Transgrid

A.4 Non-contestable Opex Forecasting Methodology

System Strength Project 2026–2031 Revenue Proposal

April 2026

Official

Contents

Acknowledgement of Country

In the spirit of reconciliation, the Transgrid Group acknowledges the Traditional Custodians of the lands where we work, the lands we travel through and the places in which we live.

We pay respect to the people and Elders past and present, and celebrate the diversity of Aboriginal and Torres Strait Islander peoples and their ongoing connections to the lands and waters of NSW and the ACT.

Pokolbin, NSW
Artwork: Yura. Gili. Nanga. the indigenous interpretation of Power. People. Possibilities

1. Purpose, scope and structure of this document

This document sets out our non-contestable operating expenditure (opex) forecast for the System Strength Accelerated Synchronous Condensers (syncons) Project (referred to herein as 'the Project') for the Regulatory Period commencing 1 October 2026 and ending 30 September 2031 (Regulatory Period). It also explains the approach, methodology and assumptions we have applied to ensure the forecast is prudent, efficient and reasonable.

The total forecast opex for the Project comprises two components: contestable opex and non-contestable opex.

Contestable opex primarily relates to the Long-Term Service Agreement (LTSA) with the syncons Original Equipment Manufacturer (OEM). The LTSA sets out that the responsibility for syncons maintenance and performance is contractually allocated to the LTSA service provider. These costs are addressed separately in our Contestable contractual arrangements and risk allocations document.

Non-contestable opex reflects the costs we incur to fulfill the obligations we retain under the LTSA to operate, maintain and manage the new project assets (non-syncons assets) once commissioned. This is the first LTSA arrangement for this asset class. We have carefully considered the allocation of responsibilities between Transgrid and the LTSA service provider to ensure there is no duplication of costs. While the LTSA transfers a significant portion of syncons maintenance and performance risk to the service provider (i.e. contestable elements), Transgrid retains responsibility to:

- undertake the supporting access, safety and site-based activities necessary to enable the service provider to safely and effectively perform syncons maintenance
- maintains asset management strategy and governance for the project including syncons assets
- maintain sufficient internal oversight and contract management capability to administer the LTSA and assure contractual compliance and system security outcomes.

Our non-contestable opex comprises the following cost categories:

- **Maintenance costs** – covers the ongoing maintenance of non-syncons assets (including primary plant, automation, protection, communications, property and operational technology assets), where Transgrid retains full lifecycle responsibility for maintenance and performance, as well as our facilitation, access and safety obligations required to enable the LTSA service provider to perform its obligations.
- **Operating costs** – reflects the ongoing activities required to manage and operate the project, including asset management, maintenance work program management (including LTSA administration and oversight), network planning, network operations and regulatory activities.
- **Insurance costs** – insurance premiums for assets required for the Project once they are commissioned and operational.

Unless otherwise stated, all forecast opex values in this document are presented in dollars as at 30 September 2026 (which is referred to as September 2026 dollars) and include real labour cost escalation. Totals presented in tables may not add due to rounding. Zero values in tables are included where the specific units used do not allow for a meaningful representation of the costs (i.e. the costs are less than $0.1 million).

1.1. Document structure

The remainder of this document is structured as follows:

- Chapter 2 provides an overview of our non-contestable opex forecast
- Chapter 3 sets out our general opex forecasting approach
- Chapter 4 sets out our opex forecasting methodology for different non-contestable cost components.

1.2. Structure of the Revenue Proposal

The Revenue Proposal (the Proposal) is structured as illustrated in Figure 1 below to be as clear and accessible as possible to the AER, customers and other stakeholders.

