

# Final decision

Transgrid transmission determination  
1 July 2023 to 30 June 2028

Overview

April 2023

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## Note

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

As a number of issues were settled at the draft decision stage or required only minor updates, we have not prepared all Attachments. The final decision Attachments have been numbered consistently with the equivalent Attachments to our draft decision. In these circumstances, our draft decision reasons form part of this final decision.

The final 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 9 – Capital expenditure sharing scheme

Attachment 10 – Service target performance incentive scheme

Attachment 13 – Pass through events

## Executive summary

The Australian Energy Regulator (AER) exists to ensure energy consumers are better off, now and in the future. Consumers are at the heart of our work, and we focus on ensuring a secure, reliable, and affordable energy future for Australia. The regulatory framework governing electricity transmission and distribution networks is the National Electricity Law and Rules (NEL and NER). Our work is guided by the National Electricity Objective (NEO).

A regulated network business must periodically apply to us to determine the maximum allowed revenue it can recover from consumers using its network. In January 2022, we received an initial revenue proposal from NSW and ACT electricity transmission network service provider, Transgrid, for the five-year regulatory control period starting 1 July 2023 to 30 June 2028 (2023–28 period). Having consulted on that initial proposal, our September 2022 draft decision, and Transgrid's December 2022 revised proposal, our final decision is that Transgrid can recover \$4,851.3 million (\$ nominal, smoothed) from consumers over the 2023–28 period. This is \$153.7 million (3.1%) less than Transgrid's revised proposal, and \$93.2 million (2.0%) more than our draft decision.

After assessing the additional information provided in Transgrid's revised proposal in support of its 2023–28 expenditure forecasts, Transgrid has not satisfied us that its total capital expenditure (capex) and operating expenditure (opex) forecasts are prudent and efficient under criteria set out in the Rules. When this occurs, the Rules require us to set out substitute estimates for these items which, in this final decision, has resulted in lower total capex and opex forecasts than put forward by Transgrid in its revised proposal. We are satisfied that our substitute estimates represent forecasts that reasonably reflect the capex and opex criteria set out under the Rules and form part of an overall transmission determination that contributes to achieving the NEO to the greatest degree.

In addition to these expenditure reductions, movements in interest rates are further reducing total revenue. The lower rate of return in this final decision is decreasing the return on Transgrid's regulatory asset base relative to its revised proposal. Our final decision applies a lower expected inflation rate compared with Transgrid's revised proposal, which has the effect of increasing total revenue via the depreciation building block. However, the depreciation building block decreases in overall terms due to our lower capex forecast. Updates for these movements – that is, interest rates and expected inflation – are a standard part of our determination process and not areas of disagreement between us and Transgrid.

### Ensuring consumers pay no more than necessary for safe and reliable energy

The total revenue approved in this final decision will be the main component of Transgrid's transmission charges for the 2023–28 period. In nominal terms, which includes the impact of expected inflation, the impact of this final decision will be an increase to the transmission component of consumers' energy bills. For illustrative purposes, we estimate that the modelled impact of this final decision on the average annual electricity bill for:

- NSW residential and small business consumers would be an increase of \$19 (1.1%) and \$46 (1.1%), respectively, by 2027–28
- ACT residential and small business consumers would be an increase of \$16 (0.9%) and \$24 (0.9%), respectively, by 2027–28.

Our final decision does not accept Transgrid’s proposed total capex forecast. Our substitute forecast is 6.5% lower than Transgrid’s revised proposal. Replacement capex is the main driver of our reduction to Transgrid’s forecast, followed by augmentation capex. We accepted Transgrid’s revised capex forecast for information and communications technology and fleet. We consider that our substitute total capex forecast will provide for a prudent and efficient service provider in Transgrid’s circumstances to maintain the safety, reliability and security of electricity supply on the transmission network. We did not accept four of Transgrid’s proposed nine contingent projects because they did not meet Rules requirements.

Our final decision also does not accept Transgrid’s proposed total opex forecast. Our substitute forecast is 7.1% lower than Transgrid’s revised proposal. We consider that Transgrid is overstating what it will need to recover from consumers for step changes relating to cyber security and critical infrastructure and its proposed System Security Roadmap project.

Australia’s energy markets are undergoing a profound transformation. The National Electricity Market is moving from a centralised system of large fossil fuel (coal and gas) generation towards an array of smaller scale, widely dispersed wind and solar generators, hydroelectric generation, grid-scale batteries and demand response. Major reforms are ongoing to transform the market’s design to ensure it is best equipped for the post-transition energy market.

We are supportive of the energy transition and are committed to enabling prudent and efficient investments based on sound business cases that advance the long term interests of consumers. In support of this, our final decision has scrutinised and made reductions to Transgrid’s 2023–28 proposed expenditure forecasts where certain projects have not been substantiated. In recognition of some of the uncertainty that the transition presents, we have allowed some capex contingent projects with carefully defined triggers. We are committed to making network determinations that reflect the input of consumers and support efficient investments in the future of energy networks, but do so at the least possible costs to consumers.

We accept that transmission networks will continue to play an important role in the energy market transition. This has been a key driver of Transgrid’s investment in the current regulatory period. While Transgrid’s proposal notes the potential benefits of this investment in facilitating access to lower cost renewable generation, it is important that it looks beyond this to its own contribution to energy costs, seeking further efficiencies in its underlying expenditure.

We also note there are additional mechanisms under the Rules that may operate to increase or decrease Transgrid’s 2023–28 transmission charges, including projects defined by the Australian Energy Market Operator as necessary to its Integrated System Plan, cost pass through events as defined in the Rules, and contingent projects with defined triggers that, if met, would allow Transgrid to apply for additional revenue subject to further consultation and assessment.

### **A missed opportunity for strong consumer engagement**

Networks businesses that engage in genuine engagement with consumers are more likely to develop better quality revenue proposals for submission to the AER. Proposals that reflect consumer preferences and meet our expectations are more likely to be largely, or wholly, accepted at the draft decision stage of the determination process, creating a more effective

and efficient regulatory process for all stakeholders. If a network business meets our expectations, this will increase the likelihood that its proposal advances the long term interests of consumers, giving us the confidence to rely on a more targeted assessment to meet our Rules obligations.

Early in this review process, stakeholders told us that Transgrid’s consumer engagement could have started sooner than it did, that it had regressed in terms of continuity and quality from past attainable benchmarks, and that it fell short of partnering to develop the initial proposal. Our draft decision commended Transgrid for taking immediate and constructive steps in response to this strong and consistent feedback, which included co-designing workshop topics with stakeholders to help inform the revised proposal.

However, in more recent submissions, including from members of Transgrid’s key stakeholder engagement body (the Transgrid Advisory Council (TAC)), stakeholders set out in express detail that Transgrid fell substantially short of both AER expectations and benchmark industry standards for consumer engagement, hampered mainly by its delayed start to engagement on its initial proposal. We agree and consider this overall assessment represents a missed opportunity for Transgrid to demonstrate that a strong engagement culture has been deeply embedded into its business-as-usual operations since its previous determination.

For example, our Consumer Challenge Panel (CCP25) observed:<sup>1</sup>

‘Despite the adjustments made to its engagement strategy, Transgrid’s consumer engagement fell short of the expectations outlined in the [AER’s] *Better Resets Handbook*, current industry good practice, and the standards expected of a nationally significant transmission network service provider.’

The Public Interest Advocacy Centre (PIAC) said:<sup>2</sup>

‘There were some noteworthy improvements, particularly to the depth and quality of discussion, and openness and responsiveness by Transgrid. Unfortunately, however, as a direct result of the belated and cursory nature of the previous engagement and quantum of new information and projects that were not part of Transgrid’s previous engagement or proposal, Transgrid and its TAC members were unable to make up the ground already lost by Transgrid. Transgrid’s improved engagement was too little because it was still too late.’

The Energy Users Association of Australia (EUAA) added:<sup>3</sup>

‘...while there has been some welcome improvement in engagement practices associated with the current revenue reset and we recognise the significant effort of a number of individuals within Transgrid who demonstrated a genuine effort to engage, we feel that more progress is required to move Transgrid towards the top of the stakeholder engagement league table. More broadly, there is still a strong feeling amongst a number of stakeholders that the key issues that will drive future transmission use of system charges remain largely off the table.’

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<sup>1</sup> CCP25, *Submission to the AER draft decision – Transgrid transmission determination 2023–28 and Transgrid revised revenue proposal 2023–28*, January 2023, p. 3.

<sup>2</sup> PIAC, *Submission on Transgrid 2023–2028 revised revenue proposal*, January 2023, p. 3.

<sup>3</sup> EUAA, *Submission, Transgrid 2023–2028 revenue determination*, January 2023, p. 2.

# 1 Our final decision

In the sections below, we outline what is driving Transgrid’s revenue, and the key differences between our final decision revenue of \$4,851.3 million (\$ nominal, smoothed) compared to Transgrid’s revised proposal revenue of \$5,005.0 million and our draft decision revenue of \$4,758.1 million.

In our draft decision, we explained why we had determined a revenue allowance that was \$550.0 million (13.1%) higher than Transgrid’s initial proposal.<sup>4</sup> Having carefully reviewed the proposal, we did not accept Transgrid’s forecast capital expenditure (capex) because we were not satisfied that the proposed amounts were prudent or efficient. However, after Transgrid lodged its proposal in January 2022, we saw movements in market variables – such as interest rates, bond rates and expected inflation – which acted to increase the return on Transgrid’s regulatory asset base (RAB) relative to its initial proposal. This increase more than offset our reductions to Transgrid’s capex expenditure forecasts. Our draft decision also determined a higher operating expenditure (opex), which is driven primarily by higher inflation forecasts, partially offset by our reductions to Transgrid’s opex step changes in its initial proposal.

It is important that we update for the latest market data so that our final decision on Transgrid’s 2023–28 revenue proposal reflects current financial market conditions. This enables Transgrid to attract the capital it needs to provide the services that consumers want. Moreover, the return investors receive on their assets should reflect the risks of their investment. These risks include the prospect of inflation eroding investors’ purchasing power. An allowance for expected inflation provides compensation for this risk. Updates for these movements are a standard part of our determination process and have been incorporated in Transgrid’s revised proposal and our final decision.

The rate of return and expected inflation parameters have decreased from Transgrid’s revised proposal and our draft decision.

- Our final decision applies a nominal rate of return of 5.768% for the first year of the regulatory period. This is based on the new 2022 Rate of Return Instrument and is slightly lower than the placeholder rate of return of 5.774% used in our draft decision and Transgrid’s revised proposal, but higher than Transgrid’s initial proposal of 4.70%
- Our final decision uses an expected inflation rate of 2.92% per annum. This is based on the Reserve Bank of Australia’s (RBA) February 2023 Statement on Monetary Policy and is lower than the placeholder estimate of 3.00% used in our draft decision and Transgrid’s revised proposal, but higher than Transgrid’s initial proposal of 2.35%.

