approved for the 2018–23 period), Transgrid proposed a closing RAB as at 30 June 2023 of $8,713.0 million ($ nominal).[19]

In rolling forward the RAB, Transgrid's estimated capex for 2021–22 and 2022–23 included expenditure related to capitalised leases as a result of a change in accounting standards AASB 16.[20] Transgrid allocated capex of $1.4 million and $1.0 million ($ nominal) for 2021–22 and 2022–23 respectively to a new asset class 'Leasehold land and property' over the 2018–23 period.

Table 2.3 sets out Transgrid's proposed roll forward of its RAB during the 2018–23 period.

15 NER, cl. S6A.2.2B(a).

16 Transgrid, *2023–28 Revenue proposal*, January 2022, p. 127.

17 AER, *Transgrid 2023–28 – Framework and approach*, July 2021, p. 28.

18 We have released a new version of the PTRM (version 5.1) in May 2022 after Transgrid submitted its revenue proposal. Our draft decision uses this updated version 5.1 PTRM.

19 Transgrid, *2023–28 Revenue proposal*, January 2022, p. 123.

20 Transgrid, *2023–28 Roll-forward model*, January 2022.

Table 2.3 Transgrid's proposed RAB for the 2018–23 regulatory control period ($ million, nominal)

	2018–19	2019–20	2020–21	2021–22[a]	2022–23[a]
Opening RAB	6,371.2	6,463.9	6,638.7	7,201.1	7,888.2
Capital expenditure[b]	235.0	330.9	795.2	744.6	963.3
Inflation indexation on opening RAB	113.7	119.0	57.1	234.0	177.5
Less: straight-line depreciation[c]	256.0	275.1	290.0	291.5	315.9
Interim closing RAB	6,463.9	6,638.7	7,201.1	7,888.2	8,713.1
Difference between estimated and actual capex in 2017–18					–0.1
Return on difference for 2017–18 capex					–0.0
Closing RAB as at 30 June 2023					**8,713.0**

Source: Transgrid, *2023–28 Roll-forward model*, January 2022.

(a) Based on estimated capex.

(b) As incurred, net of disposals, adjusted for actual CPI and half-year WACC.

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

Transgrid proposed a forecast closing RAB as at 30 June 2028 of $9,925.8 million ($ nominal). This value reflects its proposed opening RAB, forecast capex, expected inflation, and depreciation (based on forecast capex) over the 2023–28 period. Table 2.4 shows its projected RAB over the 2023–28 period.

Table 2.4 Transgrid's proposed RAB for the 2023–28 regulatory control period ($million, nominal)

	2023–24	2024–25	2025–26	2026–27	2027–28
Opening RAB	8,713.0	9,335.5	9,594.8	9,717.6	9,805.3
Capital expenditure[a]	733.8	394.5	294.4	271.8	320.2
Inflation indexation on opening RAB	204.8	219.4	225.5	228.4	230.4
Less: straight-line depreciation[b]	316.1	354.5	397.0	412.5	430.0
Closing RAB	**9,335.5**	**9,594.8**	**9,717.6**	**9,805.3**	**9,925.8**

Source: Transgrid, *2023–28 Post-tax revenue model,* January 2022.

(a) As incurred, and net of forecast disposals. Inclusive of the half-year WACC to account for the timing assumptions in the PTRM.

(b) Based on as commissioned capex.

2.3 Assessment approach

We roll forward Transgrid's RAB during the 2018–23 period to establish the opening RAB as at 1 July 2023. This value must be adjusted for any differences in estimated and actual capex.[21] It may also be adjusted to reflect any changes in the use of the assets. We may include (or remove) assets from the RAB in circumstances where the nature of assets has

21 NER, cl. S6A.2.1(f)(3).

changed and they are now contributing (or no longer contributing) to the provision of prescribed transmission services.[22]

To determine the opening RAB, we developed an asset base RFM that a TNSP must use in preparing its revenue proposal.[23] We used the RFM to roll forward Transgrid's RAB from the beginning of the final year of the 2014–18 period,[24] through the 2018–23 period, to the beginning of the 2023–28 period.

