

5 Operating Expenditure

5.1 Introduction

This chapter provides an overview of Powerlink's historical performance against the Australian Energy Regulator's (AER's) allowances for operating expenditure during the current 2022-27 regulatory period and outlines our operating expenditure forecasts for the 2027-32 regulatory period. Our operating expenditure enables the operation and maintenance of our network, as well as the business activities that support the delivery of prescribed transmission services⁸¹.

Key highlights:

2022-27 regulatory period

- We forecast total operating expenditure of \$1,517.2 million for the 2022-27 regulatory period. This is \$253.4 million (20%) higher than the AER's adjusted allowance of \$1,263.8 million. These figures are exclusive of debt raising costs.
- Our performance under the AER's economic benchmarking approach has decreased over the course of the current regulatory period, broadly reflecting the industry trend.

2027-32 regulatory period

- Our total operating expenditure forecast for the 2027-32 regulatory period is \$1,810.2 million, or \$1,832.2 million including debt raising costs, which is \$293.0 million (19%) higher than the actual/forecast operating expenditure for the 2022-27 regulatory period (excluding debt raising costs).
- Our forecast is based on the AER's preferred base-trend-step methodology.
- We proposed 2025/26 as our base year as the revealed costs will be most representative of our ongoing efficient recurrent costs at the time the revised Revenue Proposal is submitted in December 2026.
- We engaged HoustonKemp to perform an independent assessment of the efficiency of our proposed base year expenditure. HoustonKemp's analysis shows that:
 - Powerlink's operating expenditure efficiency is forecast to decline in 2024/25 and 2025/26 due to increases in operating expenditure, and
 - comparative data is not available at this time to determine whether the forecast decline in operating expenditure efficiency reflects the broader industry trend.
- Powerlink considers that the AER's economic benchmarking approach, which provides historical context, does not reflect the rapid change in our operating environment.
- We have included three step changes at a total of \$85.1 million in our operating expenditure forecast. The step changes reflect material costs not included in our base year to:
 - uplift physical security
 - transition to cloud-based computing solutions, and
 - enhance overnight network monitoring in our control room.
- We have included category specific forecasts for the Australian Energy Market Operator (AEMO) participant and cyber security fees, network support payments and debt raising costs.

⁸¹ Unless otherwise stated, references to total operating expenditure reflect underlying operating expenditure, which excludes movements in provisions, debt raising and network support costs. This is explained further in Sections 5.3 and 5.7.

5.2 Regulatory requirements

The National Electricity Rules (Rules)⁸² require that our Revenue Proposal provide information related to our actual/forecast operating expenditure over the current regulatory period and that the AER also has regard to such expenditure when considering our proposed forecast expenditure⁸³.

The Rules⁸⁴ also require that we must submit our forecast operating expenditure for the 2027-32 regulatory period in our Revenue Proposal.

5.3 Historical operating expenditure

This section summarises our historical operating expenditure for the 2022-27 regulatory period, consistent with the requirements of the Rules⁸⁵.

5.3.1 Historical operating expenditure summary

Table 5.1 shows our actual/forecast operating expenditure for the current regulatory period by expenditure category. Expenditure for the 2023 to 2025 financial years are audited actuals while the 2026 and 2027 financial years are based on our current expenditure forecasts.

⁸² National Electricity Rules, Schedule 6A.1, clause S6A.1.2(7).

⁸³ National Electricity Rules, clause 6A.6.6(e)(5).

⁸⁴ National Electricity Rules, clause 6A.6.6 and Schedule 6A.1, clause S6A.1.2.1.

⁸⁵ National Electricity Rules, Schedule 6A.1, clause S6A.1.2(7).

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Table 5.1 - Operating expenditure - actual/forecast (\$million, real 2026/27)

	2023	2024	2025	2026 forecast	2027 forecast	Total
Controllable operating expenditure						
Field Maintenance	84.5	93.7	102.6	116.0	128.7	525.6
Operational Refurbishment	36.0	37.0	48.4	42.4	45.5	209.2
Maintenance Support	19.0	22.2	27.5	30.3	31.2	130.2
Network Operations	22.4	26.7	36.9	36.6	41.1	163.7
Asset Management Support	30.8	35.5	40.9	41.2	38.6	187.0
Corporate Support	41.3	54.9	36.9	41.6	36.5	211.0
Total controllable operating expenditure	234.0	270.0	293.2	308.1	321.6	1,426.8
Other operating expenditure						
Insurance Premiums	9.2	9.6	8.6	9.1	9.9	46.3
Self-Insurance	0.9	0.9	1.0	2.0	2.3	7.0
Australian Energy Market Commission (AEMC) Levy	8.1	6.2	6.8	6.0	6.2	33.2
Network Support ⁽¹⁾	0.6	1.2	2.1	-	-	3.8
Debt raising costs	0.2	0.1	0.1	0.4	0.6	1.4
Total other operating expenditure	19.0	18.0	18.5	17.5	18.9	91.8
TOTAL OPERATING EXPENDITURE ⁽²⁾	253.0	288.0	311.7	325.6	340.4	1,518.6
TOTAL OPERATING EXPENDITURE (excl. debt raising costs)	252.8	287.8	311.6	325.1	339.9	1,517.2

(1) Network support incorporates both system security network support payments and network alternative support payments. From 1 December 2024, system security network support payments were recovered as a direct pass through via prescribed transmission prices. We have not included a forecast for 2026 and 2027.

(2) Total operating expenditure includes costs associated with AER approved pass throughs of \$2.0 million.

5.3.2 Performance against allowance

In determining the Maximum Allowed Revenue (MAR) that Powerlink may recover during a regulatory period, the AER provides an allowance for the prudent and efficient operating expenditure needed to achieve the operating expenditure objectives. The AER's allowance for the 2022-27 regulatory period was \$1,263.8 million (exclusive of debt raising costs and adjusted for approved pass throughs), restated in real 2026/27 terms.

We expect total operating expenditure to be \$1,517.2 million which is \$253.4 million (20%) higher than the AER's total allowance for the 2022-27 regulatory period. These figures are exclusive of debt raising costs. Table 5.2 outlines the annual trend in allowed and actual operating expenditure over the 2022-27 regulatory period.

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Table 5.2 - Operating expenditure - allowance vs actual/forecast (\$million real, 2026/27)

	2023	2024	2025	2026 forecast	2027 forecast	Total
AER allowance ⁽¹⁾	250.4	253.5	252.5	252.8	252.7	1,261.9
Approved pass throughs	0.9	0.9	0.1	0.0	0.0	2.0
Adjusted allowance ⁽²⁾	251.3	254.4	252.6	252.8	252.7	1,263.8
Actual/forecast ⁽³⁾	252.8	287.8	311.6	325.1	339.9	1,517.2
Difference	1.5	33.4	59.0	72.3	87.2	253.4
Difference (%)	1%	13%	23%	29%	35%	20%

(1) Exclusive of debt raising costs. There was an allowance of \$0 for network support costs.

(2) Actual/forecast expenditure includes costs associated with AER approved pass throughs of \$2.0 million.

(3) Exclusive of debt raising costs.

As discussed in Chapter 2, Powerlink's operating environment has changed significantly since our previous Revenue Proposal was lodged in January 2021. This change has impacted our cost performance in operating expenditure over the 2022-27 regulatory period, and we have experienced cost increases in several controllable and non-controllable operating expenditure categories as outlined in the following sections.

5.3.2.1 Controllable operating expenditure

Controllable operating expenditure is expected to be \$248.2 million (21%) higher in the 2022-27 regulatory period than the AER allowance. The key drivers for this are discussed below.

Demand for skilled labour

Growing demand for skilled labour resources is one of many factors driving increased operating expenditure in the 2022-27 regulatory period. This was illustrated in Chapter 2 Operating Environment. Additionally, a report on AEMO's 2024 Integrated System Plan noted that the number of electricity sector jobs required is expected to increase steeply for all scenarios in the run up to 2030⁸⁶.

Since the commencement of the 2022-27 regulatory period, Powerlink has substantially increased its workforce in response to changes in government policy, emissions reduction targets at the time and major planned investments. We have expanded our regional workforce in response to increases in workload across central and northern Queensland and have grown our teams to operate our increasingly complex network.

In addition to this, new enterprise agreements came into effect from February and March 2024 and included increases to base salary, superannuation and allowances, as well as changes to conditions. The agreements reflect the increased demand for skilled resources within the energy sector and is critical to enable Powerlink to secure and retain the resources to deliver its capital and operating works in the current 2022-27 and upcoming 2027-32 regulatory periods.

Combined, Powerlink's growth in workforce and wages account for the majority of the additional operating expenditure.

⁸⁶ The Australian Electricity Workforce for the 2024 Integrated System Plan: Projections to 2050, UTS Institute for Sustainable Futures, September 2024.

Complexity

The transition of the energy system within Queensland is well underway. To accommodate the increasing integration of large-scale inverter-based resources, energy storage and rooftop solar, there are new regulatory obligations for services such as system strength, while the operating envelope (the difference between maximum demand and minimum demand) continues to increase. Powerlink is learning and adapting to new ways in which the grid is being used.

The rapidly increasing technical complexity of operating the transmission network introduces several key operational challenges which result in additional costs. These include the need for more frequent operator intervention, an increasing number of alarms, a rise in the labour effort required for scheduling, planning and management of outages, and an increase in complex switching activities and network support activations to ensure the network operates securely and reliably. We require the development of more specific operating and contingency plans, schemes and complex operating strategies to maintain power system security and optimise utilisation of installed network assets.

These factors have driven additional operating expenditure within the current regulatory period and have also been considered in the development of operating expenditure forecasts for the 2027-32 regulatory period (refer Section 5.6.1). The cost impact in the 2022-27 period is forecast to be \$58 million and is driven by the additional network operations resources required to address and mitigate the increased complexity.

New regulatory and compliance obligations

Powerlink is required to comply with the *Security of Critical Infrastructure Act 2018 (SOCI Act)*. Amongst other obligations, the SOCI Act requires owners of critical infrastructure to implement risk management plans to mitigate material risks associated with cyber and information hazards, personnel hazards, supply chain hazards, and physical and natural hazards.

In the development of our 2023-27 Revenue Proposal, there was uncertainty about the scope and timing of upcoming obligations, as well as the impacts of relevant legislation, which were not fully understood. As a result, a step change did not form part of our Revenue Proposal.

Powerlink has incurred additional costs arising from the SOCI Act related to physical security obligations. This has contributed over \$14.5 million to the operating expenditure overspend in the current 2022-27 period, with phased implementation continuing into the 2027-32 regulatory period.

