

Draft decision

Transgrid Waratah Super Battery
(non-contestable)

(1 July 2024 to 30 June 2029)

Made under the Electricity Infrastructure
Investment Act 2020 (NSW)

September 2023

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Invitation for submissions

Transgrid has the opportunity to submit a revised proposal in response to this draft decision.

Interested stakeholders are invited to make a submission on both our draft decision and Transgrid's revised proposal (once submitted) by **24 November 2023**.

We will consider and respond to all submissions received by that date in our final decision.

Submissions should be sent to: REZ@aer.gov.au

Alternatively, submissions can be sent to:

Kami Kaur
General Manager
NSW REZ Branch
Australian Energy Regulator
GPO Box 1313
Canberra ACT 2601

We prefer that all submissions be sent in an electronic format in Microsoft Word or other text-readable document form and are publicly available, to facilitate an informed, transparent, and robust consultation process.

We will treat submissions as public documents unless otherwise requested. For further information regarding the AER's use and disclosure of information provided to it, see the [ACCC/AER Information Policy](#).

We request parties wishing to submit confidential information:

- provide a non-confidential version of the submission in a form suitable for publication.
- clearly identify the information that is the subject of the confidentiality claim.

All non-confidential submissions will be placed on the AER's website.

We are not conducting a public forum on this draft decision but will provide individual briefings upon request. Please send any request to REZ@aer.gov.au.

Note

This is the main document for the draft decision on Transgrid's 2024–29 non-contestable determination for the Waratah Super Battery (WSB) project. It should be read with all other parts of the draft decision.

The draft decision includes the following documents:

- **Draft decision** (main document)
- Appendix A – Assessment approaches
- Appendix B – Quarterly service payments
- Appendix C – Adjustment mechanisms
- Confidential Appendix D – Rate of return averaging periods

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Summary

Transgrid were directed to undertake the Waratah Super Battery project by the NSW Minister for Energy on 14 October 2022. The project addresses the anticipated shortfall in electricity supply caused by the closure of the Origin Energy Eraring power station, by increasing the transfer capacity of the existing transmission network and allowing existing generators in NSW to increase output.

Transgrid submitted a revenue proposal for the non-contestable elements of the project—the network augmentations and the implementation of the System Integrity Protection Scheme—on 30 June 2023. It forecast total expenditure of \$282.7 million (\$ 2023–24) and proposed revenue of \$137.7 million (\$ nominal).

This is the first non-contestable project to be delivered and the first draft determination for a non-contestable project under the *Electricity Infrastructure Investment Act 2020* (EII Act). We have assessed Transgrid’s proposal in line with the requirements set out in the EII Act, the *Electricity Infrastructure Investment Regulation 2021* and the process set out in our Revenue Determination guideline for non-contestable projects.

In this draft determination, we have agreed with most of the elements Transgrid proposed, namely:

- We have accepted the majority of the capital expenditure forecasts, although we have reduced the capital expenditure allowance by \$6.2 million (\$ 2023–24).
- We have accepted the majority of the operating expenditure forecasts, although we have reduced the operating expenditure allowance by \$3.3 million (\$ 2023–24).
- We have accepted the proposed adjustment mechanisms, with amendments to four.

We have disagreed with some elements of Transgrid’s proposal in this draft determination, namely:

- We do not accept Transgrid’s proposed financeability modifications, which we have reversed in this draft decision. The resulting impact of this reversal is a reduction in the regulatory depreciation building block by \$25.4 million (\$ 2023–24).
- Transgrid’s proposal to exclude the project from the application of incentive schemes. We are convinced there is merit in applying the Capital Expenditure Sharing Scheme to this project.
- The revised revenue accepted in this draft decision is \$104.1 million (\$ nominal). The revised capex and opex accepted is \$249.2 million (\$ 2023–24) and \$24.7 million (\$ 2023–24).

We acknowledge Transgrid’s efforts in delivering its revenue proposal within the time constraints imposed by the Ministerial Order and the EII framework, and the limited discretion it has in which to deliver the project. Our draft determination reflects what we consider to be the prudent, efficient, and reasonable costs of delivering the project, ensuring consumer pay no more than necessary for safe and reliable electricity.

We welcome submissions from interested stakeholders on this proposal, and Transgrid’s revised proposal in the coming months.

1 Background

1.1 Project context

On 17 February 2022, the Origin Energy Eraring Power station announced it would shut down by August 2025, seven years earlier than planned. AEMO identified a shortfall in electricity supply to the demand centres of Sydney, Newcastle, and Wollongong between 2025–2031 because of the early closure.

To address this, on 14 October 2022, the NSW Minister for Energy declared the Waratah Super Battery a Priority Transmission Infrastructure Project under the *Electricity Infrastructure Investment Act 2020* (EII Act) and directed Transgrid to undertake it as the Network Operator.¹

The Waratah Super Battery project addresses the shortfall caused by the Eraring power station closure by increasing the transfer capacity of the transmission network, allowing existing generators in NSW to increase power supply. The project consists of four components.

1. The Network Augmentations increase the transfer capacity of the network by increasing the thermal capacity of the lines (raising and tightening them) and upgrading a series of substations.
2. The System Integrity Protection Scheme (SIPS) control system is a communication system that monitors the activity of the transmission network and initiates network protection measures in the event of a contingency.
3. The Paired Generation services are a portfolio of generators that will rapidly reduce output when signaled by the SIPS control system, reducing the load on the transmission network in the event of a contingency.
4. The Battery Service is a temporary power supply located at the end of the transmission network, next to the demand centres of Sydney, Newcastle, and Wollongong. It discharges power for up to two hours when signaled by the SIPS control system, ensuring power supply is uninterrupted during a contingency event.

The Ministerial Order that directed Transgrid to undertake the project as the Network Operator specifies the project and the timeframe for delivery. Transgrid must comply with the Order and has little discretion to vary any element.

1.2 Regulatory framework

The Waratah Super Battery project is being delivered under the NSW Electricity Infrastructure Roadmap (the Roadmap), which is the NSW Government’s plan to transition NSW away from a reliance on coal-based generation to renewal energy generation. The Roadmap is enabled by the *Electricity Infrastructure Investment Act 2020 (NSW)* (EII Act) and the *Electricity Infrastructure Investment Regulation 2021 (NSW)* (EII Regulation).

The AER is a regulator under the EII Act. One of our functions is to determine the revenue a Network Operator may collect for undertaking a network infrastructure project.² There are two ways a Network Operator may be selected to undertake a network infrastructure project.

¹ NSW Gazette, Number 473 – Electricity and Water, 14 October 2022, https://gazette.legislation.nsw.gov.au/so/download.w3p?id=Gazette_2022_2022-473.pdf.

² EII Act, s. 38.

1. Under a contestable process, a Network Operator is selected following a competitive assessment procurement process conducted by the Infrastructure Planner.
2. Under a non-contestable process, a Network Operator may be selected directly by the Infrastructure Planner.

Under either process, the revenue an entity may collect from undertaking the network infrastructure project is regulated by the AER and specified in a revenue determination made. A revenue determination made for a contestable process is largely based on the contractual arrangements identified from the competitive assessment process (provided the process was genuine and appropriate).

A revenue determination made for a non-contestable process involves an assessment of the Network Operators' forecast costs and revenue to ensure only the prudent, efficient, and reasonable costs of delivering the project are recovered.

The entities to deliver the Battery Service and Paired Generation services are selected via a contestable process (competitive assessment process), the first of which (the Battery Service) was completed in 2022.³

Transgrid was selected to deliver the Network Augmentations and the SIPS control scheme via a non-contestable process which is the subject of this draft determination.

1.3 Revenue determinations

Under the NSW Roadmap, the Scheme Financial Vehicle pays the Network Operator the amounts set out in our revenue determinations. The Scheme Financial Vehicle recovers the costs of the NSW Roadmap from Distribution Network Service Providers, who recover it from consumers.

The matters a revenue determination must cover are set out in the EII Act, EII Regulation and our Revenue Determination guideline for non-contestable projects.⁴ Our guideline also sets out our process for making a revenue determination.

This draft determination is made in response to Transgrid's revenue proposal on the non-contestable elements of the Waratah Super Battery project. We expect to make our final determination in December 2023, following a public consultation period on our draft determination, and Transgrid submitting a revised proposal for consideration in early November.

1.4 Transition to the national framework

The remaining value of WSB assets will eventually be rolled back into the Transgrid's Regulatory Asset Base (RAB) under the NER.⁵ We expect this will occur once the Battery Service is no longer required as a system integrity protection service and the assets are used to provide prescribed transmission services under the NER. The Ministerial Order specified that the key SIPS Service Period runs from 1 November 2024 to 30 April 2030, a period of

³ AER, *Final determination – Waratah Super Battery – SIPS Service Component*, December 2022.

⁴ AER, *Final guideline – Transmission Efficiency Test and revenue determination guideline for non-contestable network infrastructure projects*, April 2023.

⁵ EII Regulations, ss. 54(A)–(D).

5.5 years,⁶ which would provide a potential trigger 10 months into the second regulatory control period.

⁶ Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable)*, June 2023, pp. 71–72.

2 Transgrid’s Proposal

This draft determination concerns the non-contestable components of the Waratah Super Battery (WSB) project (the Network Augmentations and the SIPS control system) and the functions of the Network Operator. It contains forecast expenditure for delivering the different components of the project and a proposal and schedule for the revenue Transgrid may receive.

2.1 Network Augmentation

The Network Augmentations are intended to increase the transfer capacity of the transmission network in the northern and southern regions of NSW. This involves increasing the thermal ratings of the 3L, 4, 5 and 39 transmission lines in the south of NSW and upgrading equipment at 22 substations along the northern and southern transmission line routes.

Increasing the thermal ratings of the transmission lines requires the raising and tightening of transmission lines, installing new structures, strengthening existing transmission towers, and modifying insulator arrangements. Transgrid forecast the capital expenditure for this component of the project to be \$69.8 million (\$ 2023–24) (see Table 2.2 below).

Upgrading substations requires replacing high voltage terminals and modifying secondary systems and is forecast to cost \$108.4 million (\$ 2023–24) in capital expenditure.

Transgrid are required to complete the augmentation works to transmission line 39 and the Northern substations by 1 November 2024 and to lines 3L, 4 and 5 the Southern substations by 1 August 2025 (in line with the Ministerial Order).

2.2 SIPS control system

The SIPS control system is a communication and monitoring system, that monitors the transmission lines for overload conditions and signals the battery service to discharge, and the paired generators to run-back where necessary. Implementing the SIPS control system includes the design, manufacture, and installation of the communications equipment across the transmission network, the battery, and paired generators. It also includes the design and development of the software used to operate the system.

Transgrid forecast the capital expenditure component of this work to be \$19.3 million (\$ 2023–24) and are required to complete the works by 1 November 2024.

2.3 Total revenue and schedule of payments

Transgrid are seeking total revenue of \$137.7 million (\$ nominal) over the 2024–29 regulatory control period for the non-contestable elements of the WSB project (see Table 2.1).

Table 2.1 Proposed revenue building blocks (\$million, nominal)

	2024-25	2025-26	2026-27	2027-28	2028-29	Total
Return on capital	7.4	16.5	17.0	16.6	16.2	73.7
Return of capital	8.0	6.4	5.8	5.8	5.7	31.6
Operating expenditure	3.9	5.2	5.8	6.5	5.9	27.2
Revenue adjustment ⁷	3.5	0.0	0.0	0.0	0.0	3.5
Corporate income tax	1.0	0.1	0.1	0.2	0.3	1.7
Maximum allowed revenue	23.7	28.2	28.7	29.1	28.1	137.7

Source: Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – PTRM*, June 2023.

Transgrid proposed a schedule of quarterly payments to be paid by the Scheme Financial Vehicle as required under the EII framework. This schedule of payments is set to be equivalent in net present value terms to the maximum allowed revenue calculated in our Post Tax Revenue Model (PTRM) for the forecast regulatory control period. Transgrid’s proposal also includes an amendment to the PTRM to ensure that the schedule of payments is updated annually to strip out forecast inflation and account for actual inflation.⁸

More than a third of the costs forecast occur before the regulatory control period (ie, prior to 2024–29). This is necessary to ensure the project will be operational within the timeframes set out in the Ministerial direction appointing Transgrid. Table 2.2 shows Transgrid’s proposed pre-period expenditure, along with its forecast expenditure over 2024–29 regulatory control period.

Table 2.2 Forecasts – Transgrid proposal 2024-29 – Waratah Super Battery (non-contestable) (\$m, 2023–24)

Forecast type	Pre-period costs (Actuals and estimates)	Forecast period 2024–29	Total
Opex forecast⁹	3.1	24.9	28.1
Capex forecast – Transmission lines	21.7	48.1	69.8
Capex forecast - Substations	34.4	74.0	108.4
Capex forecast – SIPS control	13.1	6.2	19.3
Capex forecast – Labour & indirect	37.2	19.8	56.9
Capex forecast – Other ¹⁰	0.1	0.9	1.0
Capex forecast - TOTAL	106.5	148.2	255.4
Total expenditure forecast	109.6	173.2	282.7

Source: Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – capex & opex forecast models*, June 2023.

⁷ This revenue adjustment reflects pre-period opex incurred prior to the start of the regulatory control period which commences on 1 July 2024.

⁸ Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable)*, June 2023, pp. 10–11.

⁹ Includes debt raising costs.

¹⁰ This includes real input costs and equity raising costs.

2.4 Adjustment Mechanisms and incentive schemes

Transgrid proposed 16 events that would allow for the adjustment of amounts included in the revenue determination. These range from prescribed events that are available to all Network Operators, to unique events that are specific to this project.

Transgrid also proposed excluding the project from the application of the Capital Expenditure Sharing Scheme (CESS) and the Efficiency Benefit Sharing Scheme (EBSS).

2.5 Transgrid's consumer engagement

Priority Transmission Infrastructure Projects under the EII Act represent a challenge for Network Operators in terms of stakeholder engagement:

- The Ministerial Order under which a Network Operator is directed to undertake a network infrastructure project defines the project. This includes specifying the elements for design, construction and operation and the timeframe in which each element is to be delivered. This leaves the Network Operator with little discretion in what they are required to deliver and its timing.
- Further, the Order defines when the regulatory submission (revenue proposal) must be provided to the AER. This may limit the time available for Network Operators to engage with stakeholders.

Consequently, we expect Network Operators to use their best endeavours to obtain stakeholder input for a revenue proposal but recognise there are limitations on what can be achieved in practise.

Transgrid was directed to undertake the WSB project on 14 October 2022, and commenced engaging with its stakeholders shortly after, using the Transgrid Advisory Council (TAC) as the primary means for engaging with its stakeholders. The TAC is Transgrid's stakeholder forum and comprises representatives from energy consumer groups and industry.

The TAC meets monthly and was provided with ongoing information on Transgrid's entire work program throughout 2023. This included progress updates, estimated costs, discussion of key elements of proposals (for all projects), and future plans. Additional meetings, providing greater detail on specific issues (deep dives) were offered and provided. Participation from Transgrid included senior executives within the organisation as well as all project leads.

As well as Transgrid's broader work program, the TAC was specifically asked to provide input on elements of Transgrid's revenue proposal for the WSB project across multiple meetings:

- The application of the CESS to the project,
- How to incorporate future paired generator connection costs, and
- Revenue adjustment mechanisms.

Transgrid presented preferred positions for each of these elements alongside alternative approaches for consideration and feedback from the TAC. Transgrid received limited feedback from the TAC on the WSB project. This was partly explained by the limitations imposed by the EII framework on what aspects of the project stakeholders could influence but may have been exacerbated by Transgrid's engagement approach. Transgrid developed its preferred positions on the elements of the proposal described above, independently of the

TAC. While these positions were presented alongside alternatives, they were presented in more detail and without strong counter arguments. This was likely a consequence of the time constraints Transgrid was under, but TAC members may not have perceived it as a genuine opportunity to influence the proposal.

In hindsight, conducting stakeholder engagement on the WSB project as part of stakeholder engagement on Transgrid's broader work program, may have reduced stakeholder engagement on this project. Compared to the other projects within Transgrid's portfolio, this project is very small (in terms of cost and time), which can make it difficult to prioritise. In future, we would recommend conducting a separate engagement on smaller projects, to gain greater input from stakeholders.

Our preference is that stakeholders are involved in the development of a revenue proposal and the positions contained within, as much as practicable. Although the limited time available for Transgrid to develop the revenue proposal impacted its ability to co-design some elements of the proposal with stakeholders, our preference is to see stakeholders involved in the development of these elements. This is an area Transgrid can expand on in future.

In summary, while the EII framework imposed constraints on the level of stakeholder engagement Transgrid could undertake, there are actions Transgrid may take to improve stakeholder engagement in the future. These include:

- Conducting individual consultation and discussions on the WSB project – as opposed to including it in consultation and discussion of Transgrid's broader work program.
- Developing policy positions in concert with stakeholders, rather than proposing a preferred position for consideration and feedback.
- Better articulating the elements of the proposal stakeholders can influence.
- Consider expanding consultation efforts beyond the TAC.

These views are consistent with those of the Consumer Challenge Panel:

“We suggest that Transgrid might consider changing its future approach to stakeholder engagement if it wants to undertake meaningful stakeholder engagement (and particularly customer engagement) to inform and influence its revised proposal, as well as other future projects. These changes might include:

- *Dedicating sufficient time to engagement on each individual project, rather than just subsuming within an existing engagement framework.*
- *Taking time to understand stakeholders' preferences and values and using those to formulate meaningful viable options for stakeholder to consider and choose between. Preferable co-designing those options with stakeholders in the formulation of policy positions.*
- *Focusing in its engagement on stakeholder's preferences and values rather than just Transgrid's preferences, and on engagement aspects where stakeholders could influence outcomes at engagement levels of involving and collaborating.*
- *Setting out in its proposal how the proposal has been informed and influenced by stakeholder engagement, thereby giving the AER and CCP opportunity to take stakeholder influence into account in their assessments of revenue proposals.”*

Overall, Transgrid’s efforts are encouraging, especially considering this is the first non-contestable project under the EII Act and the time constraints it faced. It has demonstrated efforts to improve its stakeholder engagement following the draft NER 2023-28 revenue proposal. While there are opportunities to further improve engagement, its efforts are trending in the right direction.