The roll forward for each year of the above period occurs by:

- adding actual inflation (indexation) adjustment to the opening RAB for the relevant year. This adjustment is consistent with the inflation factors used in the annual indexation of the maximum allowed revenue[25]
- adding actual or estimated capex to the RAB for the relevant year.[26] We review a TNSP's past capex and may exclude past capex from being rolled into the RAB where total capex exceeds the regulatory allowance.[27] The details of our assessment approach for capex overspend are set out in the *Capital expenditure incentive guideline*. We note that our review of past capex does not include the last two years of the 2018–23 period—these will instead be reviewed at the next reset.[28] We check actual capex amounts against audited regulatory accounts data and generally accept the capex reported in those accounts in rolling forward the RAB.[29] However, there may be instances where adjustments are required to the annual regulatory accounts data[30]
- subtracting depreciation from the RAB for the relevant year, calculated in accordance with the rates and methodologies allowed (if any) in the transmission determination for Transgrid's 2018–23 period.[31] Depreciation based on forecast or actual capex can be used to roll forward the RAB.[32] For this draft decision, we use depreciation based on forecast capex for rolling forward the RAB for Transgrid's 2018–23 period.[33] Depreciation

---

22 NER, cll. S6A.2.1(f)(6)–(8) and S6A.2.3.

23 NER, cll. 6A.6.1(b), 6A.6.1(e) and S6A.1.3(5).

24 The roll forward commences in the final year of the 2014–18 regulatory control period to allow us to adjust for the difference between actual 2017–18 capex and the estimated 2017–18 capex used in our 2014–18 transmission determination. This adjustment will be positive (negative) if actual capex is higher (lower) than the estimate approved in the 2014–18 determination. See NER, cl. S6A.2.1(f)(3).

25 NER, cl. 6A.6.1(e)(3).

26 NER, cl. S6A.2.1(f)(4).

27 NER, cl. S6A.2.2A. Under the NER, cl S6A.2.2A(b), the exclusion of inefficient capex could only come from there areas: overspend in capex, margin paid to third party and inappropriate capitalisation of opex as defined in cll. S6A.2.2A(c), (d) and (3) of the NER.

28 NER, cl. S6A.2.2A(a1). The two year lag ensures that actual capex (instead of estimated capex) is available when the review of past capex commences.

29 We will update any estimated capex with actual capex at the time of the next reset.

30 For example, we make adjustments for movements in provisions if the actual capex amounts reported in the regulatory accounts include capitalised provisions.

31 NER, cl. S6A.2.1(f)(5).

32 NER, cl. 6A.4.2(a1).

33 The use of forecast depreciation is consistent with the depreciation approach established in the transmission determination for the 2018–23 period for Transgrid. See AER, *Final decision – Transgrid 2018–23 – Transmission determination – Attachment 2 – Regulatory asset base*, May 2018, p. 10.

based on forecast capex will also be used for the 2023–28 period RAB roll forward at the next reset[34]

- subtracting any gross proceeds for asset disposals for the relevant year from capex to be added to the RAB.[35] We check these amounts against audited regulatory accounts 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 2018–23 period.[36] The PTRM used to calculate the annual building block revenue requirement for the 2023–28 period generally adopts the same RAB roll forward approach as the RFM although the adjustments to the RAB are based on forecasts, rather than actual amounts.[37]

The opening RAB for the 2028–33 period can be determined using depreciation based either on forecast or actual capex incurred during the 2023–28 period.[38] To roll forward the RAB using depreciation based on forecast capex, we would use the forecast depreciation contained in the PTRM for the 2023–28 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 2023–28 period.

Our decision on whether to use actual or forecast depreciation must be consistent with the capex incentive objective. This objective is to ensure that increases to the RAB through capex only occur where that capex reasonably reflects the capex criteria.[39] In deciding between actual and forecast depreciation, we have regard to:[40]

- the incentives the service provider has to undertake efficient capex
- substitution possibilities between assets with different lives and the relative benefits of each
- the extent of overspending and inefficient overspending relative to the allowed forecast
- the capex incentive guideline
- the capex 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 amounts.[41] Factors that influence the RAB will therefore flow through

---

34 Refer to section 2.4.3 for the reasons.

35 NER, cl. S6A.2.1(f)(6).

36 Any adjustments to the closing RAB at the end of the current regulatory control period for asset movements will be recorded under the 'Final Year Assets Adjustments' section in the RFM.

37 NER, cl. S6A.2.4(c).

38 NER, cl. S6A.2.2B(a).

39 NER, cl. 6A.5A(a).

40 NER, cl. S6A.2.2B(b) and (c).

41 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. It should be noted that the return on capital is calculated based on the RAB measured on an as incurred basis while depreciation (return of capital) is calculated based on the RAB measured on an as commissioned basis.