In September 2025, Powerlink lodged a cost pass through application with the AER for a portion of the additional costs directly attributable to the uplift of physical security to comply with the SOCI Act. As the outcome of this application is not yet known, we have not included the proposed pass through amount in the AER allowance for operating expenditure at this time. The AER is expected to make a decision on this matter in early 2026.

The cyber security threat to Powerlink is high⁸⁷ and a successful attack on its critical infrastructure could have severe consequences. During the 2022-27 regulatory period we have evolved our cyber security focus and capability and have now achieved the required level of maturity under the Australian Energy Sector Cyber Security Framework (AESCSF)⁸⁸ as flagged in our 2023-27 Revenue Proposal. The release of version 2 of the AESCSF in 2023 included a 37% increase in the number of practices and anti-patterns⁸⁹ (currently at 354) required

⁸⁷ The Australian Cyber Security Centre (ACSC) considers electricity transmission a high criticality cyber target.

⁸⁸ The Australian Energy Sector Cyber Security Framework (AESCSF) is a cyber security framework developed for the Australian energy sector that leverages recognised industry frameworks and references global best-practice control standards.

⁸⁹ An anti-pattern is a poor cyber security behaviour or activity that hinders maturity. It is the opposite of good practice.

to be implemented or addressed to maintain the maturity level. This heightened focus and escalating risk in the cyber threat environment has had a significant effect on cyber security related operating expenditure. The operating costs of maintaining this maturity level continue to increase and contribute over \$20 million to the operating expenditure overspend.

5.3.2.2 Non-controllable operating expenditure

In total, we forecast to exceed the AER's 2022-27 regulatory allowance for non-controllable operating expenditure by \$7.1 million. This excludes debt raising costs.

Network Support

We forecast to incur network support costs during the 2022-27 regulatory period of \$3.8 million. This incorporates both system security network support payments and network alternative support payments. To date, the AER has approved to pass through \$2.0 million in relation to network support payments, consistent with Powerlink's network support cost pass through applications.

There was considerable uncertainty around potential network support costs with no contracts in place at the time of lodging our 2023-27 Revenue Proposal in January 2021, and the possibility for emerging energy market dynamics to alter the requirements for network support payments. For this reason, we sought an allowance of \$nil for network support costs at that time.

Subsequently, in September 2023, we identified the need for network alternative support services after finalising a Regulatory Investment Test for Transmission (RIT-T) for managing voltages in South East Queensland⁹⁰. The final recommendation comprised the installation of one bus reactor at the Belmont Substation, and network support services at times of reactive power shortfall, while further reactive support from other non-network developments emerge. As this was identified as a trade-off between operating expenditure and capital expenditure that was provided for in our capital expenditure allowance, Powerlink did not make a network support cost pass through application to the AER for these services.

While we forecast to incur system security network support costs over the remainder of the 2022-27 regulatory period, these have not been included in our operating expenditure forecast in line with the Australian Energy Market Commission's (AEMC's) final Rule for the Improving Security Frameworks for the Energy Transition Rule change⁹¹. This resulted in removal of the need to forecast non-network system security costs as part of a revenue determination process. Instead, the AEMC determined that these costs be recovered by an annual forecasting and true up process, which forms part of the annual prescribed transmission service pricing process – effectively a direct pass through to customers. These changes to cost recovery commenced in December 2024.

⁹⁰ Information on the Regulatory Investment Test for Transmission – Managing voltages in South East Queensland can be found on the [Powerlink website](#).

⁹¹ National Electricity Amendment (Improving security frameworks for the energy transition) Rule 2024 No. 9, Australian Energy Market Commission.

Insurance

Insurance costs (premiums and self-insurance) for the 2022-27 regulatory period are forecast to be \$5.0 million (10.4%) higher than the AER allowance. At the time of preparing our 2023-27 Revenue Proposal the insurance industry was in a hard phase⁹² of the cycle, creating uncertainty around future costs. Increases are anticipated to continue into the 2027-32 regulatory period, but at a rate aligned with a 'softening' global insurance market. This is discussed further in Section 5.10.1.

5.3.3 Productivity initiatives

In our 2023-27 Revenue Proposal, we proposed an annual productivity target higher than the industry average and identified several productivity initiatives to support this target. We have achieved some productivity savings, partially offsetting the impacts of the cost increases highlighted in Section 5.3.2. Collectively, these equate to approximately \$5.6 million annually in savings or avoided costs and are discussed further below.

5.3.3.1 Materials supply chain and direct purchasing

We have focused on delivering productivity improvements through digitisation, process optimisation and commercial innovation in our materials supply chain and direct purchasing functions. We have increased the number of procurement panels and period agreements which has enabled more structured and competitive sourcing, consolidated spend, reduced sourcing cycle times and improved process efficiency. We are implementing a Source-to-Contract platform which will automate workflow, improve transparency, enhance compliance and enable better data-driven decision making across the procurement lifecycle.

5.3.3.2 Vegetation management

We have improved how we plan, prioritise, coordinate and verify vegetation works across our network including trialling satellite data capture technology. Combined with the shift to a statewide vegetation contract, this has seen a reduction in our vegetation management costs, with the cost per span decreasing since 2023.

5.3.3.3 Improving the efficiency of central processes and activities

We have progressed the implementation of enhanced technology and tools to support frontline teams. Through this program, we have realised benefits in the utilisation of our field-based teams with improvements in work scheduling and packaging.

5.3.3.4 Office refit

In the 2022-27 regulatory period we have shifted to shared working arrangements, maximising the utilisation of office space at our Virginia site, and deferring the need to establish additional office space.

5.3.3.5 Business Information Technology (IT)

We continue to deliver on Business IT replacements, software upgrades and rationalisation of our systems planned for the 2022-27 regulatory period. We delivered upgrades to core business systems which has improved functionality and modernised our tools, allowing for improvements in business processes and some savings in licensing costs. We are consolidating platforms and data warehouses to reduce support requirements and deliver greater efficiency.

⁹² A hard insurance market is characterised by moderate to high premium increases, more selective underwriting and greater due diligence by insurers and a reduction in capacity and cover.

5.3.3.6 In-Vehicle Asset Management Systems

We have progressed the installation of In-Vehicle Asset Management Systems (IVAMS) across our vehicle fleet as part of a project to improve our operational vehicle resource utilisation, improve safety and refine maintenance schedules. These systems are not yet fully operational while we continue consultation with our employees, hence the benefits associated with this system have not been realised.

5.3.3.7 Value driven maintenance

Powerlink takes a value driven maintenance approach to deliver cost-effective outcomes, while meeting our obligations to provide safe and reliable and cost effective prescribed transmission services to our customers. We have identified opportunities to improve and deliver greater value by changing the frequency of selected maintenance activities and removing some annual activities in favour of a risk-based program.

5.3.3.8 Other productivity initiatives

In addition to the productivity initiatives in our 2023-27 Revenue Proposal, we have realised benefits from other initiatives implemented in the current 2022-27 regulatory period. The implementation of Microsoft Copilot has boosted productivity through the automation of repetitive tasks, the ability to quickly research, analyse and interpret large datasets and streamline communication. Other initiatives included the commencement of a Christmas closure period and the option to cash out leave.

5.3.4 Benchmarking performance

5.3.4.1 Regulatory requirements

The Rules⁹³ require the AER to prepare and publish an annual benchmarking report that describes the relative efficiency of each TNSP. The AER must have regard to the most recent annual benchmarking report when assessing whether operating expenditure forecasts provided by a TNSP within its Revenue Proposal represent efficient expenditure⁹⁴.

5.3.4.2 Our approach

We considered benchmarking in the calculation of the trend parameter of our operating expenditure ‘base-trend-step’ model. This includes consideration of our benchmarking results and industry-wide productivity trends.

The AER focuses on multilateral productivity measures in its annual benchmarking report for TNSPs. This measures how efficiently a business transforms a ‘basket’ of physical and financial inputs into a ‘basket’ of outputs. Inputs to the AER’s benchmarking model for transmission include physical inputs, such as the capacity of the network, as well as financial inputs, such as operating expenditure. It is not solely related to the cost to customers.

Economic benchmarking of electricity transmission businesses is impacted by the small number of TNSPs in Australia and their specific operating environments. The AER acknowledges this limitation in applying its benchmarks to TNSPs⁹⁵, while its consultant, Quantonomics, specifically recognises that not all external factors arising from a TNSP’s operating environment can be captured in the benchmark models⁹⁶.

⁹³ National Electricity Rules, clause 6A.31.

⁹⁴ National Electricity Rules, clause 6A.6.6(e).

⁹⁵ Annual Benchmarking Report - Electricity transmission network service providers, Australian Energy Regulator, November 2024.

⁹⁶ Economic Benchmarking Results for the Australian Energy Regulator’s 2025 TNSP Annual Benchmarking Report, Quantonomics, November 2025, page 8.

Operating Environment Factors (OEFs) that may be specific to one or a subset of TNSPs, which can influence outcomes while being outside the TNSPs' control, include:

- application of different financial capitalisation policies, i.e. instances where a TNSP incorporates expenditure into operating expenditure where another would capitalise it
- differences in network terrain, that may influence expenditure necessary to maintain the network, and
- differences in the geographic nature of networks, which may mean some TNSPs need to invest in infrastructure that another TNSP would not.

Powerlink has previously expressed the need for a broader review of the economic benchmarking specification for transmission to ensure that the range of services provided is captured more effectively and reflects the new investment obligations to support the transition of the transmission system⁹⁷. In developing this Revenue Proposal, we proposed alternative measures of output growth, which we consider to be more suitable output measures for the purposes of the rate of change and benchmarking. These measures were presented to and considered by our Revenue Proposal Reference Group (RPRG) but have not been factored into the base-trend-step approach in our Revenue Proposal (refer Section 5.6.2).

The AER recognises that substantial new investment in the transmission network is likely to be captured within the current economic benchmarking model inputs (operating and capital expenditure). However, it is less clear that this is the case for all relevant outputs. The AER has stated that it is closely monitoring developments in the transmission network environment and will consider the validity of current outputs, as well as any potential additions to the output variables, in future transmission benchmarking development work⁹⁸. We are not yet aware of the likely timing of this development work.

5.3.4.3 Our benchmarking performance

Our overall performance under the AER's economic benchmarking approach in its most recent 2025 TNSP Annual Benchmarking Report has decreased slightly in 2024, as shown in Figure 5.1. This is a marginal reduction on our 2018/19 outcome when our base year operating expenditure was deemed not materially inefficient by the AER.

These results are an amalgam of both operating expenditure and capital expenditure productivity performance. Powerlink is now ranked second out of five TNSPs under the Multilateral Total Factor Productivity Measure (MTFP).

⁹⁷ 2024 Annual Benchmarking Report – Electricity Transmission Network Service Providers, Australian Energy Regulator, Section 1.4.