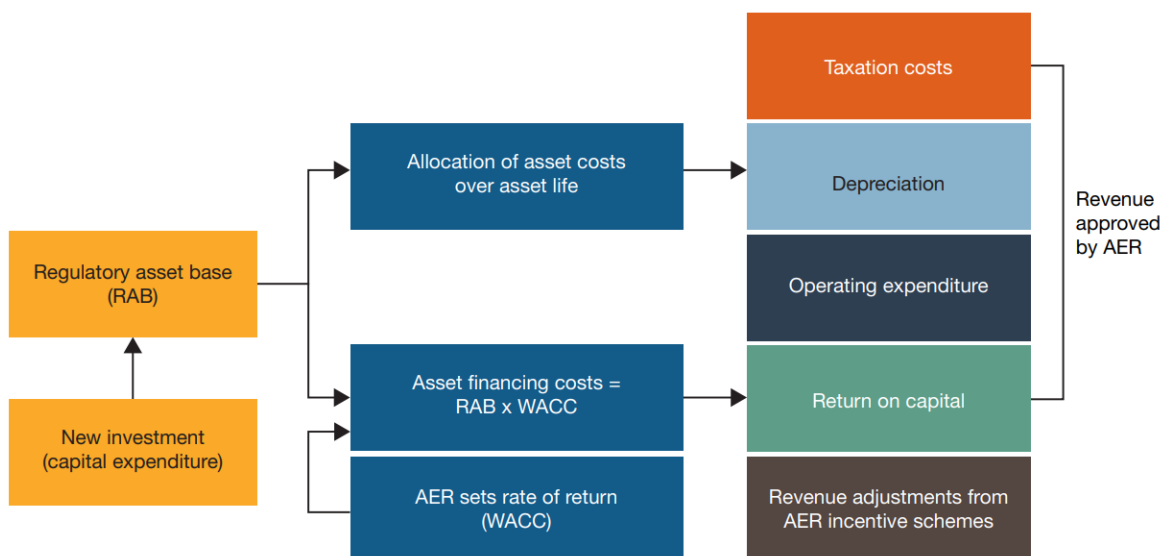
3 Key components of our draft decision

The foundation of our regulatory approach is a benchmark incentive framework to setting maximum revenues: once regulated revenues are set for the 5-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 drives lower cost benchmarks in subsequent regulatory control periods. By only allowing efficient costs in our approved revenues, we 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 regulated network services over the 2024–29 period. The revenue proposal, and our assessment of it under the EII Act, are based on a ‘building block’ approach which looks at five cost components (see Figure 3.1):

1. return on the Regulatory Asset Base (RAB) – or return on capital, to compensate investors for the opportunity cost of funds invested in this business.
2. depreciation of the RAB – or return of capital, to return the initial investment to investors over time.
3. forecast opex – the operating, maintenance, and other non-capital expenses, incurred in the provision of network services.
4. revenue increments/decrements – usually these result from the application of incentive schemes in previous periods, such as the efficiency benefit sharing scheme (EBSS) or the capital expenditure sharing scheme (CESS). However, for this determination, the revenue adjustment building block only reflects pre-period opex incurred prior to the 2024–29 regulatory control period.
5. estimated cost of corporate income tax.

Figure 3.1 The building block model to forecast network revenue



Source: AER.

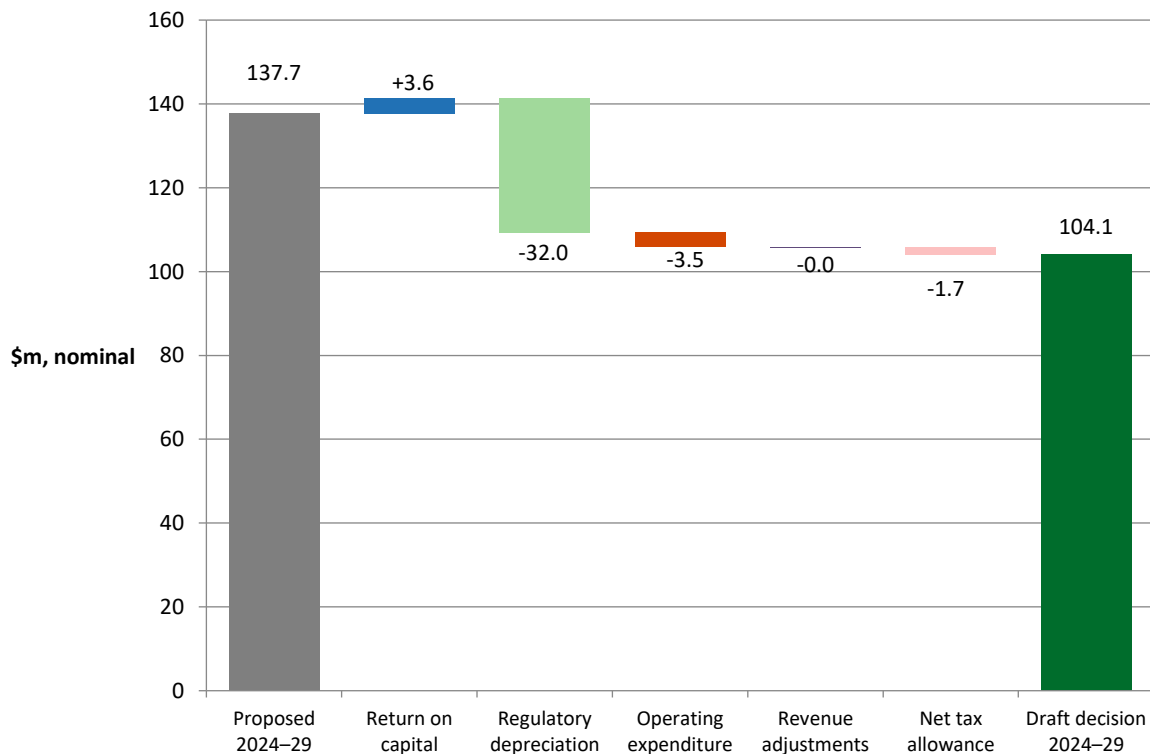
3.1 Key differences between our draft decision and Transgrid’s proposal

When looking at the 2024–29 regulatory control period, the key differences between our draft decision and Transgrid’s proposal for the WSB project relate to our:

- higher return on capital, driven by our higher forecast RAB value over the 2024–29 period caused by the reversal of financeability adjustments (section 7.2.2)
- lower return of capital (depreciation), driven primarily by lower straight-line depreciation compared to Transgrid’s proposal due to the reversal of financeability adjustments in our draft decision (section 7.2.2)
- lower opex forecast, driven by our reductions to Transgrid’s proposed operating costs associated with managing WSB scheme agreements and regulatory submissions. (section 9.2.2)
- lower capex forecast, due to not including future paired generation capex (section 8.2).
- lower estimated cost of corporate income tax, driven primarily by a lower taxable income (section 10.2)

Figure 3.2 below compares our draft decision building blocks with Transgrid’s proposal.

Figure 3.2 Comparison of building blocks between proposal and draft determination (\$m, nominal)



Source: AER analysis; Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – PTRM, June 2023*.

4 Total revenue and schedule of payments

This section sets out our draft decision on the total revenue to be recovered by Transgrid for the WSB project over the 2024–29 regulatory control period.

We determine Transgrid’s annual building block revenue requirement using a building block approach.¹¹ The schedule of payments¹² is derived from the annual building block revenue requirement, on a quarterly basis, in accordance with our non-contestable Guideline.¹³

Our assessment approach for total revenue and schedule of payments is detailed in section 1 of appendix A to this draft decision.

4.1 Transgrid’s proposal

Transgrid proposed a total revenue cap of \$137.7 million (\$ nominal) for the 2024–29 period.

Table 4.1 sets out Transgrid’s proposed annual building block revenue requirement and the estimated total revenue cap for the WSB project. Table 4.2 then sets out the proposed quarterly schedule of payments to be recovered by Transgrid.

Table 4.1 Transgrid’s proposed annual building block revenue requirement and estimated total revenue cap (\$million, nominal)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Return on capital	7.4	16.5	17.0	16.6	16.2	73.7
Regulatory depreciation ^a	8.0	6.4	5.8	5.8	5.7	31.6
Operating expenditure ^b	3.9	5.2	5.8	6.5	5.9	27.2
Revenue adjustments ^c	3.5	-	-	-	-	3.5
Net tax allowance	1.0	0.1	0.1	0.2	0.3	1.7
Annual building block revenue requirement	23.7	28.2	28.7	29.1	28.1	137.7^d

Source: Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – PTRM*, June 2023.

- (a) Regulatory depreciation is straight-line depreciation net of the inflation indexation on the opening RAB.
- (b) Includes debt raising costs.
- (c) Includes revenue adjustments relating to opex incurred prior to the start of the first regulatory control period.
- (d) The estimated total revenue cap is equal to the total annual building block revenue requirement.

Table 4.2 Transgrid’s proposed schedule of payments (\$ nominal)

	Quarter 1 (September)	Quarter 2 (December)	Quarter 3 (March)	Quarter 4 (June)	Total
2024–25	5,648,681.9	5,742,363.3	5,837,598.4	5,934,412.9	23,163,056.5
2025–26	6,701,231.6	6,812,369.2	6,925,349.9	7,040,204.4	27,479,155.2
2026–27	6,821,298.7	6,934,427.5	7,049,432.5	7,166,344.8	27,971,503.5
2027–28	6,914,429.1	7,029,102.5	7,145,677.6	7,264,186.2	28,353,395.4
2028–29	6,675,610.7	6,786,323.4	6,898,872.1	7,013,287.5	27,374,093.7

Source: Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – PTRM*, June 2023.

¹¹ EII Chapter 6A, cl.6A.4.2(a)(1)–(2) and 6A.14.1(1)(i)–(ii).

¹² EII Regulations, ss. 52(1)–(2).

¹³ EII Regulations, s. 52(3).

4.2 AER draft decision

4.2.1 Total amount and components

We determine a total annual building block revenue requirement of \$104.1 million (\$ nominal) for Transgrid for the 2024–29 period (see Table 4.3). This is a decrease of \$33.6 million (24.4%) to Transgrid’s proposed total annual building block revenue requirement of \$137.7 million for this period. This decrease reflects the net impact of our draft decision on the various building block costs.

Table 4.3 AER’s draft decision on Transgrid’s annual building block revenue requirement and estimated total revenue cap (\$million, nominal)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Return on capital	7.2	16.8	17.9	17.8	17.7	77.3
Regulatory depreciation ^a	-2.9 ^b	-2.3 ^b	1.3	1.6	1.9	-0.3
Operating expenditure ^c	2.6	4.8	5.4	5.6	5.2	23.6
Revenue adjustments ^d	3.5	-	-	-	-	3.5
Net tax allowance	0.03	-	-	-	-	0.03
Annual building block revenue requirement	10.4	19.3	24.6	25.0	24.9	104.1^e

Source: AER analysis.

- (a) Regulatory depreciation is straight-line depreciation net of the inflation indexation on the opening RAB.
- (b) Regulatory depreciation for 2024–25 and 2025–26 are negative due to there being no straight-line depreciation as capex is not commissioned until the end of year 2 (2025–26). For more information, see section 7 below.
- (c) Includes debt raising costs.
- (d) Includes revenue adjustments relating to opex incurred prior to the start of the first regulatory control period.
- (e) The estimated total revenue cap is equal to the total annual building block revenue requirement.

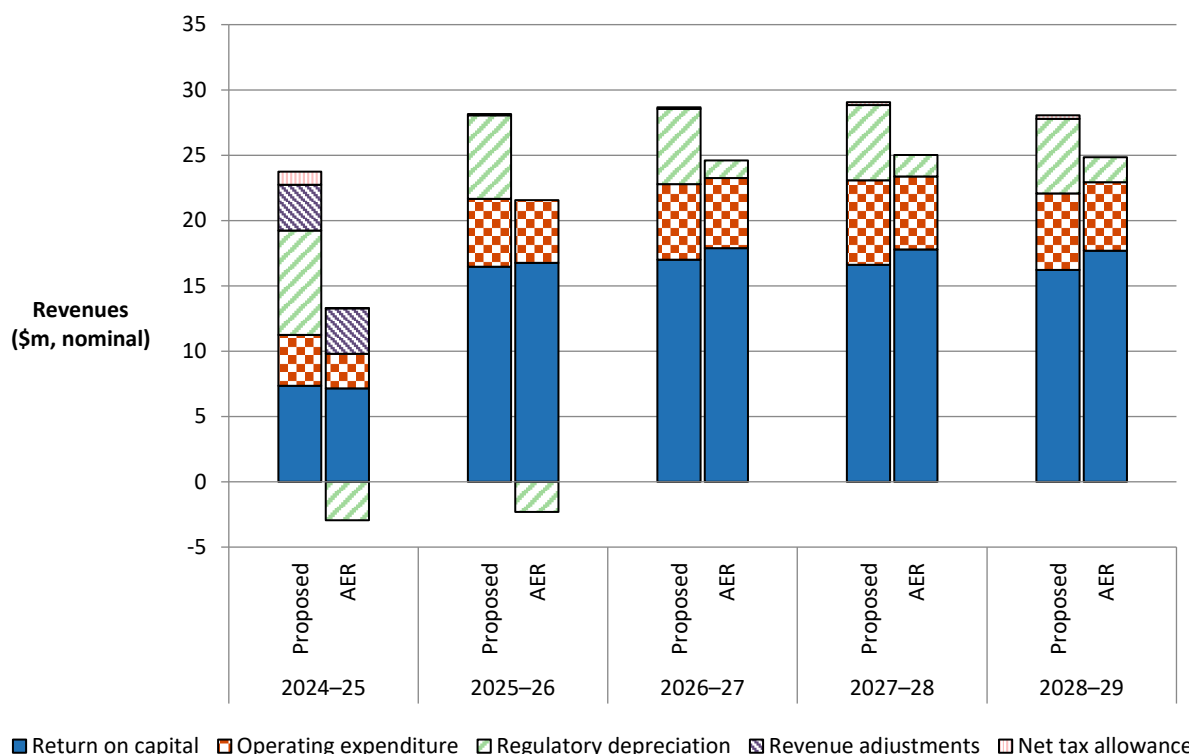
Figure 4.1 shows the building block components from our determination that make up the annual building block revenue requirement for Transgrid, and the corresponding components from its proposal.

The changes we made to Transgrid’s proposed building blocks include (in nominal terms):

- an increase in the return on capital of \$3.6 million (+4.9%) (Sections 5, 6, 7, 8)
- a decrease in the regulatory depreciation of \$32.0 million (-101.1%)¹⁴ (Section 7)
- a decrease in the operating expenditure (opex) of \$3.5 million (-13.0%) (Section 9)
- a decrease in the cost of corporate income tax of \$1.7 million (-98.2%) (Section 10)
- a marginal decrease for the revenue adjustment for pre-period opex (Section 6).

¹⁴ As per our draft decision on depreciation, we do not accept the modifications Transgrid has made to address financeability concerns. By reversing these modifications, our draft decision PTRM only begins calculating a straight-line depreciation amount after the WSB project has been commissioned in year 2 of the period (2024–25). Therefore, the regulatory depreciation building block for the initial two years are negative values (i.e. a negative adjustment to revenues). This effect, combined with not accepting Transgrid bringing forward depreciation revenue, results in this outsized difference between our draft decision and Transgrid’s proposal.

Figure 4.1 AER's draft decision and Transgrid's proposed annual building block revenue requirement (\$million, nominal)



Source: AER analysis; Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – PTRM*, June 2023.

Note: Revenue adjustments include pre-period opex that Transgrid has incurred prior to the AER making this first determination for the WSB project. Opex includes debt raising costs.

The primary driver of the overall decrease is the large reduction in the regulatory depreciation allowance (section 7), because of our draft decision to not accept Transgrid’s modifications to the depreciation schedule for financeability concerns. This building block is responsible for a \$32.0 million reduction (or 95% of the overall \$33.6 million decrease). Transgrid’s proposed financeability adjustment was designed to bring forward revenue without changing the overall amount recovered (after accounting for the time value of money). As such, this portion of the decrease is offset by increased revenue in later regulatory control periods.

4.2.2 Schedule of payments and payment dates

Our draft decision is to determine a quarterly schedule of payments totalling \$101.6 million (\$ nominal) over the 5 years of the 2024–29 period.¹⁵ This is \$32.8 million (24.4%) lower than Transgrid’s proposal of \$134.3 million. The difference reflects our decision on the various components that make up the annual building block revenue requirement, as discussed in section 4.2.1 above.

We accept Transgrid’s approach to calculating the schedule of payments. The approved schedule of payments must be consistent with the EII Regulation¹⁶ as well as what is set out

¹⁵ This amount does not align with the total revenue cap due to adjusting for the time value of money.

¹⁶ EII Regulations, ss. 52(1)–(2).

in our non-contestable Guideline.¹⁷ Transgrid has derived a schedule of payments for each year by dividing the real annual building block revenue requirement into four equal quarterly payments, followed by compounding each payment amount by a quarter-year nominal WACC. We consider that this methodology appropriately accounts for the timing differences for each of the scheduled payments. We also accept Transgrid’s proposed dates on which the quarterly schedule of payments is to be paid.¹⁸

Table 4.4 sets out our draft decision schedule of payments for the WSB project.

Table 4.4 AER’s draft decision schedule of payments and timing (\$ nominal)

	Quarter 1 (30 September)	Quarter 2 (31 December)	Quarter 3 (31 March)	Quarter 4 (30 June)	Total
2024–25	2,466,855	2,507,767	2,549,357	2,591,638	10,115,617
2025–26	4,581,549	4,657,532	4,734,776	4,813,300	18,787,157
2026–27	5,854,541	5,951,637	6,050,343	6,150,685	24,007,206
2027–28	5,953,601	6,052,339	6,152,715	6,254,756	24,413,412
2028–29	5,914,780	6,012,874	6,112,595	6,213,971	24,254,220

Source: AER analysis.

4.2.3 Mechanism to amend the schedule of payments

Transgrid’s revenue proposal includes an adjustment mechanism to amend the quarterly schedule of payments for, among other factors, cost pass-throughs and an updated rate of return. To give effect to these mid-period adjustments, it is necessary for the PTRM to be able to identify the incremental difference in historical revenues already recovered by Transgrid and the updated revenues that Transgrid should have recovered and allocate this amount to future years. However, Transgrid’s proposal PTRM did not contain a mechanism by which it could amend revenues in accordance with its proposed adjustment mechanism.

For this draft decision we have made an amendment to Transgrid’s proposal PTRM to implement this functionality.¹⁹ Specifically, we have included an interim calculation step between the annual building block revenue requirement and the schedule of payments. Our amendment ensures that when historical revenues are adjusted, such as amending historical capex for a cost pass through application or amending the rate of return to true up for any averaging period that could not be accommodated in the final decision,²⁰ the incremental revenue difference that Transgrid had under- or over- recovered is reallocated to the remaining (future) years of the regulatory control period.

In response to an information request, Transgrid has confirmed that our draft decision amendments are consistent with Transgrid’s proposed adjustment mechanisms. However, Transgrid raised a concern around the lack of flexibility in the AER’s approach to allocating any ex-post under- or over-recovery to be smoothed and the impact spread over different

¹⁷ EII Regulations, s. 52(3).

¹⁸ EII Regulations, s. 52(2)(a). Transgrid’s proposal indicated the month for which these payments will be paid. Our draft decision sets out the precise date, to align with the timing for the cost of capital.

¹⁹ To accommodate the EII framework, Transgrid’s proposal PTRM already contained a number of amendments to the standard NER-issued transmission PTRM (version 5.1 issued May 2022) in accordance with our guidance note on amending the PTRM (published June 2023).

²⁰ See section 6.2.1.

years or periods depending on need. Additional flexibility to allow the smoothing of any revenue impacts across different years or a different recovery profile needs to be considered in the context of the EII framework, which explicitly has removed X-factor smoothing from being included in the AER’s guidelines.²¹ For this draft decision we have not adopted Transgrid’s suggestion.

²¹ EII Regulation, s. 47A(5)(e).