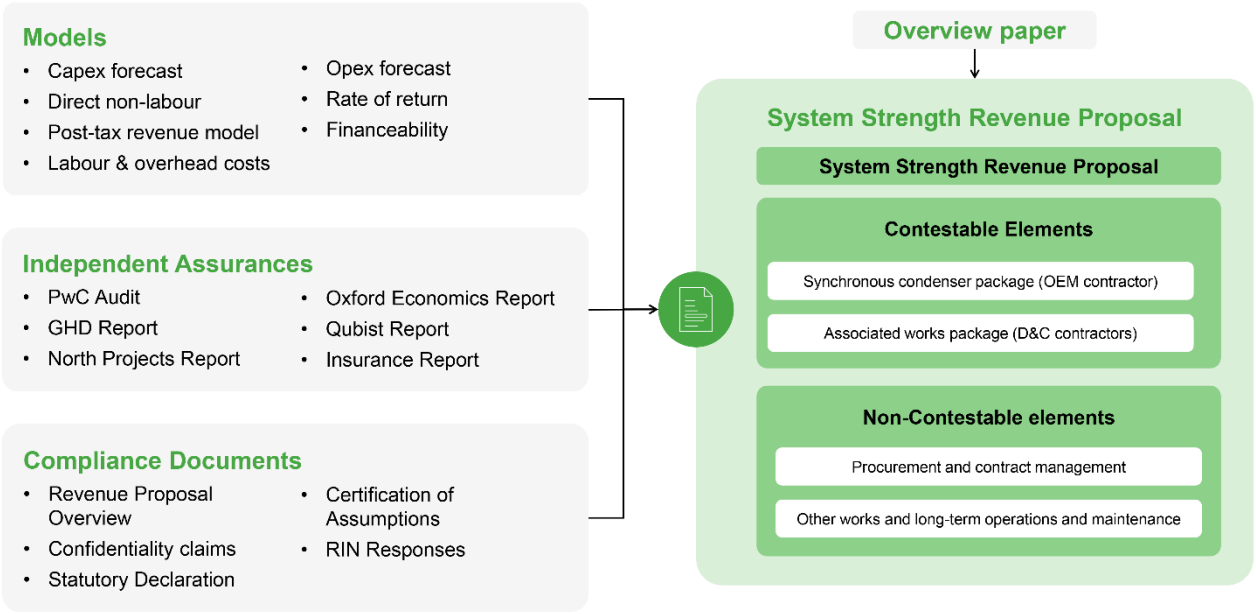

Figure 1: The Proposal structure for the Project

The attachments and supporting models comprising the Proposal are detailed in Chapter 1 of the Proposal.

2. Summary of forecast non-contestable opex for the Project

2.1. Our non-contestable opex forecast

Our forecast non-contestable opex required for the project over the Regulatory Period is $35.64 million, including debt raising costs, or $33.39 million, excluding debt raising costs.

Our forecast non-contestable opex includes the following components:

- **Maintenance costs** – These costs relate to the ongoing maintenance of commissioned non-syncons assets, including primary plant, switchbays, automation systems, buildings, operational technology and fire systems. The forecast includes routine maintenance and inspections, as well as an allowance for callouts, condition-based and defect maintenance not covered by the LTSA. In addition, the forecast includes incremental costs incurred by Transgrid to enable the LTSA service provider to safely and effectively complete site works.
- **Operating costs** – comprises the following subcategories:
  - **Asset management activities**: required to incorporate the syncons and associated digital infrastructure into Transgrid's asset portfolio and asset management systems, and to develop and maintain the overarching asset management plans and strategies to manage these assets safely and reliably over their operating life.
  - **Maintenance Work Program Management**: required to establish and manage maintenance work programs for non-syncons assets and property assets, and to administer the LTSA, including oversight of contractual performance to ensure service provider obligations are met.
  - **Network planning activities**: required to meet new system strength and performance standard obligations under the National Electricity Rules (NER), including compliance monitoring, modelling and reporting.
  - **Network Operation activities**: required to operate the expanded network safely and securely, including control room monitoring, outage coordination, SCADA integration and incident response.
  - **Regulatory activities**: required to support cost recovery and compliance through annual updates and adjustment mechanisms.
- **Insurance costs** – These costs account for the estimated premiums for industrial special risks (property damage) and third-party liability insurance once assets are commissioned.

We have used a 'bottom-up-build' approach to determine the forecast non-contestable opex. This approach allows for a more precise estimate of the required opex for the project. We have also:

- applied labour escalation rates. The labour escalators are based on the advice we received from our external consultants, Oxford Economics, on forecast real labour escalators over the Regulatory Period and reflects more recent information than those included with the AER's Final Determination for the 2023-28 regulatory period (which was made in April 2023) (Final Determination).
- included benchmark debt raising costs consistent with the AER's approach.

Table sets out our non-contestable opex forecast for the Project by sub-category over the Regulatory Period.

Table 1 Non-contestable opex forecast over the Regulatory Period ($M, September 2026)

Sub-category	Pre-period	2027	2028	2029	2030	2031	Total
Maintenance costs (excluding labour escalation)	-	-	1.52	2.63	3.40	3.39	10.94
Operating costs (excluding labour escalation)	-	0.49	3.04	4.59	5.58	5.17	18.87
Insurance costs	-	-	0.23	0.78	0.89	0.86	2.76
Real labour cost escalation	-	-	0.04	0.14	0.28	0.36	0.82
Total non-contestable opex excluding debt raising costs	**-**	**0.49**	**4.84**	**8.13**	**10.15**	**9.78**	**33.39**
Debt raising costs	-	0.16	0.39	0.56	0.58	0.56	2.25
Total non-contestable opex including debt raising costs	**-**	**0.65**	**5.22**	**8.69**	**10.73**	**10.35**	**35.64**

Note: Each year covers the period from 1 October to 30 September.

2.2. Basis of opex forecast

The table below sets out our forecast non-contestable opex for the Project by component, together with a summary of the basis of the forecast.

Table 2 Non-contestable opex forecast by category ($M, September 2026)

Opex item	Value	Basis for forecast expenditure	Relevant chapter reference for details
Maintenance costs (excluding labour escalation)	10.94	Current and proposed maintenance activity unit rates multiplied by projected volumes of maintenance activities	Chapter 4.1
Operating costs (excluding labour escalation)	18.87	Projected labour and materials requirements based on opex activities required to meet regulatory and contractual obligations, with labour hours multiplied by labour rates for each resource type	Chapter 4.2
Insurance costs	2.76	Based on independent report from Marsh	Chapter 4.3
Real labour cost escalation	0.82	Based on independent report from Oxford Economics	Chapter 4.4
Debt raising costs	2.25	Calculated using the same approach in the Final Determination, as reflected in the PTRM	Chapter 4.5
Total non-contestable opex	**35.64**		

3. Approach

This chapter outlines the forecasting approach to determine the forecast non-contestable opex for the project and ensure costs are prudent, efficient and reasonable.