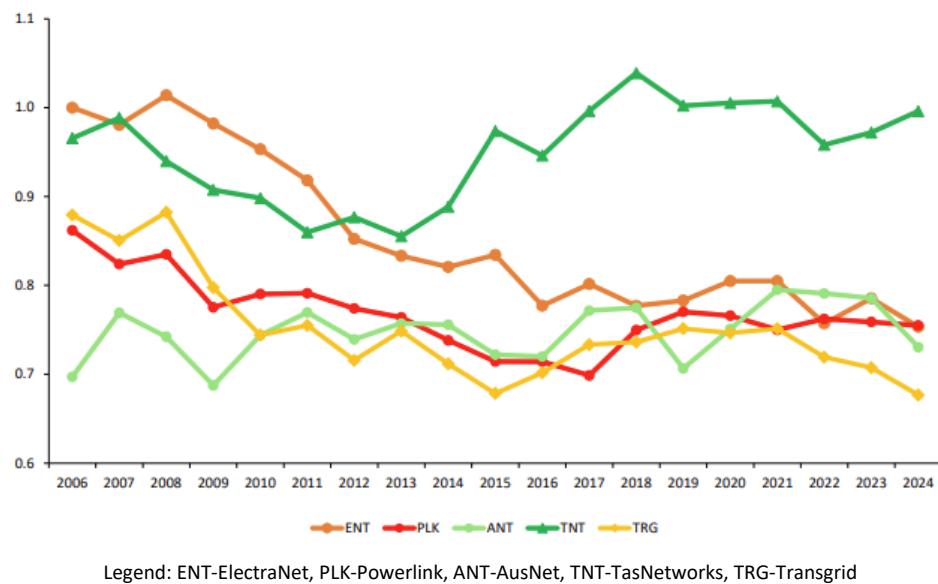
⁹⁸ 2025 Annual Benchmarking Report – Electricity Transmission Network Service Providers, Australian Energy Regulator, Section 1.4.2.

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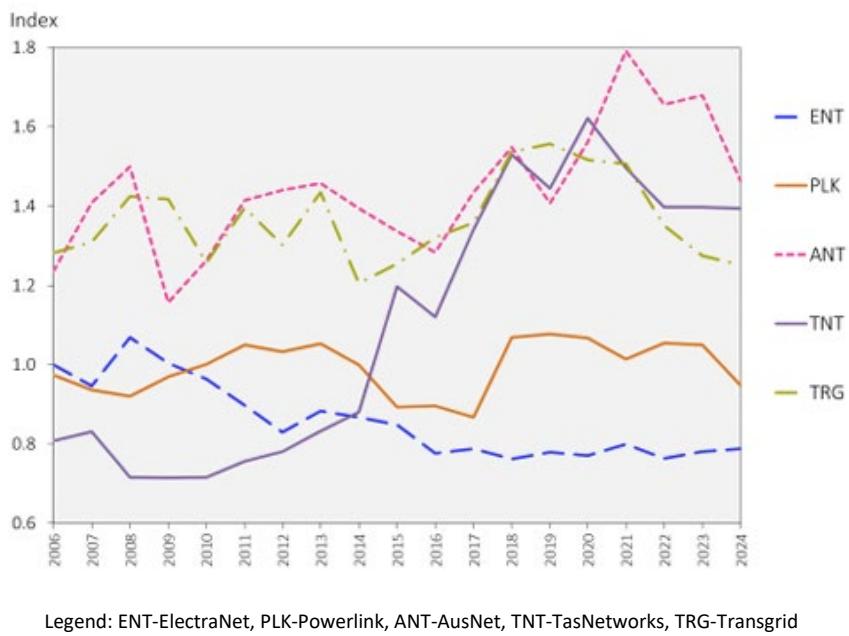
Figure 5.1 - Electricity transmission MTFP indexes by TNSP, 2006-24 (Source: AER⁹⁹)



Legend: ENT-ElectraNet, PLK-Powerlink, ANT-AusNet, TNT-TasNetworks, TRG-Transgrid

Specific to operating expenditure productivity, the AER's benchmarking analysis shows that Powerlink's operating expenditure Multilateral Partial Factor Productivity (MPFP) performance declined in 2024, broadly aligned to the industry trend of operating expenditure productivity declining, as shown for four of the five TNSPs in Figure 5.2.

Figure 5.2 - TNSP operating expenditure multilateral partial factor productivity indexes, 2006 to 2024 (Source: Quantonomics¹⁰⁰)



Legend: ENT-ElectraNet, PLK-Powerlink, ANT-AusNet, TNT-TasNetworks, TRG-Transgrid

⁹⁹ Annual Benchmarking Report - Electricity transmission network service providers, Australian Energy Regulator, November 2025.

¹⁰⁰ Economic Benchmarking Results for the Australian Energy Regulators 2025 TNSP Annual Benchmarking Report, Quantonomics, November 2025, page 14.

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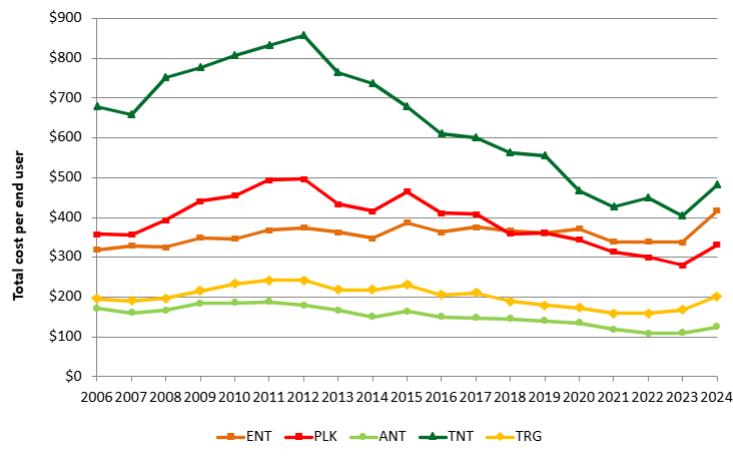
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In its Annual Benchmarking Report the AER also publishes Partial Productivity Indicators (PPIs) which provide a simple representation of the input costs used to produce particular outputs by TNPs, and may be used to provide a general indication of comparative performance in delivering one type of output. These performance indicators are shown in Figure 5.3. For each of these metrics, a lower cost represents better performance.

Powerlink has experienced a decline in performance in 2024 across all measures, primarily driven by increases in expenditure as discussed in Section 5.3.2. Overall, Powerlink's total cost (incorporating capital expenditure and operating expenditure) has increased by 19.8%, compared to the industry average of 20.3%. This indicates that the cost increases experienced by Powerlink have similarly impacted the broader industry and these increases have not been influenced by the measured outputs. In most cases, Powerlink's performance has improved from 2006.

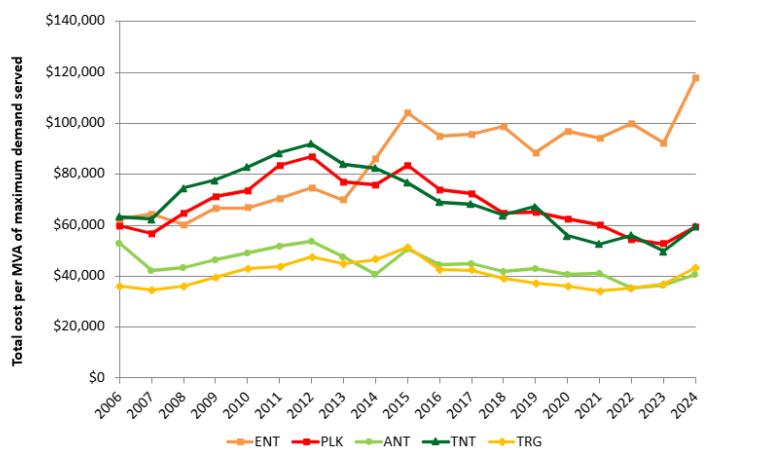
Figure 5.3 - Partial Performance Indicators (PPIs) (\$2024), 2006 to 2024 (Source: AER¹⁰¹)

Total cost per end user



Legend: ENT-ElectraNet, PLK-Powerlink, ANT-AusNet, TNT-TasNetworks, TRG-Transgrid

Total cost per MVA of maximum demand served



Legend: ENT-ElectraNet, PLK-Powerlink, ANT-AusNet, TNT-TasNetworks, TRG-Transgrid

Powerlink ranks third out of the five TNPs for the total cost per end user which has increased by 18.7% from 2023 to 2024. This is slightly less than the industry average of 19.1%.

Expenditure in 2024 increased at a significantly greater rate than the number of end users for all TNPs which increased by an average of 0.96%. For Powerlink, total cost increased by 19.8% compared to an increase in end users of 0.91%.

Total cost per user has decreased by 7.4% from 2006 to 2024.

Powerlink ranks third out of the five TNPs for the total cost per MVA of maximum demand which increased by 12.6% from 2023 to 2024. This is less than the industry average increase of 17.7%.

Expenditure in 2024 increased at a significantly greater rate than the maximum demand for all TNPs which increased by an average of 2.33%. For Powerlink, total cost increased by 19.8% compared to an increase in end users of 6.36%.

Total cost per MVA of maximum demand decreased by 0.4% from 2006 to 2024.