5 Regulatory Asset Base

The regulatory asset base (RAB) is the value of the assets used by Transgrid to provide regulated network services.²² 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.²³ The indexation of the RAB is one of the building blocks that form the annual building block revenue requirement for each year of the 2024–29 regulatory control period.²⁴ We set the RAB as the foundation for determining a Network Operator’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.²⁵

This section presents our draft decision on the opening RAB value as at 1 July 2024 for Transgrid and our forecast of its RAB values over the 2024–29 period. It also presents our draft decision for establishing the RAB as at the commencement of the 2029–34 period using depreciation that is based on forecast capex.²⁶

Our assessment approach for the RAB is detailed in section 2 of appendix A to this draft decision.

5.1 Transgrid’s proposal

Transgrid has proposed an opening RAB of \$108.1 million as at 1 July 2024 (\$ nominal). Transgrid is not required to use the AER’s roll forward model to determine an opening RAB for this revenue determination as this expenditure occurred prior to the first regulatory control period (2024–29) for the WSB project. Please see section 8.2 for further discussion on pre-period capex.

Transgrid’s proposed opening RAB is the pre-period capex of \$106.5 million which Transgrid incurred prior to the start of the 2024–29 period, adjusted for \$1.6 million in financing costs. This sums up to \$108.1 million, which represents Transgrid’s proposed opening RAB value as at 1 July 2024.

Transgrid proposed a forecast closing RAB as at 30 June 2029 of \$232.8 million (\$ nominal). This value reflects its proposed opening RAB, forecast capex, expected inflation, and depreciation (based on forecast capex) over the 2024–29 period.

Table 5.1 shows its projected RAB over the 2024-29 period.

²² EII Chapter 6A, cl. 6A.6.1(a).

²³ EII Chapter 6A, cl. 6A.4.2(a)(3A)–(4).

²⁴ EII Chapter 6A, cl. 6A.5.4(a)(1) and (b)(1).

²⁵ EII Chapter 6A, cl. 6A.5.4(a)(2)–(3).

²⁶ EII Chapter 6A, cl. 6A.14.1(5E).

Table 5.1 Transgrid’s proposed RAB for the 2024–29 regulatory control period for the WSB project (\$million, nominal)

	2024–25	2025–26	2026–27	2027–28	2028–29
Opening RAB	108.1	242.2	250.0	244.3	238.5
Capital expenditure ^a	142.1	14.3	-	-	-
Inflation indexation on opening RAB	3.0	6.7	6.9	6.7	6.6
Less: straight-line depreciation ^b	11.0	13.0	12.7	12.5	12.3
Closing RAB	242.2	250.0	244.3	238.5	232.8

Source: Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – PTRM*, June 2023.

- (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. As discussed in section 7.2, Transgrid has equalled as commissioned and as incurred capex in its proposal.

5.2 AER draft decision

We determine an opening RAB value for Transgrid of \$105.2 million (\$ nominal) as at 1 July 2024, a decrease of \$2.9 million (2.7%) from the proposed value. We forecast a closing RAB value of \$258.1 million by 30 June 2029. This represents an increase of \$25.3 million (10.9%) compared with Transgrid’s proposal. The reasons for our draft decision are discussed below.

5.2.1 Opening RAB as at 1 July 2024

This draft decision represents our first determination for Transgrid’s WSB project as a new non-contestable capital project under the EII framework. Ordinarily, new projects do not have an opening asset base, as there is no prior revenue determination with approved capex to establish an opening RAB. However, Transgrid is required to incur capex prior to the start of the first regulatory control period of 1 July 2024 to meet the contracted commissioning date of the WSB project, as set out in the Ministerial Order. To the extent that Transgrid is obligated to incur capex prior to our revenue determination and subject to our assessment of the prudence, efficiency, and reasonableness of this expenditure (section 8), an opening RAB should be established to account for this capex amount.

To establish an opening RAB, we must decide on the process for rolling forward the capex to 1 July 2024, the start of the period. We determine an opening RAB value of \$105.2 million (\$ nominal) as at 1 July 2024. This value is \$2.9 million (2.7%) lower than Transgrid’s proposed opening RAB of \$108.1 million as at 1 July 2024. In determining the opening RAB:

- We have decreased Transgrid’s proposed pre-period capex for the ‘SIPS control’ asset class. Our draft decision pre-period capex is \$101.7 million (\$ nominal), \$2.4 million (2.3%) lower than Transgrid’s proposal of \$104.1 million. See section 8.2 for further discussion and reasoning on our pre-period capex decision.
- We have amended Transgrid’s proposed pre-period WACC for 2022–23 and 2023–24 to reflect the WACC we determined for Transgrid under our NER revenue determinations. This also reduced the opening RAB by \$0.4 million. See section 6.2.3 for further discussion on pre-period WACC.

5.2.2 Forecast closing RAB as at 30 June 2029

We forecast a closing RAB value of \$258.1 million by 30 June 2029 for Transgrid, which represents an increase of \$25.3 million (10.9%) to Transgrid’s proposal. The increase

reflects our draft decision on the inputs for determining the forecast RAB in the PTRM. Our draft decision uses the 'EII PTRM' to forecast the closing RAB at 30 June 2029, which is version 5.1 of the NER PTRM²⁷ amended as per our guidance note.²⁸

Table 5.2 sets our draft decision on the forecast RAB values for Transgrid over the 2024–29 period.

Table 5.2 AER's draft decision on Transgrid's RAB for the 2024–29 regulatory control period (\$ million, nominal)

	2024–25	2025–26	2026–27	2027–28	2028–29
Opening RAB	105.2	246.4	263.0	261.6	260.0
Capital expenditure ^a	138.3	14.3	-	-	-
Inflation indexation on opening RAB	2.9	6.9	7.4	7.3	7.3
Less: straight-line depreciation ^b	0.0	4.6	8.7	9.0	9.2
Closing RAB	246.4	263.0	261.6	260.0	258.1

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.

The change in the size of the RAB over the 2024–29 period depends on our assessment of its various components including forecast capex (section 8), expected inflation (section 6) and forecast depreciation (section 7). Inflation and capex increase the RAB, while depreciation and asset disposals reduce it.

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

- we decreased Transgrid's proposed opening RAB as at 1 July 2024 by \$2.9 million (\$ nominal) or 2.7% (section 5.2.1)
- we updated Transgrid's proposed expected inflation rate from 2.75% per annum to 2.80% per annum over the 2024–29 period (section 6.2.4), an increase to the indexation of the RAB component for the 2024–29 period by \$2.0 million (\$ nominal) or 6.8%²⁹
- we decreased Transgrid's proposed forecast capex for the 2024–29 period by \$3.8 million (\$ nominal) or 2.4% (section 8.2)³⁰
- we reduced the magnitude of Transgrid's proposed forecast straight-line depreciation for the 2024–29 period by \$29.9 million (\$ nominal) or 48.8% (section 7.2). As straight-line depreciation is deducted from the RAB, this has the effect of increasing the closing RAB.

Figure 5.1 shows the key drivers of the change in Transgrid's RAB over the 2024–29 period for this draft decision. Overall, our draft decision closing RAB at the end of the 2024–29 period is forecast to be \$152.9 million (145.3%) higher than the opening RAB at the start of

²⁷ AER, *Electricity transmission network service providers: Post-tax revenue model (version 5.1)*, May 2022.

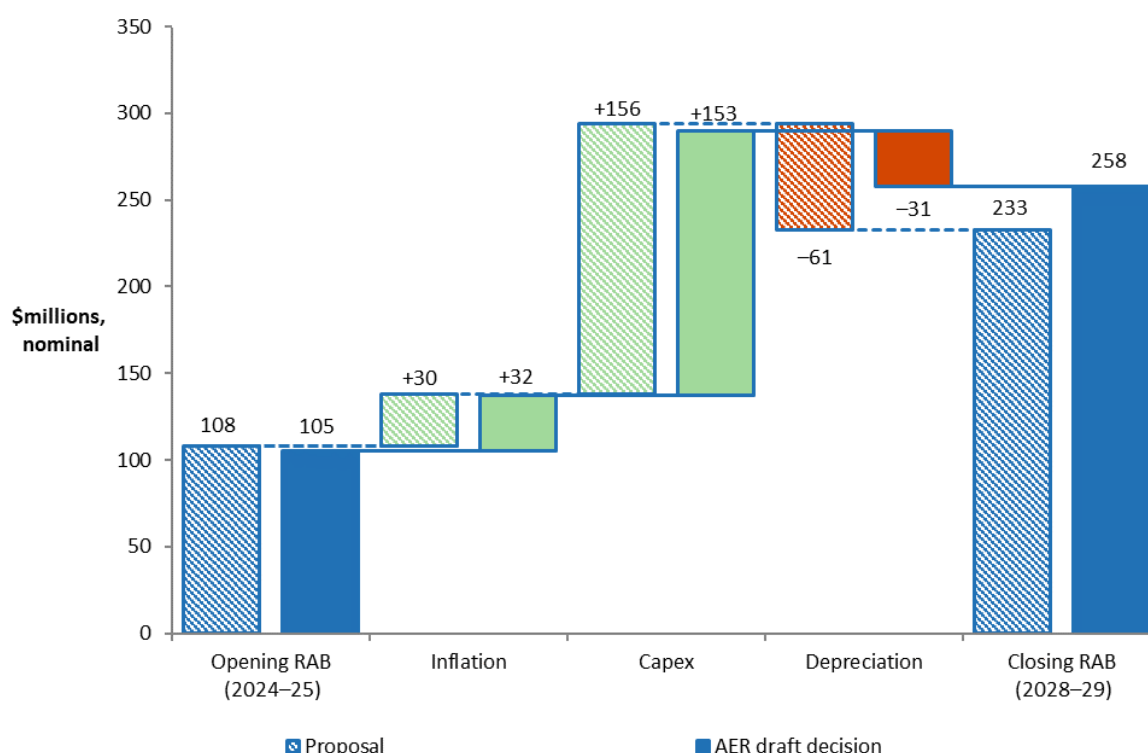
²⁸ AER, *Final guidance note – Amendments to NER PTRM for determinations under the Electricity Infrastructure Investment Act and Regulations*, June 2023.

²⁹ The increase in the indexation of the RAB is primarily due to the reversal of financeability-related accelerated depreciation, as the (slightly higher) expected inflation figure is applied to a larger RAB during the period.

³⁰ This figure reflects as incurred capex net of asset disposals, and inclusive of a half-year WACC adjustment.

that period, in nominal terms. The approved forecast net capex is the largest factor behind the increase, more than doubling the opening RAB. This reflects the scale of capex in the initial build phase of the WSB project. The largest divergence between Transgrid’s proposal and our draft decision is on forecast straight-line depreciation. Reversing the financeability-related changes proposed by Transgrid roughly halved this category, leading to a higher closing RAB.

Figure 5.1 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.

5.2.3 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 2029–34 period will be based on the depreciation schedules (straight-line) using forecast capex at the asset class level approved for the 2024–29 period. We consider this approach will provide sufficient incentives for Transgrid to achieve capex efficiency gains over the 2024–29 period.³¹

This is consistent with Transgrid’s proposal to use forecast depreciation in rolling forward the RAB for the commencement of the 2029–34 period.³² It is also consistent with the forecast depreciation approach used for Transgrid’s RAB under the NER.³³

³¹ EII Chapter 6A, cl. 6A.14.1(5E) and S6A.2.2B.

³² Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable)*, June 2023, p. 75.

³³ AER, *Final decision, Transgrid transmission determination, 1 July 2023 to 30 June 2028*, April 2023, Attachment 2 – Regulatory asset base, pp. 9–10.

As discussed in section 11, we will apply the CESS to Transgrid over the 2024–29 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.³⁴

³⁴ 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.

6 Rate of return

The return each business is to receive on its RAB, known as 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 the 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 on its loans and give a return on equity to investors.

We also make an estimate of expected inflation over the next 5 years. Alongside our nominal estimate of the rate of return, these determine the effective real return that will be provided to investors over time.

Our assessment approach for rate of return is detailed in section 3 of appendix A to this draft decision.

6.1 Transgrid’s proposal

Transgrid’s proposal applied the 2022 Rate of Return Instrument.³⁵ Transgrid proposed the following inputs for the rate of return, expected inflation, and debt and equity raising costs for the 2024–29 regulatory control period:³⁶

- a nominal vanilla weighted average cost of capital (WACC) of 6.80%
- a value of imputation credits (gamma) of 0.57
- an expected inflation rate of 2.75%
- equity raising costs of \$0.7 million (\$ 2023–24)
- debt raising costs of 8.28 basis points per annum or \$0.5 million (\$ 2023–24).

The nominal vanilla WACC of 6.80% was calculated using market data from placeholder averaging periods, and Transgrid’s confidentially nominated averaging periods to be used to estimate its final revenue.³⁷ This included one risk-free rate averaging period and five averaging periods for the return on debt, so that the latter could be updated annually across the 2024–29 regulatory control period.

In addition to the inputs for the 2024–29 period, Transgrid proposed a WACC of 4.56% and 6.59% for 2022–23 and 2023–24 respectively to capitalise pre-period capex and opex. This is to ensure Transgrid can recover its pre-period expenditure from the commencement of the period. Determination of the pre-period WACC is not covered by the 2022 Rate of Return Instrument.

³⁵ AER, *Rate of return instrument*, February 2023, <https://www.aer.gov.au/publications/guidelines-schemes-models/rate-of-return-instrument-2022>.

³⁶ Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable)*, June 2023, pp. 77–82.

³⁷ Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable)*, June 2023, p. 79; Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – Nominated Averaging Periods – CONFIDENTIAL*, June 2023.

6.2 AER draft decision

For this draft decision, we apply the current 2022 Rate of Return Instrument (2022 Instrument),³⁸ consistent with the requirements of the EII Act.³⁹ The 2022 Instrument specifies how we will estimate:

- the return on debt
- the return on equity
- the overall rate of return.

By applying the 2022 Instrument to Transgrid’s proposal for the 2024–29 regulatory control period, we determine a placeholder allowed rate of return of 6.8% (nominal vanilla). For this draft decision, we have maintained the same placeholder averaging periods used by Transgrid in its revenue proposal.⁴⁰ This will be updated to reflect the approach in the 2022 Instrument and our final decision on the averaging periods.

We will update the return on debt component of the rate of return each year, in accordance with the 2022 Instrument, to use a 10-year trailing average portfolio return on debt that is rolled-forward each year. Hence, only 10% of the return on debt is calculated from the most recent averaging period, with 90% from prior periods. Transgrid will gradually transition the WSB RAB into the trailing average portfolio, as described further below.

As such, our calculated rate of return in Table 6.1 would apply to the first year of the 2024–29 period. A different rate of return may apply for the remaining regulatory years of the 2024–29 period.

Table 6.1 Draft decision on Transgrid’s rate of return (\$ nominal)

	Transgrid’s proposal (2024–29)	AER’s draft decision (2024–29)	Allowed return over the regulatory control period
Nominal risk-free rate	3.76%	3.76% ^a	
Market risk premium	6.2%	6.2%	
Equity beta	0.6	0.6	
Return on equity (nominal post-tax)	7.48%	7.48%	Constant (%)
Return on debt (nominal pre-tax)	6.35%	6.35% ^b	Updated annually
Gearing	60%	60%	Constant (60%)
Nominal vanilla WACC	6.80%	6.80% ^{ab}	Updated annually for return on debt
Expected inflation	2.75%	2.80%	Constant (%)

Source: AER analysis; Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – Rate of return model*, June 2023.

(a) Calculated using a placeholder averaging period of 20 business days between 17 February and 16 March 2023.

(b) Calculated using a placeholder averaging periods of 10 business days between 5 and 16 December 2022.

Our draft decision is also to:

³⁸ AER, *Rate of return instrument*, February 2023.

³⁹ EII Chapter 6A, cl. 6A.6.2

⁴⁰ The risk-free rate placeholder averaging period was 17 February to 16 March 2023; the return on debt averaging period was 5 to 16 December 2022. Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable)*, June 2023, p. 77.

- Accept Transgrid’s proposed risk-free rate averaging period⁴¹ and debt averaging periods because they comply with the conditions set out in the 2022 Instrument.⁴² We specify these averaging periods in **confidential appendix D**.
- Apply a value of imputation credits (gamma) of 0.57 as specified in the 2022 Instrument.⁴³

6.2.1 True up for final averaging period

Required market data from Transgrid’s nominated averaging periods may not be available in time to include in our final decision.⁴⁴ The 2022 Instrument is designed such that even if the latest possible averaging periods are nominated, data relevant to the first year of the regulatory control period can be included in the final decision.⁴⁵ However, the EII framework has a shorter timeline than a standard NER revenue determination, by about 4 months. This means that our ability to include the relevant market data in an EII final decision depends on the specific dates of the averaging periods nominated by the Network Operator.

To preserve confidentiality over Transgrid’s nominated averaging periods, we have included a mechanism in the PTRM to allow us to adjust revenues to true up for any rate of return not known at the time of the final decision. If this occurs, a placeholder averaging period would be used in our final decision,⁴⁶ and we would subsequently adjust revenues to ‘true-up’ and put Transgrid back in the position it would have been in, had the outcomes been known in time for the final decision.⁴⁷ The amended calculation step in the PTRM is described in section 4.2.3.

Our decision to develop a mechanism to incorporate later averaging periods under the EII framework should not be viewed as confirming that Transgrid has nominated periods of this type. Even if it is not used in this case, it will be relevant to any later decisions under the EII framework and so provide for Network Operators to select from the full set of permissible averaging periods under the 2022 Instrument.

6.2.2 Transition to the trailing average portfolio return on debt

The 2022 Instrument provides for a gradual transition into the 10-year trailing average portfolio return on debt. This transition period commences in the first regulatory year for which the return on debt is calculated using a trailing average for the first time for the relevant regulated service. The transition takes 10 years to complete.

⁴¹ Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – Nominated Averaging Periods – CONFIDENTIAL*, 30 June 2023, p. 2.

⁴² Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – Nominated Averaging Periods – CONFIDENTIAL*, 30 June 2023, pp. 2–3.

⁴³ AER, *Rate of return Instrument, Explanatory Statement*, February 2023, pp. 240–250.

⁴⁴ More specifically, this statement refers to data from the risk-free rate averaging period (which is relevant across the whole 5-year regulatory control period) and the year 1 return on debt averaging period (which is relevant to 2024–25 only). It is always expected that year 2 to year 5 return on debt averaging periods will not be known when the final decision is made.

⁴⁵ The 2022 Instrument specifies that the risk-free rate averaging period must finish 4 months before the start of the regulatory control period, and the return on debt averaging period must finish 5 months before the start of the relevant regulatory year. AER, *Rate of return instrument*, February 2023 (version 1.1 as amended August 2023), cl. 8, 24.

⁴⁶ We will use a placeholder averaging period as close as practicable to the date of the final decision, noting that some lead time is necessary for data providers to publish the data and for the AER to obtain and process it.

⁴⁷ For clarity, this would include a time value of money adjustment.

Transgrid’s NER RAB has already completed a transition to the full trailing average portfolio. However, Transgrid distinguishes its ‘EII services’ from the prescribed transmission services under the NER.⁴⁸ As such, Transgrid’s position is that 2024–25 is the first time a trailing average is applied to the relevant regulated services. We accept this position.

In the first year, there is only one return on debt estimate, so it is given 100% weight. In each subsequent year, a new estimate is added to the portfolio and given 10% weight, while the weight on the earliest year reduces by 10%. Eventually, after 10 years, a rolling 10-year window is established.