3.1. Choice of 'bottom-up-build' forecasting method

We have adopted a bottom-up-build forecasting approach because this is the first Regulatory Period in which the assets will enter service and there is no historical opex base from which to apply a base-step-trend methodology. This approach is consistent with the AER's treatment of other non-contestable EII projects and reflects the bespoke scope, delivery model and contractual arrangements applying to the Project.

How prudency and efficiency have been ensured

The bottom-up build is anchored to clearly defined regulatory, contractual and asset management obligations and is limited to incremental activities that we must undertake as the Transmission Network Service Provider (TNSP and System Strength Service Provider (SSSP) in NSW.

Costs covered by the LTSA are explicitly excluded, and resourcing has been constrained to activities necessary to meet retained obligations only. No allowance has been included for contingency or discretionary enhancements. Labour inputs are based on standard Transgrid labour rates and reflect efficient task-based resourcing rather than notional headcount uplifts.

In developing the forecast, we considered cost elements that may be affected by changes to contestable arrangements or external approvals. While certain obligations, such as syncons performance standard (SCPS) testing[1], are covered under contestable opex through the LTSA, changes to LTSA scope or compliance requirements may affect Transgrid's non-contestable opex. As Transgrid retains accountability under the NER as the TNSP and SSSP, we have proposed an adjustment mechanism to address any material impacts on non-contestable opex (refer Chapter 10 of the Principal Application).

Managing complexity prudently

While the syncons introduce a technically complex and specialised asset class, our forecast costs reflect the minimum capability required to manage asset performance, system security and contractual oversight within a clearly bounded scope. Activities have been scoped to avoid duplication with the LTSA service provider and to ensure that consumers fund only those costs necessary to meet Transgrid's obligations.

At the same time, given the scale of the Project (over $1 billion in new assets) and the long-term contractual framework, it is necessary to maintain appropriately skilled and experienced resources to manage asset performance, contractual obligations and system security outcomes

Use of benchmarking and assurance

An independent external review was undertaken to assess the reasonableness of the bottom-up build. While direct comparators were limited due to differences in scope and operating context, the review tested labour intensity, functional coverage and cost structure and found the forecast to be consistent with for the requirements of a prudent and efficient operator managing assets of this scale and complexity.

[1] Under the LTSA, this is referred as generator performance standard (GPS) testing.

3.2. Alignment with our capex

Our non-contestable opex forecast for the project is aligned with the delivery and commissioning schedule, as follows:

- maintenance and operating activities are assumed to commence from commissioning of assets, with the exception of regulatory submission activities. As such, the activities are expected to begin in the first year of the Regulatory Period (i.e. 2026-27) to support annual updates and adjustment mechanisms. The activities are then forecast to ramp up as assets are progressively commissioned. The forecast commissioning dates for the assets are as follows:
  - First syncon (Newcastle) Energised (Pre-R2 Testing) – Q1 2028
  - First syncon (Newcastle) In Service – Q1 2028
  - Last syncon (Darlington Point) Energised (Pre-R2 Testing) – Q4 2028
  - Last syncon (Darlington Point) In Service – Q1 2029.
- operational insurance coverage commences once assets are commissioned and enter the operation phase (with the premium costs incurred prior to the year of coverage)
- debt raising costs are assumed to be incurred when new debt is required to fund capital investment.[2]

3.3. Two-step process to forecast non-contestable opex

We applied a two-step process to forecast non-contestable opex for the Project:

Step one involves determining the base expenditure by:

- multiplying unit rates by forecast volumes for maintenance activities[3]
- forecasting expected labour requirements multiplied by labour rates for each resource type and forecasting non-labour expenses for operating activities
- identifying the number and cost of internal resources required to meet our contractual obligations in accordance with the LTSA, and meet our regulatory and compliance requirements
- basing the operational insurance premium costs on the independent expert report from our broker, Marsh.

Step two involves applying labour escalators to the base labour expenditure (in step one), as relevant, and adding an allowance for debt raising costs.

This forecasting approach is summarised in Figure 2 below.

[2] Debt raising costs are transaction costs incurred each time debt is raised or refinanced as well as the costs of maintaining the debt facility. This reflects benchmark costs, and not actual debt raising costs. The inclusion of debt raising costs as part of opex allowance aligns with the AER's preferred approach. Debt raising costs are included in the opex because these are regular and ongoing costs which are likely to be incurred each time service providers such as Transgrid refinance debt.

[3] Maintenance unit rates are based on standard job costs comprising two components: labour and material rates. These rates are multiplied by the required labour resources and material volumes to calculate total maintenance costs.