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

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 capex[42]
- depreciation
- indexation adjustment – so the RAB is presented in nominal terms, consistent with the rate of return.

The opening RAB of the 2023–28 period 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 throughout the regulatory control period.

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

We maintain the RAB in real terms by indexing for inflation.[43] A nominal rate of return (WACC) is multiplied by the opening RAB to produce the return on capital building block.[44] To prevent the double counting of inflation through the nominal WACC and indexed RAB,[45] the regulatory depreciation building block has an offsetting reduction for indexation of the RAB.[46] Indexation of the RAB and the offsetting adjustment made to depreciation results in a smoother revenue recovery profile over the life of an asset than if it was un-indexed. If the RAB was un-indexed, there would be no need for an offsetting adjustment to the depreciation calculation of total revenue. This alternative approach provides for overall revenues being higher early in the asset's life (as a result of more depreciation being returned to the TNSP)

---

42 Net capex is gross capex less disposals. The rate of return or WACC also influences the size of the capex. This is because 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-year WACC to arrive at an end of year value. It then begins depreciating the following year.

43 NER, cll 6A.5.4(b)(1) and 6A.6.1(e)(3).

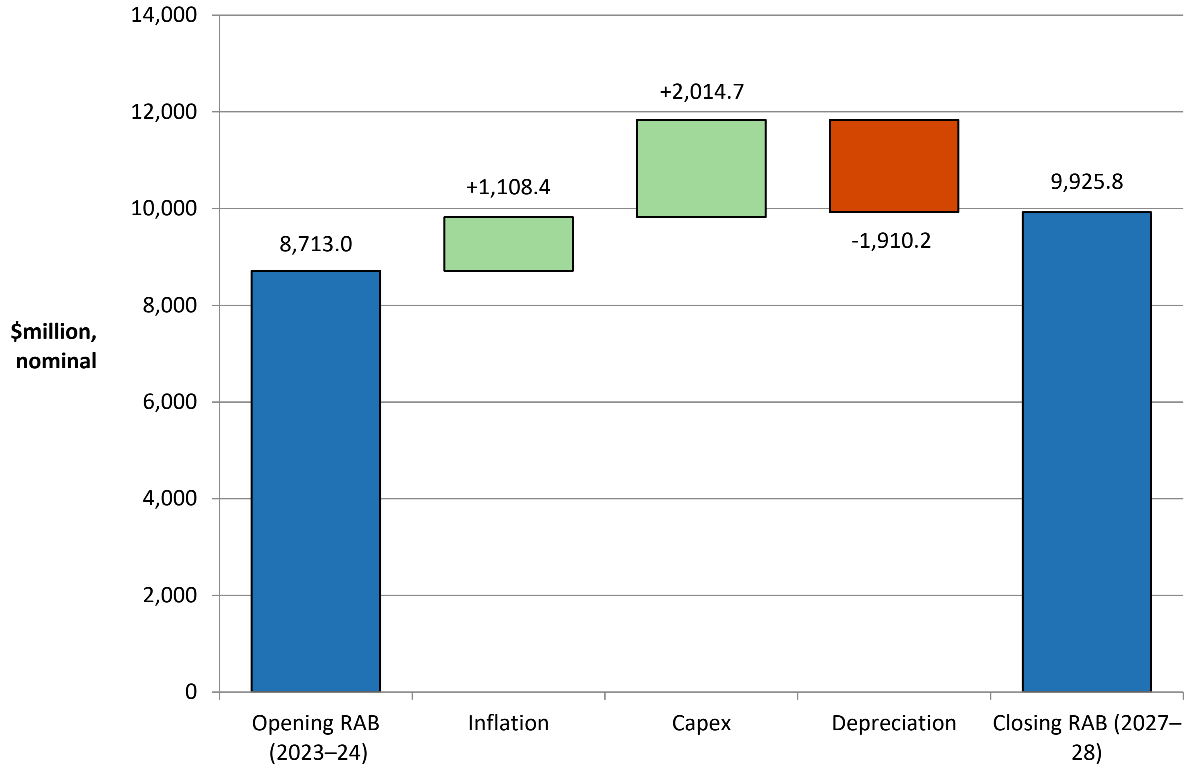
44 AER, *Rate of return instrument*, cll. 1, 3(a) and 36(c), December 2018.