For Transgrid across the 2024–29 regulatory control period, this means the weights are as follows:

- **2024-25:** 100% on 2024–25
- **2025-26:** 90% on 2024–25, 10% on 2025–26
- **2026-27:** 80% on 2024–25, 10% on 2025–26, 10% on 2026–27
- **2027-28:** 70% on 2024–25, 10% on 2025–26, 10% on 2026–27, 10% on 2027–28
- **2028-29:** 60% on 2024–25, 10% on 2025–26, 10% on 2026–27, 10% on 2027–28, 10% on 2028–29.

This pattern continues until the full 10-year rolling window is established in 2033–34.

6.2.3 Pre-period rate of return

We have not accepted Transgrid’s proposed pre-period WACC of 4.56% and 6.59% for 2022–23 and 2023–24 respectively to capitalise expenditure incurred prior to the first regulatory control period for the WSB project. We have instead applied the WACC that we determined in the NER final decisions for Transgrid for each of the relevant years. That is,

- 5.75% for 2022–23, consistent with our 2022–23 return on debt update⁴⁹ for the 2018–23 final decision for Transgrid’s transmission determination under the NER.
- 5.77% for 2023–24, consistent with our 2023–28 final decision for Transgrid’s transmission determination under the NER.⁵⁰

Under the EII framework, a Network Operator may be required to incur expenditure prior to the first regulatory determination. For a non-contestable process, a Network Operator can only recover its investments through our revenue determinations. As such, we consider it reasonable for a Network Operator to capitalise its pre-period expenditure to form an opening RAB as at the start of the relevant regulatory control period. We typically apply a nominal WACC when capitalising these costs to compensate the Network Operator for the delay in revenue recovery. However, while we are bound by the 2022 Instrument in determining an overall rate of return when making a determination, it does not address the specific situation where there is expenditure in advance of the first regulatory period.

Transgrid proposed that the following principles should be adopted when determining the rate of return applied to the pre-period expenditures in 2022–23 and 2023–24:

⁴⁸ Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable)*, June 2023, pp. 15–16, 78.

⁴⁹ AER, *TransGrid 2018–23 – Final decision – PTRM – 2022-23 return on debt update*, January 2022.

⁵⁰ AER, *Transgrid 2023–28 – Final decision – PTRM*, April 2023.

- the return that is capitalised in each year should reflect the cost of capital that would be incurred by a benchmark efficient service provider in that year. Setting the allowed return in accordance with the benchmark efficient cost of capital is consistent with the NPV=0 principle and is in the long-term interests of consumers
- for this purpose, a benchmark efficient service provider is one that follows the financing approach that underpins the AER's Rate of Return Instrument (2022 Instrument).⁵¹
- the return that is capitalised each year should be estimated as the nominal vanilla WACC using the same formula as underpins the 2022 Instrument.
- WACC parameters should be estimated in a way that is consistent with the approach adopted in the 2022 Instrument, reflecting the relevant market data at the beginning of each year of capitalisation.

At a high level, we have no major disagreement with these principles. We consider that there should be consistency between the rate of return approach for 2024–29 (using the binding 2022 Instrument) and the pre-period rate of return approach for 2022–23 and 2023–24.⁵²

However, we consider that Transgrid's proposed implementation is inconsistent with the approach set out in the Rate of Return Instrument in several material aspects. In proposing a return on capital for the rolling forward of capex to the start of the regulatory period, Transgrid:

- used on-the-day rates to calculate its return on equity each year – that is, updating the risk-free rate used to calculate return on equity for 2022–23 (using Feb–Mar 2022 data) and then 2023–24 (using Feb–Mar 2023 data)
- adopted a capex-weighted debt portfolio transition starting in 2022–23—that is, its 2022–23 return on debt is wholly based on the on-the-day rate, while the 2023–24 return on debt is a weighted average of 2022–23 and 2023–24 rates, with weights based on capex expenditure across the two pre-period years.
- selected averaging periods for each of the years on a retrospective basis.

First, on the return on equity, the 2022 Instrument sets the risk-free rate with a 10-year term, fixed for the regulatory control period (generally 5 years). Annual updates of the return on equity would be consistent with a shorter term for the risk-free rate. As such, Transgrid's proposal to use an annually updated return on equity is inconsistent with the implementation in the 2022 instrument.

Second, on the return on debt, as explained in the previous section, the 2022 Instrument equally weights all years in the trailing average return on debt. When developing the 2022 Instrument, the AER explicitly considered varying these weights to reflect yearly capex,⁵³ but concluded that it was preferable to maintain equal weighting.⁵⁴ In that process, Transgrid

⁵¹ AER, *Rate of return instrument*, February 2023 (version 1.1 as amended August 2023). See <https://www.aer.gov.au/publications/guidelines-schemes-models/rate-of-return-instrument-2022/final-decision>.

⁵² We do consider that regard should be had to consistency with the 2018 rate of return instrument where this would have applied (that is, in 2022–23). However, given the high degree of consistency between the 2018 and 2022 instruments this does not appear to be a major difference.

⁵³ AER, *Rate of Return, Draft debt omnibus paper*, July 2021, pp. 3–18 to 3–25; AER, *Rate of return, Overall rate of return, equity and debt omnibus, Final working paper*, December 2021, pp. 87–99.

⁵⁴ AER, *Draft rate of return instrument, Explanatory statement*, June 2022, pp. 225–242; AER, *Rate of return instrument, Explanatory statement*, February 2023, pp. 236–239.

submitted that we should maintain equal weighting and not vary weights with regard to capex profiles.⁵⁵ Transgrid’s proposal to use varying capex weights for return on debt in the pre-period WACC is therefore inconsistent with (a) the principles underlying the 2022 Instrument, (b) the implementation of equal weighting in the 2022 Instrument, and (c) Transgrid’s own position on this issue.

Finally, there is also concern about the retrospective selection of averaging periods. A fundamental principle in the 2022 Instrument is that averaging periods are nominated in advance of the period commencing. This prevents selection of an averaging period with a known outcome that upwardly biases the resulting rate of return. Transgrid does not explain how it has selected the yearly averaging periods used in its approach, and we do not suggest that it has attempted to select favourable periods.⁵⁶ Nonetheless, an approach that involves retrospective selection of averaging periods for each of the two pre-period years is inconsistent with the principles and implementation in the 2022 Instrument.

We expect financing costs to be reflective of the broader business’ rate of return, reflecting the opportunity cost of obtaining financing in these years. As such, an approach that is more consistent with the 2022 Instrument is to use the rate of return determined in each of Transgrid’s NER determinations for the relevant year. This addresses each of the shortcomings above:

- The return on equity is set using the relevant risk-free rate determined for each 5-year regulatory control period.⁵⁷
- The return on debt is set using an equally weighted trailing average portfolio.
- The averaging periods used in the Transgrid NER decisions were nominated in advance of those periods occurring, complying with all the requirements of the relevant Instruments.

The major point of contention with such an approach is that it uses the 10-year trailing average portfolio applying to Transgrid in each year. Transgrid’s proposal explicitly rejected the use of a historical trailing average for its pre-period WACCs on the grounds that it was new debt for a major new project that required its own determination. Transgrid stated that a benchmark network operator could not ‘go back in time’ to issue debt at historical rates.⁵⁸

We have carefully considered this point, which has some merit. However:

- The 2022 instrument is clear that the return on debt is best estimated as a 10-year trailing average, even though this abstracts away from observed variation in capex

⁵⁵ Transgrid, *Letter re: Response to AER Rate of return omnibus papers*, 2 September 2021, p. 6.

⁵⁶ Transgrid’s proposal is for consistent periods in each of the two years, which (if anything) suggests it has not attempted to choose averaging periods to arrive at a higher outcome. In contrast, evidence of deliberate selection might be inferred where a business proposed averaging periods that differed each year so as to capture the highest outcomes observed.

⁵⁷ As a minor point, this approach also means that the market risk premium consistent with the 2018 Instrument (6.1%) is applied to 2022–23, and the market risk premium consistent with the 2022 Instrument (6.2%) is applied to 2023–24. The Transgrid proposal applied 6.2% to both years, but the 2022 Instrument only came into force from 2023–24 onwards. In any case, the difference is very small (4 basis points on the calculated WACC).

⁵⁸ Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable)*, June 2023, p. 80.

timing. It reflects the opportunity cost of obtaining financing in these years, in the context of ongoing regulated services.

- There is a transition period specified in the 2022 Instrument, which is binding. Transgrid’s position is that this transition starts in 2024–25 when ‘EII services’ are first regulated. As such, it is not open to us to consider starting the 10-year transition period from 2022–23, which might otherwise be the endpoint of Transgrid’s reasoning on needing ‘new debt for a major new project’.
- There is a relevant link between the WSB project and the NER RAB, being that the WSB assets will be rolled into the NER RAB after the current regulatory control period.
- In practice, the WSB project is sufficiently small relative to the NER RAB that it can be reasonably treated as part of Transgrid’s ongoing financing program. The WSB project involves capex worth around 2.6 per cent of Transgrid’s NER RAB (spread across 7 years). This falls well within the range of variation in business-as-usual debt loads we observed when developing the 2022 Instrument.⁵⁹
- Transgrid was directed to undertake the WSB project because it was the existing transmission network operator with an existing NER RAB.⁶⁰ Hence, the concern that a new benchmark operator tasked with the WSB project might not have an existing RAB debt appears misplaced.

On balance, we consider that it is reasonable to use the rate of return determined in each of Transgrid’s NER determinations for the relevant year as the pre-period WACC. Overall, this approach is more consistent with the 2022 Instrument and the principles endorsed in Transgrid’s proposal than the pre-period WACCs proposed by Transgrid.

6.2.4 Expected inflation rate

Our estimate of expected inflation included in this draft decision is 2.80% (Table 6.2) based on the approach adopted in our final position paper from our 2020 Inflation Review.⁶¹

Transgrid’s proposal adopted our current approach for estimating expected inflation.⁶² Our draft decision therefore updates the relevant inputs for the latest information available at the time of this draft decision.

Table 6.2 Draft decision on Transgrid’s forecast inflation (%)

	Year 1	Year 2	Year 3	Year 4	Year 5	Geometric average
Expected inflation	3.10%	2.95%	2.80%	2.65%	2.50%	2.80%

Source: AER Analysis; RBA, *Statement on Monetary Policy*, August 2023, Table 1: Forecast Table. See <https://www.rba.gov.au/publications/smp/2023/aug/forecasts.html>

⁵⁹ Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable)*, June 2023, p. 15.

⁶⁰ AER, *Rate of return, Overall rate of return, equity and debt omnibus, Final working paper*, December 2021, pp. 92–94.

⁶¹ AER, *Final position – Regulatory treatment of inflation*, December 2020.

⁶² Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable)*, June 2023, p. 81.

6.2.5 Imputation credits

Our draft decision applies a value of imputation credits (gamma) of 0.57 as set out in the 2022 Instrument.⁶³ This is consistent with the value included in Transgrid’s proposal.

6.2.6 Capital raising costs

In addition to compensating for the required rate of return on debt and equity, we provide an allowance for the transaction costs associated with raising debt and equity. Our draft decision forecasts for debt and equity raising costs are included in the PTRM.

Equity raising costs

Equity raising costs are transaction costs incurred when a service provider raises new equity. We provide an allowance to recover an efficient amount of equity raising costs. We include equity raising costs in the capex forecast because these costs are only incurred once and would be associated with funding the particular capital investments. Equity raising costs are calculated in our PTRM as part of our approved capex for the first year of the period.

Transgrid has forecast \$0.68 million equity raising costs in the PTRM, using the approach set out in the model, and inputs consistent with the AER’s decision for Transgrid’s standard transmission services over the 2023–28 period.⁶⁴ We have updated our estimate for the 2024–29 period based on the benchmark approach using updated inputs. This results in equity raising costs of \$0.71 million.

Debt raising costs

Debt raising costs are the transaction costs incurred each time debt is raised or refinanced, as well as the costs for maintaining the debt facility. These costs may include underwriting fees, legal fees, company credit rating fees and other transaction costs. We include debt raising costs in the opex forecast because these are regular and ongoing costs which are likely to be incurred each time service providers refinance their debt. Transgrid has proposed debt raising costs of 8.28 basis points per annum, consistent with the AER’s decision for Transgrid’s standard transmission services over the 2023–28 period.⁶⁵ Our draft decision is also to apply debt raising costs of 8.28 basis points per annum.

⁶³ AER, *Rate of return Instrument, Explanatory Statement*, February 2023, pp. 240–250.

⁶⁴ Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable)*, June 2023, p. 82; Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – PTRM*, June 2023.

⁶⁵ Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable)*, June 2023, p. 82; Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – PTRM*, June 2023.

7 Depreciation

Depreciation is the amount provided so capital investors recover their investment over the economic life of the asset (return of capital). In deciding whether to approve the depreciation schedules submitted by Transgrid, we make determinations on:

- the indexation of the RAB and depreciation building blocks for the regulatory control period⁶⁶
- the capability for the Network Operator to efficiently obtain finance to carry out the network infrastructure project.⁶⁷

The regulatory depreciation amount is then calculated as the net total of the straight-line depreciation less the indexation of the RAB.⁶⁸

This section sets out our draft decision on Transgrid’s regulatory depreciation amount. It also presents our draft decision on the proposed depreciation schedules, including assessments of the proposed asset lives used for calculating the straight-line depreciation and Transgrid’s proposed modification to depreciation schedules for financeability.

7.1 Transgrid’s proposal

For the 2024–29 period, Transgrid proposed a total forecast regulatory depreciation amount of \$31.6 million (\$ nominal). To calculate the depreciation amount, Transgrid proposed to use:⁶⁹

- the straight-line depreciation method employed in our post-tax revenue model (PTRM) for standard asset classes⁷⁰
- an opening RAB value as at 30 June 2024 calculated by escalating pre-period capex with a nominal WACC⁷¹
- the proposed forecast capex for the 2024–29 period
- an expected inflation rate of 2.75% per annum for the 2024–29 period
- the same asset classes and standard asset lives for depreciating its forecast capex for the 2024–29 period as those approved in its 2023–28 transmission determination under the NER.
- Transgrid proposed a new asset class of ‘SIPS control’, containing computing and communication assets required to monitor and control the System Integrity Protection Scheme. Transgrid also proposed another new asset class in the PTRM, ‘Financeability

⁶⁶ EII Chapter 6A, cl. 6A.5.4(a)(1) & (3) & 6A.14.1.

⁶⁷ EII Chapter 6A, cl. 6A.6.3(d).

⁶⁸ EII Chapter 6A, cl. S6A.2.4(c).

⁶⁹ Transgrid, *Revenue proposal – 2024–29 – WSB (non-contestable)*, PTRM, June 2023.

⁷⁰ Transmission lines, Substations, SIPS Control and Equity raising costs asset classes.

⁷¹ Transgrid had applied a nominal WACC that reflected on-the-day rates, as opposed to the nominal WACC determined in the 2018–23 and 2023–28 regulatory determinations under the NER.

asset’ related to its proposal to amend the forecast depreciation schedule for financeability.

Table 7.1 Table 7.1 sets out Transgrid’s proposed depreciation amount for the 2024–29 period.

Table 7.1 Transgrid’s proposed regulatory depreciation for the 2024–29 regulatory control period (\$ million, nominal)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Straight-line depreciation	11.0	13.0	12.7	12.5	12.3	61.4
Less: inflation indexation on opening RAB	3.0	6.7	6.9	6.7	6.6	29.8
Regulatory depreciation	8.0	6.4	5.8	5.8	5.7	31.6

Source: Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – PTRM*, June 2023.

7.2 AER draft decision

We accept Transgrid’s proposed straight-line depreciation method for calculating the regulatory depreciation amount as set out in the PTRM. However, we have decreased Transgrid’s proposed forecast regulatory depreciation amount for the 2024–29 period by \$32.0 million (101.1%) to \$–0.3 million (\$ nominal). Table 7.2 shows our decision.

This decrease is primarily the result of our draft decision not accepting Transgrid’s proposed financeability modifications, which in turn affects:

- the opening as commissioned RAB as at 1 July 2024
- forecast as commissioned capex for the 2024–29 period
- Transgrid’s proposed accelerated depreciation of the new ‘financeability asset’ asset class.

Table 7.2 AER’s draft decision regulatory depreciation for the 2024–29 regulatory control period (\$ million, nominal)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Straight-line depreciation	0.0	4.6	8.7	9.0	9.2	31.5
Less: inflation indexation on opening RAB	2.9	6.9	7.4	7.3	7.3	31.8
Regulatory depreciation	–2.9	–2.3	1.3	1.6	1.9	–0.3

Source: AER analysis.

Our assessment of Transgrid’s standard and remaining asset lives and Transgrid’s proposed financeability modifications are discussed in the following subsections.

7.2.1 Standard and remaining asset lives

We accept Transgrid’s proposed standard lives for existing asset classes, as well as the standard life for the new asset class ‘SIPS control’. This is because we consider Transgrid’s proposed asset lives and depreciation schedule results in a profile that reflects the nature of

the asset over the economic life of the asset.⁷² However, we do not accept the new ‘financeability asset’ asset class and remaining asset lives for all asset classes.

Transgrid proposed the same asset classes and standard asset lives as those we have approved in our 2023–28 determination for Transgrid under the NER framework. We accept the proposed asset classes and asset lives as they are identical to those determined for Transgrid under the NER, which we have assessed to be reflective of the economic life of the assets.⁷³ The proposed standard asset lives are also largely comparable with those approved by us for other transmission network operators. However, we have removed a number of asset classes⁷⁴ that are not used for the WSB project as these asset classes do not have any forecast capex allocated to them. Transgrid has not raised any concerns with the removal of these unused asset classes.⁷⁵

We accept Transgrid’s proposed new asset class ‘SIPS control’ and its associated standard asset life of 5.5 years. This is a WSB-specific asset class containing capex related to computing and communication assets required to monitor and control the System Integrity Protection Scheme. As discussed in section 8, we accept there is capex associated with the SIPS asset and consider the useful lives of this asset to mirror the length of the concession period of 5.5 years.

As we discuss in the following financeability section (section 7.2.2), we do not consider Transgrid has demonstrated there are difficulties in obtaining efficient financing for the WSB project. Consequently:

- We do not accept the ‘financeability asset’ asset class Transgrid has proposed for the purposes of accelerating depreciation to address perceived financeability concerns.
- We also do not accept Transgrid’s proposal to depreciate assets on an as incurred basis (that is, depreciating assets prior to when they have been commissioned and providing a benefit to consumers). We consequently are not required to assess Transgrid’s proposed remaining asset lives as our draft decision contains a zero as commissioned opening RAB as at 1 July 2024. Accordingly, our draft decision does not contain remaining lives for any of Transgrid’s proposed asset classes at the start of the regulatory period.

7.2.2 Financeability

Under the EII framework, we must make modifications to any depreciation schedule, if we are satisfied that it is reasonably necessary to ensure the revenue determination is consistent with the principles specified in the EII Act⁷⁶ and the Network Operator is capable of efficiently obtaining finance to carry out the network infrastructure project.⁷⁷ This capability to efficiently obtain finance is what is commonly known as ‘financeability’. Financeability has

⁷² EII Chapter 6A, cl. 6A.6.3(b)(1).

⁷³ EII Chapter 6A, cl. 6A.6.3(b)(1).

⁷⁴ The unused asset classes we have removed are: Underground cables, Secondary systems, Communications (short life), Business IT, Minor plant, motor vehicles & mobile plant, Transmission line life extension, Land and easements, Synchronous condensers, Leasehold land and property, Buildings – capital works and In-house software.