This means the return on capital is lower due to the decrease in the rate of return. Our regulatory depreciation amount has also decreased from the revised proposal, primarily driven by our reduced forecast capex. The lower expected inflation rate partially offsets the reduction in regulatory depreciation. Our reduced opex forecast and lower revenue adjustments also contribute to the reduction in total revenue. Our corporate tax amount is higher which partially offsets these decreases. The combined impact of the above outcomes

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<sup>4</sup> Transgrid, *Revenue proposal 2023–28*, January 2022.

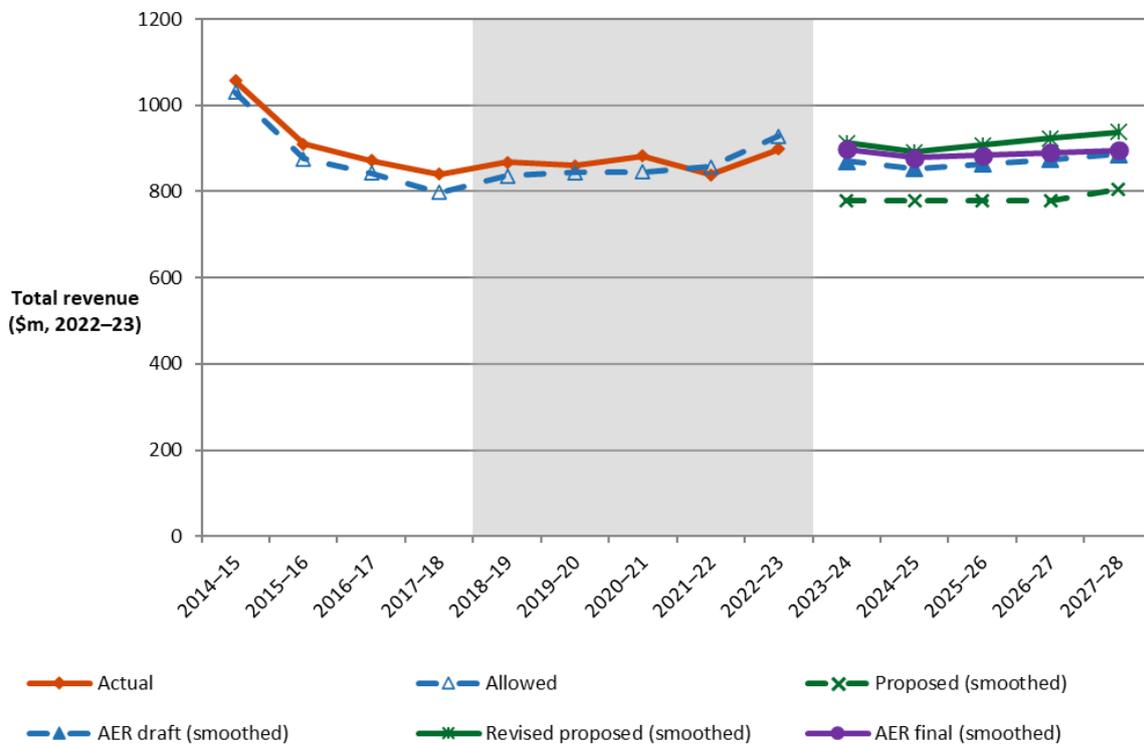
on the final decision is total revenue that is \$153.7 million (3.1%) lower than Transgrid’s revised proposal.

## 1.1 What is driving revenue?

Over time, inflation impacts the spending power of money. To compare revenue from one period to the next on a like-for-like basis, in this section we use ‘real’ values based on a common year (2022–23) that have been adjusted for the impact of inflation instead of the nominal values used above.

In real terms, this final decision allows Transgrid to recover \$4,452.4 million (\$2022–23, unsmoothed) from consumers over the 2023–28 period. This is 3.3% higher than our decision for the 2018–23 period. Changes in Transgrid’s revenue over time are shown in Figure 1.

**Figure 1** Changes in regulated revenue over time (\$ million, 2022–23)



Source: AER analysis.

Notes: The material increase in revenues between the initial proposal and draft decision were primarily driven by market variables, such as the higher interest rates we adopted at the draft decision stage.

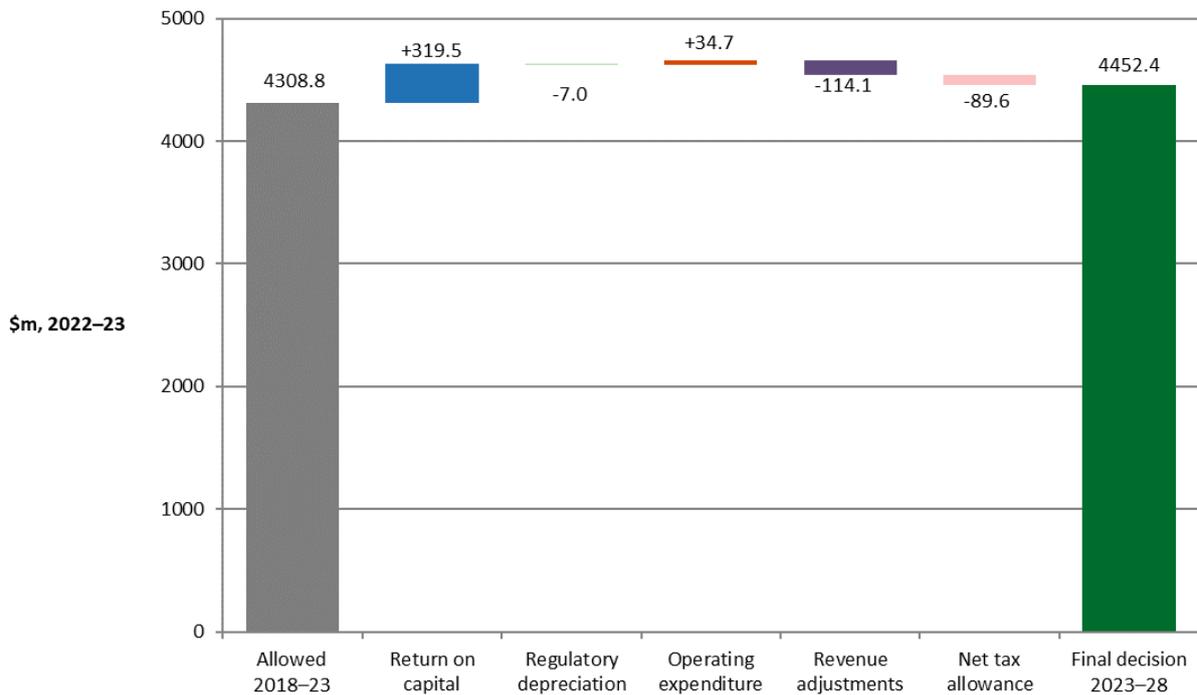
Figure 2 highlights the key drivers of the change in Transgrid’s revenue approved for the 2023–28 period compared to that approved for the 2018–23 period. It shows that our final decision provides for increases in the building blocks for:

- the return on capital, which includes capex and its financing costs, and is \$319.5 million (13.5%) higher than the 2018–23 period, driven largely by a higher RAB in the 2023–28 period
- opex, which is \$34.7 million (3.3%) higher than the 2018–23 period, driven primarily by step changes.

Figure 2 also shows that our final decision provides for decreases in the building blocks for:

- regulatory depreciation, which is \$7.0 million (1.1%) lower than the 2018–23 period, driven primarily by a higher expected inflation in the 2023–28 period
- net tax allowance, which is \$89.6 million (46.7%) lower than the 2018–23 period, primarily due to applying our regulatory tax approach following our 2018 tax review
- revenue adjustments, which are \$114.1 million (225.6%) lower than the 2018–23 period, due to the combination of capital expenditure sharing scheme (CESS), efficiency benefit sharing scheme (EBSS) and shared asset reductions more than offsetting the demand management innovation allowance mechanism (DMIAM) increase.

**Figure 2 Change in total revenue 2018–23 to 2023–28 (\$ million, 2022–23, unsmoothed)**



Source: AER analysis.

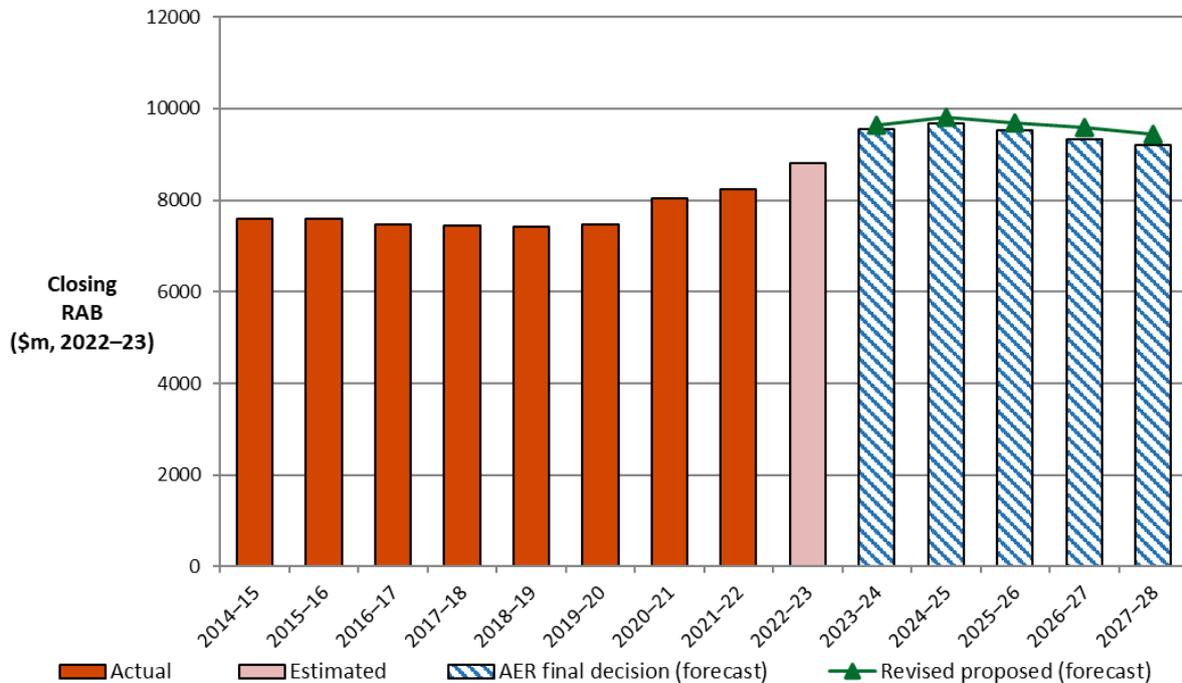
As we observed in our draft decision, the impact of a higher return on capital is further magnified by major capital project investments in the 2018–23 period – *Project EnergyConnect, HumeLink, Queensland-NSW Interconnector and Victoria-NSW Interconnector minor* – which increases Transgrid’s RAB. Current period investment in these projects has already been scrutinised through contingent project assessments and is outside the scope of this 2023–28 determination.