45 NER, cl. 6A.5.4(b)(1)(ii).

46 If the asset lives are extremely long, such that the RAB depreciation rate is lower than the inflation rate, then negative regulatory depreciation can emerge. The indexation adjustment is greater than the RAB depreciation in such circumstances. Please also refer to section 4.3.1 of Attachment 4 of this draft decision for further explanation of the offsetting adjustment to the depreciation.

and lower in the future—producing a steeper downward sloping profile of total revenue.[47] The implications of an un-indexed RAB are discussed further in Attachment 4.

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



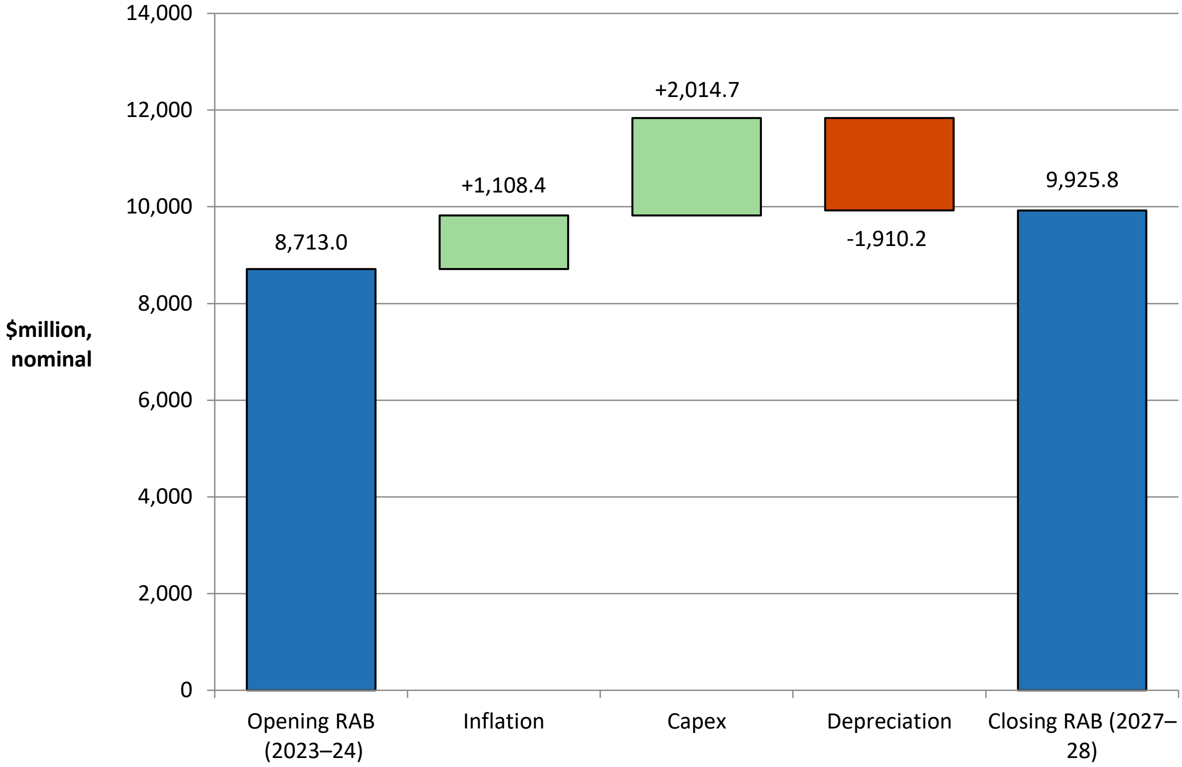
Source: Transgrid, *2023–28 Post-tax revenue model,* January 2022.

Note: Capex is net of forecast disposals. It is inclusive of the half-year WACC to account for the timing assumptions in the PTRM.

shows the key drivers of the changes in the RAB over the 2023–28 period as proposed by Transgrid. Overall, the closing RAB at the end of the 2023–28 period would be 13.9% 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 23.1%, while expected inflation increases it by 12.7%. Forecast depreciation, on the other hand, reduces the RAB by 21.9%.

47 A change of approach from an indexed RAB to an un-indexed RAB would result in an initial step change increase in revenues to preserve net present value neutrality.

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



Source: Transgrid, *2023–28 Post-tax revenue model,* January 2022.

Note: Capex is net of forecast disposals. It is inclusive of the half-year WACC to account for the timing assumptions in the PTRM.