⁷⁵ Transgrid, *Response to AER information request #01*, July 2023.

⁷⁶ EII Act, s.3(1)(a) – (c).

⁷⁷ EII Regulation, s. 47D(3)(b); EII Chapter 6A, cl. 6A.6.3(d).

emerged as an issue in the current environment where there is a step change in the pace of large transmission investments such that more flexibility is desirable to support these investments.

For this draft decision, we do not accept the modifications to the forecast depreciation schedule proposed by Transgrid to address issues with financeability. This is because we do not consider Transgrid's proposal provides adequate evidence that, absent these modifications, it is not capable of obtaining efficient finance for the WSB project. We consider Transgrid's proposed 'financeability test' is of limited scope and does not reasonably identify whether or not Transgrid is capable of efficiently obtaining finance.

Our draft decision is to therefore reverse the modifications Transgrid has made in its proposed PTRM for the purposes of accelerating cashflows to address financeability concerns. Based on the information provided, we consider the draft decision depreciation schedule, absent any modifications for financeability, is consistent with the objects specified in the EII Act and provides adequate cashflows to improve electricity supply,⁷⁸ and co-ordinate and encourage investment in network infrastructure.⁷⁹ This change will reduce Transgrid's forecast regulatory depreciation allowance by about \$23.5m, from an initial proposal of \$137.7m to \$114.2m (\$ nominal) (all else constant).

Under our standard approach to calculating depreciation, in the absence of financeability concerns, we depreciate assets using a profile that reflects the nature of the assets over the economic life of the asset. In past determinations under the NER, we have employed the straight-line method set out in the PTRM. Further to these considerations, however, the EII framework explicitly requires the AER to consider whether the Network Operator is capable of efficiently obtaining finance when making a decision on the forecast depreciation schedule.⁸⁰ While there is currently no equivalent financeability provision in the NER, we observe that there is an AEMC rule change proposal to consider potential changes to the NER framework to address financeability concerns.

We are aware of the need to ensure a Network Operator is capable of efficiently obtaining finance to carry out network infrastructure projects.⁸¹ When assessing any proposal for financeability-driven modifications to the forecast depreciation schedule, we will apply the EII framework which allows us to make modifications to depreciation schedules if we are satisfied that it is reasonably necessary to ensure the revenue determination is consistent with the objects specified in the EII Act; and that the network operator is capable of efficiently obtaining finance to carry out the network infrastructure.⁸²

In determining whether it is reasonably necessary to modify a depreciation schedule under the EII framework, we will assess the Network Operator's proposal and consider evidence provided in support of the Network Operator's difficulty in efficiently obtaining finance to carry out the network infrastructure project. For the WSB project, Transgrid engaged Frontier

⁷⁸ EII Act, s. 3(1)(a).

⁷⁹ EII Act, s. 3(1)(b)–(c).

⁸⁰ EII Regulation, s. 47D(3); EII Chapter 6A, cl. 6A.6.3(d).

⁸¹ EII Chapter 6A, cl. 6A.6.3(d)(2)

⁸² EII Chapter 6A, cl. 6A.6.3(d) and EII Act, ss. 3(1)(a)–(c).

Economics to develop a ‘financeability test’ for the purposes of demonstrating financeability issues.⁸³ This test consists of the following features:

- A mechanical formula is constructed based on 3 financial metrics: funds-from-operations vs net debt (FFO/net debt) ratio; funds-from-operations (FFO) interest cover ratio; and gearing ratio. These financial metrics form part of ratings agencies’ considerations when assigning credit ratings to businesses.
- Transgrid has adopted a 9% FFO/net debt, 2.4 times interest coverage ratio and a 60% gearing ratio as the thresholds to use in the financeability test. It considers that these reflect the metrics required for a BBB+ credit rating.
- For each year of the forecast regulatory period, financeability issues are considered to be evident when the formula calculates insufficient cashflow to attain, on average, the benchmark thresholds specified above.⁸⁴
- Cashflow analysis is undertaken on the WSB project as a standalone project, separate to the rest of the Transgrid RAB.

Having identified an issue with cashflow financing for each year of the 2024–29 period through the application of this test, Transgrid proposed to amend the forecast depreciation schedule in the PTRM by:

- Recognising depreciation of assets on an as incurred, rather than an as commissioned basis. This brings forward cashflows by depreciating assets during the construction stage, prior to the commissioning and operation of the asset.
- Creating a new ‘financeability asset’ asset class to bring forward cashflows and shape the forecast depreciation schedule. Specifically, Transgrid has proposed to reallocate a certain amount of capex from its other asset classes to the new asset class each year, whereupon the capex is immediately fully depreciated in the same year. The amount of capex allocated to the ‘financeability asset’ asset class for each year of the period is calculated such that the additional cashflow (through the forecast depreciation schedule) is sufficient to bring the above nominated financial metrics back up to the level it considers to be equal to a BBB+ rating.

Having assessed Transgrid’s proposed approach to financeability, we do not consider Transgrid’s proposed ‘financeability test’ to be fit for purpose for the following two reasons.

- The proposed approach to demonstrating financeability issues takes an unreasonably narrow scope in assessing the cashflows by focusing only on the WSB project, as opposed to Transgrid’s combined regulated revenues under both the EII framework and NER.
- The financeability test also looks at a limited set of quantitative metrics and does not adequately consider the broader set of information, including other quantitative metrics and qualitative factors, relevant to the assessment of financeability.

⁸³ This formulaic ‘financeability test’ is identical to the rule change request submitted by Energy Networks Australia in June 2023, to ensure the financeability of actionable Integrated System Plan projects.

⁸⁴ A weighted average is used: 35.7% on FFO/net debt, 28.6% on FFO interest cover, 35.7% on gearing ratio.

On the first matter, we consider the assessment of whether a financeability problem exists should be performed at the overall regulated business level rather than at an isolated project level.⁸⁵ It is the cumulative impact that gives rise to our concern about financeability. Accordingly, we do not agree with Transgrid’s proposal to identify financeability issues by examining WSB project cashflows in isolation from the broader Transgrid RAB under the NER framework. We would expect any financing decision or capital raising for the WSB project will be made in conjunction with its financing strategy for the broader Transgrid RAB. We also understand that ratings agencies, such as Moody’s, consider the entity’s consolidated business cashflows in assigning a credit rating. This view is also reflected by the CCP, where it submitted that investors looking to invest in Transgrid are more likely to consider Transgrid’s overall credit rating as opposed to creating a credit rating for each individual project.⁸⁶

Transgrid’s NER RAB is around \$10 billion (as at 30 June 2024) and the proposed WSB RAB peaks at about \$263 million. At 2.6% of the existing RAB, and with capex spread across a seven year period, it is improbable that the WSB project (on its own) will materially alter Transgrid’s financeability assessment. In contrast, there are other major ISP projects (e.g. VNI-West, Humelink) that will materially increase Transgrid’s RAB, roughly increasing it by more than 50%. Our position that financeability must be holistically assessed reflects our concern for the cumulative impact of these projects.

We asked Transgrid to provide further financeability analysis with regards to Transgrid’s cashflows for the WSB project (under the EII framework) in the context of its broader NER RAB and ISP projects. Transgrid declined to provide this information and stated:⁸⁷

It would be inappropriate and unprecedented for a regulator of a business under one framework to assume the availability of cash flows that relate to regulated services under a completely separate framework, when assessing financeability.

Transgrid also noted by way of example the regulation of Essential Energy by the AER under the NER framework and of Essential Water, a subsidiary of Essential Energy, by IPART under a separate jurisdictional framework. Transgrid submitted that, as part of this regulatory determination process, IPART makes an assessment of Essential Water’s financeability, however it does not include AER regulated revenues in its assessment.

We do not consider Transgrid’s observation to be relevant in the context of the WSB project. We consider that the cashflows for WSB under the EII framework are clearly related to Transgrid’s NER cashflows for the following reasons:

- The EII Framework is intimately linked to the NER framework. The AER’s guideline for making a non-contestable revenue determination for Network Operators under the EII Framework is as far as is reasonably practicable, intended to be consistent with Chapter 6A of the NER.⁸⁸

⁸⁵ This is consistent with our submission to the AEMC rule change process. See AER, *Submission to the Accommodating Financeability in the Regulatory Framework Consultation paper*, August 2023, p. 1.

⁸⁶ Consumer Challenge Panel, *CCP submission to the AER on Transgrid’s 2024–29 Revenue Proposal in regards to the Waratah Super Battery (WSB)*, August 2023, p. 11.

⁸⁷ Transgrid, *Response to AER information request 5 – 1a*, August 2023.

⁸⁸ EII Regulation, s. 47A(3)(b).

- The RAB for the WSB project will roll in to Transgrid's broader NER RAB at a future date.⁸⁹ Furthermore, the asset classes, standard lives and capex for the WSB project are broadly consistent with those we have determined for Transgrid in our 2023–28 NER determination. This differs to the Essential Energy and Essential Water example, where the AER and IPART regulate different assets which have no interlinkages between the two businesses.

In any event, Transgrid's proposal is internally inconsistent on its proposed assessment of WSB as a stand-alone project. Transgrid's proposal does not include the cashflows determined for its NER RAB as part of its financeability assessment, however as we discuss below, uses financial metrics associated with Moody's whole of business assessment. If ratings agencies such as Moody's deem it appropriate to make an assessment on a project-specific basis, they will use a separate set of project finance metrics related to average and minimum debt service coverage which reflects the cashflow timing issues expected when financing individual greenfield projects.⁹⁰ However, for the reasons we've listed above, we observe that this is unlikely to be the case for the WSB project. Finally, a stand-alone financeability test would also have to allow for a limited period of departure from the recommended metrics without a negative impact on credit rating assessment.

Our second key concern is the limited and prescriptive focus on 3 metrics in Transgrid's proposed financeability test.⁹¹ We consider it is important to be able to review the full set of relevant information. As we have discussed above, credit rating agencies assess the whole of business' ability to finance its operations and pay back credit obligations. In doing so, they place material weight on qualitative factors in addition to key financial metrics. In Moody's published methodology for assessing regulated electric and gas networks—which is the primary source for the proposed formula—financial metrics only accounts for 40% of their initial assessment. The majority of its assessment is related to qualitative factors requiring Moody's to exercise its judgement, such as consideration of the regulatory environment, ownership model and financial policies. The outcome of the qualitative assessment materially impacts the thresholds for the quantitative assessment that the rating agency applies in practice.

We invited Transgrid to provide further financeability analysis for the WSB project that engaged with a broader set of factors, including the qualitative assessment used by credit rating agencies. Transgrid referred back to the Frontier Economics report submitted with its proposal and stated that consideration of qualitative factors was not compatible with the principles it considered relevant to the financeability assessment (objectivity, predictability, replicability, transparency and timeliness).⁹² The key reasoning was:

Since the quantitative rating thresholds that we have proposed in our regulatory financeability test are benchmarked to the actual rating thresholds that Moody's has used in recent rating assessments of regulated energy networks in

⁸⁹ At the time of the expected roll-in of the WSB project RAB into Transgrid's broader RAB, the WSB project RAB is expected to still contain significant value, with over 30 years of depreciation still to be recovered.

⁹⁰ Moody's, *Rating methodology – Regulated electric and gas networks*, April 2022, pp. 13–15. Available at <https://ratings.moody.com/api/rmc-documents/386754>.

⁹¹ This is consistent with our submission to the AEMC rule change process. See AER, *Submission to the Accommodating Financeability in the Regulatory Framework Consultation paper*, August 2023, attachment pp. 7, 12.

⁹² Transgrid, *Response to AER information request 5 – 1a*, August 2023; and Frontier Economics, *A proposed financeability test for Priority Transmission Infrastructure Projects in NSW, Report for Transgrid*, May 2023.

Australia, we have implicitly accounted for some of the qualitative factors that Moody's takes into account when conducting rating assessments.

We understand that two of the thresholds proposed by Transgrid in its financeability test (for FFO/net debt and FFO interest cover) are set slightly below the standard ranges used by Moody's.⁹³ However, this still appears to give insufficient weight – implicit or otherwise – to the range of qualitative factors relevant to a credit rating assessment. We consider that assessment of these qualitative factors would provide strong support for a higher credit rating.

If qualitative factors were to be given due weight, the threshold values included in the prescriptive formula appear to be excessive. Further, there is a fundamental disconnect between the lower thresholds Transgrid has adopted for the FFO/net debt and FFO interest cover metrics, and the gearing ratio. Our understanding of Moody's assessment criteria (including qualitative criteria) is that a regulated energy network could be assessed at an investment grade with a 9% FFO/net debt ratio, 2.4 times FFO interest cover and a gearing ratio around 80%, materially higher than the 60% gearing ratio threshold proposed by Transgrid. Of course, other combinations are possible, for example due to variation in other qualitative factors.

One indicator that the 3-metric test is inadequate is that if it is applied to existing NER revenue determinations it indicates that network service providers are not financeable, even before any consideration of additional step-change in investment levels. This outcome has also been noted in the ENA rule change proposal, based on assessment of Transgrid's NER RAB.⁹⁴ Our submission to the AEMC provides analysis on the range of metrics observed across the full set of regulatory determinations, highlighting that a substantial portion fall below the chosen thresholds.⁹⁵ Despite this observation, there doesn't appear to be evidence of widespread financeability problems for the businesses we regulate, nor have we observed any firms being unable to efficiently raise capital to date.

This suggests the proposed financeability test generates false positives, detecting a financeability problem where none exists. This type of error appears to be an inherent disadvantage to the simple, formulaic approach proposed, as it is unable to adapt to changing circumstances over time and the complex nature of financeability assessments. We agree that the values cited by Transgrid as justification for its financeability test are desirable (objectivity, predictability, replicability, transparency and timeliness). We consider that additional regard should also be given to accuracy and appropriateness, given the context in which we are making our decision.

Transgrid also stated that:⁹⁶

⁹³ Moody's indicative metrics at the Baa rating band are FFO Interest cover of 2.8–4.0 times; FFO/net debt of 11–18%; and gearing ratio of 60–75%. The proposed test thresholds are below these bands for FFO interest cover (2.4 times) and FFO/net debt (9%). The 60% gearing threshold is at the top of the band (as gearing is reverse scored – a lower gearing ratio entails a higher credit rating). Moody's, *Rating methodology for Regulated Electric and Gas Networks*, April 2022, p. 6.

⁹⁴ Energy Networks Australia, *Ensuring the financeability of actionable ISP projects, Proposal to change the National Electricity Rules*, June 2023, pp. 7–8.

⁹⁵ AER, *Submission to the Accommodating Financeability in the Regulatory Framework Consultation paper*, August 2023, attachment p. 13.

⁹⁶ Transgrid, *Response to AER information request 5 – 1a*, August 2023.

Finally, we note that no other regulator that conducts regulatory financeability tests incorporates these wider qualitative factors into their assessments. The tests are always based on quantitative rating factors for precisely the reasons explained above. The approach that the AER has suggested of incorporating wider qualitative rating factors into the regulatory assessment of financeability would be inconsistent with regulatory best practice.

We consider that Transgrid’s assertion appears incorrect. For example, Ofgem’s approach to assessing financeability under its RIIO framework is built on an ‘in-the-round’ assessment that explicitly has regard to qualitative factors in addition to modelled quantitative metrics.⁹⁷ Ofwat has a similar ‘in-the-round’ approach.⁹⁸ More fundamentally, while we may consider and have regard to the practices of other regulators, that should not automatically lead to us making the same decisions or taking the same positions. This is because for any given circumstance, the facts or factors that need to be considered may differ.

Therefore, for the reasons discussed above, we do not consider Transgrid’s proposal provides evidence of an inability to efficiently obtain finance to carry out the WSB project. For this draft decision, we have therefore determined a forecast depreciation schedule that reflects the nature of the assets over the economic life of the assets. We have also applied our standard approach to calculating depreciation on an as commissioned basis for transmission assets, as opposed to an as-incurred basis.

We will reassess our position on financeability for the final decision with any additional material Transgrid may provide that addresses our above concerns as part of its revised proposal.⁹⁹ As part of this, we will also consider the interrelationship with the ongoing AEMC rule change.

⁹⁷ Ofgem, *RIIO-ED2 Final determinations, Overview document*, November 2022, p. 31; and Ofgem, *RIIO-ED2 Final Determination, Finance Annex*, November 2022, pp. 66–79.

⁹⁸ Ofwat, *Creating tomorrow, together: Our final methodology for PR24*, December 2022, p. 119.

⁹⁹ EII Chapter 6A, cl. 6A.12.1(c).

8 Capital expenditure

Capital expenditure (capex) refers to investment made for the development and construction of network infrastructure. This investment mostly relates to assets with long lives (typically 30–50 years) and these costs are recovered over several regulatory control periods. On an annual basis, the financing (return of capital) and depreciation (return on capital) costs associated with these assets are recovered as part of the building blocks that form Transgrid's total revenue cap.¹⁰⁰

We must determine whether Transgrid's forecast capex (including pre period capex) is prudent, efficient, and reasonable to comply with all applicable regulations and maintain the safety of its network (the capex objectives).

For capital expenditure, the expenditure forecast assessment guideline states that prudent expenditure is that which reflects the best course of action, considering available alternatives.¹⁰¹ We recognise that the NSW Infrastructure Planner has determined the best course of action for this project and that the Ministerial direction has obligated Transgrid to meet the requirements of this action. Accordingly, we do not assess the prudence of the project requirements as set out in the Ministerial direction. However, we do assess the prudence of Transgrid's capital expenditure where it does have discretion.

Our assessment approach for capex is detailed in section 5 of appendix A to this draft decision.

8.1 Transgrid's proposal

Transgrid proposed \$254.7 million (\$ 2023–24) in forecast capex.¹⁰² This forecast capex is primarily for the augmentation of existing transmission lines and substations in Transgrid's network.

Table 8.1 sets out the total forecast capex by capex category and year. This includes \$106.5 million (\$ 2023–24) in pre-period costs that will be incurred in years 2022–23 and 2023–24 to ensure the project commissioning dates are met.¹⁰³

Table 8.1 Transgrid's proposed capex by category (\$million, 2023–24)

	Pre-period		Forecast period					Total
	2022–23	2023–24	2024–25	2025–26	2026–27	2027–28	2028–29	
Transmission lines augex	-	21.7	48.1	-	-	-	-	69.8
Substations augex	-	34.4	62.5	11.5	-	-	-	108.4
SIPS control	1.9	11.2	6.2	-	-	-	-	19.3
Labour and indirect costs	9.5	27.6	18.0	1.7	-	-	-	56.9
Real input costs	-	0.1	0.2	0.0	-	-	-	0.3
Equity raising costs	-	-	0.7	-	-	-	-	0.7

¹⁰⁰ EII Chapter 6A, cl. 6A.5.4(a).

¹⁰¹ AER, *Better Regulation, Expenditure forecast assessment guideline for electricity distribution*, August 2022, available at www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/expenditure-forecast-assessment-guideline-2013, p. 10.

¹⁰² This is excluding equity raising costs.

¹⁰³ At the time of the proposal, Transgrid's pre-period costs were a mix of actuals and forecasts.

Total capex excluding equity raising costs	11.4	95.0	134.9	13.3	-	-	-	254.7
Total capex including equity raising costs	11.4	95.0	135.6	13.3	-	-	-	255.4

Source: Transgrid's proposal.