RAB growth over the next five years is expected to be slower under this final decision. Forecast capex for the 2023–28 period is lower than approved for the 2018–23 period. We consider that our substitute total capex forecast will provide for a prudent and efficient service provider in Transgrid’s circumstances to maintain the safety, reliability and security of electricity supply on the transmission network.

Figure 3 shows the value of Transgrid’s RAB overtime. The RAB grew by 18.6% over the 2018–23 period. This growth has been driven by investment in new lines to support the transition. Our final decision results in a forecast RAB increase of \$499.9 million (5.7%) over

the 2023–28 period. However, this value excludes the effects of possible 2023–28 investment projects, such as those relating to AEMO’s ISP and triggered contingent projects, which could further increase the RAB over the period. These projects could increase the RAB significantly. For example, we have approved five contingent projects with a combined value of \$364.6 million.

**Figure 3 Value of Transgrid’s RAB over time – Actual, revised proposal forecast, and final decision RAB value (\$2022–23, million)**



Source: AER analysis.

## 1.2 Key differences between our final decision and Transgrid’s revised proposal

When looking at the 2023–28 period, the key differences between our final decision and Transgrid’s revised proposal relate to our:

- lower return on capital, driven by our lower rate of return<sup>5</sup> and lower net capex
- lower opex forecast, primarily driven by removal of the proposed System Security Roadmap project step change, reductions to Transgrid’s proposed step change for cyber and critical infrastructure security, and updated labour price and productivity growth inputs
- higher estimated cost of corporate income tax, driven primarily by a lower tax depreciation amount which increases taxable revenue
- lower return of capital (depreciation), driven primarily by lower straight-line depreciation compared to Transgrid’s revised proposal due to lower forecast capex in the final decision

<sup>5</sup> Average rate of return over the 2023–28 period.

- lower revenue adjustments, driven primarily by a larger CESS penalty compared to the revised proposal
- lower capex forecast, driven by a lack of supporting evidence to justify that Transgrid's forecast is prudent and efficient.

### 1.3 Estimated impact of our final decision on network charges

Transgrid recovers its regulated revenue through transmission charges, which it determines annually and in accordance with a pricing methodology approved by us as part of its transmission determination.

Transgrid's revised pricing methodology incorporated the minor changes required by our draft decision, as well as updates to reflect system strength pricing.<sup>6</sup> It also reflected the Australian Energy Market Commission's (AEMC) final rule determination on recovering the cost of the Australian Energy Market Operator's (AEMO) participant fees.<sup>7</sup> Our final decision is to approve Transgrid's revised pricing methodology with two subsequent amendments:

- removal of the words 'forward looking' from the definition of the system strength unit price in section 7.5.2. This makes it consistent with the definition of the system strength unit price developed by system strength service providers (which includes Transgrid)<sup>8</sup>
- removal of a paragraph in section 10 regarding any anticipated under-recoveries from prudent discounts, as we do not consider it is consistent with NER requirements.

Our decision on Transgrid's proposal will set the revenue allowance that forms the major component of its transmission charges for the 2023–28 period. It provides a baseline or starting point for those five years.

For illustrative purposes only, we estimate the modelled impact of this final decision would be a 2.3% decrease in real terms to average transmission charges in 2027–28 compared to 2022–23 levels. This estimate is subject to ongoing revenue adjustments and changes in consumer energy consumption. Figure 4 compares this indicative price path for the 2023–28 period to actual tariffs over the 2018–23 period.

These charges flow through to NSW / ACT consumers as part of retail electricity bills, which combine costs associated with operating and maintaining the transmission (9% / 7%)<sup>9</sup> and distribution (34% / 24%) networks, and also costs of generation (40% / 41%), environmental schemes (6% / 21%) and costs incurred by retailers in selling electricity (9% / 8%).<sup>10</sup>

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<sup>6</sup> AEMC, [Efficient management of system strength on the power system, Rule determination](#), 21 October 2021. We approved the equivalent system strength amendments to Transgrid's pricing methodology for the 2018–23 period in January 2023 (see AER, *Final decision, Proposed amended pricing methodology – System strength pricing*, 31 January 2023 and Transgrid, *Approved amended pricing methodology: 1 July 2018 to 30 June 2023*, 31 January 2023).

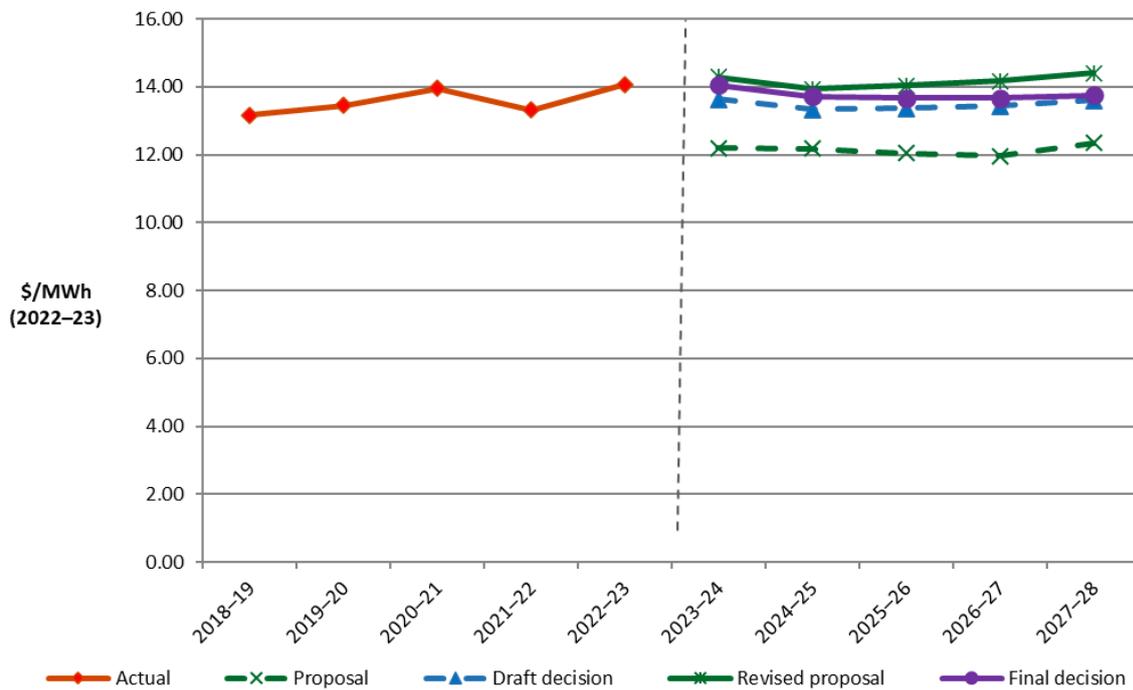
<sup>7</sup> AEMC, [Recovering the cost of AEMO's participant fees, Rule determination](#), 20 October 2022.

<sup>8</sup> AER, *Final decision, Proposed amended pricing methodology – System strength pricing*, 31 January 2023; Transgrid, *Approved amended pricing methodology: 1 July 2018 to 30 June 2023*, 31 January 2023.

<sup>9</sup> In this section, '(9% / 7%)', for example, indicates a 9% share of retail electricity bills for NSW consumers, and 7% share of retail electricity bills for ACT consumers.

<sup>10</sup> AEMC, *Data Portal, Trends in NSW supply chain components 2022/23*.

**Figure 4** Change in indicative transmission tariffs 2018–23 to 2023–28 per MWh (\$2022–23)



Source: AER analysis.

Notes: The price path for the transmission network is based on actual or forecast energy throughput amounts for Transgrid’s transmission network across NSW and ACT. Revenue used to calculate the ‘Actual’ indicative price path over the 2018–23 period includes revenue from Inter- and Intra-Regional Settlements Residue collections and may not fully reflect the price path experienced by end-users.

In nominal terms, which includes the impact of expected inflation, the impact of this final decision will be to increase the transmission component of consumers’ energy bills. For illustrative purposes, the modelled impact of this final decision on the average annual electricity bill for:<sup>11</sup>

- NSW residential and small business consumers would be an increase of \$19 (1.1%) and \$46 (1.1%), respectively, by 2027–28
- ACT residential and small business consumers would be an increase of \$16 (0.9%) and \$24 (0.9%), respectively, by 2027–28.

In considering the outcomes of this final decision, we note there are additional mechanisms under the NER that may operate to increase or decrease Transgrid’s 2023–28 transmission charges, including projects defined by AEMO as necessary to its Integrated System Plan (ISP), cost pass through events as defined in the NER, and contingent projects with defined triggers that, if met, would allow Transgrid to apply for additional revenue subject to further consultation and assessment. Other components of the electricity supply chain – such as the cost of purchasing energy from the wholesale market, distribution network charges, and costs and margins applied by electricity retailers in determining the prices they charge

<sup>11</sup> These bill impacts are in nominal terms, which includes the impact of inflation over the 2023–28 period.

consumers for supply – make up the remaining portions of the prices ultimately paid by consumers. These sit outside the decision we are making here, but will also continue to change throughout the 2023–28 period.

## 1.4 Transgrid’s consumer engagement

Genuine, high quality consumer engagement by Transgrid is essential to ensuring that its proposal is driven by consumer preferences, supports the delivery of services that meet the needs of consumers, and does so at a price that is affordable and efficient. We’ve seen through experience that a regulatory proposal developed through genuine engagement with consumers is more likely to be largely, or wholly, accepted in our decisions.

Our framework for considering consumer engagement in network revenue determinations is set out in our *Better Resets Handbook*.<sup>12</sup> Used in conjunction with our technical analysis, the framework allows us to place weight on the outcomes of the engagement activities undertaken by a business to assist in providing an overall assessment of a proposal. We are also guided in our consideration of a business’s consumer engagement by our Consumer Challenge Panel (CCP25).<sup>13</sup>

Transgrid commenced engaging on its 2023–28 proposal’s development around mid-2021. This included consulting its key stakeholder engagement group, the Transgrid Advisory Council (TAC), on a draft Stakeholder Engagement Plan in May 2021.<sup>14</sup> We observed Transgrid’s monthly engagement with its TAC since this time, which included deep-dive discussions of regulatory matters and research on consumer priorities and preferences. Key consumer priorities that influenced Transgrid’s proposal were: affordability; safety, security and reliability; rapid localised demand growth; energy transition; and technology and innovation.<sup>15</sup>

Our draft decision challenged Transgrid to demonstrate how it has improved the way in which it engages with consumers, and to provide clear evidence of where it has listened and allowed consumers to influence its revised proposal. In developing its revised proposal, Transgrid improved its consumer engagement approach. This included a monthly series of independently-facilitated deep-dives that were co-designed with its TAC.

For example, the Energy Users Association of Australia (EUAA) said:<sup>16</sup>

‘In our earlier submissions we were critical of the approach of Transgrid to this current revenue determination process, believing it to fall somewhere between consult and involve on the IAP2 Spectrum of Public Participation...We are encouraged that Transgrid have listened to these concerns and embarked on a revised engagement approach between their draft and final proposals. During this time Transgrid worked with stakeholders (including TAC members) to better understand critical areas of the draft revenue proposal requiring further investigation, seeking our views on a number of issues...Transgrid also engaged in specific deep dive sessions at the request of TAC members (i.e. several on existing contingent projects) where

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<sup>12</sup> AER, *Better Resets Handbook*, December 2021.