Transgrid's proposed forecast depreciation for the 2023–28 period is $1910.2 million ($ nominal). We have accepted most aspects of Transgrid's depreciation proposal, subject to some updates and modelling amendments, as it satisfies the requirements of the National Electricity Rules (NER) in terms of assigned asset lives. This is discussed in Attachment 4. The depreciation amount largely depends on the opening RAB, which in turn depends on capex in the past.[48] Depreciation associated with forecast capex is a relatively smaller amount.

However, we do have concerns with the size of the forecast capex proposed by Transgrid. It is the largest driver of the increase in the RAB over the 2023–28 period. In this draft decision, we have reduced Transgrid's proposed forecast capex by $150.1 million ($2022–23), or 8.0% over the 2023–28 period.[49] Our review of Transgrid's forecast capex is set out in Attachment 5 of this draft decision.

48 At the time of this draft decision, the roll forward of Transgrid's RAB includes estimated capex values for 2021–22 and 2022–23. We expect to update the 2021–22 estimated capex with actuals in the final decision. We may also update the 2022–23 estimated capex with a revised estimate in the final decision.

49 This amount is net of asset disposals and excludes half-year WACC adjustment.

A 10% increase in the opening RAB causes revenues to increase by about 2.6%. 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.[50]

2.4 Reasons for draft decision

We determine an opening RAB value for Transgrid of $9228.7 million ($ nominal) as at 1 July 2023, an increase of $515.7 million (5.9%) from the proposed value. We forecast a closing RAB value of $10532.2 million by 30 June 2028. This represents an increase of $606.3 million (6.1%) compared with Transgrid's proposal. The reasons for our draft decision are discussed below.

2.4.1 Opening RAB as at 1 July 2023

We determine an opening RAB value of $9228.7 million ($ nominal) as at 1 July 2023 for Transgrid. This value is $515.7 million (5.9%) higher than Transgrid's proposed opening RAB of $8713.0 million as at 1 July 2023.[51] This increase is primarily driven by updates to the CPI inputs for 2021–22 and 2022–23 and our approach to addressing changes in capitalisation of expenditure within a regulatory control period.

To determine the opening RAB for Transgrid as at 1 July 2023, we have rolled forward the RAB over the 2018–23 period to determine a closing RAB value as at 30 June 2023. In doing so, we reviewed the key inputs of Transgrid's proposed RFM, such as actual inflation, rate of return, gross capex values, asset disposal values, forecast depreciation and asset lives. We found these were generally correct and reconcile with relevant data sources such as ABS data, regulatory accounts and the 2018–23 decision models.[52] However, we consider some of Transgrid's proposed RFM inputs require updating with newly available data. Our draft decision RFM also reflects our approach to capitalisation changes for leases and SaaS related expenditures.

We have therefore made the following updates to Transgrid's proposed RFM inputs:

- Removed capex related to leases for 2021–22 and 2022–23 from the RFM as a result of our approach to capitalising leases from operating expenditure (opex) to capex. We have instead rolled-in an amount of $4.2 million representing the remaining lease value as at 30 June 2023 as a final year asset adjustment to be included in the opening RAB as at 1 July 2023. This is discussed further in section 2.4.1.1 below.
- Similarly, Transgrid's proposed RFM did not include capex related to SaaS for 2021–22 and 2022–23 as it was to be treated as opex going forward. As discussed in section 2.4.1.1 below, we do not agree with Transgrid's proposed timing to account for capitalisation changes. We have therefore reinstated capex related to SaaS for 2021–22

---

50 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.

51 Transgrid, *2023–28 Revenue proposal*, January 2022, p. 123.

52 At the time of this draft decision, the roll forward of Transgrid's RAB includes estimated capex values for 2021–22 and 2022–23. We expect to update the 2021–22 estimated capex with actuals in the final decision. We may also update the 2022–23 estimated capex with a revised estimate in the final decision.

and 2022–23 to be rolled forward in the RFM and included in the opening RAB as at 1 July 2023.

- Updated Transgrid's estimate for the 2021–22 inflation of 3.25% with actual CPI of 3.5% published by the ABS, which became available after Transgrid submitted its proposal. We have also updated the estimated CPI for 2022–23 to better reflect the latest economic conditions. Transgrid's proposal had used an estimated CPI input of 2.25% for 2022–23. We have updated this value to 7.8% based on the RBA's *Statement on Monetary Policy*.[53] These CPI updates have therefore resulted in an increase to the closing RAB value by $482.8 million.[54]
- Updated the nominal WACC input for 2022–23 following the most recent return on debt update for that year in the 2018–23 PTRM.
- Updated as incurred and as commissioned equity raising costs capex in 2018–19 and the forecast depreciation input for the years 2019–20 to 2022–23 due to the 2022–23 return on debt update to Transgrid's PTRM for the 2018–23 period.[55]