8.2 AER draft decision

Our draft decision on Transgrid's determination is to not accept forecast capex of \$254.7 million (\$ 2023–24). Our substitute forecast is \$248.5 million which is 2.4% below Transgrid's forecast. This reflects our decision to not include forecast capex for future paired generation.

We consider this forecast will provide a prudent, efficient, and reasonable service provider in Transgrid's circumstances the necessary capex required to carry out the project according to the Minister's direction, maintain the safety of its network and comply with all applicable regulations. Table 8.2 and Table 8.3 sets out our draft decision on Transgrid's forecast capex by year and category respectively.

Table 8.2 AER's draft decision on Transgrid's forecast capex by year (\$million, 2023–24)

	Pre period		Forecast					Total
	2022–23	2023–24	2024–25	2025–26	2026–27	2027–28	2028–29	
Transgrid's proposal	11.4	95.0	134.9	13.3	-	-	-	254.7
AER's draft decision	11.4	92.6	131.2	13.3	-	-	-	248.5
Difference (\$)	-	-2.5	-3.7	-	-	-	-	-6.2
Difference (%)	-	-2.6%	-2.7%	-	-	-	-	-2.4%

Source: Transgrid and AER analysis.

Note: Excludes equity raising costs. Numbers may not sum due to rounding.

Table 8.3 AER's draft decision on Transgrid's forecast capex by category (\$million, 2023–24)

Category	Transgrid's proposal	AER's draft decision	Difference (\$)	Difference (%)
Transmission lines augex	69.8	69.8	-	-
Substations augex	108.4	108.4	-	-
SIPS control	19.3	13.1	-6.2	-32%
Labour and indirect costs	56.9	56.9	-	-
Real input costs	0.3	0.3	-	-
Equity raising costs	0.7	0.7	-	-
Total capex excluding equity raising costs	254.7	248.5	-6.2	-2.4%
Total capex including equity raising costs	255.4	249.2	-6.2	-2.4%

Source: Transgrid and AER analysis.

Note: Numbers may not sum due to rounding.

8.2.1 Augmentation

The augmentation component comprises works on transmission lines and substations. Transgrid proposed \$178.2 million (\$ 2023–24) in forecast capex for augmentation works.¹⁰⁴ Of this, 93% is a design and construct contract for both transmission lines and substations (\$165.9 million).

Transgrid undertook competitive procurement processes for both transmission lines and substations, with Transgrid preferring a single contractor to undertake the design and construction works on both. Transgrid will procure all high voltage equipment from existing period agreements with suppliers and the equipment will be provided to the contractor.

We accept Transgrid's proposal of \$178.2 million (\$ 2023–24) for transmission lines and substations augmentation capex. We are satisfied Transgrid's procurement practices have resulted in market tested costs that are likely to reflect prudent and efficient and reasonable costs.

8.2.1.1 Transmission lines

Transgrid proposed \$69.8 million (\$ 2023–24) for transmission lines augmentation capex. This represents 27% of total forecast capex with \$68.3 million relating to the design and construct contract. The scope of work comprises uprating of existing transmission lines 3/4L, 5 and 39. This includes:

- Installation of new tower structures
- Installation of D and V strings
- Strengthening of existing tower structures

The transmission lines will also require insulator modification, which will use high voltage insulators procured by Transgrid.

8.2.1.2 Substations

Transgrid proposed \$108.4 million (\$ 2023–24) for substation augmentation capex. This represents 43% of total forecast capex with \$97.7 million relating to the design and construct contract. The scope of work comprises uprating of 22 existing substations in northern and southern regions of NSW. This includes replacing high voltage equipment such as circuit breakers, current transformers, and line traps.

8.2.1.3 Reasons for the decision

Given the magnitude of the design and construct contract relative to total capex, we have assessed Transgrid's procurement practices to establish whether forecast capex for the augmentation component represents a competitive and market tested outcome. We have also assessed whether the augmentation works for the WSB project have any overlap with Transgrid's work programs under the NER.

In assessing Transgrid's procurement practices, we considered whether the tender process (for both transmission lines and substations) provided enough competitive constraint to enable market tested and efficient prices. This includes the following:

- The number of participating tenderers,

¹⁰⁴ Labour and indirect costs for transmission lines and substations are assessed separately in section 8.2.3.

- Whether or not prospective contractors were deterred from participating in the tender process, and
- Whether risks were allocated to the party best placed to manage those risks.

We are satisfied that the procurement process was appropriate and that the design and construct contracts reflect competitive and market tested prices. Our assessment indicates that the project requirements were not complex or high value to an extent that would reduce the number of contractors that could respond to the tender. We also found that through the procurement process there was an appropriate sharing of risks between Transgrid and the subsequent preferred contractor.

In assessing whether the WSB project has any overlap with Transgrid's work programs under the NER, we sought information from Transgrid regarding potential overlap on the lines and substations work proposed in this determination and proposed programs for its recently finalised 2023–28 determination. Specifically, we looked at Transgrid's low spans remediation, asbestos remediation and circuit breaker replacement programs it proposed for its 2023–28 regulatory period under the NER.

In response to our information request, Transgrid provided details of relevant transmission lines and circuit breakers earmarked for both the WSB project and programs under the NER. This information showed the only potential overlap is the asbestos remediation on line 39. Transgrid noted there are two towers on line 39 that are being modified as part of the WSB project and will potentially require asbestos remediation under its NER program. As the WSB project will precede the asbestos remediation program under the NER, Transgrid stated that if any asbestos is remediated as part of the WSB project, these towers will be removed from the program under the NER.

Transgrid also noted that as the delivery dates for the WSB project precede the work programs under the NER, there is no option for Transgrid to achieve capex savings from synergies by bundling these programs. While we accept Transgrid must meet the delivery dates set out in the Ministerial direction, we believe it would be prudent for a network operator under both the EII framework and the NER to explore the financial value in bundling work programs in the future.

8.2.2 SIPS control

Transgrid proposed \$19.3 million (\$ 2023–24) for SIPS control works. This includes \$6.2 million for costs associated with future rounds of paired generation being integrated into the scheme. The SIPS control capex forecast reflects a bottom-up build of the resources Transgrid requires to design, install, test and commission the SIPS control component. Transgrid stated that it is best placed to design and implement the SIPS control due to the highly complex and specialised nature of the works.

The scope of works comprises designing and implementing IT infrastructure relating to system monitoring, communication, and control. This control system will monitor and link associated transmission lines, the WSB battery and paired generators. Transgrid will procure all control panels and equipment from existing period agreements with suppliers.

We include \$13.1 million (\$ 2023–24) for SIPS control capex as our substitute forecast. This is \$6.2 million (32%) below Transgrid's forecast of \$19.3 million.

8.2.2.1 Reasons for the decision

Transgrid has included \$6.2 million (\$ 2023–24) in its SIPS control forecast capex for any future paired generation tender rounds. This includes \$2.5 million in the pre period (in 2023–24) and \$3.7 million in the forecast period (in 2024–25).

In its proposal, Transgrid stated that there will be future procurement rounds to compliment the first procurement round already completed. It also stated the future paired generation forecasts are uncertain due to the limited understanding of the scope of works given the number and location of procured future paired generators is unknown. Therefore, in developing its estimates for future paired generator capex, Transgrid has relied on assumptions mainly based on its experience to date with the first tender round.

Transgrid proposed an adjustment mechanism for future paired generation costs that would account for the difference in its pre period/forecast amount (proposed \$6.2 million) and Transgrid’s actual costs (higher or lower).

Transgrid do not have a role in selecting generators to provide Paired Generation services. This is the role of the Infrastructure Planner, EnergyCo. As the Network Operator for the project, Transgrid is obligated to connect any additional generators to the SIPS control scheme. Consequently, Transgrid does not have access to information they may reliably use to forecast the costs of connecting future paired generators.

Due to the current uncertainty of future paired generation capex, we believe there is risk in including forecast capex for this determination and that this risk would be better handled via the adjustment mechanism. This mechanism would still serve the original purpose of providing revenue payments to Transgrid that accurately reflect the costs of future paired generation. We believe it is prudent and efficient to amend this adjustment mechanism to include the total cost of any future paired generation rounds. Further detail on the amended adjustment mechanism can be found in section 12.

We canvassed this option in our consultation with Transgrid and it was receptive to amending its adjustment mechanism to account for the total future paired generation capex. Therefore, our draft decision is to not include the \$6.2 million (\$ 2023–24) for future paired generation capex leading to a substitute forecast capex of \$13.1 million (\$ 2023–24) for SIPS control.

8.2.3 Labour and indirect costs

Transgrid proposed \$56.9 million (\$ 2023–24) for labour and indirect costs.¹⁰⁵ This includes \$3.5 million for historical labour and indirect capex that Transgrid has already incurred. These incremental costs reflect a bottom-up build relating to activities that Transgrid would not undertake if it did not proceed with the WSB project.

Transgrid has assumed that 70% of its forecast labour and labour related costs are direct with the other 30% being included as indirect. This is consistent with Transgrid’s historical allocation of capitalised labour and labour related costs.

We accept Transgrid’s proposal of \$56.9 million (\$ 2023–24) for labour and indirect costs. We are satisfied these costs are likely to reflect prudent and efficient and reasonable costs.

¹⁰⁵ SIPS control labour and indirect costs are separate to this and are included in the SIPS control capex.

8.2.3.1 Reasons for the decision

GHD’s independent verification of Transgrid’s capex forecast performed a top-down labour and indirect cost benchmarking assessment against Transgrid’s similar sized contingent projects.¹⁰⁶ The benchmarking focussed project management and ‘other support and corporate roles’, which are the two biggest cost categories. We agree with GHD’s top-down assessment that these categories are reasonable.

Approximately 60% of Transgrid’s forecast labour and indirect costs are for project management. GHD’s benchmarking assessment indicates that Transgrid’s forecast project management costs as a percentage of total project costs for WSB (11.3%) aligns with comparative projects such as the QNI contingent project (11.4%).¹⁰⁷

Other support and corporate roles represent 28% of total labour and indirect costs. For this category the WSB project benchmarks higher than QNI. We agree with GHD’s assessment that accounting for the WSB project’s larger scope of substation and transmission line works would decrease labour costs for ‘other support and corporate roles’ such that it would benchmark much closer to the QNI project.

8.2.4 Real input costs

Transgrid applied labour escalation to the labour component of its capex forecast from 2023–24 onwards using escalators from our Transgrid 2023–28 NER revenue determination. These escalators are an average of forecasts provided by KPMG and BIS Oxford Economics for years 2023–24 to 2027–28.¹⁰⁸ While Transgrid has used a simple formula to set the remaining 2028–29 escalator, it has no impact on the capex forecast and an immaterial impact on the opex forecast.¹⁰⁹ We are satisfied that the proposed \$0.3 million for real input costs reflects prudent, efficient, and reasonable costs.

¹⁰⁶ Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) – Attachment - GHD, Waratah Super Battery Non-contestable Independent Verification and Assessment*, June 2023, p. 19.

¹⁰⁷ VNI benchmarks higher than both WSB and QNI although this is to be expected from a smaller project.

¹⁰⁸ Transgrid has applied the same methodology for its opex forecast. See section 9.2.4.

¹⁰⁹ Transgrid has set the 2028–29 real labour escalator equal to the average of that approved by us for 2023–28 NER transmission determination.

9 Operating expenditure

Operating expenditure (opex) refers to operating, maintenance and other non-capital expenses. Forecast opex for regulated network services is one of the building blocks we use to determine a network operator’s total revenue cap.¹¹⁰

We must determine whether Transgrid’s forecast opex (including pre period opex) is prudent, efficient, and reasonable to comply with all applicable regulations, meet or manage the expected demand for regulated network services, and maintain the safety of its network (the opex objectives).

Our assessment approach for opex is detailed in section 5 of appendix A to this draft decision.

9.1 Transgrid’s proposal

Transgrid proposed \$28.1 million (\$ 2023–24) in forecast opex.¹¹¹ Table 9.1 sets out the total forecast opex by capex category and year. This includes \$3.1 million in pre-period opex costs relating to a Network Operator Appointment Fee payable to EnergyCo as the Infrastructure Planner.

Table 9.1 Transgrid’s proposed opex by category (\$million, 2023–24)

	Pre-period		Forecast period					Total
	2022–23	2023–24	2024–25	2025–26	2026–27	2027–28	2028–29	
Maintenance costs (excl labour escalation)	-	-	-	\$0.3	\$0.8	\$0.6	\$0.3	\$2.1
Operating Costs (excl labour escalation)	\$3.1	-	\$3.4	\$4.1	\$4.0	\$4.6	\$4.2	\$23.3
Insurance Costs	-	-	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3	\$1.7
Real input cost escalation	-	-	\$0.0	\$0.1	\$0.1	\$0.1	\$0.2	\$0.6
Debt raising costs	-	-	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.5
<u>Total excluding debt raising costs</u>	\$3.1	-	\$3.7	\$4.8	\$5.2	\$5.7	\$5.0	\$27.5
<u>Total including debt raising costs</u>	\$3.1	-	\$3.8	\$4.9	\$5.3	\$5.8	\$5.1	\$28.1

Source: Transgrid’s proposal.

Note: Numbers may not sum due to rounding.

Operating costs are \$23.3 million (\$ 2023–24) and the primary driver of forecast opex, representing 83% of total opex. Operating costs include resource requirements for contract management, network planning and operations, and regulatory submissions.

9.2 AER draft decision

Our draft decision on Transgrid’s determination is to not accept Transgrid’s forecast opex of \$28.1 million. Our substitute forecast is \$24.7 million which is 11.8% below Transgrid’s

¹¹⁰ EII Chapter 6A, cl. 6A.5.4(a)(6).

¹¹¹ This includes debt-raising costs.

forecast. This reflects our substitute forecast for contract management and regulatory submissions resource requirements.

We consider this substitute forecast to be a prudent, efficient, and reasonable. Table 9.2 and Table 9.3 set out our draft decision on Transgrid’s forecast opex by year and category respectively.

Table 9.2 AER’s draft decision on Transgrid’s forecast opex by year (\$million, 2023–24)

	Pre period		Forecast					Total
	2022–23	2023–24	2024–25	2025–26	2026–27	2027–28	2028–29	
Transgrid’s proposal	3.1	-	3.8	4.9	5.3	5.8	5.1	28.1
AER’s draft decision	3.1	-	2.6	4.5	4.9	5.0	4.6	24.7
Difference (\$)	-	-	-1.2	-0.4	-0.4	-0.8	-0.5	-3.3
Difference (%)	0.0%	-	-32.2%	-7.9%	-7.1%	-13.6%	-10.6%	-11.8%

Source: Transgrid and AER analysis.

Note: Includes debt raising costs. Numbers may not sum due to rounding.

Table 9.3 AER’s draft decision on Transgrid’s forecast opex by category (\$million, 2023–24)

Category	Transgrid’s proposal	AER’s draft decision	Difference (\$)	Difference (%)
Maintenance costs (excl. labour escalation)	2.1	2.1	-	0.0%
Operating costs (excl. labour escalation)	23.3	20.0	-3.2	-13.9%
Insurance costs	1.7	1.7	-	0.0%
Real input cost escalation	0.6	0.5	-0.1	-17.1%
Debt raising costs	0.5	0.5	0.0	4.7%
Total opex excluding debt raising costs	27.5	24.2	-3.3	-12.1%
Total opex including debt raising costs	28.1	24.7	-3.3	-11.8%

Source: Transgrid and AER analysis.

Note: Numbers may not sum due to rounding.

9.2.1 Maintenance costs

Transgrid proposed \$2.1 million for maintenance costs, excluding labour escalation. This represents 7% of total forecast opex. The scope of work comprises condition-based or defect maintenance work, routine maintenance, and inspection work. It includes:

- Warranty inspections at substations
- End of defects liability period transmission line inspections
- Annual testing of the SIPS Control

The maintenance activities and forecast assumptions are consistent with comparable contingent projects such as Queensland-NSW Interconnector. While we haven’t been able to benchmark SIPS control testing unit rates against these contingent projects, warranty and end of defects inspection unit rates appear reasonable in comparison.

We accept Transgrid’s proposal of \$2.1 million (\$ 2023–24) for maintenance costs opex. We are satisfied these costs are likely to reflect prudent and efficient and reasonable costs.

9.2.2 Operating Costs

Transgrid proposed \$23.3 million (\$ 2023–24) for operating costs. Contract management costs are \$19.1 million and are the primary driver of operating costs (82%). These costs are for ongoing management and reporting linked to the Network Operator Deed (NOD), the SIPS service agreement (SIPSA) and Paired Generation Service Agreements (PGSA).

Operating costs also includes \$3.0 million associated with preparing various WSB regulatory submissions such as annual adjustments and the 2029–34 non-contestable revenue proposal. Regulatory submissions include within-period annual adjustments to the non-contestable determination, and the SIPS Battery Service, and Paired Generator contestable determinations.

We do not accept Transgrid’s proposal of \$23.3 million for operating costs. We include an alternative amount of \$20.0 million. This is \$3.2 million (13.9%) lower than Transgrid’s proposal. We are satisfied that these costs are likely to reflect prudent and efficient and reasonable costs. Table 9.4 below shows our draft decision for operating costs by category.

Table 9.4 AER’s draft decision on Transgrid’s operating costs by category (\$million, 2023–24, excludes labour escalation)

Operating Cost	Transgrid’s Proposal	AER’s draft decision	Difference (\$)	Difference (%)
Contract management ¹¹²	19.1	17.4	-1.7	-8.8%
Network planning	0.4	0.4	-	-
Network operations	0.8	0.8	-	-
Regulatory submissions	3.0	1.5	-1.6	-51.9%
Total Operating Costs	23.3	20.0	-3.2	-13.9%

Source: Transgrid and AER analysis.

Note: Numbers may not sum due to rounding.

9.2.2.1 Reasons for the decision

We reviewed each of the operating cost categories. In some cases, we found that Transgrid overestimated the full-time equivalents (FTEs) required to complete the expected activities. We believe this can be a common issue when forecasting resource requirements using a bottom-up approach. In our assessment, we have relied on our internal technical experts to evaluate Transgrid’s resourcing requirements.

(a) Contract management

As part of an information request, Transgrid provided a detailed breakdown of costs for the labour resources required (Full Time Equivalents, FTEs) to deliver the project. The breakdown is comprehensive and maps the obligations of the agreements to the FTEs required to complete the activities on an annual basis across the regulatory control period.

¹¹² Contract management costs, for both Transgrid’s Proposal and the AER’s draft decision both include the \$3.1 million Network Operator Appointment Fee that needs to be paid to EnergyCo as the Infrastructure Planner.

We have assessed each activity pertaining to Transgrid’s WSB agreements for all resource types across the regulatory control period. While we agree that Transgrid’s list of activities is consistent with their obligations under the agreements, we believe that Transgrid has overestimated the required FTEs for some of the activities and has not provided sufficient information to justify these estimates. Most commonly, we found Transgrid:

- overestimated the number of hours required for specific activities.
- allocated too many resource types to specific activities.
- overestimated the likelihood of certain events occurring that would require Transgrid resources.
- included FTEs in the first regulatory year for some obligations that won’t require activities until the second regulatory year.