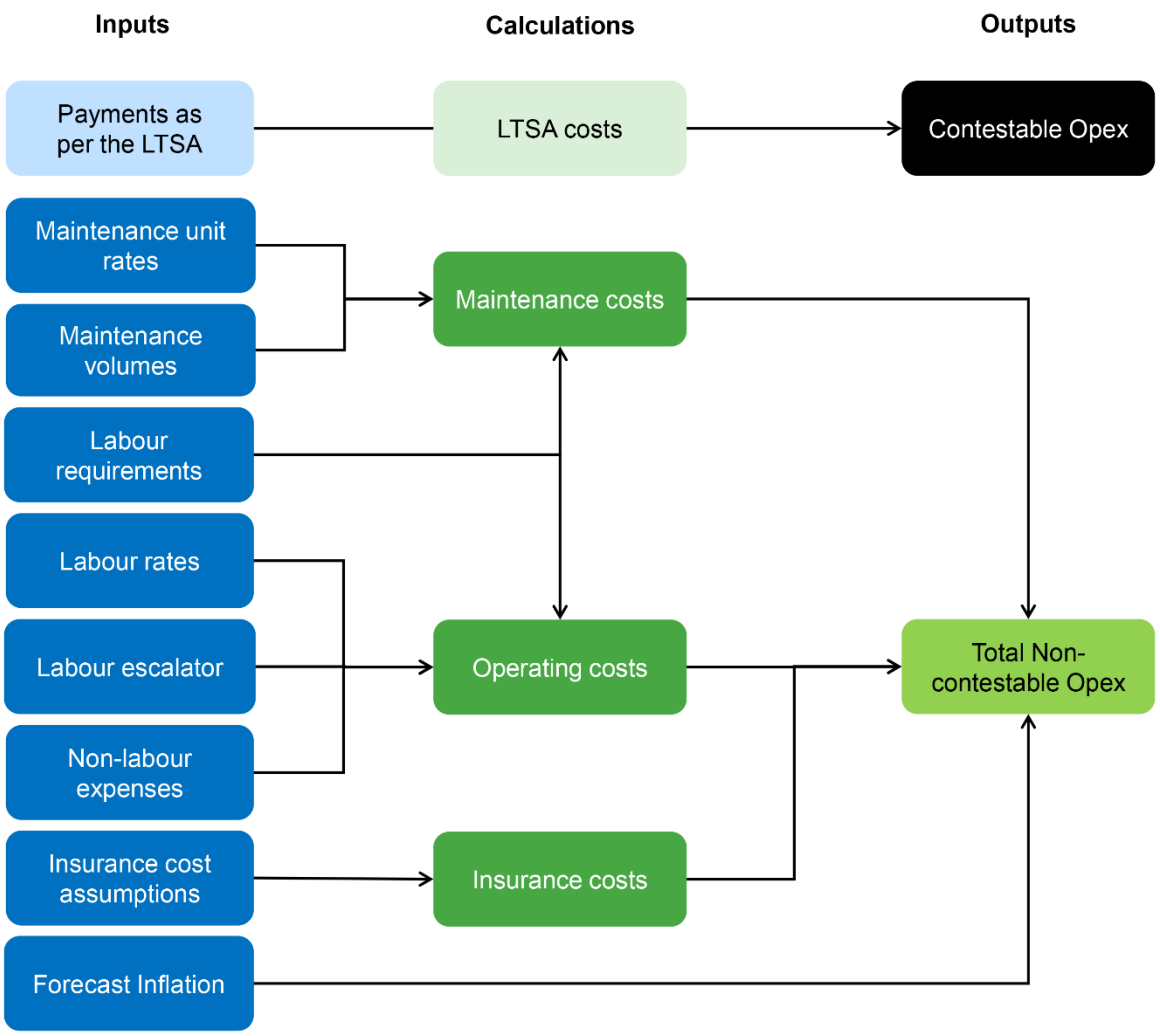

Figure 2 Process to determine forecast non-contestable opex for the Project.[4]

3.4. Robust approach for the initial Regulatory Period

This is the first time we are forecasting opex for this Project. Accordingly, we adopted a bottom-up approach tailored to meet the opex objectives under EII Chapter 6A, including:[5]

- meeting or managing expected demand over the Regulatory Period
- complying with all regulatory requirements
- maintaining the safety of the Project through the supply of network services.

Our non-contestable opex forecast has been prepared in accordance with our Asset Management System, which has been independently certified to comply with the international asset management standard ISO55001. The system provides a structured framework for asset-related decision-making that balances cost, risk and performance across the asset lifecycle, supported by defined governance, monitoring and review processes, including for the introduction and ongoing management of the new syncons fleet. This structured and systematic approach supports robust planning of maintenance, asset management and

[4] Note: Debt raising costs, although a component of forecast opex, are not shown. These costs are calculated within the PTRM.
[5] AER, Appendix A EII Chapter 6A – Transmission Efficiency Test and revenue determination guideline for non-contestable network infrastructure projects, Section 6A.6.6 Forecast operating expenditure, page 18.

delivery activities, while enabling continual improvement as asset knowledge and operational experience evolve.

We have also had regard to compliance requirements that remain subject to external approval or potential changes to contestable contractual scope (as previously discussed in section 3.1). Where such changes materially affect our non-contestable activities, we have proposed an adjustment mechanism. Our non-contestable opex forecast therefore reflects prudent, efficient and reasonable costs based on our current scope of responsibilities, while proposing a mechanism to address material changes if they arise. We consider this approach ensures that consumers fund only those costs necessary to meet our obligations – no more, no less.