<sup>13</sup> CCP25 comprises Elissa Freeman and Mike Swanston.

<sup>14</sup> Transgrid, *Revenue proposal 2023–28*, January 2022, p. 28.

<sup>15</sup> Transgrid, *Revenue proposal 2023–28*, January 2022, pp. 1, 33–38.

<sup>16</sup> EUAA, *Submission, Transgrid 2023–2028 revenue determination*, January 2023, p. 1.

they allowed a robust conversation to take place. All of this represented an improvement from the previous engagement, albeit from a low base.’

While stakeholders welcomed Transgrid’s improved approach, overall, the overwhelming conclusion is that this 2023–28 determination process represents a missed opportunity for Transgrid to build and advance from previously demonstrated capabilities in regard to meaningful consumer engagement, such as its *Powering Sydney’s Future* project. In many respects, Transgrid was hampered by its delayed start to engagement on its initial proposal.

For example, CCP25 observed:<sup>17</sup>

‘The cascading effects of commencing its consumer engagement too late, and with insufficient breadth and depth, continued to adversely impact Transgrid’s post-lodgement engagement. Transgrid’s engagement program was also made more difficult because of: the quantum of matters it did not accept from the AER’s draft decision, the complexity of new additional expenditure in its revised revenue proposal, and the novel issues that were discussed very late in the process...We raise concerns about the robustness of information provided to customer representatives and the quality of engagement that took place. Many important issues were unresolved at the end of the engagement process or deferred for further discussion. Consequently, the AER will need to make difficult and precedent-setting decisions without the benefit of a robust customer view on many matters raised in the revised revenue proposal.’

Public Interest Advocacy Centre (PIAC) said:<sup>18</sup>

‘...substantial elements of the revised proposal – even where they might be efficient, prudent and in the interest of consumers – can still not be relied on to reflect informed consumer preferences garnered from good quality engagement. This is not only disappointing and frustrating for stakeholders who have invested considerable time and effort in engaging with Transgrid, but defeats the purpose of engagement-centred regulatory proposals in a modern regulatory context, adding more work to that of the AER.’

Notwithstanding the key areas where Transgrid let itself down in this determination process, PIAC considers that Transgrid can leverage the positive engagement practices it adopted in the latter-half of this process for future projects. To avoid a repeat of the missed opportunity scenario, taking early and active steps in terms of future planning is recommended:<sup>19</sup>

‘In PIAC’s view, if Transgrid continues to improve its engagement on a similar trajectory, it could produce a high quality 2028-2033 proposal. This will require a cultural change at Transgrid...’

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<sup>17</sup> CCP25, *Submission to the AER draft decision – Transgrid transmission determination 2023–28 and Transgrid revised revenue proposal 2023–28*, January 2023, p. 3.

<sup>18</sup> PIAC, *Submission on Transgrid 2023–2028 revised revenue proposal*, January 2023, p. 3.

<sup>19</sup> PIAC, *Submission on Transgrid 2023–2028 revised revenue proposal*, January 2023, p. 3.

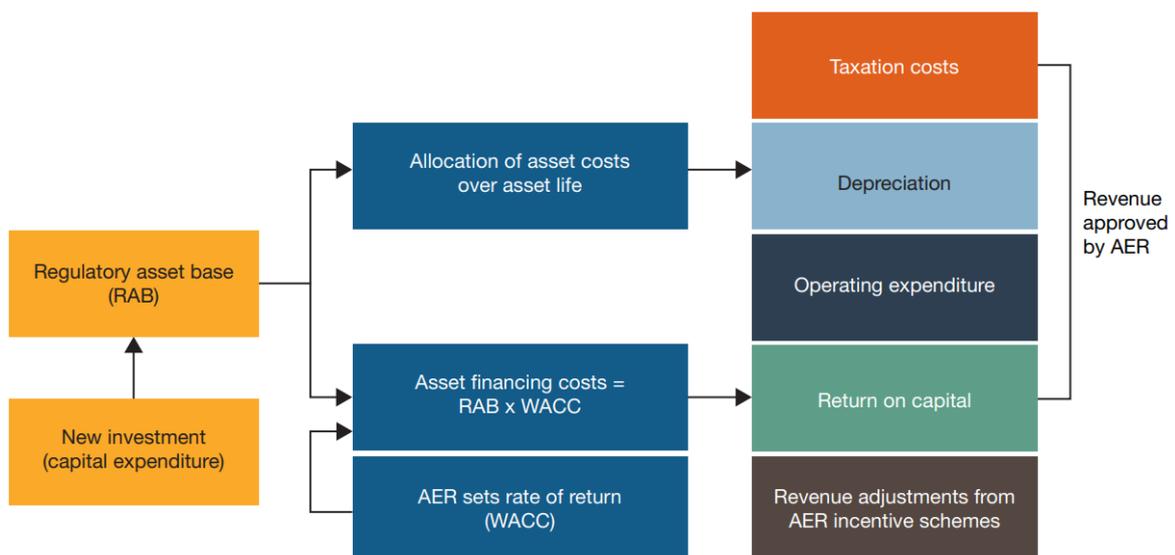
## 2 Key components of our final decision on revenue

The foundation of our regulatory approach is a benchmark incentive framework to setting maximum revenues: once regulated revenues are set for a five-year period, a network that keeps its actual costs below the regulatory forecast of costs retains part of the benefit. This provides an incentive for service providers to become more efficient over time. It delivers benefits to consumers as efficient costs are revealed over time and drive lower cost benchmarks in subsequent regulatory control periods. By only allowing efficient costs in our approved revenues, we promote delivery of the National Electricity Objective and ensure consumers pay no more than necessary for the safe and reliable delivery of electricity.

Transgrid’s proposed revenue reflects its forecast of the efficient cost of providing transmission network services over the 2023–28 period. Its revenue proposal, and our assessment of it under the National Electricity Law and Rules, are based on a ‘building block’ approach which looks at five cost components, as set out below and at Figure 5:

- return on the RAB – or return on capital, to compensate investors for the opportunity cost of funds invested in this business
- depreciation of the RAB – or return of capital, to return the initial investment to investors over time
- forecast opex – the operating, maintenance and other non-capital expenses, incurred in the provision of network services
- revenue increments/decrements – resulting from the application of incentive schemes such as the EBSS (opex) and CESS (capex), as well as the DMIAM innovation scheme.
- estimated cost of corporate income tax.

**Figure 5 The building block model to forecast network revenue**



Source: AER.

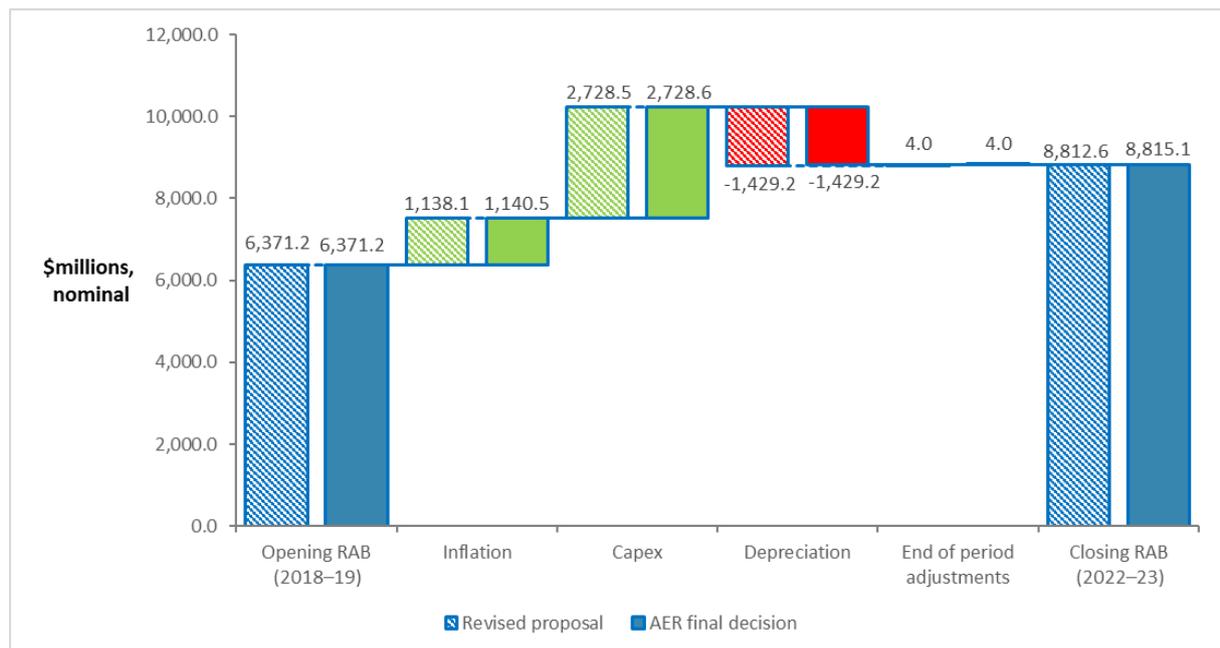
## 2.1 Regulatory asset base

The regulatory asset base (RAB) accounts for the value of regulated assets over time. To set revenue for a new regulatory period, we take the opening value of the RAB from the end of the last period, and roll it forward year-by-year by indexing it for inflation, adding new capex and subtracting depreciation and other possible factors (such as disposals). This gives us a closing value for the RAB at the end of each year of the regulatory period.

The value of the RAB is used to determine the return on capital and depreciation building blocks, and 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 components of the revenue determination.

For this final decision, we have determined an opening RAB value of \$8,815.1 million (\$ nominal), as at 1 July 2023. This value is \$2.6 million (0.03%) higher than Transgrid’s revised proposal of \$8,812.6 million. It reflects our update to the roll forward model (RFM) for the actual consumer price index (CPI) for 2022–23 and is not an area of disagreement between us and Transgrid. Figure 6 shows the key drivers of the change in Transgrid’s RAB over the 2018–23 period compared to its 2023–28 revised proposal.