We relied on our internal experts to exercise our judgement on industry standards for contract management practices. For example, where we believe Transgrid overestimated the likelihood of activities occurring, we reduced those probabilities leading to a reduction in the FTEs forecast for those activities. Additionally, we have included zero FTEs for activities that do not require resourcing in the first year of the regulatory control period such as annual testing for both SIPS service and paired generation events.

Once we made our adjustments to the FTEs in Transgrid’s breakdown, we aggregated each activity for each resource type across all years of the regulatory control period. This gave us our alternate FTE forecast, which we then substituted into Transgrid’s opex model.¹¹³ This led to an alternate forecast of \$17.4 million for contract management which is 8.8% lower than Transgrid’s proposal.¹¹⁴

(b) Regulatory submissions

In its opex model, Transgrid forecast the number of FTEs required to prepare various WSB regulatory submissions. Regulatory submissions include within-period annual adjustments to the non-contestable determination and the SIPS and Paired Generator contestable determinations. Transgrid has also included resources towards the end of the regulatory control period for the preparation of the 2029–34 non-contestable revenue proposal.

Like our assessment of contract management costs, we relied on our internal expert judgement to evaluate Transgrid’s proposed resourcing requirements for regulatory submissions. Our assessment reviewed Transgrid’s proposed FTEs in its opex model to each regulatory submission type across the regulatory control period.

We believe Transgrid has overestimated some of the resources required to prepare these regulatory submissions (apart from the paired generator annual adjustments) and has not provided sufficient information to justify these estimates. For example, for non-contestable determination annual adjustments, the number of adjustments after the first regulatory year are likely to require far fewer resources than the first year, yet Transgrid forecast the same number of FTEs for each regulatory year. For both the SIPS and Paired Generator annual adjustment submissions, Transgrid has also allocated FTEs earlier in the regulatory control period than will likely be required.

¹¹³ Note not all FTEs have been adjusted.

¹¹⁴ Not including labour escalation.

Where we found issues with Transgrid’s proposed FTEs in its opex model for regulatory submissions, we have included alternate FTEs.¹¹⁵ We have included \$1.5 million for regulatory submissions which is 52% lower than Transgrid’s proposal.

9.2.3 Insurance Costs

Transgrid proposed \$1.7 million (\$ 2023–24) for insurance costs. This represents 6% of total forecast opex. These costs are for insurance premiums payable for the infrastructure assets once the project has been commissioned.

Transgrid’s approach to forecasting insurance opex is consistent with comparable contingent projects such as VNI and QNI. For this proposal, we benchmarked insurance costs as a percentage of the market value of assets and found that insurance costs for the WSB project compares favourably with these contingent projects.

Therefore, we are satisfied these costs are likely to reflect prudent and efficient and reasonable costs and accept Transgrid’s proposal of \$1.7 million for insurance.

9.2.4 Real Input Cost Escalation

Transgrid proposed \$0.6 million for real input cost escalation. Transgrid has applied labour escalation to the labour components of maintenance and operating costs. These two labour components represent approximately 90% of Transgrid’s total forecast opex. Transgrid has used the same labour escalation method as described in section 8.2.3 for capex. We are satisfied with this approach.

As our draft decision includes a lower forecast for operating costs than Transgrid’s proposal, labour escalation has subsequently reduced to \$0.5 million.

9.2.5 Debt raising costs

We include \$0.5 million for debt raising costs, which represents 2% of total forecast opex. We used our standard approach to forecast debt raising costs, which is discussed further in section 6.2.6 of this draft decision.

¹¹⁵ These FTEs have been substituted into Transgrid’s opex model.

10 Corporate income tax

Our revenue determination includes the estimated cost of corporate income tax for Transgrid’s 2024–29 regulatory control period.¹¹⁶ Under the post-tax framework, the cost of corporate income tax is calculated as part of the building block assessment using our EII PTRM. This amount allows Transgrid to recover the costs associated with the estimated corporate income tax payable during the 2024–29 period.

Our assessment approach for corporate income tax is detailed in section 6 of appendix A to this draft decision.

10.1 Transgrid’s proposal

Transgrid proposed an estimated cost of corporate income tax of \$1.7 million (\$ nominal) for the 2024–29 period using the EII PTRM, and with the following inputs¹¹⁷:

- an opening tax asset base (TAB) value as at 1 July 2024 of \$104.1 million (\$ nominal)
- an expected statutory income tax rate of 30% per year
- a value of imputation credits (gamma) of 0.57
- the same asset classes and standard asset lives for depreciating its forecast capex for the 2024–29 period, which are consistent with those approved in the 2023–28 Transgrid transmission determination under the NER.¹¹⁸
- remaining tax asset lives set equal to standard asset lives for pre-period capex incurred prior to 1 July 2024.
- one new asset class for ‘SIPS control’ and associated standard tax asset lives for the 2024–29 period.

Table 10.1 sets out Transgrid’s proposed cost of corporate income tax for the 2024–29 period.

Table 10.1 Transgrid’s proposed cost of corporate income tax for the 2024–29 regulatory control period (\$ million, nominal)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Tax payable	2.3	0.2	0.3	0.5	0.6	4.0
Less: value of imputation credits	1.3	0.1	0.1	0.3	0.4	2.3
Net cost of corporate income tax	1.0	0.1	0.1	0.2	0.3	1.7

Source: Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) –PTRM*, June 2023.

10.2 AER draft decision

Our draft decision on the estimated cost of corporate income tax is \$0.03 million (\$ nominal) over the 2024–29 period. This represents a decrease of \$1.67 million (98.2%) from Transgrid’s proposal of \$1.7 million. Our draft decision also forecasts a tax loss of \$14.5

¹¹⁶ EII Chapter 6A, cl. 6A.5.4(a)(4).

¹¹⁷ Transgrid, *Revenue proposal 2024–29 – WSB (non-contestable) –PTRM*, June 2023.

¹¹⁸ AER, *Transgrid 2023-28 - Final Decision – Post-tax revenue model*, April 2023.

million (\$ nominal) in the final year of the 2024–29 period.¹¹⁹ This is because the WSB project is a new transmission program, and therefore total tax expenses outweigh taxable revenues. The key components of our tax treatment are discussed in the following sections.

Table 10.2 sets out our draft decision on the estimated cost of corporate income tax for Transgrid over the 2024–29 period.

Table 10.2 AER’s draft decision on Transgrid’s cost of corporate income tax for the 2024–29 period (\$ million, nominal)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Tax payable	0.07	-	-	-	-	0.07
Less: value of imputation credits	0.04	-	-	-	-	0.04
Net cost of corporate income tax	0.03	-	-	-	-	0.03

Source: AER analysis.

10.2.1 Opening TAB as at 1 July 2024 and remaining tax asset lives

Our draft decision does not include an opening TAB or remaining tax asset lives for pre-period capex. Transgrid has proposed an opening TAB value as at 1 July 2024 of \$104.1 million which reflects its capex incurred, but not commissioned, prior to the 2024–29 period.

The PTRM calculates tax depreciation on as commissioned capex. As discussed in sections 5.2.1 and 7.2.1 above, we have determined a zero opening as commissioned RAB compared to Transgrid’s proposal, as we have not accepted the proposed modifications for financeability. Consequently, our draft decision does not include an opening TAB as there is no as commissioned capex prior to 1 July 2024. Given that there is no opening value for the TAB, there is no need to nominate remaining tax lives.

10.2.2 Standard tax asset lives

We accept Transgrid’s proposed standard tax asset lives for its ‘transmission lines’, ‘substations’, and ‘equity raising costs’ asset classes because they are:

- consistent with the values prescribed by the Commissioner of Taxation in ATO Taxation Ruling 2022/1¹²⁰
- the same as the approved standard tax asset lives in our 2023–28 final decision for Transgrid under the NER.

In addition to these asset classes which align with Transgrid’s 2023–28 transmission determination under the NER, Transgrid also proposed a new asset class ‘SIPS control’ for the 2024–29 period. As discussed in section 7.2.1, we accept this new asset class and its associated standard life for RAB depreciation. Transgrid has set the standard tax asset life of the SIPS control asset class to be the same as the proposed standard asset life for regulatory depreciation purposes for this asset class. We consider this approach to be reasonable. The ATO has not provided a specific ruling on the effective life for such an

¹¹⁹ Our PTRM calculates a small positive tax allowance in the first year of \$0.1 million (2024–25), however this is offset by tax losses for the remaining 4 years (2025–29) of the period.

¹²⁰ ATO, *Taxation Ruling TR2022/1 – Income tax: effective life of depreciating assets (applicable from 1 July 2022)*.

asset.¹²¹ Given this, we consider it appropriate to use the economic life (standard life for RAB depreciation) of the SIPS control as the standard tax asset life, which is consistent with the ATO’s guidance on determining the effective life of an asset.¹²²

Table 10.3 sets out our draft decision on the standard tax asset lives for Transgrid. We are satisfied that the standard tax asset lives are appropriate for application over the 2024–29 period. We are also satisfied that the standard tax asset lives provide an estimate of the tax depreciation amount that would be consistent with the tax expenses used to estimate the annual taxable income for a benchmark efficient service provider.¹²³

Table 10.3 AER’s draft decision on Transgrid’s standard asset lives for the 2024–29 regulatory control period (years)

Asset class	Standard tax asset life
Transmission lines	50.0
Substations	40.0
SIPS Control	5.5
Equity raising costs ^a	5.0

Source: AER analysis.

(a) This is the only asset classes used for the straight-line method of tax depreciation for new assets. All new assets for other asset classes used the diminishing value method of tax depreciation.

10.2.3 Tax loss carryover

A business that has tax expenses which are greater than its taxable revenue in a period would not be subject to pay tax and generate a tax loss. A tax loss can be carried forward to offset against tax payable in the future.

Our draft decision calculates tax losses for Transgrid between 2025–26 to 2028–29, therefore we have calculated a cost of corporate income tax of zero for these years. The tax loss at the end of the 2024–29 period is \$14.5 million. This will be carried forward to Transgrid’s following regulatory control period and offset against future tax payable amounts.

¹²¹ ATO, *Taxation Ruling TR2022/1 – Income tax: effective life of depreciating assets (applicable from 1 July 2022)*.

¹²² ATO, *Taxation Ruling TR2022/1 – Income tax: effective life of depreciating assets*, p. 9; ITAA 1997, s 40.105.

¹²³ EII Chapter 6A, cl. 6A.6.4.

11 Incentive schemes

When making a revenue determination we are required to consider the principle that Network Operators should have incentives to promote economic efficiency.¹²⁴

We have developed and applied the Capital Expenditure Sharing Scheme (CESS) and the Efficiency Benefit Sharing Scheme (EBSS) under the NER to provide financial incentives to Network Service Providers to become more efficient. We intend to apply those schemes to EII projects.

Transgrid proposed to exclude the non-contestable components of the Waratah Super Battery (WSB) project from the application of the CESS and EBSS for the 2024-29 regulatory period. Our draft decision is to reject this aspect of Transgrid’s proposal, and apply both schemes as set out in the [Capital Expenditure Incentive Guideline](#), the [Efficiency Benefit Sharing Scheme Guideline](#) and our draft [Guidance Note on Incentive Schemes for non-contestable projects in NSW \(draft Guidance Note\)](#).

For the CESS, this draft decision is finely balanced. We consider the cases to apply the CESS and not apply both have merit and we seek submissions from interested stakeholders to inform our final decision. Our decision is based on our published criteria, the merits of Transgrid’s proposal, and the characteristics of this project. In making our decision, we have considered all the requirements of EII Chapter 6A and our published guidelines on incentives schemes.

For the EBSS a decision on applying the EBSS will be made at the end of the first regulatory period as there is no historical opex upon which to base forecasts. When considering whether to apply the scheme, the AER will consider whether the opex is efficient and has reached a steady state on which forecasts may reasonably be based.

11.1 Transgrid’s proposal

Transgrid’s proposal focussed on the application of the CESS. Transgrid’s concerns are that individually regulated infrastructure projects have a greater risk of ‘unquantifiable’ cost escalation which it has limited or reduced ability to influence. Because many of these projects are high value, any CESS penalty it could receive would also be high value.

11.2 Our Assessment Approach

Our approach to assessing a Network Operator’s proposal for the application of the incentive schemes to individually regulated network infrastructure projects is set out in the final decision on the Review of Incentive Schemes for Networks, our draft Guidance Note¹²⁵ and EII Chapter 6A. These factors are listed and considered in Table 11.1. Our default position is to apply the schemes to all infrastructure projects, although we make our decisions on a case-by-case basis.

¹²⁴ EII Act, s. 37(1)(b), EII Chapter 6A.

¹²⁵ See section 3.3 of the AER’s Final guideline Transmission Efficiency Test and revenue determination guideline for non-contestable network infrastructure projects, which provides that we will apply the current NER Chapter 6A guidelines for CESS and EBSS.

Table 11.1 Factors for consideration in applying the CESS.

Factor	Consideration
The circumstances of the Network Operator ¹²⁶	<p>Transgrid had little time between when it was directed by Ministerial Order (14 October 2022) to deliver the WSB project, and when the revenue proposal was required to be submitted to the AER (30 June 2023).</p> <p>Transgrid conducted a procurement exercise to secure a contractor to deliver the Design and Construction component of the project, to ensure an efficient cost was achieved. Due to time pressures, the procurement exercise was conducted before the project design was finalised and was instead based on a preliminary design. The successful contractor committed to a preliminary price in the contract based on the initial design, with the final price to be confirmed once the design was finalised and the contractor could establish the required sub-contracting arrangements.</p>
The CESS and capex proposal	<p>Transgrid has proposed this project be excluded from the application of the CESS. It has not included any discussion of varying the sharing ratio.</p> <p>The total forecast capex is \$255.4 million. Transgrid is exposed to cost escalation from the Design and Construction component, which is forecast to cost \$166.0 million (64% of the total forecast capex).</p>
Benefits to consumers from exemption	<p>The benefit to consumers from not applying the CESS is almost even.</p> <p>If the project is excluded from the application of the CESS, any capex underspend would be passed on in full to consumers as there would be no benefit sharing between the Network Owner and consumers. However, an underspend is less likely without the application of the CESS, as Transgrid would have little incentive to pursue it.</p> <p>Applying the CESS creates a financial incentive for Transgrid to pursue an underspend which would lower the cost to consumers. However, consumers would share the underspend with Transgrid (so they would receive less benefit compared to the case above).</p> <p>If CESS is not applied and there is an overspend the Network Operator faces no penalty for the overspend. In the case where CESS applies, in the event of an overspend the Network Operator Deed described further below is triggered. In both these cases there is no benefit to consumers.</p>
The size of the project	<p>The project is relatively small compared to projects under the NER. Capex is concentrated in 2022-24 (pre-period) and the first two years of the regulatory control period.</p>
The degree of capex forecasting risk	<p>Transgrid has not provided an indication of the level of forecasting risk it is exposed to as it considers this to be unquantifiable. Transgrid is exposed to some forecasting risk, particularly from the contracting arrangement that has some allowances for cost escalation.</p>
Stakeholder Views	<p>Two submissions were received on Transgrid's revenue proposal:</p> <ul style="list-style-type: none"> - The Energy Users' Association of Australia (EUAA) - The Consumer Challenge Panel (CCP) <p>Neither submission supported the removal of the CESS from this project. Both submissions considered Transgrid best placed to manage the cost of the project, and therefore appropriately placed to manage the risk.</p> <p>Consumers have no ability to influence these costs and already bear the majority of any capex overspend with the scheme in place.</p>
Mitigation actions and ability to manage	<p>Transgrid has not described any actions it has taken to attempt to minimise the cost variations it may experience. Transgrid's proposal focussed on the risks associated with the flexible priced Design and Construction contract, which it states it has limited influence over. We acknowledge there are areas where Transgrid's influence and ability to manage costs within the capex allowance has been reduced. However, it still has some ability and influence, which is more than consumers have.</p>
Capital Expenditure Objectives	<p>The forecast capital expenditure provided by Transgrid complies with the regulatory requirements as defined in the EII Regulation associated with the provision of regulated network services. It also maintains the safety of the network infrastructure project through the supply of regulated services, satisfying the capital expenditure objectives.</p>
Network Operators should be rewarded or penalised for improvements or inefficiencies in capital expenditure	<p>The CESS as set out in the Capital Expenditure Incentive Guideline, and intended for application here provides rewards or penalties to Transgrid for improvements or inefficiencies in capital expenditure by:</p> <ul style="list-style-type: none"> - Allowing Transgrid to retain a portion of the benefits of an underspend,

¹²⁶ EII Chapter 6A, 6A.6.5(e)(4)(ii).

	- Requiring Transgrid to finance a portion of the overspends.
The rewards or penalties should be commensurate with the efficiencies or inefficiencies in capital expenditure ¹²⁷	The rewards or penalties created by the CESS are applied as a proportion and are therefore commensurate to the efficiencies or inefficiencies in capital expenditure.
The interaction of the scheme with other incentives that Network Operators may have in relation to undertaking efficient operating or capital expenditure ¹²⁸	The Network Operator Deed contains a clause that provides the opportunity for Transgrid to seek recovery of the cost of a CESS penalty from EnergyCo, were one applied for a capex overspend. This influences the incentives Transgrid has in relation to undertaking efficient capital expenditure.

11.3 AER draft decision

We acknowledge that:

- Transgrid has less control over cost escalation that may arise from the final design of the project than it would if it had engaged in a fixed price contract.
- The time pressures and design of the EII framework meant Transgrid had little choice but to enter a contract with cost variation clauses.
- The drivers that are likely to influence this cost escalation are labour and material costs, and inflation. Transgrid has little ability to influence these factors.

Consequently, we consider Transgrid is exposed to increased risk of cost escalation compared to projects under the NER.

We also recognise that Transgrid’s ability to absorb increased capex and avoid a CESS penalty on this project may be less than other projects under the NER. The EII framework establishes regulated revenue for individual projects, rather than a portfolio of projects as is the case under the NER framework. This reduces a Network Operator’s ability to re-prioritise expenditure between projects to remain within the expenditure allowance and avoid a CESS penalty.

However, we note Transgrid can re-prioritise expenditure within the NER portfolio, potentially offsetting any CESS penalty that may arise from this project. Further, some of the cost escalation risk Transgrid is exposed to is reduced via the application of the adjustment mechanism (cost pass through provision) that we have accepted for unavoidable contract variations (see section 12).

We are required to consider the interaction of the CESS with other incentives that network Operators may have in relation to undertaking efficient opex or capex. The contractual arrangement between Transgrid and EnergyCo (the Network Operator Deed) materially influences the incentive for Transgrid to undertake efficient capex. The Network Operator Deed contains a clause that provides the opportunity for Transgrid to recover the cost of a CESS penalty from EnergyCo, were one applied for a capex overspend. This clause doesn’t guarantee Transgrid will move the financial burden of any CESS penalty to EnergyCo, but it provides it with the opportunity to do so, which weakens the incentive for Transgrid to manage its capex within the allowance.

The clause is asymmetric, in that it does not require Transgrid to pass on to EnergyCo, any benefit (ie, a CESS benefit payment) it may gain from an underspend. As such, applying the CESS provides an incentive for Transgrid to pursue an efficient capex underspend. However,

¹²⁷ EII Chapter 6A, cl. 6A.6.5A(f)(2).

¹²⁸ EII Chapter 6A, cl. 6A.6.5A(g)(1).

this incentive is only effective where Transgrid has the ability to influence the capex of the project.