4. Non-contestable opex forecasts and rationale

This chapter details our forecast costs and the assumptions behind each opex category.

4.1. Maintenance costs

While the LTSA transfers responsibility for syncons maintenance to the LTSA service provider, Transgrid retains responsibility for a range of residual maintenance, access and site-based activities that are necessary to ensure the ongoing safety, reliability and availability of the transmission network. Accordingly, our forecast maintenance opex includes only those activities that are not covered by the LTSA, together with Transgrid's retained obligations under the LTSA, and excludes all maintenance activities that are the contractual responsibility of the LTSA service provider.

We anticipate that in the next Regulatory Period, additional allowances will be required to support the development of internal capability before the LTSA expires. This approach ensures ongoing efficiency by managing the contract renewal risks, including non-commercial terms and unavailability of a suitable service provider. It will also enable alternate service provision models for the maintenance program if required.

Maintenance costs have been estimated using a bottom-up approach, by:

- identifying the maintenance tasks and activities required for the Project
- assessing the expected number, frequency and timing of these activities over the Regulatory Period
- applying material unit costs and labour resources to each activity.

4.1.1. Key inputs, assumptions and forecasts

Given the early stage of the assets lifecycle and the progressive commissioning dates, we expect lower maintenance costs in the first year of operation, with costs increasing thereafter as all assets enter routine inspection cycles and move beyond the defects liability period.[6] Accordingly, maintenance costs commence in 2028, following commissioning of the first syncons site, and then ramp up progressively to reflect the staged commissioning of the remaining sites.

The activities explained in the following sections are grouped into five broad categories set out in Table 3. Forecast maintenance opex has been calculated by multiplying current standard unit rates for the different categories of maintenance activities by the expected quantities of the activities in each category as shown in Table 4. Based on these activities, unit costs and assumptions, the forecast maintenance opex over the Regulatory Period is set out in Table 5.

[6] With the first syncon being commissioned [redacted] The Additional Service variation would trigger an adjustment mechanism for contract costs and Transgrid resource impacts. This variation is described elsewhere in the Revenue Proposal documents, namely the Non-Contestable Revenue Proposal Contract related Adjustment Mechanisms, and A.1 Contestable Elements Adjustment Mechanisms Overview.

Table 3 Maintenance activities

Maintenance plan requirement	Maintenance activity
Substations assets maintenance[7]	Minor maintenance of [redacted]
	Maintenance of ancillary equipment
	Oil sampling of [redacted]
	First-response services to site, including managing LTSA service provider attendance; facilitating outages for annual LTSA syncons and Balance of plant outages
	Supervision and management of first responses, defects and corrective maintenance [redacted]
Communication	Maintenance and inspection [redacted]
OT Cyber	Maintenance of [redacted]
Automation and electrical systems	Facilitating and supervising [redacted]
	Facilitating and supervising [redacted]
	Facilitating and supervising [redacted]
Property	Building maintenance [redacted]
	[redacted] maintenance and [redacted] activities at syncons sites

Table 4 Key inputs and assumptions for maintenance expenditure

Item	Description
Unit rates	Unit rates for each maintenance activity combine both standard labour and material unit rates and: • are based on standard jobs sourced from data in our accounting system[8] • reflect the average actual rates of all employees assigned to labour resource categories (based on the nature of the work performed) which include labour on-costs and overhead costs. Actual labour rates reflect our Enterprise Agreement (EA) and individual employment contracts where the EA does not apply.
Quantities	Quantities, or maintenance frequencies, are based on the standard frequencies outlined in our maintenance plan for each asset class under our ISO55001 certified Asset Management System (AMS) and Electricity Network Safety Management System to manage network safety risks to SFAIRP and ALARP. These include substations, property/facilities and digital systems equipment. The activities are assumed to start in the 2027-28 year, i.e. the year after the first assets are commissioned.
Real labour cost escalation	Real labour escalation is applied only to the labour component of the unit rates and applies from 2027 onwards.

[7] End of warranty activities are undertaken just prior to the end of warranty period.
[8] Standard job costs represent the cost per maintenance task, based on typical labour resource quantities and material expenses using actual data. Most are predominantly labour-based, with a smaller expense component, though this can vary.

Item	Description
Key Assumptions	Defect costs for the syncons and syncons buildings have been based on an estimate of the effort and material costs required to respond to alarms, assuming: • For syncons issues - 10 responses per year • For building issues - 2 responses per year.[9] Defect costs for other assets have been estimated as a percentage of expected routine maintenance costs based on historical performance: • 137% for substations • 122% for automation, metering and communications at Transgrid sites.[10]

The table below sets out the forecast maintenance costs for the Project over the Regulatory Period by category.

Table 5 Forecast maintenance costs over the Regulatory Period ($M, September 2026, excludes labour escalation)

Maintenance costs	2027	2028	2029	2030	2031	Total
Substations	-	1.49	2.28	2.92	2.85	9.54
Property	-	0.00	0.19	0.30	0.30	0.79
OT Cyber	-	0.01	0.08	0.10	0.10	0.29
Automation	-	0.01	0.06	0.07	0.11	0.26
Communication	-	-	0.02	0.02	0.03	0.07
Total maintenance costs	**-**	**1.52**	**2.63**	**3.40**	**3.39**	**10.94**

Note: Each year covers the period from 1 October to 30 September.