2.4.1.1 Change in capitalisation policy

Transgrid proposed to capitalise its lease costs to reflect a change in accounting standards (AASB 16).[56] These costs were previously treated as opex. In doing so, Transgrid has proposed to include estimated capex for 2021–22 and 2022–23 in the RFM, allocated to an unapproved 'Leasehold land and property' asset class. Similarly, due to new International Financial Reporting Standards (IFRS) guidance,[57] Transgrid proposed to reclassify SaaS expenditure for the final two years of the 2018–23 period (2021–22 and 2022–23) as opex, which was previously treated as capex.

We have assessed Transgrid's approach to capitalising lease costs and expensing SaaS costs. We do not consider it to be appropriate as there are potential windfall gains and losses under the incentive schemes associated with a change in capitalisation treatment mid-period for short-lived assets. Instead, our draft decision approach is to maintain the current capitalisation treatment for the 2018–23 period consistent with the basis approved in the 2018–23 determination and allocate capex and opex costs accordingly. We will then apply the new capitalisation changes from the start of the 2023–28 period. Our draft decision approach entails the following:

- For leases-related expenditure, we will continue treating it as opex for the 2018–23 period. A remaining value of these leases as at 30 June 2023, representing the present value of its existing leases at this point in time, is to be rolled into the RAB as a final year

---

53 RBA, *Statement on Monetary Policy, Appendix: Forecasts*, August 2022.

54 All else being equal, a higher CPI will result in a higher inflation indexation for the RAB and therefore increase the value of the RAB. In our final decision, we will update the estimate for 2022–23 expected inflation with actual CPI.

55 This is because if the external equity raising threshold is achieved, any resulting benchmark equity raising cost allowance will be recalculated to reflect any new financing cost requirements as a result of the return on debt update.

56 AASB 16 was expected to apply from 1 July 2019.

57 The IFRS guidance 'Configuration or Customisation Costs in a Cloud Computing Arrangement (IAS 38)' was published in April 2021.

asset adjustment. A remaining life is also assigned, reflecting the average remaining term of the leases for Transgrid to recover these costs.

- For SaaS-related expenditure, it will remain as capex and reported as such in the RFM to be rolled into the RAB over the 2018–23 period. Forecast expenditure related to SaaS, however, will not be included in the forecast RAB roll forward for the 2023–28 period as the costs are included in the opex forecast.

The reasons for the above approach are set out in Attachment 8.

In response to an information request, Transgrid indicated it had no concerns with our approach to apply capitalisation changes at the start of the next regulatory control period.[58] In doing so, Transgrid has provided values of $24.1 million and $5.0 million for SaaS expenditure to be added as capex in the RFM for the years 2021–22 and 2022–23 respectively.[59] Similarly, Transgrid has also provided a total roll-in value for leases of $4.2 million as a final year asset adjustment, reflecting the present value of its existing leases as at 30 June 2023.[60] Transgrid has also provided the remaining terms of the relevant leases for forecast depreciation purposes (discussed in more detail in Attachment 4).

2.4.1.2 Ex post review of 2016–21 capex

We also consider the extent to which our roll forward of the RAB to 1 July 2023 contributes to the achievement of the capex incentive objective.[61] In the 2018–23 transmission determination, we noted that the 2016–17 and 2017–18 capex would form part of the review period for whether past capex should be excluded for inefficiency reasons in this transmission determination.[62] The capex for 2018–21 also forms part of the review period. Consistent with the requirements of the NER, we have excluded the last two years of the 2018–23 period from the review of past capex for this transmission determination.[63] This approach ensures that actual capex (instead of estimated capex) is available when the review of past capex commences.