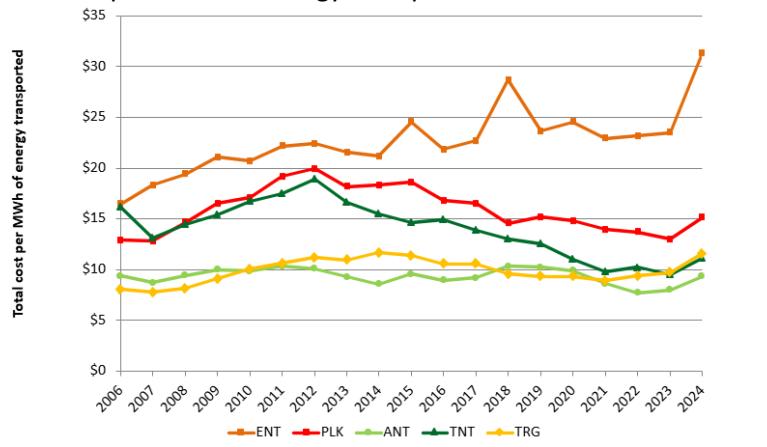
¹⁰¹ AER – 2025 Partial Performance Indicators for transmission, Australian Energy Regulator, November 2025

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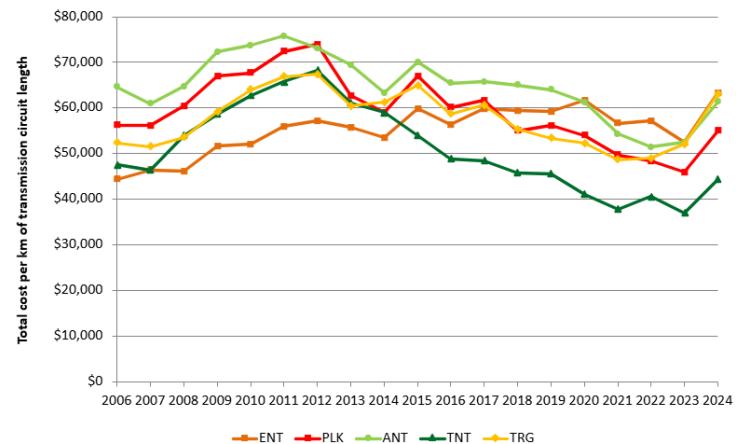
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Total cost per MWh of energy transported



Legend: ENT-ElectraNet, PLK-Powerlink, ANT-AusNet, TNT-TasNetworks, TRG-Transgrid

Total cost per km of transmission circuit length



Legend: ENT-ElectraNet, PLK-Powerlink, ANT-AusNet, TNT-TasNetworks, TRG-Transgrid

5.3.4.4 Independent assessment of performance

We engaged HoustonKemp to provide an independent review of our relative performance based on available and forecast information, and to advise on the potential efficiency of our proposed base year (2025/26) to forecast operating expenditure in the 2027-32 regulatory period. The key elements of that review are focused on:

- Multilateral Total Factor Productivity (MTFP)
- Capital expenditure Multilateral Partial Factor Productivity (capital expenditure MPFP), and
- Operating expenditure Multilateral Partial Factor Productivity (operating expenditure MPFP).

Based on actual results for 2023/24 and 2024/25 and the current forecast for 2025/26, Powerlink's operating expenditure performance is expected to decline due to an increase in cost, with no corresponding increase in output. The outcome for 2023/24 is aligned with the industry trend, with only one TNSP (ElectraNet) displaying an improvement in operating expenditure MPFP for that year.

Powerlink ranks fourth out of the five TNSPs for the total cost per MWh of energy transported which increased by 16.4% from 2023 to 2024. This is less than the industry average of 20.6%.

Expenditure in 2024 increased at a significantly greater rate than the energy transported for all TNSPs which decreased by an average of 0.08%. For Powerlink, total cost increased by 19.8% compared to an increase in end users of 2.96%.

Total cost per MWh of energy transported increased by 17.6% from 2006 to 2024.

Powerlink ranks second out of the five TNSPs for the total cost per circuit km which increased by 19.8% from 2023 to 2024. This is the same as the industry average.

Expenditure in 2024 increased at a significantly greater rate than the circuit length for all TNSPs which increased by an average of 0.43%. For Powerlink, total cost increased by 19.8% compared to an increase in end users of 0.03%.

Total cost per circuit km decreased by 2.2% from 2006 to 2024.

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The AER has not yet published comparative TNSP data for 2024/25 and 2025/26. As a result, we expect to provide comparative data from the Annual Information Order returns for 2024/25 in our Revised Revenue Proposal.

HoustonKemp's key findings on our operating expenditure performance, particularly as they relate to our proposed operating expenditure base year (2025/26), is summarised in Section 5.6.1.

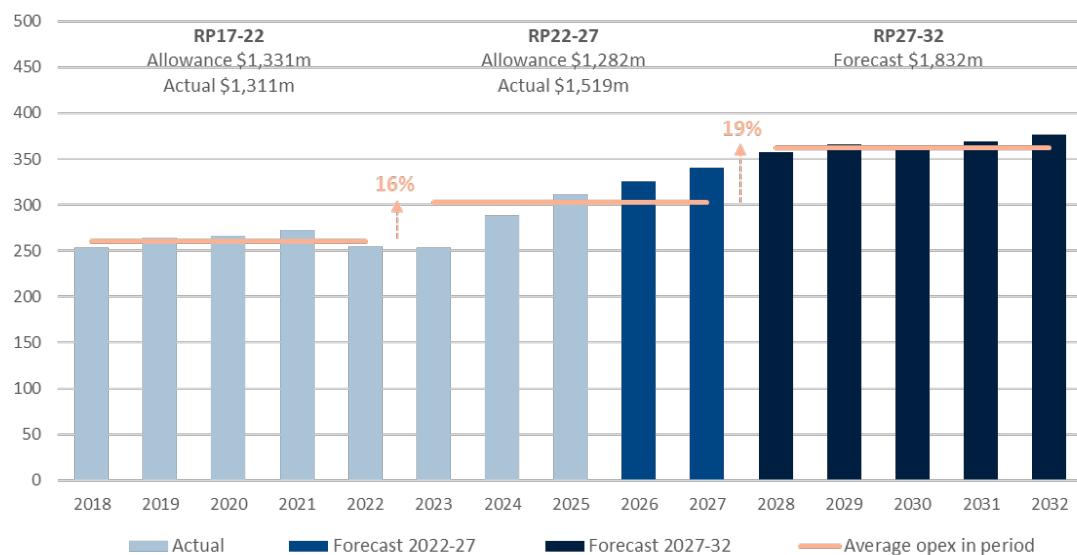
5.4 Forecast Operating Expenditure

Our Expenditure Forecasting Methodology (included as Appendix 4.03) discusses our approach to forecasting operating expenditure, which Powerlink sought RPRG input on prior to lodging with the AER in June 2025. We have made one change to the proposed methodology relating to the approach for forecasting our insurance costs. This is discussed in Section 5.5. Our operating expenditure forecasting methodology is designed to produce forecasts that satisfy the requirements of the Rules¹⁰² including the operating expenditure objectives in Section 5.5.1 and the operating expenditure criteria and factors in Appendix 4.01. It will allow us to maintain and operate the network safely, meet the expected demand for prescribed transmission services and comply with all applicable regulatory obligations and requirements. In formulating our operating expenditure forecast, we have also considered the AER's 2024 Expenditure Forecast Assessment Guideline for Electricity Transmission¹⁰³ and Better Resets Handbook¹⁰⁴.

5.4.1 Total forecast operating expenditure

Our total forecast operating expenditure for the 2027-32 regulatory period, along with our actual/forecast expenditure for the previous and current regulatory periods, is shown in Figure 5.4.

Figure 5.4 - Total actual historical and forecast operating expenditure (\$million real, 2026/27)



Our total forecast operating expenditure is \$1,810.2 million (excluding debt raising costs). This represents a \$293.0 million (19%) increase from actual/forecast operating expenditure for the 2022-27 regulatory period. With debt raising costs included, our total forecast operating expenditure is \$1,832.2 million, a \$313.6 million (21%)

¹⁰² National Electricity Rules, clause 6A.6.6.

¹⁰³ Expenditure Forecast Assessment Guideline for Electricity Transmission, Australian Energy Regulator, October 2024.

¹⁰⁴ Better Resets Handbook – Towards Consumer Centric Network Proposals, Australian Energy Regulator, July 2024.

increase from actual/forecast operating expenditure in the 2022-27 regulatory period. To derive this forecast, we have applied the AER's base-trend-step approach.

We have proposed 2025/26 (year 4 of the current regulatory period) as our efficient base year. We have reviewed our expenditure in this year on a category basis and have had the efficiency of this base year independently assessed (refer Section 5.6.1).

We applied an annual rate of change to our base year which broadly reflects the change in output growth, price growth and productivity growth. Our approach to the rate of change calculation and the resulting rates is discussed further in Section 5.6.2, including an alternative approach to output growth which we considered but did not adopt in our Revenue Proposal.

We have included step changes for material new costs that we will incur that are not in our base year operating expenditure. These are discussed further in Section 5.6.3 in summary, to:

- uplift physical security, associated with meeting our obligations as a critical infrastructure provider under the *Security of Critical Infrastructure Act 2018 (SOCI Act)*
- transition to cloud-based computing solutions, in line with industry trends, and the appropriate accounting treatment for those costs, with an associated reduction in capital expenditure, and
- enhance overnight network monitoring, by addressing sole overnight control room operator risk, as supported by AEMO.

We have provided category specific forecasts for the AEMO participant and cyber security fees, network support and debt raising costs (refer Section 5.10). Our forecast expenditure by category is shown in Table 5.3.

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Table 5.3 - Forecast operating expenditure by category (\$million real, 2026/27)

Operating expenditure category	2028	2029	2030	2031	2032	Total
Controllable operating expenditure						
Field maintenance	116.9	117.9	119.3	121.2	123.5	598.9
Operational refurbishment	42.7	43.1	43.6	44.3	45.1	218.7
Maintenance support	33.5	33.8	34.1	34.6	35.2	171.2
Network operations	38.6	39.0	39.4	40.0	40.7	197.7
Asset management support	41.4	41.8	42.3	43.0	43.8	212.4
Corporate support	47.3	53.1	47.2	47.1	48.6	243.3
Total controllable operating expenditure	320.4	328.6	326.0	330.1	337.1	1,642.2
Other operating expenditure						
Insurance premiums	9.2	9.3	9.4	9.5	9.7	47.1
Self-insurance	2.0	2.0	2.0	2.0	2.1	10.1
Network support ⁽¹⁾	-	-	-	-	-	-
AEMC levy	6.0	6.1	6.1	6.2	6.4	30.8
AEMO participant and cyber security fees	15.0	15.5	16.0	16.5	17.0	80.1
Debt raising costs	4.3	4.4	4.4	4.4	4.5	22.0
Total other operating expenditure	36.5	37.2	37.9	38.7	39.7	190.0
TOTAL OPERATING EXPENDITURE	356.9	365.8	363.9	368.9	376.7	1,832.2
TOTAL OPERATING EXPENDITURE (excl. debt raising costs)	352.6	361.4	359.5	364.5	372.2	1,810.2

(1) Network support incorporates both system security network support payments and network alternative support payments. From 1 December 2024, system security network support payments were recovered as a direct pass through via prescribed transmission prices. We forecast \$0 for network support costs.

5.4.2 Operating expenditure objectives

We consider that our forecast operating expenditure achieves the operating expenditure objectives set out in the Rules. This is summarised in Table 5.4 and discussed in detail in Appendix 4.01 Operating and Capital Expenditure Criteria and Factors.