4.1.2. Maintenance activities for non-syncon assets

The maintenance scope applies to the following asset classes:

- substation primary plant, including connections to the transmission network
- substation automation, protection, communications and metering systems interfacing with syncons control systems
- buildings and property assets, including fire protection and essential services
- operational technology assets, including firewalls, gateways and network connections supporting data exchange between Transgrid systems and LTSA service provider systems.

Maintenance activities covered by this category include:

- routine maintenance and inspection work
- condition-based and defect maintenance (including corrective activities).

[9] This is an estimate based on historical data, with an average of around 1 response per month.
[10] This is based on historical data. The percentage is a representation of past cost differences between routine/defect work. Typically defect work costs are higher than routine maintenance.

4.1.3. Maintenance facilitation activities for Transgrid under the LTSA

Under the LTSA, we are required to perform a range of access and safety-related maintenance activities to enable the LTSA service provider to complete its works under the LTSA. [redacted] and give rise to incremental maintenance costs for Transgrid.

These incremental activities include:

- mobile plant hire required to support safe access and execution of works
- [redacted] and supervision works, including site safety and access management
- facilitating and supervising minor maintenance [redacted]
- high-voltage safety and access authority management (where applicable)
- isolations and restoration works

[redacted]

4.2. Operating costs

Our non-contestable operating costs reflect incremental ongoing activities required to operate the Project assets, meet our regulatory requirements and securely manage our transmission network once the syncons enter operational phase.

The syncons represent new, technically specialised and high-value asset class within Transgrid's portfolio. They perform critical system strength functions and must operate within defined performance parameters. Given the technical complexity, geographic spread across five sites, and the long-term contractual framework under the LTSA, it is necessary to have sufficient capability with the appropriate engineering, operational and management expertise to safeguard asset performance, protect service reliability, and ensure the long-term value of the investment is realised.

These considerations have been reflected in our labour estimates. Costs are forecast to commence from commissioning and reflect the efficient resourcing required to fulfil obligations and maintain secure operation of the network. The exception is regulatory activity where we incur costs throughout the Regulatory Period to comply with annual updates and adjustment mechanisms. Key elements of our operating costs are summarised in the table below.

Table 6 Opex activities for the Project

Item	Description
Asset Management	Asset management activities focus on the development and governance of asset management strategies for the syncons fleet and associated infrastructure. These activities are distinct from delivery and maintenance functions and are required to ensure assets are managed safely and reliably in accordance with Transgrid's ISO 55001-certified Asset Management System, regulatory obligations and obligations under the LTSA. While certain obligations are transferred to the LTSA service provider, Transgrid remains the TNSP and SSSP and retains accountability under the NER. Accordingly, Transgrid maintains asset management strategy and governance for the Project, supported by an appropriately sized and technically capable team. These activities are limited to incremental requirements arising from the syncons fleet and support effective lifecycle risk management and system security outcomes.

Item	Description
	Key asset management activities include: • establishing and maintaining asset strategies, maintenance plans and governance arrangements for syncons and associated digital, network equipment and network property infrastructure • developing maintenance strategies using external inputs such as performance data from the LTSA service provider and internal inputs • updating renewal and maintenance strategies as operational experience is gained • monitoring asset condition, predictive health indicators and external performance reports • investigating defects, emerging issues and abnormal condition trends • updating renewal and maintenance strategies as operational experience is gained and in response to emerging issues and asset condition • defining spares plan (holdings and replenishments) • establishing and maintaining asset data, registers, reporting and visualisation tools to support informed decision-making • Control Assurance Reviews on the effectiveness of the Maintenance Plans and Strategies • Cyber Security/ Penetration Testing on the LTSA Connection and associated control systems.
Maintenance Work Program Management	Maintenance Work Program Management activities relate to the development, coordination and oversight of maintenance work programs required to implement the asset management plans and strategies described above. Specifically, the activities include: • establish and manage maintenance work programs for non-syncons assets • administer and oversee the LTSA to ensure contractual performance obligations are met. This is a work program and contract management focused. It is distinct from asset management and from physical maintenance execution, facilitation, access and site-based activities described above. In particular, this covers the work program development, oversight of maintenance work programs and contractual performance, and not execution of maintenance activities. Key maintenance work program management activities include: • maintenance work program development and oversight - developing and coordinating forward maintenance work programs for non-syncon assets across all syncon sites, ensuring work is scheduled efficiently and aligned with operational requirements • management of compliance-related maintenance, testing and reporting requirements - incorporating additional maintenance, testing and reporting requirements under the SCPS compliance framework into standard maintenance schedules and processes • spare management - procurement of critical spares and monitoring availability to reduce outage duration and operational risk, in compliance with spares plan • property maintenance program planning - planning and oversight of maintenance programs for buildings and associated facilities