**Figure 6 Key drivers of changes in the RAB over the 2018–23 period – Transgrid’s revised proposal compared to the AER’s final decision (\$ million, nominal)**



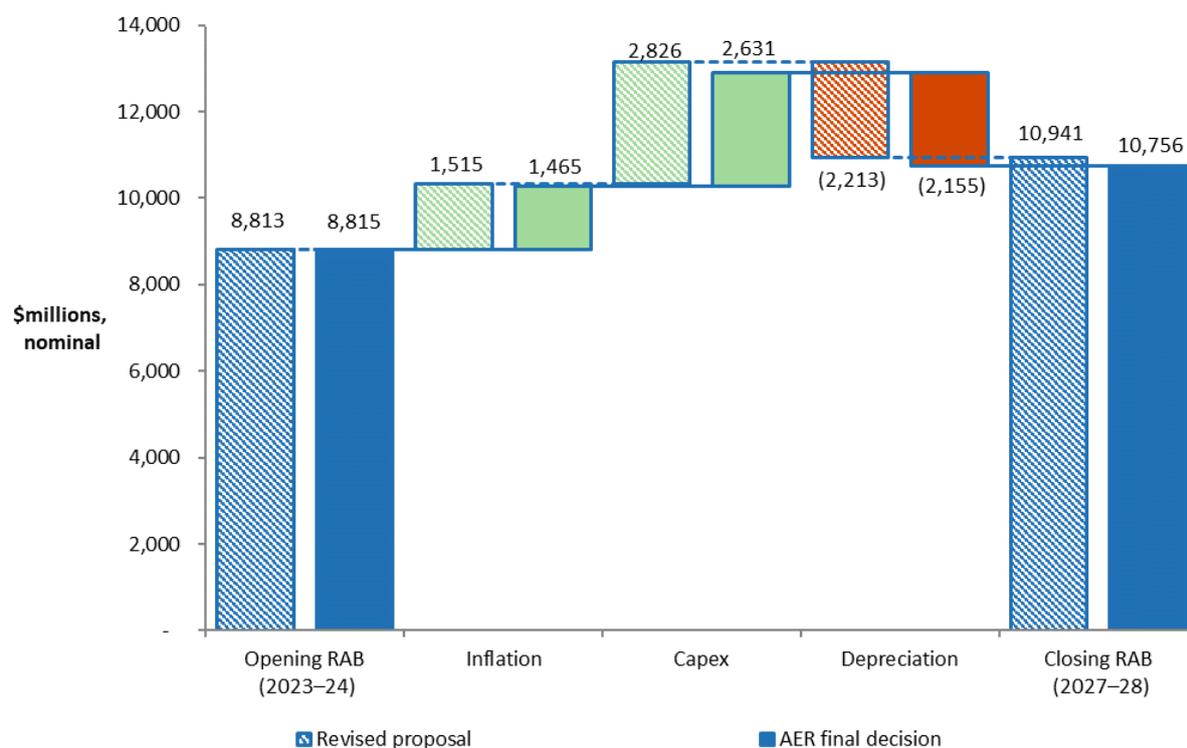
Source: AER analysis.

Notes: Capex is net of disposals. It is inclusive of the half-year weighted average cost of capital (WACC) to account for the timing assumptions in the roll-forward model (RFM).

The closing RAB value as at 2022–23 may not reflect the sum of the opening RAB and net additions, as it also includes some amounts for end of period RAB adjustments (not shown).

Figure 7, likewise, shows the key drivers of the change in Transgrid’s RAB over the 2023–28 period compared to Transgrid’s revised proposal. Our final decision projects an increase of \$1,941.3 million (22.0%) to the RAB by the end of the 2023–28 period compared to the \$2,128.3 million (24.2%) increase in Transgrid’s revised proposal.

**Figure 7** Key drivers of changes in the RAB over the 2023–28 period – Transgrid’s revised proposal compared with AER’s final decision (\$ million, nominal)



Source: AER analysis

Notes: Capex is net of forecast disposals. It is inclusive of the half-year WACC to account for the timing assumptions in the post-tax revenue model (PTRM).

We have determined a projected closing RAB of \$10,756.4 million, as at 30 June 2028. This value is \$184.5 million (1.7%) lower than Transgrid’s revised proposal of \$10,940.9 million. This decrease is mainly due to our lower total forecast capex final decision than proposed by Transgrid (discussed below), but also reflects our final decisions on the opening RAB as at 1 July 2023, the expected inflation rate, and forecast straight-line depreciation.

## 2.2 Rate of return and value of imputation credits

The return each business is to receive on its RAB (the ‘return on capital’) is a key driver of proposed revenues. We calculate the regulated return on capital by applying a rate of return to the value of the RAB.

We estimate the rate of return by combining the returns of two sources of funds for investment – equity and debt. The allowed rate of return provides the business with a return on capital to service the interest rate on its loans and give a return on equity to investors.

Our draft decision and Transgrid’s revised proposal both applied our 2018 Rate of Return Instrument to estimate the rate of return.<sup>20</sup> This final decision applies our new 2022 Rate of

<sup>20</sup> AER, *Rate of return Instrument*, December 2018. See <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/rate-of-return-guideline-2018/final-decision>

Return Instrument, as published in February 2023.<sup>21</sup> This has affected the estimate of the rate of return and the value of imputation credits as follows.

- Our final decision applies a nominal rate of return of 5.768% for the first year of the regulatory period. This is slightly lower than the placeholder rate of return of 5.774% in our draft decision and Transgrid’s revised proposal. A small reduction in the risk-free rate was offset by a marginal increase in the market risk premium in the 2022 Instrument, resulting in a slightly lower overall rate of return figure.
- Our final decision applies a value of imputation credits (gamma) of 0.57 as set out in the 2022 Instrument,<sup>22</sup> compared to 0.585 in the 2018 Instrument.<sup>23</sup>

Our estimate of expected inflation for the purpose of this final decision is 2.92% per annum. It is an estimate of the average annual rate of inflation expected over a five-year period based on the approach adopted in our 2020 Inflation Review<sup>24</sup> and the forecast from the RBA’s February 2023 Statement on Monetary Policy.<sup>25</sup> This is marginally lower than the inflation estimate of 3.00% used in our draft decision and Transgrid’s revised proposal, which was taken from an earlier Statement on Monetary Policy.

Figure 8 isolates the impact of expected inflation from other parts of our final decision to illustrate its impact on the return on capital and regulatory depreciation building blocks and the total revenue allowance. Other elements held constant, lower inflation reduces the return on capital, but increases regulatory depreciation.

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<sup>21</sup> AER, *Rate of return Instrument*, February 2023. See <https://www.aer.gov.au/publications/guidelines-schemes-models/rate-of-return-instrument-2022/final-decision>

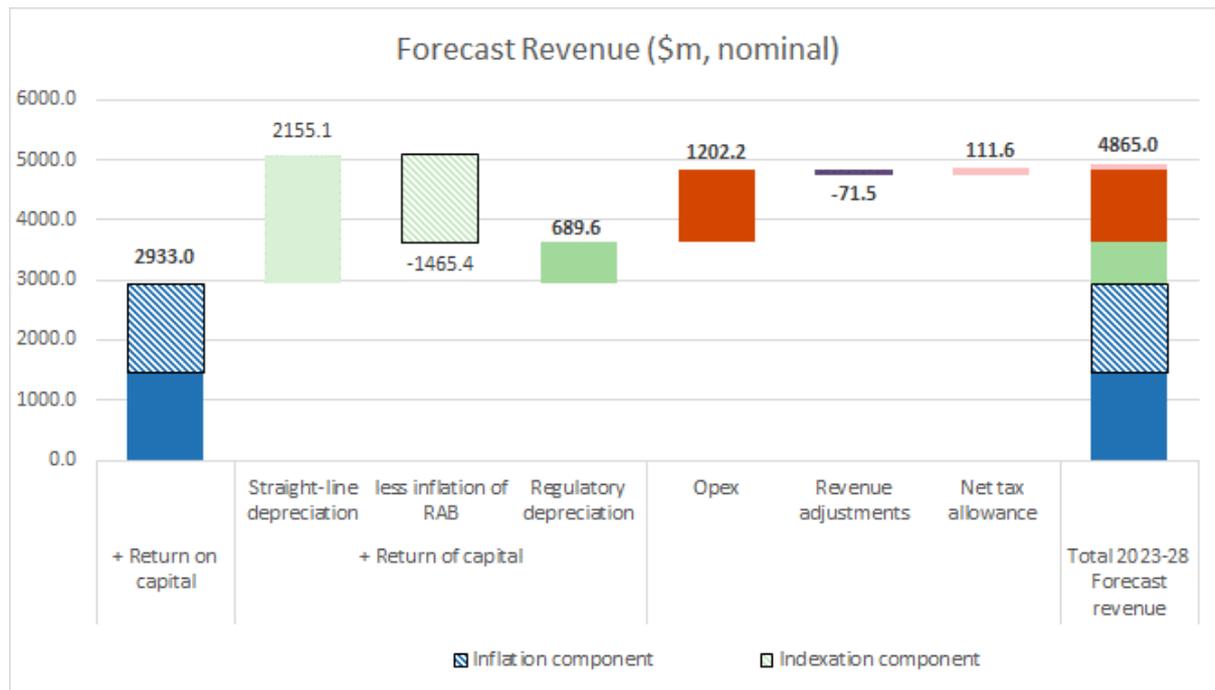
<sup>22</sup> AER, *Rate of return Instrument, Explanatory Statement*, February 2023, pp. 240–250.

<sup>23</sup> AER, *Rate of return Instrument, Explanatory Statement*, December 2018, pp. 307–382.

<sup>24</sup> AER, *Final position – Regulatory treatment of inflation*, December 2020.

<sup>25</sup> RBA, *Statement on Monetary Policy*, February 2023, Table 1: Forecast Table. See <https://www.rba.gov.au/publications/smp/2023/feb/forecasts.html>

**Figure 8 Inflation components in final decision revenue building blocks (\$m, nominal)**



Source: AER analysis.

Notes: Proposed revenue in the chart is unsmoothed total revenue for the regulatory period.

## 2.3 Regulatory depreciation

Depreciation is a method used in our decision to allocate the cost of an asset over its useful life. It is the amount provided so that capital investors can recover their investment over the economic life of the asset (the ‘return of capital’). When determining Transgrid’s total revenue, we include an amount for the depreciation of the projected RAB. The depreciation amount is the net total of the straight-line depreciation less the indexation of the RAB.

Our final decision determines a regulatory depreciation amount of \$689.6 million (\$ nominal) for the 2023–28 period. This is \$7.9 million (1.1%) lower than Transgrid’s revised proposal of \$697.5 million. The key reason for the decrease is our reduced forecast capex for the 2023–28 period, which results in a lower straight-line depreciation. This decrease more than offsets the lower indexation of the RAB, which is driven by the lower expected inflation rate.