This draft decision is finely balanced. We are choosing between:

- Applying the CESS which is consistent with the EII Act as it provides Network Operators with an incentive to promote economic efficiency. In this scenario, any underspend on capex would be shared between consumers and Transgrid. Due to the Network Operator Deed, any overspend on capex resulting in a CESS penalty will trigger the Network Operator Deed and hence the Network Operator's incentive to keep capital costs down is diminished. The existence of the Network Operator Deed hence makes the incentive regime asymmetric.
- Not applying the CESS removes the primary incentive tool the AER applies to promote efficient capital expenditure. Any underspend or overspend on capex would be entirely borne by consumers as there is no benefit sharing, and Transgrid would have less incentive to pursue an underspend or avoid an overspend.

We consider Transgrid is likely to have enough influence over the capex of the project, that if the opportunity for a capex underspend arises, it's more likely to be achieved with Transgrid's action than without it. As such, we consider applying the CESS to this project creates the best chance of reducing the cost of the project to consumers and is consistent with the capital expenditure objective.

This draft decision is based on the unique circumstances of this project and we consider the decision to be a close one. We welcome interested stakeholders to provide submissions to inform our final decision.

Other incentive schemes

The Service Target Performance Incentive Scheme (STPIS) is not able to be applied to non-contestable revenue determinations under the EII Act in the initial regulatory period. The project deed between the Infrastructure Planner and the Network Operator stipulates service level standards and attaches financial penalties to metrics such as unplanned outages and availability for the initial regulatory period. We will collect information during the initial regulatory period to develop a STPIS for application in the second regulatory control period.

12 Revenue adjustment mechanisms

During a regulatory control period, a Network Operator can apply to us to adjust any amount in a revenue determination to account for material changes in its costs arising from pre-defined circumstances. These circumstances are referred to as pass through events or adjustment events. Revenue adjustments are administered via the revenue adjustment mechanisms described in this chapter.

Transgrid refers to cost pass throughs, nominated pass throughs and adjustment mechanisms in its proposal. These terms describe the same concept and we collectively refer to them as adjustment mechanisms, reflecting the terminology used under the EII framework.

In considering the adjustment mechanisms proposed by Transgrid, we consider the principle that a Network Operator is entitled to recover the prudent, efficient, and reasonable costs of carrying out an infrastructure project.¹²⁹ Our approach to considering revenue adjustment mechanisms is described in our revenue determination guideline for non-contestable projects. Namely that we are likely to have regard to the nominated pass through event considerations in relation to pass through events, and we also have the discretion to do so in relation to other adjustment mechanisms.¹³⁰

In its revenue proposal, Transgrid proposed 16 adjustment mechanisms:

- Six adjustment mechanisms for events prescribed in EII Chapter 6A of the revenue determination guideline for non-contestable projects,
- Four adjustment mechanisms for events that were proposed and accepted under Transgrid’s 2023–28 determination,
- Three adjustment mechanisms for routine administrative events, and
- Three adjustment mechanisms for other events.

Our draft decision is to include:

- 12 of the proposed mechanisms as written, and
- 4 of the proposed mechanisms with amendments.

Adjustment Mechanisms prescribed in EII Chapter 6A

Six of the adjustment mechanisms proposed by Transgrid are for prescribed cost pass through events in our revenue determination guideline for non-contestable network infrastructure projects (EII Chapter 6A), which largely mirrors Chapter 6A of the NER.¹³¹ Revenue adjustments for these events are intended to be available for all Network Operators and are included in this draft decision.

¹²⁹ EII Act, s. 37(1)(a).

¹³⁰ AER, [Final guideline – Transmission Efficiency Test and revenue determination guideline for non-contestable network infrastructure projects](#), April 2023, p. 27.

¹³¹ EII Chapter 6A, cl. 6A.7.3(a1).

They are:

1. Regulatory requirements as defined in section 46(3) of the EII Regulation,
2. A service standard event.
3. A tax change event,
4. An insurance event,
5. An inertia shortfall event, and
6. A fault level shortfall event.

These events have the same definition under the EII framework as they do under the NER and are accepted in this draft decision.

Adjustment Mechanisms proposed by Transgrid in its 2023–28 proposal

Transgrid also proposed the following four nominated pass-through events, which were also proposed in its 2023–28 proposal.¹³² These are included in this draft decision (see Table 12.1).

Table 12.1 Accepted adjustment mechanisms proposed by Transgrid in its 2023–28 proposal

Accepted Event	Accepted Definition
Insurance Coverage Event	<p>An insurance coverage event occurs if:</p> <ol style="list-style-type: none"> 1. Transgrid: <ol style="list-style-type: none"> (a) Makes a claim or claims and receives the benefit of a payment or payments under a relevant insurance policy or set of insurance policies, or (b) Would have been able to make a claim or claims under a relevant insurance policy or set of insurance policies but for changed circumstances, and 2. Transgrid incurs costs: <ol style="list-style-type: none"> (a) Beyond a relevant policy limit for that policy or set of insurance policies, or (b) That are unrecoverable under that policy or set of insurance policies due to changed circumstances, and 3. The costs referred to in paragraph 2 above materially increase the costs to Transgrid in providing NSW non-contestable services. <p>For this insurance coverage event:</p> <p><i>‘changed circumstances’</i> means movements in the relevant insurance market, including liability insurance that are beyond the control of Transgrid, where those movements mean that it is no longer possible for Transgrid to take out an insurance policy or set of insurance policies at all or on reasonable commercial terms that include some or all of the costs referred to in paragraph 2 above within the scope of that insurance policy or set of insurance policies.</p> <p><i>‘costs’</i> means the costs that would have been recovered under the insurance policy or set of insurance policies had:</p> <ol style="list-style-type: none"> (i) The limit not been exhausted, or (ii) Those costs not been unrecoverable due to changed circumstances.

¹³² AER, *Transgrid 2023–28 – Final decision – Attachment 13 Pass through events*, April 2023, pp. 2–4.

	<p>A relevant insurance policy or set of insurance policies is an insurance policy or set of policies held during the regulatory control period or a previous regulatory control period in which Transgrid was regulated.</p> <p>Note: for the avoidance of doubt, in assessing an insurance coverage event through application under clause 6A.7.3(j) of EII Chapter 6A, the AER will have regard to:</p> <ul style="list-style-type: none"> (i) The relevant insurance policy or set of insurance policies for the event, (ii) The level of insurance that an efficient and prudent Network Operator would obtain or would have sought to obtain in respect of the event, (iii) Any information provided by Transgrid to the AER about Transgrid’s actions and processes, and (iv) Any guidance published by the AER on matters the AER will likely have regard to in assessing any insurance coverage event that occurs.
<p>Insurer’s credit risk event</p>	<p>An insurer’s credit risk event occurs if an insurer of Transgrid becomes insolvent, and as a result, in respect of an existing or potential claim for a risk that was insured by the insolvent insurer, Transgrid:</p> <ul style="list-style-type: none"> (a) Is subject to a higher or lower claim limit or a higher or lower deductible than would have otherwise applied under the insolvent insurer’s policy, or (b) Incurs additional costs associated with funding insurance claims, which would otherwise have been covered by the insolvent insurer. <p>Note: in assessing an insurer credit risk event pass through application, the AER will have regard to, among other things:</p> <ul style="list-style-type: none"> (i) Transgrid’s attempts to mitigate and prevent the event from occurring by reviewing and considering the insurer’s track record, size, credit rating and reputation, and (ii) In the event that a claim would have been covered by the insolvent insurer’s policy, whether Transgrid had a reasonable opportunity to insure the risk with a different provider.
<p>Natural Disaster Event</p>	<p>Natural disaster event means any natural disaster including but not limited to cyclone, fire, flood, or earthquake that occurs during the 2024–29 regulatory control period that changes the costs to Transgrid in providing EII services, provided the cyclone, fire, flood, earthquake, or other event was:</p> <ul style="list-style-type: none"> (a) A consequence of an act or omission that was necessary for the Network Operator to comply with a regulatory obligation or requirement or with an applicable regulatory instrument, or (b) Not a consequence of any act or omission of the Network Operator.
<p>Terrorism Event</p>	<p>Terrorism event means an act (including, but not limited to, the use of force or violence or the threat of force or violence) of any person or group of persons (whether acting alone or on behalf of or in connection with any organisation or government), which:</p> <ul style="list-style-type: none"> (a) From its nature or context is done for, or in connection with, political, religious, ideological, ethnic, or similar purposes or reasons (including the intention to influence or intimidate any government and/or put the public, or any section of the public, in fear), and (b) Changes to the costs for Transgrid in providing NSW non-contestable services. <p>Note: in assessing a terrorism event pass through application the AER will have regard to, among other things:</p> <ul style="list-style-type: none"> (i) Whether Transgrid has insurance against the event

	<p>(ii) The level of insurance that an efficient and prudent Network Operator would obtain in respect of the event, and</p> <p>(iii) Whether a declaration has been made by a relevant government authority that a terrorism event has occurred.</p>
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Adjustment mechanisms for routine administrative events

Transgrid proposed three adjustment mechanisms for routine administrative events. Under the NER, there is an annual pricing process where, among other things, revenue may be adjusted for the actual rate of inflation and the return on debt is updated. This process doesn't exist under the EII framework, so these updates need to be administered via adjustment mechanisms.

A third adjustment mechanism for additional contractual payments to EnergyCo was proposed by Transgrid. The mechanism is intended to accommodate changes in legislative or contractual arrangements that may require Transgrid to make additional payments to EnergyCo. As written, the adjustment mechanism encompasses all potential payment obligations described in the contractual arrangements between EnergyCo and Transgrid, many of which Transgrid could mitigate. As such, the mechanism (as proposed) does not satisfy the nominated pass through event considerations.

We have amended the definition of the adjustment mechanism to better reflect the intention of the mechanism and have included it in this draft decision (see Table 12.2).

Table 12.2 Accepted adjustment mechanisms for routine administrative events

Accepted Event	Accepted Definition
Annual updates to revenue for actual inflation	Annual updates to revenue for the actual rate of inflation. Actual inflation is the percentage change in the Australian Bureau of Statistics' (ABS) Consumer Price Index (CPI), All Groups, Weighted Average of Eight Capital Cities, from December in year t–1 to December in year t–2.
Return on debt update to the allowed rate of return	Return on debt update to the allowed rate of return. Updated rate of return is the applicable rate of return calculated for year t, updated for the return on debt calculated for year t, in accordance with the 2022 RORI and using the averaging periods approved by the AER.
Additional contractual payments to EnergyCo	Any payments Transgrid is obligated to pay to the Infrastructure Planner (EnergyCo) in year t, where: <ul style="list-style-type: none"> (i) The obligation is the result of legislative amendments or unavoidable contractual arrangements that come into existence after the revenue proposal is submitted, and (ii) The obligation is not already included in the contractual arrangements or building block calculations of this revenue proposal. <p>This excludes payments Transgrid can avoid or mitigate and is not in the form of a penalty, fine or compensation for a breach of a requirement imposed on Transgrid by a relevant law.</p>

Adjustment mechanisms for other events

Transgrid proposed three adjustment mechanisms that may require the revenue determination to be reviewed and amended.

Paired Generation Costs

We have rejected Transgrid’s forecast capex for connecting additional paired generators to the SIPS control Scheme, described in the capex section of its proposal. As described in section 8 (capital expenditure), we consider there to be no reliable information available that acceptable forecasts may be based. However, the costs to Transgrid of connecting additional paired generators to the System Integrity Protect Scheme is a prudent and reasonable cost that it will incur as part of delivering the Waratah Super Battery project.

Consequently, we accept this adjustment mechanism but have amended the proposed mechanism to include the total efficient cost of the tender administration process to secure additional paired generation services and the costs of connecting and contracting additional generators to the System Integrity Protect Scheme (see Table 12.3).

Unavoidable Contract Variations

Transgrid entered into a contract with a construction contractor for the Design and Construction components of the project following a competitive procurement process. The cost of the contract was based on the preliminary design of the project available at the time of tendering. The contract allows for variations in cost of the contract as the design of the project is finalised. Transgrid proposed an adjustment mechanism intended to account for the difference in costs (increases or decreases) identified as the design of the project is finalised.

The contracting approach (including variations) is a consequence of the constrained time frame in which Transgrid had to develop a project design and procure a design and construction contractor, and a feature of the construction market. A final design wasn’t available at the time of the procurement exercise, so a contractor could not commit to a final cost. The construction contractor market is unwilling to commit to fixed cost contracts while they are facing greater unpredictability in costs.

The advantage of this contracting approach is that the final cost of the project could be significantly cheaper (compared to a fixed price contract with no sharing of changes in costs). The difference in the cost of this contract and a fixed-price contract is estimated to be \$30 million by Transgrid.

However, allowing an adjustment mechanism to recover the full cost of any capital expenditure increase that Transgrid bears (as implied in the proposed mechanism) undermines the incentives created by an efficient revenue allowance. It also weakens the incentive provided by the CESS – as it effectively removes the expenditure cap with no penalty.

Therefore, to balance these concerns, in accepting the adjustment mechanisms we have added an upper limit – a maximum cumulative increase of \$30 million (\$ 2023–24) over the regulatory control period (see Table 12.3). We selected the maximum increase based on information provided to us by Transgrid.

This approach allows Transgrid to recover the prudent, efficient, and reasonable costs of carrying out the network infrastructure project by accommodating the cost variations it has no control over. This ensures it isn’t exposed to additional risk by taking a contracting approach that could lower the cost of the project overall (benefiting consumers) and maintains the incentive to manage its costs efficiently.

Contractor Force majeure

Transgrid proposed an adjustment mechanism to recover the additional construction costs incurred by Transgrid during the construction phase of the WSB project as a result of force majeure events impacting the construction contractor. We accept this adjustment mechanism in our draft decision, with an amendment for clarity for stakeholders (see Table 12.3).

Table 12.3 Adjustment mechanisms for significant events

Accepted Event	Accepted Definition
Paired Generation Cost	<p>The Paired Generation mechanism provides for the prudent, efficient, and reasonable cost impact to Transgrid of the following trigger events:</p> <ol style="list-style-type: none"> 1. A further procurement process for Paired Generation Services is completed, or 2. The Infrastructure Planner selects a new generator to provide Paired Generation Services. <p>The adjustment is to include Transgrid’s prudent, efficient, and reasonable costs associated with:</p> <ol style="list-style-type: none"> a) Participating in the tender administration process (if the trigger event is the completion of a further procurement process), b) The contract administration process, and c) The connection of additional generators to the System Integrity Protect Scheme.
Unavoidable Contract Variation	<p>The unavoidable contract variation adjustment mechanism is the change in prudent, efficient, and reasonable design and construction costs to Transgrid from the following trigger events:</p> <ol style="list-style-type: none"> (i) a change in the final design occurs and the cost implications are known, or (ii) a change in the civil works costs is higher (or lower) than the forecast amount accepted by the AER in relation to the revenue determination, up to a maximum cumulative adjustment of \$30 million (\$ 2023–24) over the regulatory control period.
Contractor Force Majeure	<p>The Contractor Force Majeure adjustment mechanism accounts for the efficient, prudent, and reasonable additional construction costs incurred by Transgrid during the construction phase as a result of an unforeseen force majeure event impacting the contractor. The following conditions apply:</p> <ol style="list-style-type: none"> 1. The costs are not covered by an existing insurance policy or adjustment mechanism, 2. Transgrid has informed EnergyCo of the Force Majeure event consistent with the requirements of the Network Operator Deed, and 3. The Force Majeure event is declared in accordance with the terms of the construction contract.

Our reasons

We have accepted the proposed adjustment mechanisms or accepted them with amendments. They ensure Transgrid may recover the prudent, efficient, and reasonable costs of delivering the infrastructure project. All mechanisms will be assessed by the AER to ensure only the prudent, efficient, and reasonable costs of delivering the project are recovered. No submissions were received on the adjustment mechanisms proposed in Transgrid’s revenue proposal.

List of submissions

We received two submissions in response to Transgrid’s 2024–29 proposal.

Stakeholder	Received date
Energy Users Association of Australia (EUAA)	26 July 2023
AER’s Consumer Challenge Panel	29 August 2023

Glossary

Term	Definition or extended form
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
Competitive assessment process	The contestable process undertaken by the Infrastructure Planner to select a Network Operator for a Project or to select a person who will assist a Network Operator in carrying out all or part of a Project.
Consumer Trustee	A person or body authorised under section 60 of the EII Act to exercise the functions of the Consumer Trustee. The Consumer Trustee is required to act independently and in the long-term financial interests of NSW electricity consumers. AEMO Services Ltd has been appointed to undertake this role.
Contractual arrangement	Contracts that the Network Operator enters into as required under the Consumer Trustee's authorisation or Minister's authorisation or direction. This includes contracts made between the Infrastructure Planner and the Network Operator for carrying out a network infrastructure project under section 63(4)(a) of the EII Act.
EBSS	Efficiency benefit sharing scheme
EII Act	<i>Electricity Infrastructure Investment Act 2020 (NSW)</i> .
EII framework	The EII Act and any regulations made under it.
EII Regulations	Any regulations made under the EII Act.
Gamma	Value of imputation credits
Guideline	The <i>Transmission Efficiency Test and revenue determination guideline for non-contestable network infrastructure projects</i> prepared and published by the AER in April 2023 as updated from time to time.
Infrastructure Planner	A person authorised to exercise the functions of an infrastructure planner under section 63 of the EII Act. The Infrastructure Planner performs a range of planning and contracting functions. The Energy Corporation of NSW has been appointed to undertake this role for the five REZs specified in the EII Act.
ISP	Integrated System Plan
MAR	Maximum allowed revenue
Minister	The New South Wales Minister for Energy
NEL	National Electricity Law as it applies in NSW.
NER	National Electricity Rules
Network Operator	Means a person who owns, controls or operates, or proposes to own, control or operate, network infrastructure under the EII Act.
Opex	Operating expenditure
Priority transmission infrastructure project (PTIP)	Has the meaning given to that term in the EII Act.
PTRM	Post-tax revenue model
REZ	Has the meaning given to that term in the EII Act.
RAB	Regulatory asset base
RBA	Reserve Bank of Australia

Term	Definition or extended form
REZ network infrastructure project (or project)	Has the meaning given to that term in the EII Act.
RIN	Information notice issued to a network operator under s.38(7) of the EII Act.
SFV (Scheme Financial Vehicle)	A person or body authorised under section 62 of the EII Act to exercise the functions of the Scheme Financial Vehicle.
SIPS	System Integrity Protection Scheme
SIPS Service	A service capable of providing a guaranteed continuous active power capacity of at least 700 MW and a guaranteed useable energy storage capacity of at least 1400 MWh.
TET (Transmission Efficiency Test)	The test to be applied to calculate the prudent, efficient and reasonable capital costs for development and construction of a network infrastructure project under s.38(4) of the EII Act.
Transgrid	NSW Electricity Network Operations Pty Limited (ACN 609 169 959) as trustee for NSW Electricity Networks Operations Trust (ABN 70 250 995 390), trading as Transgrid the Network Operator for the WSB project
WACC	Weighted average cost of capital
Waratah Super Battery (WSB) project	The Waratah Super Battery project comprising contestable components (SIPS battery service and paired generation Services) and non-contestable components (network augmentations and the SIPS control and communications system). This revenue determination relates to the non-contestable components of the WSB project, namely the network augmentation and SIPS control system.