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Table 5.4 - How we meet the operating expenditure objectives

Operating expenditure objective	How our proposal meets this objective
Meet or manage the expected demand for prescribed transmission services over the period	Maximum demand is forecast to gradually increase over the 2027-32 regulatory period, while minimum demand is forecast to decline. Our operating expenditure reflects a prudent and reasonable cost forecast to operate and maintain our transmission network and deliver safe and reliable supply in an increasingly complex operating environment.
Comply with all applicable regulatory obligations or requirements associated with the provision of prescribed transmission services	We are subject to regulatory obligations as the holder of a Transmission Authority under the <i>Electricity Act 1994 (Qld)</i> and as a registered TNSP in the National Electricity Market (NEM). As a corporation, we are also subject to various other environmental, cultural heritage, planning, Workplace Health & Safety, industrial, financial and other regulations. Our compliance with these regulatory obligations and requirements is encompassed in our Strategic Asset Management Plan and associated policies and procedures, which provide the foundation for our operating and maintenance activities. New regulatory obligations and other requirements have also been assessed to determine the potential effect on forecast operating expenditure in the 2027-32 regulatory period. We have included three step changes in this Revenue Proposal to address these requirements.
Maintain the quality, reliability and security of supply of prescribed transmission services and maintain the safety, reliability and security of the transmission system through the supply of prescribed transmission services	Our operating expenditure forecast includes prudent provision to maintain the safety of the transmission system and deliver reliable services to our customers. An appropriate balance of operating and capital expenditure has been proposed in our 2027-32 Revenue Proposal to ensure network assets deliver the required safety, reliability, availability and quality of supply in a prudent and efficient manner.
Contribute to achieving emissions reduction targets through the supply of prescribed transmission services	Powerlink plays a pivotal role in Queensland's energy transition through its transmission infrastructure. As Queensland's System Strength Service Provider, Powerlink is investing in synchronous condensers to address system strength requirements to maintain fault levels and support voltage stability for new inverter-based resources. We have not included costs associated with maintaining these synchronous condensers in our forecast as they do not form part of this regulatory process ¹⁰⁵ .

¹⁰⁵ Powerlink intends to lodge a Contingent Project Application with the AER for the capital expenditure in the 2022-27 and 2027-32 regulatory periods for the installation of synchronous condensers and the resulting incremental operating expenditure for the 2027-32 regulatory period.

5.4.3 Changes from the draft Revenue Proposal

Our draft Revenue Proposal included total forecast operating expenditure of \$1,805.5 million (\$ real, 2026/27), excluding debt raising costs. Since publishing our draft Revenue Proposal in September 2025, we have made several changes that have not had a material impact to our total forecast operating expenditure overall. These include:

- reflecting the latest inflation data, as published by the Reserve Bank of Australia (RBA) in November 2025
- refining our proposed step changes, including the removal of the synchronous condenser maintenance step change
- updating our circuit kilometres, based on Annual Information Order return data for 2024/25 and revised project timings
- updating the rate of change calculations to align with the revised output weightings and productivity factors reflected in the AER's latest benchmarking report released in November 2025
- changing the approach for forecasting insurance costs from category specific to trend-based, and
- updating to the AEMO participant and cyber security fees, based on the latest information provided by AEMO in December 2025.

Table 5.5 summarises the difference in total forecast operating expenditure between our draft Revenue Proposal (September 2025) and our Revenue Proposal.

Table 5.5 - Forecast operating expenditure comparison (\$million real, 2026/27)

	2028	2029	2030	2031	2032	Total
Draft Revenue Proposal ⁽¹⁾	348.4	353.8	357.0	363.2	383.0	1,805.5
Revenue Proposal ⁽²⁾	352.6	361.4	359.5	364.5	372.2	1,810.2
Difference	4.2	7.6	2.5	1.2	10.8	4.8
Difference (%)	1.2%	2.1%	0.7%	0.3%	(2.8%)	0.3%

(1) Excludes debt raising costs.

(2) Reflects underlying operating expenditure, excluding movements in provisions and debt raising costs.

5.5 Operating expenditure forecasting methodology

Our Expenditure Forecasting Methodology (included as Appendix 4.03) discusses the approach to forecasting our operating expenditure, which Powerlink sought RPRG input on prior to lodging with the AER in June 2025. We have based our approach on the AER's 2024 Expenditure Forecast Assessment Guideline for Electricity Transmission¹⁰⁶ and Better Resets Handbook¹⁰⁷.

Our forecasting approach is consistent with our Expenditure Forecasting Methodology submitted to the AER in June 2025, except for the proposed category specific forecasts. We noted in our Expenditure Forecasting Methodology that we intended to include a category specific forecast for our insurance costs. Based on the forecasts received from our insurance broker and discussions with the RPRG, we have now decided to include these costs as part of the base-trend-step forecast. This is discussed further in Section 5.7.1.

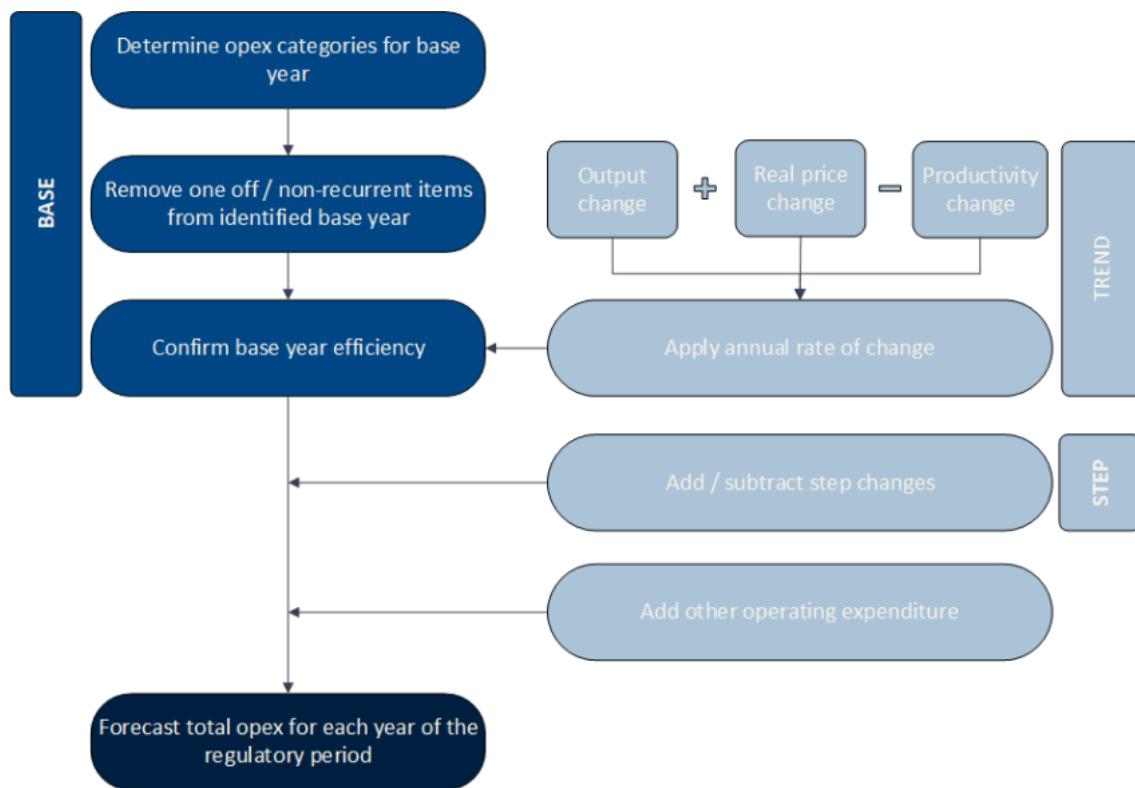
¹⁰⁶ Expenditure Forecast Assessment Guideline for Electricity Transmission, Australian Energy Regulator, October 2024.

¹⁰⁷ Better Resets Handbook – Towards Consumer Centric Network Proposals, Australian Energy Regulator, July 2024.

We also proposed to review the appropriateness of the output measures. We engaged with the RPRG on this in July and September 2025 and empowered the RPRG (under the International Association for Public Participation Public Participation Spectrum) to select the approach to be included in Powerlink's 2027-32 Revenue Proposal. Based on the outcome of this engagement, Powerlink adopted the AER's preferred approach to the output growth. We have provided more detail on this in Section 5.6.2.

The methodology used to prepare our operating expenditure forecast is summarised in Figure 5.5 and explained in the following sections. Further information on our approach is provided in Appendix 5.02.

Figure 5.5 - Powerlink's operating expenditure forecasting methodology



5.5.1 Operating expenditure categories

We have retained the same broad categories of operating expenditure from the current 2022-27 regulatory period, with the addition of one new non-controllable expenditure category, AEMO participant and cyber security fees, as outlined in Table 5.6.

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Table 5.6 - Operating expenditure categories

Operating expenditure category	Definition	Prescribed transmission service
Controllable operating expenditure		
<i>Direct operating and maintenance</i>		
Field maintenance	Includes all field activities to ensure plant can perform its required functions. There are four types of field maintenance: routine, condition-based, emergency and deferred corrective maintenance. Field maintenance costs include all labour and materials needed to perform the required maintenance tasks. Each field maintenance type is further separated into five major asset type categories: substations, transmission lines, secondary systems, communications and vegetation.	Exit, entry, Transmission Use of System (TUOS) and common services
Operational refurbishment	Involves activities that return an asset to its pre-existing condition or function, or activities undertaken on specific parts of an asset to return these parts to their pre-existing condition or function. These refurbishment activities do not involve increasing the capacity or capability of the plant or extending its life beyond its original design.	Exit, entry, TUOS and common services
Maintenance support	Includes activities where maintenance service providers undertake asset support functions in the field as well as non-field functions supporting maintenance functions for the operate/maintain phase of the asset life cycle. Examples of activities include maintenance procedure development, performance management and maintenance auditing. This category also includes local government rates charges, water charges, electricity charges and charges for permits and licencing for Powerlink.	Exit, entry, TUOS and common services
Network operations	Includes control centre functions as well as those additional activities required to ensure the safe, secure, reliable and efficient operational management of the Queensland transmission network. Network operations also includes other control room activity not related to Powerlink assets such as switching to allow access to customer assets, new connections and AEMO Requirements.	Exit, entry, TUOS and common services
<i>Other controllable expenditure</i>		
Asset management support	Activities required to support the strategic analysis, development and ongoing asset management of the network. There are four major sub elements: network planning, business development, regulatory management and operations.	Exit, entry, TUOS and common services
Corporate support	Corporate support encompasses the support activities required by Powerlink to ensure adequate and effective corporate governance. This includes corporate and direct corporate support charges and also revenue reset costs.	Common services
Non-controllable operating expenditure		
<i>Other operating expenditure</i>		
Insurances	This covers insurance premiums for Powerlink's network and non-network assets and a self-insurance allowance to provide cover for losses that cannot be insured.	Common services

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Operating expenditure category	Definition	Prescribed transmission service
Network support	Network support refers to costs associated with non-network solutions used by Powerlink as a cost-effective alternative to network investment. These costs can be for various services including inertia provision, system strength and other network support services.	TUOS services
AEMC levy	Since 2014/15, the <i>Electricity Act 1994 (Qld)</i> has required electricity transmission networks in Queensland to pay a share of the State's cost to fund the AEMC.	Common services
AEMO participant and cyber security fees	The AEMO participant fee is a charge imposed by AEMO to recover its efficient associated with performing core National Electricity Market (NEM) functions. It applies to all registered participants, including TNSPs. The AEMO cyber security fee is a charge introduced to recover the efficient costs of fulfilling its expanded cyber security responsibilities under the Rules.	Common services
Debt raising costs	Debt raising costs relate to costs incurred by an entity over and above the debt margin.	Common services

5.6 Application of the base-trend-step methodology

This section outlines how we have applied the AER's base-trend-step methodology to forecast our operating expenditure, and the inputs and assumptions used for each element. This approach consists of the following:

- determine an efficient base year from which to forecast operating expenditure (Section 5.6.1.1)
- establish an annual rate of change to trend forecast operating expenditure (Section 5.6.2)
- assess step changes in operating expenditure (Section 5.6.3), and
- add other category specific operating expenditure (Section 5.7).