## 2.4 Capital expenditure

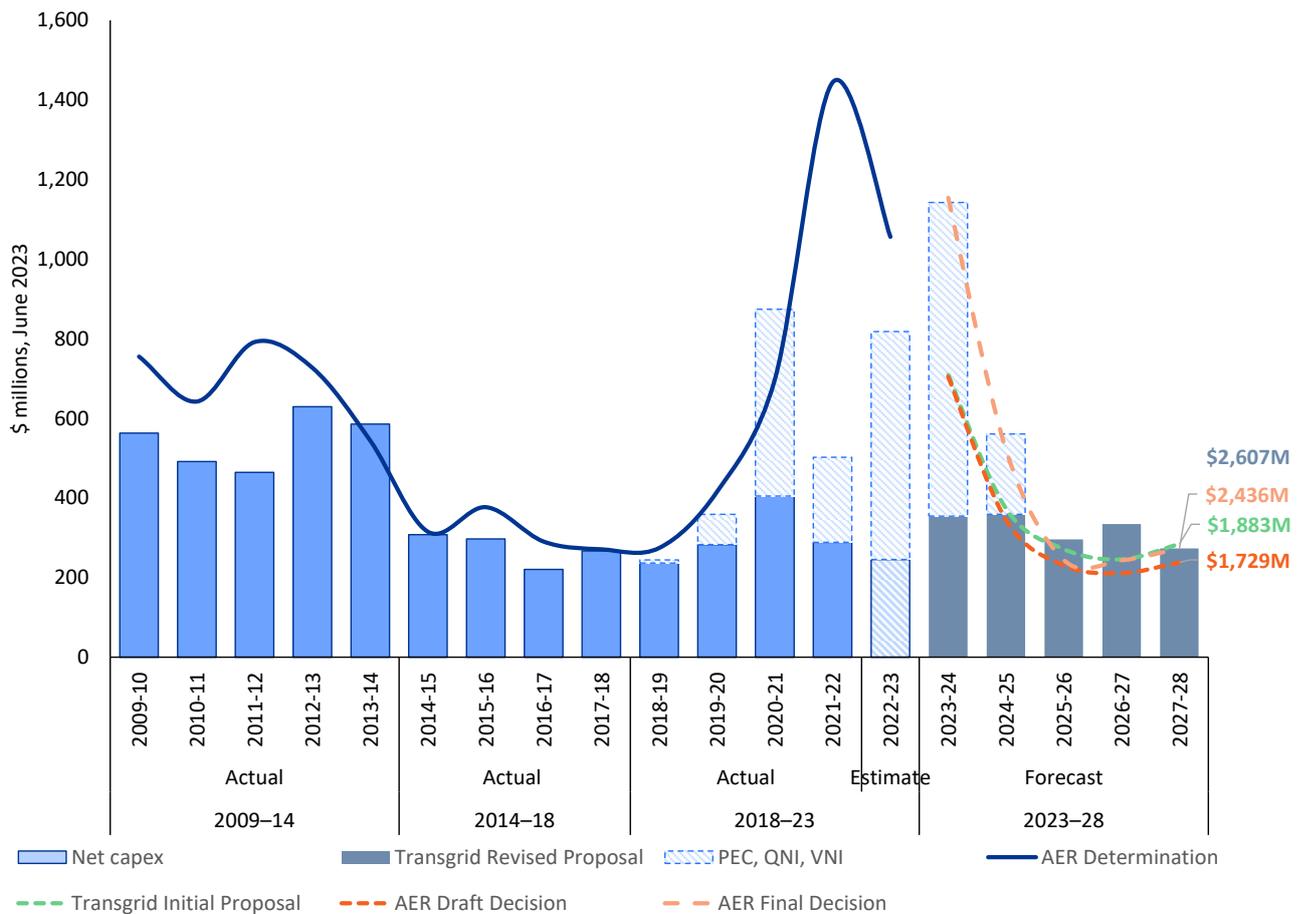
Capital expenditure (capex) – the capital costs and expenditure incurred in the provision of prescribed transmission services – mostly relates to assets with long lives, the costs of which are recovered over several regulatory periods. Forecast capex directly affects the size of the RAB and the revenue generated from the return on capital and depreciation building blocks.

Our final decision is to not accept Transgrid’s total forecast net capex of \$2,606.6 million (\$2022–23) for the 2023–28 period. Our substitute forecast is \$2,436.2 million, which is \$170.4 million (6.5%) lower than Transgrid’s revised proposal. We consider that our substitute forecast provides for a prudent and efficient service provider in Transgrid’s circumstances to maintain the safety, reliability and security of electricity supply on the transmission network.

Figure 9 shows Transgrid’s historical and forecast capex, our previous decisions, and our 2023–28 final decision. Transgrid also proposed nine contingent projects costed at \$723.6 million<sup>26</sup> over the 2023–28 period, which are not included in Figure 9 as contingent projects are only required if pre-defined trigger events are met.

Transgrid’s revised proposal forecast capex is 34.9% higher than our draft decision and 19.8% higher than its initial proposal. In response to our draft decision, Transgrid did not accept the majority of our positions at the capex category level, and included additional new capex of around \$153 million and four new contingent projects.<sup>27</sup>

**Figure 9 Historical and forecast capital expenditure (\$ million, 2022–23)**



Source: AER analysis of Transgrid’s proposal, regulatory information notices (RINs), and responses to information requests. Figures remove asset disposals.

Notes: For the 2018–23 period, we have separated out the base/net capex from the capex for large Integrated System Plan (ISP) projects for *Project EnergyConnect* (PEC), *Queensland-NSW interconnector minor upgrade* (QNI), and *Victoria-NSW interconnector* (VNI).

We undertook a top-down and bottom-up review of Transgrid’s forecast capex. Overall, we found a lack of supporting evidence that Transgrid’s proposed forecast was prudent and efficient.

<sup>26</sup> \$723.6 million includes \$648.2 million for eight contingent projects submitted in the revised proposal, as well as the \$75.4 million submission for a System Security Roadmap operational technology contingent project.

<sup>27</sup> \$153 million for capex includes Transgrid’s \$88.2 million System Security Roadmap.

Typically, we undertake a top-down review to test whether a regulated business' capex proposal, as a whole, could be prudent and efficient. We do this using a number of high-level metrics and information. Having regard to the results from our top-down review, we then determine the degree to which a targeted bottom-up review is required. In this case, we are not satisfied based on the information before us that, at the top-down level, Transgrid's capex proposal, as a whole, is prudent and efficient. We, therefore, undertook a thorough bottom-up review of the proposal.

Top-down testing results reveals a number of concerns with Transgrid's total capex forecast:

- Transgrid's forecast capex is likely to be more than required for it to maintain its network over the 2023–28 period. This is reflected in its forecast capex being 11% higher than current period spend, and its forecast recurrent expenditure (which represents about 76% of the total) being 16% higher than current period spend.<sup>28</sup>
- There is around \$153 million of new capex which was not in Transgrid's initial proposal, as well as four new contingent projects costed at \$338.6 million.
- Transgrid's proposal reveals a consistent theme of greater and inefficient risk allocation to consumers, which does not align with the long term interests of consumers.
- We remain concerned about Transgrid's ability to deliver its entire capex portfolio – both regulatory proposal and non-regulatory proposal related – in the 2023–28 period. Transgrid's further deferral of *Project EnergyConnect* (PEC) to the 2023–28 period deepens our concerns about deliverability risk.
- There is a lack of evidence of Transgrid demonstrating how it has addressed its customers' priority of affordability. This concern was also raised by CCP25. Transgrid noted in its regulatory proposal that 'Affordability is our customers' highest priority.'<sup>29</sup> However, it does not provide any examples of how it incorporated this customer preference in its forecast capex and proposal more generally.

Our bottom-up assessment reveals an overall lack of justification for Transgrid's comparatively higher total capex forecast. Key drivers of our reduction to Transgrid's forecast were to replacement capex (replex) and augmentation capex (augex):

- For replex, our final decision maintains our draft decision position on a number of projects and programs because insufficient information was provided by Transgrid to support the prudence and efficiency of the forecast. In particular, we found much of the supporting information to be qualitative, without the backing of a robust cost-benefit analysis. We also found that for some of the projects/programs that had been re-scoped, risks continued to be overstated such that Transgrid's preferred option was not the most prudent and efficient.
- For augex, our final decision includes forecast capex where Transgrid has demonstrated that new obligations exist, or there are changes in scope or project timing that are outside of Transgrid's reasonable control. However, for some projects, like the System Security Roadmap and the Supply to Panorama, Transgrid has not demonstrated that these projects satisfy the capex objectives. While we have not included Transgrid's

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<sup>28</sup> Comparisons made are excluding Integrated System Plan projects.

<sup>29</sup> Transgrid, *2023–28 Revised revenue proposal*, December 2022, p. 1.

forecast augex for the System Security Roadmap, we have accepted Transgrid’s contingent project for the System Security Roadmap operational technology. This recognises the potential for operational technology upgrades that may be required as part of AEMO’s industry consultation, which may provide guidance on specific actions and assign responsibilities to Transgrid from the energy transition.

Given the nature and magnitude of our concerns over Transgrid’s total capex proposal after testing at both the top-down and bottom-up levels, we consider our alternative total capex estimate for the 2023–28 period is reasonable and sufficient for Transgrid to maintain its network. While we note that Transgrid’s revised forecast is 11% above current period spend, we also note that our alternative forecast for recurrent expenditure is in line with current period spend. Given this, we are satisfied that our alternative forecast provides Transgrid with sufficient funds to maintain its network.

Our assessment has been balanced so that consumers only pay for what is necessary and in their long term interests. We have undertaken a thorough bottom-up review of the key drivers of the forecast, including Transgrid’s forecast for its projects/programs where it provided evidence to support their prudence and efficiency. Where Transgrid has not provided sufficient supporting information, we consider consumers should not pay for these parts of the forecast because Transgrid has not demonstrated these to be in the long term interests of consumers. Where we have included an alternative forecast, these have been derived based on the underlying principles in our expenditure forecasting guidelines and guidance notes to network businesses, such as the AER’s industry practice application note for asset replacement.

Our final decision is also to not accept four of the nine contingent projects proposed by Transgrid in its revised proposal. This is because we found that there was a high probability that these would not occur in the 2023–28 period and/or the proposed trigger events did not satisfy the NER requirements for an appropriate trigger event.<sup>30</sup>

For the five contingent projects that we accepted, Transgrid provided sufficient evidence to support the probability of the projects occurring in the 2023–28 period. Further, after additional engagement with us, Transgrid provided updated trigger events for these projects which we consider to satisfy the NER requirements.

## 2.5 Operating expenditure

Operating expenditure (opex) is the operating, maintenance and other non-capital expenses incurred in the provision of prescribed transmission services.

Our final decision is to not accept Transgrid’s total opex forecast of \$1,184.8 million (\$2022–23), including debt raising costs, for the 2023–28 period.<sup>31</sup> Our alternative estimate of \$1,100.8 million, including debt raising costs, is \$84.1 million (7.1%) lower than Transgrid’s revised proposal. Therefore, we consider that Transgrid’s total opex forecast does not reasonably reflect the opex criteria.<sup>32</sup>

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<sup>30</sup> NER, cl. 6A.8.1(c).

<sup>31</sup> Transgrid, *2023–28 Revised Revenue Proposal Opex Forecast Model - PUBLIC*, 2 December 2022.