Transgrid's aggregate actual capex incurred from 2016–17 and 2020–21 is above the forecast allowance set at the previous relevant transmission determinations. Therefore, the overspending requirement for an efficiency review of past capex is satisfied.[64] However, for the reasons discussed in Attachment 5, we consider the capex incurred in those years is consistent with the capex criteria and can therefore be included in the RAB.[65]

Further, for the purposes of this draft decision, we have included estimated capex for 2021–22 and 2022–23 in the RAB roll forward to 1 July 2023. At the next reset, the 2021–22 and 2022–23 capex will form part of the review period for assessing whether past capex should

---

58 Transgrid, *Response to information request IR 033,* 4 August 2022.

59 Transgrid, *Response to information request IR 033,* 8 August 2022.

60 Transgrid, *Email response to AER information request IR 007,* 20 May 2022.

61 NER, cll. 6A.14.2(b) and 6A.5A(a).

62 AER, *Final decision – Transgrid transmission determination – Attachment 2 – Regulatory asset base*, May 2018, p. 7.

63 NER, cl. S6A.2.2A(a1).

64 NER, cl. S6A.2.2A(c).

65 NER, cl. S6A.2.2A(c).

be excluded for inefficiency reasons.[66] 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 capital expenditure sharing scheme (CESS).[67] As such, we consider that the 2018–23 RAB roll forward contributes to an opening RAB (as at 1 July 2023) that includes capex that reflects prudent and efficient costs, in accordance with the capital expenditure criteria.[68]

2.4.2 Forecast closing RAB as at 30 June 2028

We forecast a closing RAB value of $10,532.2 million by 30 June 2028 for Transgrid, which represents an increase of $606.3 million (6.1%) to Transgrid's proposal. The increase reflects our draft decision on the inputs for determining the forecast RAB in the PTRM. Our draft decision used version 5.1 of the PTRM to forecast the closing RAB by 30 June 2028.[69] This new version of the PTRM was published after Transgrid submitted its revenue proposal and corrects for a calculation error.[70]

The change in the size of the RAB over the 2023–28 period depends on our assessment of its various components including forecast capex (Attachment 5), expected inflation (Attachment 3) and forecast depreciation (Attachment 4). Inflation and capex increases the RAB, while depreciation and disposals reduce it.

To determine the forecast RAB value for Transgrid, we amended the following PTRM inputs:

- we increased Transgrid's proposed opening RAB as at 1 July 2023 by $515.7 million ($ nominal) or 5.9% (section 2.4.1)
- we decreased Transgrid's proposed forecast capex for the 2023–28 period by $132.1 million ($ nominal) or 6.6% (Attachment 5)[71]
- we updated Transgrid's proposed expected inflation rate from 2.35% per annum to 3.0% per annum over the 2023–28 period (Attachment 3). Compared to the proposal, our draft decision results in an increase to the indexation of the RAB component for the 2023–28 period by $390.8 million ($ nominal) or 35.3%[72]
- we increased Transgrid's proposed forecast straight-line depreciation for the 2023–28 period by $168.1 million ($ nominal) or 8.8% (Attachment 4).

---

66 Here, 'inefficiency' of past capex refers to three specific assessments (labelled the overspending, margin and capitalisation requirements) detailed in NER, cl. S6A.2.2A(b). The details of our ex post assessment approach are set out in AER, Capital expenditure incentive guideline, November 2013, pp. 13–20.