Item	Description
	• LTSA contract management and performance oversight - administering and overseeing the LTSA to ensure service provider obligations are met, including: > managing LTSA performance settings (including availability metrics and response obligations) and resolving performance issues under the contractual framework > contract administration activities, including change control, invoice verification, milestone and service deliverable verification, and performance reporting > coordinating performance governance across multiple sites and rotating outage windows.
Network Planning	The activities relate to the incremental effort required to comply with system strength and SCPS obligations for syncons, which for the first time are subject to registered performance standards under Schedule 5.2 of the NER. As the Registered Participant, Transgrid is required under NER rule 4.15 to establish and maintain a compliance program within prescribed timeframes, consistent with the AEMC Reliability Panel's 2019 template. In preparation for syncons commissioning from early 2028 to early 2029, Transgrid is developing an SCPS compliance program encompassing data collection and analysis, model validation, reporting, and engagement with AEMO and the AER, supported by ongoing maintenance of power system models and tools. The forecast costs are considered prudent, efficient and reasonable, as they reflect incremental compliance and modelling activities necessary to manage system security risks and avoid non-compliance, and are scoped in line with draft compliance plans, with any changes to be addressed through adjustment mechanisms where appropriate. Key activities are: • instituting and maintaining a SCPS compliance monitoring program • collecting and analysing operational and metering data • undertaking active testing where compliance cannot be demonstrated through operational data alone • preparing compliance reports for submission to the AER • investigating network or syncons incidents and potential non-compliances with the syncons compliance framework • liaising with AEMO and the AER on compliance matters • maintaining and updating power system models in accordance with AEMO guidelines and modelling requirements.
Operations	These activities reflect the incremental operational effort required to integrate and operate syncons across five sites, including control room integration, alarm and outage management, and incident response. The syncons materially increase operational complexity, and coordination requirements. The work is efficient because upfront SCADA and alarm configuration and operating procedure integration reduce nuisance alarms, improve response quality, and minimise avoidable downtime and risk-driven interventions. It is reasonable because it is limited to the incremental operational effort required by the new assets and locations, rather than an expansion of business-as-usual functions. Key activities include:

Item	Description
	• integrating syncons into control room monitoring (SCADA point additions, mappings, simulator models, displays and alarm configuration) and ensuring alarm settings support efficient response (avoiding unnecessary alarms while not missing critical events) • monitoring events and alarms, coordinating operational responses and escalating issues for investigation where appropriate • coordinating customer and interface management and operational change processes • verifying constraints, development of outage contingency plans and operating information • maintaining electrical models used for state estimation • responding to defects, incidents and emergency events.
Regulatory activities	These activities reflect the incremental effort required to manage regulatory processes necessary to recover efficient costs over the Regulatory Period, including both within-period processes and preparation activities required for the next Regulatory Period. This is prudent because it supports timely cost recovery through annual updates and adjustment mechanisms consistent with the regulatory framework for the Project and the EII framework. This is efficient and reasonable because it is limited to incremental regulatory tasks attributable to the Project and is proportionate to the complexity and the new obligations created by the syncons. Key activities include: • preparing annual updates and within-period adjustment mechanism submissions (including gathering evidence, reconciling actuals/forecasts and responding to AER information requests) • maintaining audit trails for cost recovery, ensuring traceability from activities and obligations to expenditure outcomes • coordinating inputs across internal teams (Operations, Asset Management, Network Planning, Delivery and Finance) • managing Scheme Financial Vehicle payments • developing the 2031-36 Revenue Proposal for the Project.

The table below sets out the key inputs and assumptions used to calculate the operating costs for the Project.

Table 7 Key inputs and assumptions for operating costs

Item	Description
Labour resource requirements	We have forecast the expected FTE labour resource requirements for each task required to operate the Project assets, meet our obligations under the LTSA, comply with regulatory obligations and maintain secure operation of the transmission network once the syncons enter service. • asset management requiring 1.0 FTE in 2027-28 to 3.0 FTEs from 2028-29 and onwards • maintenance work program management requiring 3.9 FTE in 2027-28 to 4.3 FTEs in 2030-31 • network planning requiring 0.4 FTE over the Regulatory Period • network operation requiring 0.3 FTE in 2027-28 to 1.0 FTEs from 2028-29 and onwards

Item	Description
	• preparation of: - adjustment proposals within-period regulatory submissions that require on average 1.2 FTE per year over the Regulatory Period - our 2031-36 revenue proposal requiring 1.4 FTEs in 2029-30 and 0.8 FTE in 2030-31.
Labour unit rates	Labour costing rates are the average rates calculated based on the actual rates of all employees assigned into labour resource categories including labour on-costs and overhead costs. The forecast applies the standard labour rates (including labour on-costs and overhead costs) effective from 1 July 2026 to 30 June 2027. These rates have then been converted to real September dollar terms to align with the cost basis adopted in this report.
Escalation and inflation	Real labour escalation is applied only to the labour component of the unit rates and applies from 2027 onwards. This is described in section 4.5 of this paper.
Assumptions	Labour resource requirements are assumed based on estimated effort required to operate the Project assets, manage LTSA, comply with regulatory obligations and maintain secure operation of the transmission network once the syncons enter service.

The table below sets out the forecast operating costs for the Project over the Regulatory Period by category.