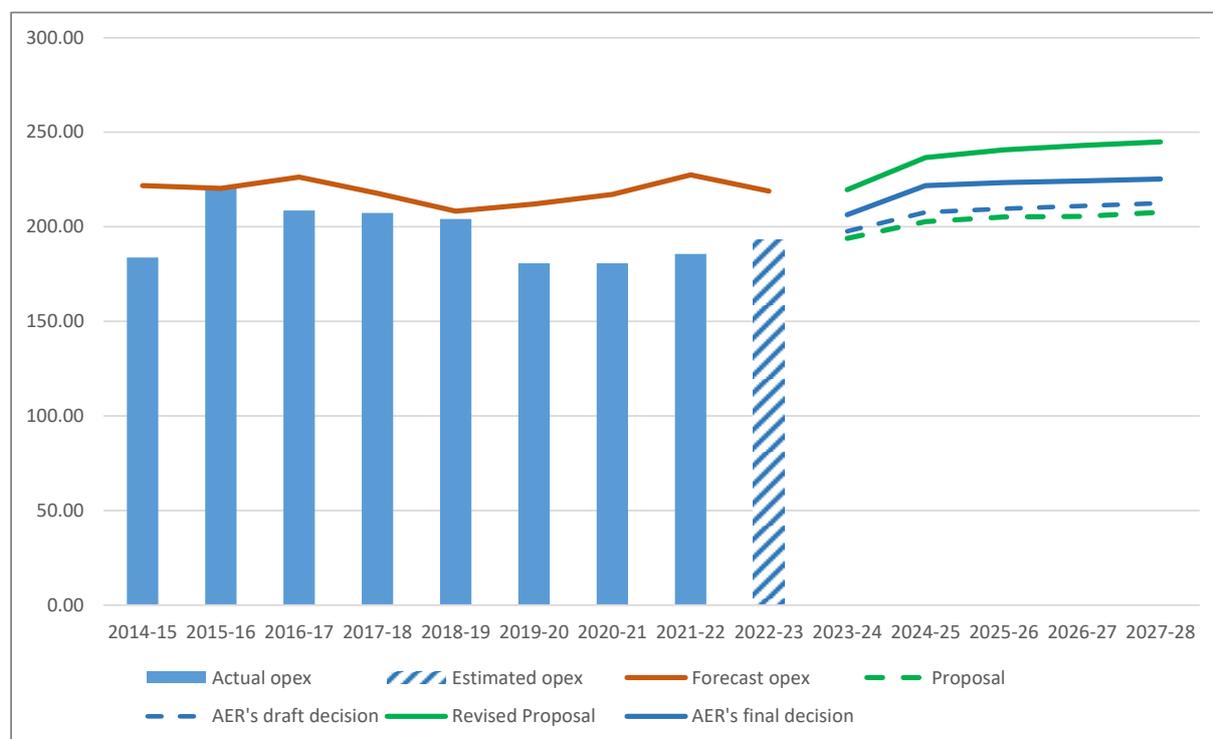
<sup>32</sup> NER, cl. 6A.6.6(c).

The key area of difference leading to our final opex decision being lower than Transgrid’s revised proposal is that we have included a total of \$60.8 million in opex step changes compared to Transgrid’s proposed \$128.8 million. This outcome reflects our assessment that, in some cases, we are not satisfied that the step changes are prudent and efficient.

- Cyber and critical infrastructure security step changes: We have included a lower estimate of required costs for this step change to remove costs Transgrid had not demonstrated are prudent and efficient.
- System Security Roadmap project step change: We have not included this step change in our alternative estimate of total forecast opex as we are not satisfied that it meets our standard criteria under which we would allow a step change.

Figure 10 compares Transgrid’s opex forecast to its past actual opex, our previous decisions, and our 2023–28 draft decision.

**Figure 10 Historical and forecast operating expenditure (\$ million, 2022–23)**



Source: Transgrid, *Regulatory accounts 2014–15 to 2020–21*; Transgrid, *Transgrid – 2023–28 Opex Forecast model – Public*, 31 January 2022; AER, *Transgrid revenue determination, PTRM (multiple periods 2014–18, 2018–22, 2023–28)*; Transgrid, *Transgrid – 2023–28 Revised Revenue Proposal Opex Forecast Model – PUBLIC*, 2 December 2022; AER analysis.

Notes: Includes debt raising costs and movements in provisions. We have removed ‘software as a service’ opex and added capitalised leases to estimated opex for 2021–22 and 2022–23 to align with accounting standards applied in the 2018–23 final determination.

In summary, our final decision total opex forecast for the 2023–28 period is:

- \$62.2 million (6.0%) higher than our draft decision
- \$85.8 million (8.5%) higher than Transgrid’s initial proposal
- \$17.0 million (1.6%) higher than the approved opex forecast for the 2018–23 period

- \$156.3 million (16.6%) higher than Transgrid’s actual/estimated opex for the 2018–23 period.

## 2.6 Revenue adjustments

Our calculation of Transgrid’s total revenue includes adjustments under the efficiency benefit sharing scheme (EBSS) and capital expenditure sharing scheme (CESS) that apply for the 2018–23 period. These mechanisms provide a continuous incentive for Transgrid to pursue efficiency improvements in opex and capex, respectively, and a fair sharing of these between Transgrid and its users. Our final decision also determines an amount for the demand management innovation allowance mechanism (DMIAM)<sup>33</sup> and shared asset revenue reductions.<sup>34</sup> In this section we use ‘real’ values based on a common year (2022–23) that have been adjusted for the impact of inflation instead of the nominal values.

Our final decision is to approve carryover amount decreases to forecast revenue totalling \$22.1 million from the application of the EBSS and CESS in the 2018–23 period. The calculations for these revenue decrements are in our final decision EBSS and CESS models, which we have published with this final decision.

- We have included penalties of \$19.5 million for the application of the EBSS in the 2018–23 period. This is \$4.4 million more than Transgrid’s revised proposal, in which it accepted our draft decision and updated the carryover amounts to reflect actual expenditure in 2021–22 which was previously unknown. This reduced the carryover amounts in Transgrid’s revised proposal by \$38.8 million compared to our draft decision. We have updated Transgrid’s revised proposal to correct for Transgrid’s 2021–22 actual opex to equal the amount reported in its regulatory accounts<sup>35</sup>, and forecast inflation consistent with the RBA’s February Statement of Monetary Policy.
- We have included total CESS penalties of \$38.1 million in our final decision. This includes penalties of \$39.2 million from the application of the CESS in the 2018–23 period, which is \$36.3 million more than Transgrid’s revised proposal, and arises from an over-spend in capex against the forecast for the 2018–23 period after accounting for deferrals and capitalisation changes. We have amended the deferred capex for *Project EnergyConnect* so that Transgrid receives the full capex forecast on common dollar terms. The total CESS penalty amount also includes a CESS true-up carryover of \$1.1 million from 2017–18.

Our final decision also includes an allowance of \$4.7 million for the DMIAM, which will apply to Transgrid for the first time in the 2023–28 period. In each year of the 2023–28 period, Transgrid will submit demand management projects for approval under the DMIAM. Any part of the allowance that is not spent on projects approved by us will be returned to consumers in the subsequent regulatory control period.

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<sup>33</sup> The purpose of the DMIAM is to encourage Transgrid to expand and share its knowledge and understanding of innovative demand management projects that may reduce long-term network costs.

<sup>34</sup> Shared assets arise when a business may use assets to provide both prescribed transmission services we regulate and unregulated services. If the revenue from shared assets is material, 10% of the unregulated revenues that a service provider earns from shared assets will be used to reduce the service provider’s revenue for prescribed transmission services.

<sup>35</sup> Transgrid confirmed that it had added an additional amount had been added to its reported opex for 2021–22 in error.

Our final decision also estimates that Transgrid’s unregulated revenues from shared assets exceed the materiality threshold in all years of the 2023–28 period. As a result, we have determined an adjustment of –\$10.6 million to be returned to consumers over the 2023–28 period. This is the same amount as proposed by Transgrid and included in our draft decision.

The combined effect of these final decision revenue adjustments is a –\$63.5 million revenue adjustment building block (a reduction to revenue) compared to Transgrid’s revised proposal of –\$31.5 million.

## **2.7 Corporate income tax**

Our determination of the total revenue requirement includes the estimated cost of corporate income tax for the 2023–28 period. Under the post-tax framework, this amount is calculated as part of the building blocks assessment using our post-tax revenue model (PTRM).

Our final decision determines an estimated cost of corporate income tax amount of \$111.6 million (\$ nominal) for Transgrid over the 2023–28 period. This is \$11.5 million (11.5%) higher than Transgrid’s revised proposal of \$100.0 million. The increase is primarily due to a lower tax depreciation in the final decision which, in turn, increased Transgrid’s taxable revenue and therefore the cost of corporate income tax.

### 3 Incentive schemes and allowances

Incentive schemes are a component of incentive-based regulation and complement our approach to assessing efficient costs. They provide important balancing incentives under network determinations, encouraging businesses to pursue expenditure efficiencies while maintaining the reliability and overall performance of its network. Consistent with previous positions taken in our Framework and Approach paper and draft decision, our final decision confirms that the following incentive schemes will apply to Transgrid in the 2023–28 period:

- Version 2 of the EBSS: This provides a continuous incentive to pursue efficiency improvements in opex and provide for a fair sharing of these between Transgrid and network users. Consumers benefit from improved efficiencies through lower opex in regulated revenues for future periods. In calculating EBSS carryover amounts, we will exclude cost categories and make adjustments, as required by the scheme and previously set out in our in our draft decision.
- Version 1 of the CESS: This incentivises efficient capex throughout the period by rewarding efficiency gains and penalising efficiency losses, each measured by reference to the difference between forecast and actual capex. Consumers benefit from improved efficiencies through a lower RAB, which is reflected in regulated revenues for future periods.
- Version 5 of the service target performance incentive scheme (STPIS): The purpose of the STPIS is to provide incentives to transmission network service providers to improve or maintain a high level of service for the benefit of participants in the National Electricity Market and end users of electricity.
- Version 1 of the DMIAM: This funds research and development in demand management projects that have the potential to reduce long term network costs. The allowance available to Transgrid in the 2023–28 period will be \$4.7 million. Any part of the allowance that is not spent on projects approved by us will be returned to consumers in the subsequent regulatory control period.

With regard to the STPIS, at the time of our draft decision, we had not fully resolved the application of the service component (SC) and market impact component (MIC) to Transgrid.

- The SC provides an incentive to Transgrid to improve network reliability by focussing on unplanned outages. It encourages Transgrid to seek to reduce the number of unplanned network outages and promptly restore the network in the event of unplanned outages that result in supply interruptions.
  - Transgrid initially proposed that the SC’s loss of supply parameter should be amended to incentivise it to further improve network reliability, but it had not consulted stakeholders on its proposal.<sup>36</sup> Our draft decision did not accept Transgrid’s proposed change, instead requiring Transgrid to consult with stakeholders and provide analysis and reasons on why it will be in the long term interests of consumers to accept Transgrid’s proposal.

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<sup>36</sup> Transgrid, *Revenue proposal 2023–28*, January 2022, p. 152.