5.6.1 Efficient base year

5.6.1.1 Base year selection

We proposed 2025/26 (Year 4 of the current regulatory period) as the base year in our base-trend-step model. This base year has been selected as Powerlink considers that it is reflective of an efficient level of the expenditure required to meet the operating expenditure objectives¹⁰⁸ and criteria¹⁰⁹. For this Revenue Proposal we have applied a forecast for our 2025/26 base year. For our Revised Revenue Proposal in December 2026, we will apply actual costs (or in AER terms, the revealed cost) in line with the AER's preference¹¹⁰.

¹⁰⁸ National Electricity Rules, clause 6A.6.6(a)

¹⁰⁹ National Electricity Rules, clause 6A.6.6(c)

¹¹⁰ Expenditure Forecast Assessment Guideline for Electricity Transmission, Australian Energy Regulator, October 2024.

We considered the use of 2024/25 as a potential base year from which to forecast operating expenditure for the next regulatory period, as it represents the latest year of audited accounts prior to lodging our Revenue Proposal. However, we do not consider this to be a typical year of operation for the following reasons:

- there are new regulatory and compliance costs that we will incur to meet our SOCI Act obligations, maintain the required Security Profile maturity level for cyber security and address arc flash electrical safety risks that are not revealed in 2024/25, and
- the volume of maintenance work undertaken was lower than required ongoing levels with both routine and non-routine maintenance activities impacted by restricted access to numerous sites across the network.

We engaged on our proposed base year with the RPRG in the development of our Revenue Proposal and determined that 2025/26 is the most appropriate choice for our base year operating expenditure. We engaged HoustonKemp to undertake an independent review of the efficiency of our 2025/26 operating expenditure and our performance against other TNSPs. This is discussed further in this section and HoustonKemp's report is provided in Appendix 5.03.

5.6.1.2 Base year adjustments

We reviewed forecast expenditure in the base year for non-recurrent items or items that are not considered to reflect an efficient level of recurrent operating expenditure. We adjusted for a portion of Operational Technology (OT) licences that will not continue after 2025/26 and made an adjustment for the costs associated with the preparation of the Revenue Proposal which do not occur to the same extent in each year of the regulatory period.

Our approach to remove this expenditure is consistent with the AER's 2024 Expenditure Forecast Assessment Guideline. We will refine our base year adjustments to align with revealed costs in our Revised Revenue Proposal. We outline these adjustments and the resultant base year expenditure in Table 5.7.

Table 5.7 - Adjusted expenditure items in the 2025/26 base year (\$million real, 2026/27)

Operating expenditure category	Total
2025/26 unadjusted base year operating expenditure (controllable expenditure, insurances and AEMC levy)	325.1
Adjustment for Operational Technology Licences not continuing	(0.3)
Adjustment for Revenue Reset preparation	(6.0)
2025/26 base year operating expenditure – efficient base year	318.8

The unadjusted base year has increased from our draft Revenue Proposal due to the change in forecasting approach for insurance costs. These were previously excluded from the base year as we had taken a category specific forecasting approach for this category.

Operating expenditure associated with the AEMO participant and cyber security fees, network support and debt raising costs is not included in the base year, as we have taken a category specific approach to forecast these items (refer Section 5.7).

5.6.1.3 Category analysis of operating expenditure

To confirm the reasonableness of our selected base year, we assessed the relative performance of each major category of operating expenditure for the current 2022-27 regulatory period which has been trended under the base-trend-step methodology. This includes all controllable expenditure categories and the insurance and AEMC

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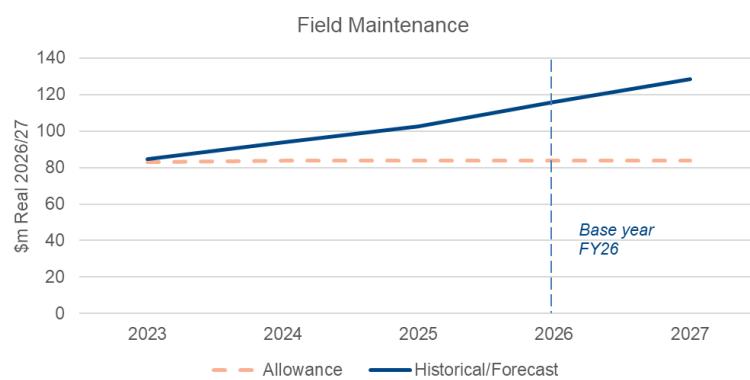
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levy categories. Other non-controllable expenses have been forecast as category specific items using a zero-based approach and therefore were not assessed.

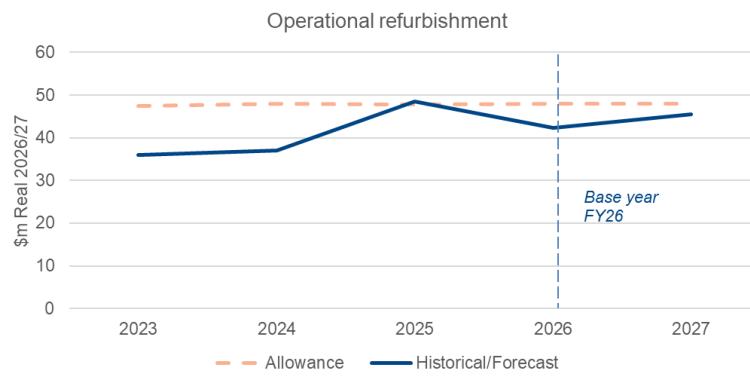
The results of this analysis, shown in Figure 5.6, highlights that at a category level, the proposed 2025/26 base year is more reflective of the ongoing costs required to maintain and operate the network.

Figure 5.6 - Category analysis of operating expenditure (\$million real, 2026/27)



Maintenance in 2025 was disrupted by limited access to 24 substations due to a safety concern related to current transformers, and the response to Tropical Cyclone Alfred. This led to the cancellation and rescheduling of some maintenance work, such that the volume was below ongoing required volumes. The 2026 forecast reflects maintenance volumes aligned with expected needs during the upcoming regulatory period.

From 2026 we have forecast the full cost of compliance with new electrical safety obligations addressing arc flash risk near energised equipment, effective from January 2025.

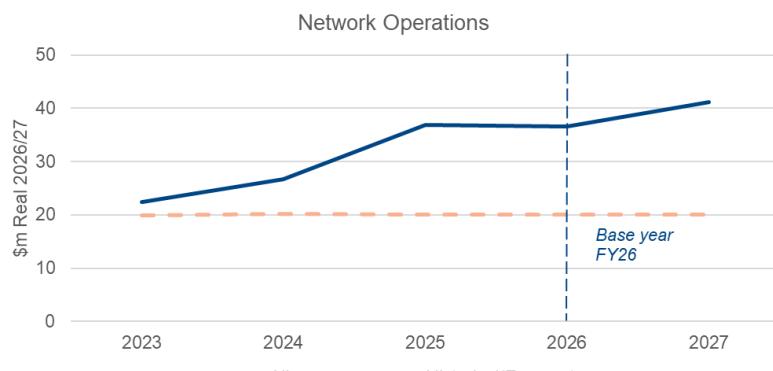


The ongoing insulator replacement program forms the core of the refurbishment expenditure. This is forecast to continue at a consistent level for the next regulatory period. Expenditure in 2025 was higher than planned due to the inclusion of a significant refurbishment project.

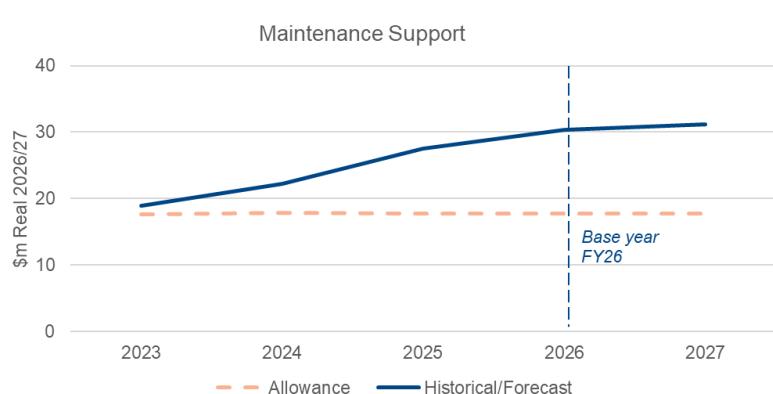
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As the transmission system evolves and complexity increases, so does the effort required to maintain safe and reliable transmission operations. There are increasing requirements for more engineering studies, alarm responses, simulations, contingency planning and network support.



Expenditure in 2026 reflects ongoing recurrent costs, with additional spend driven by changes to management of electrical authorisations and investigations into plant condition and failures. A base year adjustment is proposed to account for changes in OT licensing.