67 AER, *Final decision – Transgrid transmission determination – Attachment 2 – Regulatory asset base*, May 2018, p. 10.

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

69 AER, *Electricity transmission network service providers: Post-tax revenue model (version 5.1)*, May 2022.

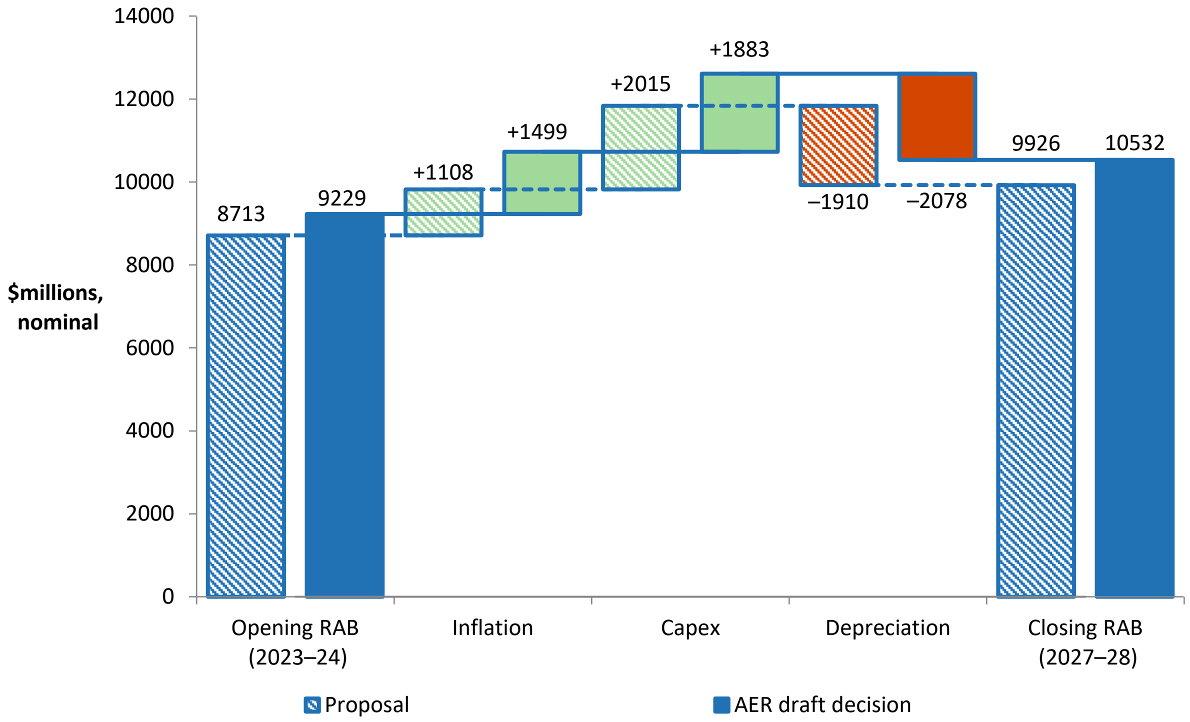
70 The error affects the calculation of expected inflation for a regulatory control period longer than 5 years. As a result, this error does not affect Transgrid over the forecast 2023–28 period.

71 This figure reflects as incurred capex net of asset disposals, and inclusive of a half-year WACC adjustment.

72 The increase in the indexation of the RAB is primarily due to an increase in the expected inflation rate and higher opening RAB in our draft decision.

Figure 2.2 shows the key drivers of the change in Transgrid's RAB over the 2023–28 period for this draft decision. Overall, our draft decision closing RAB at the end of the 2023–28 period is forecast to be 14.1% higher than the opening RAB at the start of that period, in nominal terms. The approved forecast net capex increases the RAB by 20.4%, while expected inflation increases it by 16.2%. Forecast depreciation, on the other hand, reduces the RAB by 22.5%.

Figure 2.2 Key drivers of changes in the RAB – Transgrid's proposal compared with the AER's draft decision ($ million, nominal)



Source: AER analysis.

Note: Capex is net of forecast disposals. It is inclusive of the half-year WACC to account for the timing assumptions in the PTRM.

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

We determine that the depreciation approach to be applied to Transgrid's opening RAB at the commencement of the 2028–33 period will be based on the depreciation schedules (straight-line) using forecast capex at the asset class level approved for the 2023–28 period. We consider this approach will provide sufficient incentives for Transgrid to achieve capex efficiency gains over the 2023–28 period.[73]

Transgrid's proposal noted and supported our *Framework and Approach* paper[74] specifying the use of the forecast depreciation approach in rolling forward the RAB for the commencement of the 2028–33 period.[75] Therefore, consistent with our *Framework and*

---

73 NER, cll 6A.14.1(5E) and S6A.2.2B.

74 AER, *Transgrid 2023–28 – Framework and approach*, July 2021, p. 27.

75 Transgrid, *2023–28 Revenue proposal,* January 2022, p. 76.

Approach paper and Transgrid's proposal, we determine that the forecast depreciation approach should be used to establish the RAB as at 1 July 2028.

We have used forecast depreciation for this draft decision when rolling forward the opening RAB at the commencement of the 2023–28 period (section 2.4.1). The use of forecast depreciation to establish the opening RAB for the commencement of the 2028–33 period at the next reset therefore maintains the current approach.

As discussed in Attachment 9, Transgrid is currently subject to the CESS for the 2018–23 period. We will continue to apply the CESS to Transgrid over the 2023–28 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.[76]

[76] 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.

Glossary

Term	Definition
AASB	Australian Accounting Standards Board
ABS	Australian Bureau of Statistics
AER	Australian Energy Regulator
Capex	Capital expenditure
CESS	Capital expenditure sharing scheme
CPI	Consumer price index
IFRS	International Financial Reporting Standards
NER	National Electricity Rules
Opex	Operating expenditure
PTRM	Post-tax revenue model
RAB	Regulatory asset base
RBA	Reserve Bank of Australia
RFM	Roll forward model
SaaS	Software as a Service
TNSP	Transmission network service provider
WACC	Weighted average cost of capital