- For its revised proposal, Transgrid consulted its TAC about whether it should re-propose its alternate target for the loss of supply events (y) system minutes parameter.<sup>37</sup> Giving effect to the TAC’s concern of affordability and cost of living pressures on consumers, Transgrid’s revised proposal accepted our draft decision on the loss of supply parameter. Therefore, our final decision is consistent with our draft decision for this SC parameter.
- The MIC provides an incentive to Transgrid to minimise the impact of transmission outages that can affect wholesale market outcomes. It measures performance against the number of dispatch intervals where an outage on Transgrid’s network results in a network outage constraint<sup>38</sup> with a marginal value greater than \$10/MWh.<sup>39</sup>
  - Our January 2022 final decision on the transmission determination for AusNet Services considered the impact changes in the energy mix in the National Electricity Market have had on the way semi-dispatch generators bid into the market. We recognised the potential for generator bidding behaviour to appear as a constraint when this is not within a transmission network service provider’s control. In such cases, we considered these should be excluded from the measurements of MIC performance.<sup>40</sup>
  - Transgrid initially considered that the exclusion clarification should also apply to scheduled and non-scheduled renewable generators because it also has no control over the bidding behaviour of these generators.<sup>41</sup> Our draft decision deferred this issue until stakeholders were consulted on whether constraints caused by both types of renewable generators should also be excluded from the MIC performance measure.
  - Transgrid consulted its TAC about whether the exclusion clarification should be re-proposed in its revised proposal. The TAC considered that the generator behaviour was ultimately an issue for the AER to consider. As such, Transgrid’s revised proposal accepted our draft decision on the MIC performance parameters. Our final decision is, thus, to uphold our draft decision on the MIC for Transgrid.<sup>42</sup>

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<sup>37</sup> Transgrid, *2023–28 Revised revenue proposal*, December 2022, p. 144.

<sup>38</sup> Network outage constraints are constraint sets that are applied in AEMO’s market systems to manage power flows during outages so that the power system remains secure during an outage.

<sup>39</sup> AER, *Final – STPIS, Appendix C, October 2015*.

<sup>40</sup> AER, *Final decision, Ausnet Services transmission determination 2022 to 2027, Attachment 10, STPIS*, January 2022, pp. 12-19.

<sup>41</sup> AER, Information request IR#015, STPIS - MIC target setting, 17 February 2022; AER, Information request IR#038 - STPIS - MIC target setting, 1 July 2022.

<sup>42</sup> Transgrid, *2023–28 Revised revenue proposal*, December 2022, p. 145.

## A Constituent decisions

Our final decision on Transgrid’s transmission revenue determination for the 2023–28 regulatory control period includes the following constituent components:<sup>43</sup>

Constituent component
In accordance with clause 6A.14.1(1)(i) of the NER, the AER’s final decision is not to approve the total revenue cap set out in Transgrid’s building block proposal. Our decision on Transgrid’s total revenue cap is \$4,851.3 million (\$ nominal, smoothed) for the 2023–28 regulatory control period. This decision is discussed in Attachment 1 of this final decision.
In accordance with clause 6A.14.1(1)(ii) of the NER, the AER’s final decision is not to approve the maximum allowed revenue (MAR) for each regulatory year of the regulatory control period set out in Transgrid’s revised building block proposal. Our decision on Transgrid’s MAR for each year of the 2023–28 regulatory control period is set out in Attachment 1 of this final decision.
In accordance with clause 6A.14.1(1)(iii) of the NER, the AER’s final decision is to apply the service component, network capability component and market impact component of Version 5 of the service target performance incentive scheme (STPIS) to Transgrid for the 2023–28 regulatory control period. The values and parameters of the STPIS that are approved by the AER are set out in Attachment 10 of this final decision.
In accordance with clause 6A.14.1(1)(iv) of the NER, the AER’s final decision on the values that are to be attributed to the parameters for the efficiency benefit sharing scheme (EBSS) that will apply to Transgrid in respect of the 2023–28 regulatory control period are set out in version 2 of the EBSS and Attachment 8 to our draft decision.
In accordance with clause 6A.14.1(1)(v) of the NER, the AER’s final decision is to approve the commencement and length of the regulatory control period as Transgrid proposed in its revenue proposal. The regulatory control period will commence on 1 July 2023 and the length of this period is five years, expiring on 30 June 2028.
In accordance with clause 6A.14.1(2)(ii) of the NER and acting in accordance with clause 6A.6.7(d), the AER’s final decision is to not accept Transgrid’s proposed total forecast capital expenditure of \$2,606.6 million (\$2022). Our final decision, therefore, includes a substitute estimate of Transgrid’s total forecast capital expenditure for the 2023–28 regulatory control period of \$2,436.2 million (\$2022). The reasons for our decision are set out in Attachment 5 of this final decision.
In accordance with clause 6A.14.1(3)(ii) of the NER and acting in accordance with clause 6A.6.6(d), the AER’s final decision is to not accept Transgrid’s proposed total forecast operating expenditure inclusive of debt raising costs of \$1,184.8 million (\$2022). Our final decision, therefore, includes a substitute estimate of Transgrid’s total forecast operating expenditure for the 2023–28 regulatory control period of \$1,100.9 million (\$2022). The reasons for our decision are set out in Attachment 6 of this final decision.

<sup>43</sup> NEL, s. 16(1)(c).

Constituent component
<p>In accordance with clause 6A.14.1(4)(i) of the NER, the AER’s final decision is that the following proposed projects are contingent projects for the purpose of this revenue determination:</p> <ul style="list-style-type: none"> <li>• Manage increased fault levels in southern NSW</li> <li>• Supply to Bathurst, Orange and Parkes Stage 2</li> <li>• Moree Special Activation Precinct</li> <li>• Maintaining reliable supply to the North West Slopes area Stage 2</li> <li>• System Security Roadmap operational technology</li> </ul> <p>This is set out in Attachment 5 of this final decision.</p>
<p>In accordance with clause 6A.14.1(4)(ii) of the NER, the AER’s final decision is that it is satisfied that the capital expenditure of:</p> <ul style="list-style-type: none"> <li>• \$54.3 million (\$2022) for the Manage increased fault levels in Southern NSW contingent project</li> <li>• \$134.3 million (\$2022) for the Supply to Bathurst, Orange and Parkes Stage 2 contingent project</li> <li>• \$45.3 million (\$2022) for the Moree Special Activation Precinct contingent project</li> <li>• \$42.6 million (\$2022) for the Maintaining reliable supply to the North West Slopes area Stage 2 contingent project</li> <li>• \$88.2 million (\$2022) for the System Security Roadmap operational technology contingent project</li> </ul> <p>as described in Transgrid’s revenue proposal reasonably reflects the capital expenditure criteria, taking into account the capital expenditure factors. This is set out in Attachment 5 of this final decision.</p>
<p>In accordance with clause 6A.14.1(4)(iii) of the NER, the AER’s final decision on the trigger events for the following contingent projects:</p> <ul style="list-style-type: none"> <li>• Manage increased fault levels in Southern NSW</li> <li>• Supply to Bathurst, Orange and Parkes Stage 2</li> <li>• Moree Special Activation Precinct</li> <li>• Maintaining reliable supply to the North West Slopes area Stage 2</li> <li>• System Security Roadmap operational technology</li> </ul> <p>are set out in Attachment 5 of this final decision and include amendments to the trigger events as proposed by Transgrid.</p>
<p>In accordance with clause 6A.14.1(5A) of the NER, the AER’s final decision is that Version 1 of the capital expenditure sharing scheme (CESS) as set out in the Capital Expenditure Incentives Guideline will apply to Transgrid in the 2023–28 regulatory control period. This is set out in Attachment 9 of this final decision.</p>
<p>In accordance with clause 6A.14.1(5A) of the NER, the AER’s final decision is that the demand management innovation allowance mechanism (DMIAM) for electricity</p>

Constituent component
<p>transmission networks will apply to Transgrid in the 2023–28 regulatory control period. Our reasons for this are set out in Attachment 11 of our September 2022 draft decision.</p>
<p>In accordance with clauses 6A.14.1(5B) and 6A.6.2 of the NER, the AER's final decision is that the allowed rate of return for the 2023–24 regulatory year is 5.768% (nominal vanilla), as set out in Attachment 3 of this final decision. The rate of return for the remaining regulatory years 2024–25 to 2027–28 will be updated annually because our decision is to apply a trailing average portfolio approach to estimating debt which incorporates annual updating of the allowed return on debt.</p>
<p>In accordance with clause 6A.14.1(5C) of the NER, the AER's final decision is that the value of imputation credits as referred to in clause 6A.6.4 is 0.57. This is set out in Attachment 3 of this final decision.</p>
<p>In accordance with clause 6A.14.1(5D) of the NER, the AER's final decision, in accordance with clause 6A.6.1 and schedule 6A.2, is that the opening regulatory asset base as at the commencement of the 2023–28 regulatory control period, being 1 July 2023, is \$8,815.1 million (\$ nominal). This is set out in Attachment 2 of this final decision.</p>
<p>In accordance with clause 6A.14.1(5E) of the NER, the AER's final decision is that the depreciation approach used to establish the regulatory asset base at the commencement of Transgrid's 2028–33 regulatory control period as at 1 July 2028 is based on forecast capital expenditure (forecast depreciation). This is set out in Attachment 2 of this final decision. For completeness, we also note that the regulatory depreciation amount that is approved in this decision is \$689.6 million (\$ nominal) for the 2023–28 regulatory control period.</p>
<p>In accordance with clause 6A.14.1(8) of the NER, the AER's final decision is to approve Transgrid's proposed pricing methodology. This is set out in this Overview.</p>
<p>In accordance with clauses 6A.14.1(9) and 6A.6.9 of the NER, the AER's final decision is to apply the following nominated pass through events to Transgrid for the 2023–28 regulatory control period in accordance with clause 6A.7.3(a1)(5):</p> <ul style="list-style-type: none"> <li>• Insurance coverage event</li> <li>• Insurer's credit risk event</li> <li>• Natural disaster event</li> <li>• Terrorism event.</li> </ul> <p>These events have the definitions set out in Attachment 13 of this final decision.</p>

## B List of submissions

We received five submissions in response to our draft decision (30 September 2022) and Transgrid’s revised proposal (2 December 2022) for this 2023–28 revenue determination.

Submission	Date
AER Consumer Challenge Panel, sub-panel 25 (CCP25)	20 January 2023
Energy Users Association of Australia (EUAA)	20 January 2023
Public Interest Advocacy Centre (PIAC)	25 January 2023
Reach Solar Energy	20 January 2023
SecureEnergy	20 January 2023

# Glossary

Term	Definition
ABS	Australian Bureau of Statistics
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Augex	Augmentation expenditure
Capex	Capital expenditure
CESS	Capital expenditure sharing scheme
CPI	Consumer price index
CCP25	Consumer Challenge Panel, sub-panel 25
DMIAM	Demand management innovation allowance mechanism
EBSS	Efficiency benefit sharing scheme
Gamma	Value of imputation credits
ISP	Integrated System Plan
MAR	Maximum allowed revenue
MWh	Megawatt hours
NEL	National Electricity Law
NEO	National Electricity Objective
NER	National Electricity Rules
Opex	Operating expenditure
PTRM	Post-tax revenue model
RAB	Regulatory asset base
RBA	Reserve Bank of Australia
Repex	Replacement expenditure
RIN	Regulatory information notice
RIT-T	Regulatory investment test – transmission
RFM	Roll forward model
STPIS	Service target performance incentive scheme
TAC	Transgrid Advisory Council
WACC	Weighted average cost of capital