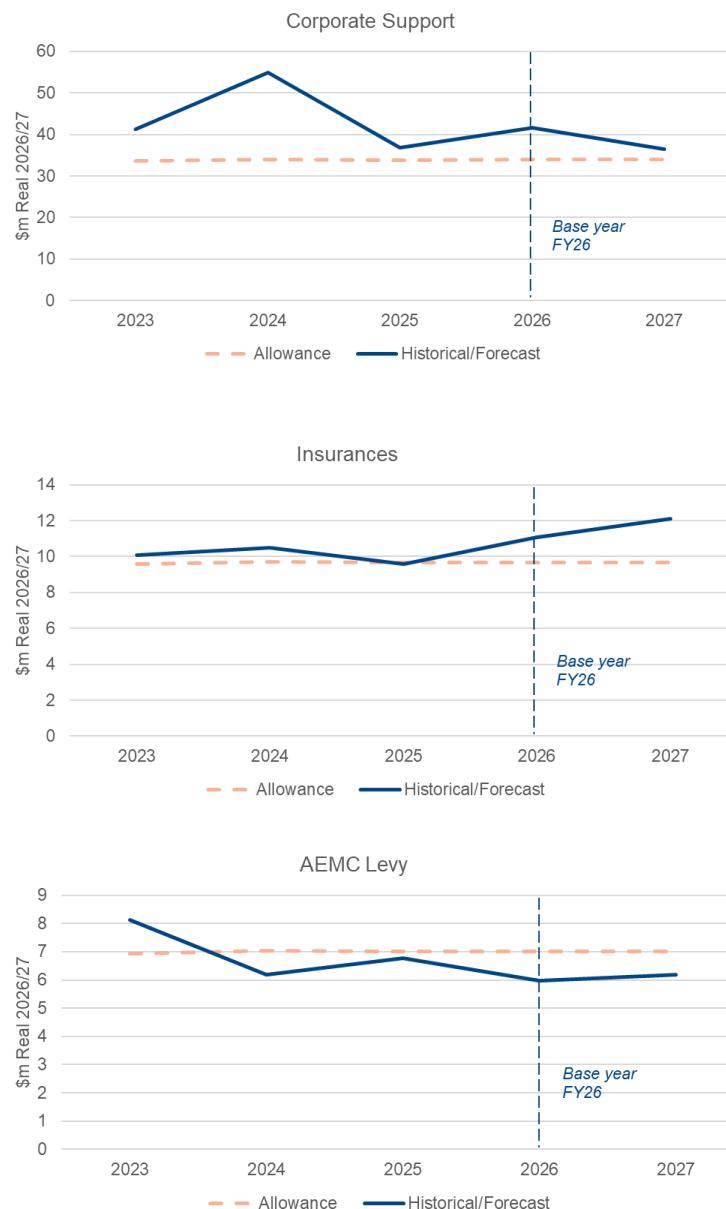


Expenditure increases in 2026 reflect strategic planning for the future network, including network simulation tools, operating schemes, system restart and contingency plans and managing voltage fluctuations. We consider these costs are representative of ongoing requirements in this category.

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Expenditure in 2026 reflects ongoing IT support and licensing costs and expenditure related to maintaining our cyber security maturity level of SP-2 under AESCSF¹¹¹. We have commenced uplifting our management of physical security to meet obligations under the SOCI Act in 2026, with further improvements required in the 2027-32 regulatory period. The base year has been adjusted to exclude non-recurrent costs of preparing our Revenue Proposal.

Combined insurance and self-insurance expenditure in 2026 reflects forecast insurance expenditure for 2027-32 regulatory period, based on independent expert advice.

Expenditure in 2026 reflects the expected ongoing AEMC levy for the 2027-32 regulatory period, based on a forecast provided by Queensland Treasury. We consider this represents efficient recurrent operating expenditure within Powerlink's base year.

5.6.1.4 Benchmarking of base year

This section provides detail about our benchmarking outcomes relative to our proposed 2025/26 base year. Further information about our historical benchmarking performance is included in Section 5.4.

¹¹¹ The Australian Energy Sector Cyber Security Framework (AESCSF) is a cyber security framework developed for the Australian energy sector that leverages recognised industry frameworks and references global best-practice control standards.

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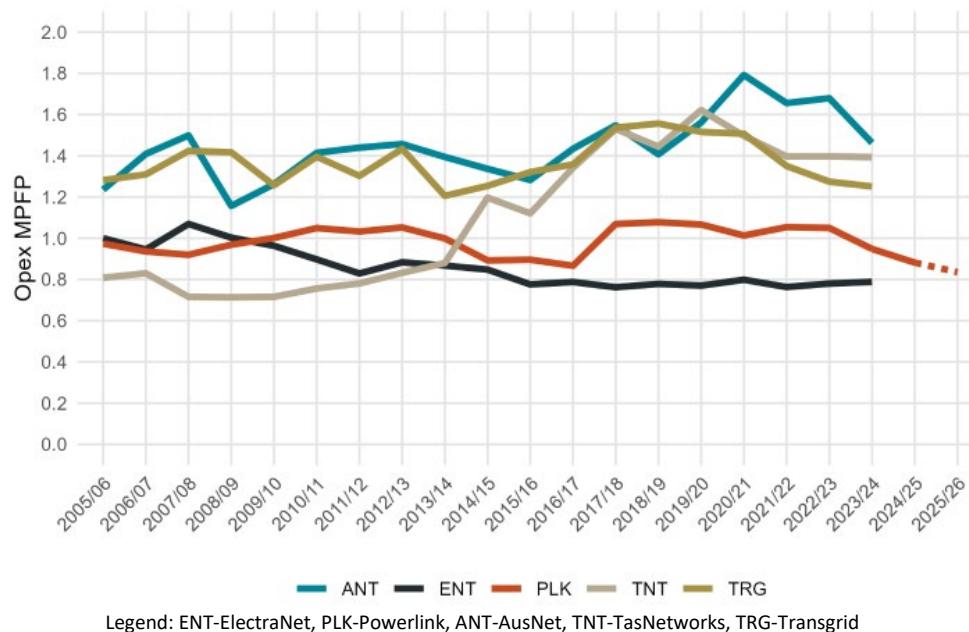
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Benchmarking plays a role in the AER's assessment of TNSP performance and expenditure forecasts, particularly with respect to base year operating expenditure efficiency and trends. Economic benchmarking of electricity transmission businesses is impacted by the small number of TNSPs in Australia (five) and their specific operating environments. The AER acknowledges this limitation in applying its benchmarks to TNSPs, while its consultant, Quantonomics, specifically recognises that not all external factors arising from a TNSP's operating environment can be captured in the benchmark models¹¹².

We engaged HoustonKemp to undertake an independent review of our base year operating expenditure. As part of its review, HoustonKemp benchmarked our expenditure against other TNSPs and examined productivity trends focussing on operating expenditure MPFP, as shown in Figure 5.7. Comparative data for other TNSPs is currently only available to the 2023/24 financial year.

Figure 5.7 - Historical and projected absolute opex MPFP by TNSP (Source: HoustonKemp)



Key findings in HoustonKemp's December 2025 report¹¹³ (included as Appendix 5.03) were:

- Powerlink's operating expenditure efficiency has declined in 2023/24 and is forecast to continue to decline in 2024/25 and 2025/26 due to increases in operating expenditure
- the decline in 2023/24 reflects the broader industry trend
- comparative data from other TNSPs is not available at this time to determine whether Powerlink's decline in operating expenditure efficiency in 2024/25 and forecast decline in 2025/26 continues to reflect the broader industry trend, and
- TNSP performance in 2024/25 is likely to provide a good indication of whether or not this is the case.

¹¹² Economic Benchmarking Results for the Australian Energy Regulator's 2025 TNSP Annual Benchmarking Report, Quantonomics, November 2025, page 8.

¹¹³ Efficiency of Powerlink's proposed base year operating expenditure (2027-32), HoustonKemp Economists, December 2025.

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HoustonKemp notes¹¹⁴:

In the absence of further evidence regarding broader industry trends, Powerlink's current benchmarking results are not yet sufficient to support a conclusion that its (forecast) 2025/26 opex is not materially inefficient.

Powerlink anticipates that industry data to the 2024/25 financial year will be available in early 2026. This will enable HoustonKemp to undertake a comparison against the industry trend in recent years and will further inform their assessment of our base year efficiency. HoustonKemp will provide a revised report to Powerlink following the release of this data.

Powerlink considers that the benchmarking approach, which provides historical context, does not reflect the rapid change in the operating environment experienced by Powerlink and other network businesses in recent years. This was acknowledged by the AER in its most recent report in November 2025 where they noted that the changing operating environment for transmission network businesses may be reflected in input costs but may not be recognised in the relevant outputs, potentially affecting the potency of the benchmarking report¹¹⁵.

In developing this Revenue Proposal, we proposed alternative measures of output growth, which we consider are more suitable output measures for the purposes of the rate of change and benchmarking. These measures were presented to and considered by our RPRG who indicated their support for the alternative measures but recommended that Powerlink adopt the AER's preferred approach to output growth. We discuss the alternative measures in Section 5.6.2.3.

Powerlink has considered its MTFP and operating expenditure MPFP performance in the AER's most recent benchmarking report, the drivers for increased expenditure in the proposed 2025/26 base year and our ongoing engagement relating to the base year with the RPRG. We consider that the 2025/26 is the most appropriate choice for our base year operating expenditure as it represents the operating expenditure required to continue to meet the operating expenditure objectives in the next regulatory period.

5.6.2 Rate of change

5.6.2.1 Total rate of change

The overall real rate of change in the base-trend-step model is a function of the forecast change in network output, real input costs (labour and non-labour) and productivity. The calculation method for the total rate of change is shown in Figure 5.8 and is consistent with the AER's 2024 Expenditure Forecast Assessment Guideline for Electricity Transmission¹¹⁶ and Better Resets Handbook¹¹⁷, and our Expenditure Forecasting Methodology in Appendix 4.03.

Figure 5.8 - Forecast rate of change method



¹¹⁴ Efficiency of Powerlink's proposed base year operating expenditure (2027-32), HoustonKemp Economists, December 2025, page 6.

¹¹⁵ 2025 Annual Benchmarking Report – Electricity Transmission Network Service Providers, Australian Energy Regulator, November 2025, page 7.

¹¹⁶ Expenditure Forecast Assessment Guideline for Electricity Transmission, Australian Energy Regulator, October 2024.

¹¹⁷ Better Resets Handbook – Towards Consumer Centric Network Proposals, Australian Energy Regulator, July 2024.

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Each of these components is discussed in the following sections.

Table 5.8 reflects the total rate of change applied in our Revenue Proposal for the 2027-32 regulatory period.

Table 5.8 - Total rate of change (\$million real, 2026/27)

Rate of change	2028	2029	2030	2031	2032	Total
Output change	1.3	3.3	5.7	9.4	14.7	34.4
Price change	2.2	4.5	7.4	10.1	12.6	36.9
Productivity change	(1.3)	(2.7)	(4.1)	(5.4)	(6.8)	(20.3)
Total Rate of change	2.3	5.1	9.0	14.1	20.5	51.0

5.6.2.2 Output change

Output change is the expected growth in network output, measured by the four parameters outlined in Table 5.9. These are weighted by their assessed share of gross revenue based on weighting factors defined by the AER as part of its economic benchmarking of TNSPs¹¹⁸. We have applied the updated output index weights for non-reliability outputs as used in the AER's 2025 Annual Benchmarking Report.