Table 8 Forecast operating costs over the Regulatory Period ($M, September 2026, excludes labour escalation)

Operating costs	2027	2028	2029	2030	2031	Total
Asset management	-	0.58	1.73	1.73	1.73	5.77
Maintenance work program management	-	1.63	1.66	1.78	1.78	6.86
Network planning	-	0.21	0.21	0.21	0.21	0.83
Network operations	-	0.14	0.49	0.53	0.53	1.70
Regulatory activities	0.49	0.49	0.49	1.33	0.92	3.72
Total operating costs	**0.49**	**3.04**	**4.59**	**5.58**	**5.17**	**18.87**

Note: Each year covers the period from 1 October to 30 September.

4.3. Insurance costs

We expect to incur annual costs associated with insurance premiums for assets required for the Project once they are commissioned and operational. We require two types of insurance for our regulated infrastructure assets:

- **Operational Property Damage** – this covers physical loss, destruction or damage to the assets occurring during operation.
- **Operational liability** – this covers Transgrid's legal liability for third party property damage or bodily injury occurring during operation of the assets.

Both types of insurance are prudent as they cover risks that are both material and that we cannot easily (or cost effectively) avoid. Operational insurance cover is required once each syncon site becomes operational, with commissioning occurring progressively from Q1 2028.

Transgrid engaged an independent insurance broker (i.e. Marsh) to estimate the costs of insuring the Project during both the construction and operational phases:

- the construction phase insurance costs are included in the capex forecast (indirect costs). This is explained in the Capex Forecasting Methodology.
- the operational phase insurance costs are included in the annual opex forecast for the Project.

Full details are set out in an independent report from Marsh, as attached to the Proposal.

The table below sets out the key inputs and assumptions used to calculate the annual insurance-related opex for the Project, allocated between Property Damage and operational liability insurance.

Table 9 Incremental insurance related opex for the Project

Insurance type	Description
Operational Property Damage	Industrial special risks insurance covers physical loss, destruction or damage of insured property occurring during operation. Marsh estimated an annual premium [redacted] (in September 2026 dollars and excluding GST), assuming [redacted] of estimated completed asset value.
Operational liability	Operational liability insurance covers Transgrid's legal liability for third party property damage and bodily injury occurring during operation. Marsh estimated an annual premium of [redacted] (in September 2026 dollars and excluding GST), assuming [redacted]

In addition, our forecast insurance opex includes small, one-off increases in 2029-30 and 2030-31 to reflect:

- a marginal allowance for internal labour to review insurance requirements and engage with insurers and brokers in advance of the next regulatory reset
- a small incremental cost for the insurance broker to prepare the insurance premium assessment for the next regulatory period.

These costs are prudent and efficient, as they support continuity of insurance coverage and mitigate the risk of delays or coverage gaps at the commencement of the next regulatory period. The table below sets out the annual insurance opex forecast as explained above.

Table 10 Forecast insurance costs over the Regulatory Period ($M, September 2026)

Cost component	2027	2028	2029	2030	2031	Total
Insurance costs	-	0.23	0.78	0.89	0.86	2.76

Note: Each year covers the period from 1 October to 30 September.

4.4. Real labour price escalation

Two components of the opex forecast – maintenance costs and operating costs – are primarily driven by labour costs.[11] As expenditure forecasts were prepared in real 2026 dollars, labour escalation needs to be applied from 2027 onwards. We engaged Oxford Economics to forecast real labour escalators over the Regulatory Period in September years.

We opted to use this updated forecast because it reflects more recent information (including a revised outline) than earlier forecasts, such as those included with the Final Determination. Oxford Economics used the same approaches as those use to generate forecasts previously adopted by the AER. Its report describing these forecasts is attached to the Proposal.

Table 11 Forecast real labour escalation over the Regulatory Period

Component	2027	2028	2029	2030	2031	Total
Real labour escalation (%)	-	-	0.76%	0.96%	1.18%	N/A
Real labour escalation ($M, September 2026)	-	0.04	0.14	0.28	0.36	0.82

Note: Each year covers the period from 1 October to 30 September.

4.5. 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. We have adopted the AER's benchmark approach and parameters to estimate debt raising costs for a benchmark efficient business (rather than our actual costs). Our PTRM sets out the detailed calculations of our debt raising costs. Table below describes the approach and assumptions we have adopted, which is consistent with the AER's benchmark approach.

Table 12 Debt raising cost estimation approach and assumptions

Component	Approach and assumptions
Forecast debt	This is calculated by multiplying the forecast Project RAB in the PTRM by the benchmark leverage ratio (i.e. 60 per cent) adopted by the AER in its Final Determination for our prescribed transmission services.
Debt raising costs	Debt raising costs are calculated for each year of the 2026-31 period by multiplying the opening RAB value for the year by a unit rate. We propose adopting a unit rate of 8.3 basis points per annum as a placeholder, which is the value adopted by the AER in its Final Determination
Assumptions	• Forecast Project RAB. • leverage ratio of 60 per cent. • debt raising cost benchmark of 0.083 per cent.

[11] Our insurance cost forecast also includes some labour costs that we expected to incur in the 2030 regulatory year when managing the insurance contract.