Table 5.9 - Output measures

Output measure	Weighting	Description	Source
Energy throughput	9.45%	A measure of the amount of electricity that TNSPs deliver to their customers.	AEMO Electricity Statement of Opportunities (ESOO) 2025
Ratcheted maximum demand (RMD)	28.69%	TNSPs endeavour to meet the demand for energy from their customers when that demand is greatest. RMD recognises the higher maximum demand that the TNSP has had to meet in the time period examined.	AEMO ESOO 2025
Number of customers	9.32%	The number of end users is a proxy for the complexity of the TNSPs network.	Number of customers from Ergon Energy and Energex 2025-30 Revenue Proposals, trended forward for the 2031 and 2032 years, plus Powerlink direct connect customers.
Circuit length	52.54%	Reflects the distances over which TNSPs transport electricity and is a significant driver of the services a TNSP must provide.	Powerlink's Enterprise Resource Planning database (SAP) Plant Maintenance Module. Powerlink has forecast a small net increase in circuit length over the 2027-32 regulatory period

The measures used in our Revenue Proposal and their respective growth rates and data sources are detailed in Table 5.10. The last two years of the current regulatory period are shown for comparison purposes.

¹¹⁸ Annual Benchmarking Report 2025- Electricity Transmission Network Service Providers, Australian Energy Regulator, November 2025.

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Table 5.10 - Output growth rates (% per annum)

Output measure ⁽¹⁾	2026	2027	2028	2029	2030	2031	2032
Energy throughput (GWh)	0.10	0.28	0.30	0.76	1.96	3.56	4.91
Ratcheted maximum demand (RMD)	4.21	0.84	1.04	1.51	1.64	2.42	3.56
Number of customers	1.09	1.06	1.05	1.03	1.01	1.04	1.01
Circuit length	0.00	0.00	0.00	0.00	0.00	0.01	0.05

(1) Output measures have been updated with the most current data available at the time of submission of our Revenue Proposal.

5.6.2.3 Alternative output change

Powerlink considers that an alternative output measure may better represent the increasing complexity experienced by TNSPs in the current environment (refer Chapter 2 Operating Environment). We considered the use of alternative measures with our RPRG for this Revenue Proposal. However, we have adopted the AER's approach for output growth.

The AER's current approach assumes the number of customers connected to transmission and distribution networks represents an appropriate proxy for the complexity of operating and maintaining a safe, reliable and cost-effective transmission system.

In addition to reliability and affordability, our customers highlighted¹¹⁹ that they support investment in the energy system to move to a cleaner system for future generations. Additionally, we surveyed major commercial and industrial customers, some directly connected to our network and others connected to the distribution networks, who told us that they continue to prioritise electrification and renewable energy sources.

The energy transition is already well underway and with the increasing integration of new inverter connected generation and energy storage, Powerlink is learning and adapting to the new ways the grid is being used. The future energy system will be characterised by a mix of technologies and infrastructure along the entire supply chain, which further increases complexity.

Consequently, we engaged with the RPRG in July 2025 on the potential to establish an alternative output measure which we consider better reflects the increasing complexity of providing safe, reliable and cost-effective services to customers. The RPRG supported further analysis to understand the potential impact of an alternative output measure.

As an alternative to customer numbers, we presented a measure in our draft Revenue Proposal (published in September 2025) and engaged with the RPRG on this option. This measure was intended to broadly demonstrate the change in complexity of operating the transmission network.

Based on feedback from the RPRG we undertook further analysis and identified generation capacity as a reasonable alternative to the number of customers. This measure is intended to broadly demonstrate the change in complexity as the mix and number of connected generators changes over time.

In November 2025, Powerlink presented two options to the RPRG for consideration as a proxy for complexity – customer numbers (the current approach) and generation capacity. The options presented considered potential trade-offs with proposed step changes and the impact of changes to productivity outcomes. We empowered the

¹¹⁹ Queensland Household Energy Survey, April 2025.

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RPRG under the IAP2 Public Participation Spectrum to select the approach to be included in our 2027-32 Revenue Proposal. The RPRG response to the options is as follows:

There was support for Powerlink proposing the new measure to the AER - it is better than the current metric and the impact is very small on proposed 2027-32 revenue.

However given the AER's comments at our meeting last week, it is very unlikely the AER would approve this change as part of an individual reset – these matters are usually dealt with in a network wide review – which would be part of a review of the productivity measurement methodology; one of the reasons that the AER prefers dealing with these matters as part of a review applying to all networks is that it provides the opportunity to fully explore the alternatives – which might provide an even better alternative than the one Powerlink proposes eg while the impact on Powerlink's 2027-32 revenue is very small we don't have the data to understand what impact it might have on following reset periods or other networks – it might be material.

Given Powerlink's desire to present a proposal that is 'capable of acceptance', even if the RPRG might support Powerlink proposing the new measure (we think it is 'capable of acceptance'), it would likely constrain the ability to meet the aim of 'capable of acceptance' by the AER.

Consequently, Powerlink has adopted the AER's preferred approach to the output growth.

5.6.2.4 Real price change

Real price change is the forecast real change in input costs, measured for labour and non-labour¹²⁰ costs. We consider the forecast labour and non-labour price changes represent a realistic forecast of input increases over the 2027-32 regulatory period.

Our forecast of labour input price changes is based on an average of two state-level utility industry Wage Price Index (WPI) forecasts: an independent forecast developed by Oxford Economics Australia (OEA)¹²¹, and an alternative Queensland WPI forecast¹²². Our approach is detailed in Chapter 6 Escalation Rates.

Table 5.11 presents these forecasts along with the simple average of the two forecasts that has been used in the rate of change calculations. The last two years of the current regulatory period are shown for comparison purposes. The average annual labour price change over the 2027-32 regulatory period is 1.1%.

Table 5.11 - Real labour price growth (% per annum)

Labour Price Growth	2026	2027	2028	2029	2030	2031	2032	Average 2028-32
OEA EGWWS WPI – Qld	2.8	1.2	1.3	1.4	1.6	1.6	1.3	1.4
Alternative Utilities WPI – Qld	0.6	1.1	0.7	0.6	0.9	0.8	0.8	0.8
Average	1.7	1.2	1.0	1.0	1.3	1.2	1.1	1.1

¹²⁰ Non-labour includes expenses such as materials, insurances, fees and levies, rates, leases, hardware and software contracts, equipment hire, accommodation costs and professional and other services.

¹²¹ Labour Cost Escalation Forecasts to 2031/32 report for Powerlink, Oxford Economics Australia, October 2025.

¹²² Labour price growth forecasts, Deloitte Access Economics, March 2025. This was prepared for the Australian Energy Regulator and referenced in the Final Decision for the Energex 2025-30 Revenue Proposal.

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We propose a real non-labour price growth of zero in our expenditure forecasts for the 2027-32 regulatory period. Given significant increases during the current regulatory period we recognise that there is a risk with adopting this approach. However, we consider this is an appropriate balance of risk. We discuss this approach further in Chapter 6 Escalation Rates.

To develop our real price growth escalation forecasts for the 2027-32 regulatory period, we have applied weightings of labour to non-labour of 70.4 to 29.6. These weightings are consistent with the methodology used for the AER's 2025 TNSP Annual Benchmarking Report. We investigated the appropriateness of this weighting and found it is consistent with the split of labour and materials costs in our historical operating expenditure.

The measures used in our Revenue Proposal and their respective growth rates are detailed in Table 5.12.

Table 5.12 - Price growth rate (% and \$million real, 2026/27)

Price Growth Rate	2028 (%)	2029 (%)	2030 (%)	2031 (%)	2032 (%)	Average (%)	Total price growth (\$)
Total price growth	0.70	0.70	0.88	0.85	0.75	0.78	36.9

5.6.2.5 Productivity change

Productivity change measures the forecast expected productivity improvements for a network business. The AER currently applies an industry average to calculate productivity, based on operating expenditure productivity across all TNSPs, as published annually in the AER's Economic Benchmarking Report for Electricity Transmission.

Table 5.13 presents the forecast total productivity growth for the 2027-32 regulatory period in accordance with the AER specification.

Table 5.13 - Productivity growth rate (% and \$million real, 2026/27)

Productivity growth	2028 (%)	2029 (%)	2030 (%)	2031 (%)	2032 (%)	Average (%)	Total productivity growth (\$)
Productivity growth	0.42	0.42	0.42	0.42	0.42	0.42	(20.3)

In our Revenue Proposal, we have adopted the AER's preferred productivity growth forecast of the industry average productivity change¹²³ for electricity transmission. We forecast a decline in productivity based on the AER's benchmarking approach which we expect will be in line with prevailing industry outcomes.

We recognise the need to identify ways to deliver further efficiency and productivity improvements during the 2027-32 regulatory period and commit to doing this as part of business as usual operations.

We will target productivity improvement through the implementation of alternative project and asset management methods which will enhance efficiency, safety and quality control. We expect that this will include the use of robotic, drone and sensor technologies, new project and maintenance delivery methodologies and improved data, systems and analytics which will enable us to reduce time, costs and delays, improve our scheduling and optimise network maintenance and performance. We will also focus on delivering business

¹²³ Based on latest publicly available TNSP operating expenditure partial factor productivity 2006-2024, published with the accompanying independent report by Quantonomics (Regression-based growth rates) referenced within the AER's 2025 Annual Benchmarking Report – Electricity Transmission Network Service Providers.

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improvements to streamline processes, reduce errors, increase automation and improve productivity. We explore this in more detail in Appendix 5.04.

5.6.3 Step changes

We have included three operating expenditure step changes for the 2027-32 regulatory period. This followed detailed investigation of potentially material changes in our regulatory obligations, the external market and trade-offs between capital expenditure and operating expenditure.

As part of the preparation of our Revenue Proposal, we initially identified 21 potential step changes and reviewed them against a set of criteria. The criteria included whether costs were material, had not already been realised in the base year, had a high likelihood of being realised, and/or were associated with a new legislative/regulatory obligation, a change in the external market beyond our control, and/or a trade-off between capital expenditure and operating expenditure.

We also engaged with the RPRG on our potential step changes in the development of our Revenue Proposal.

Table 5.14 outlines those potential step changes that we consider will result in an increase in costs in the 2027-32 regulatory period, for which we have pursued a regulatory expenditure allowance. In determining our step changes, we have considered costs incurred or likely during the 2025/26 base year. Accordingly, the step change requested represents the amount exceeding any recurrent costs already included in base year operating expenditure.

Table 5.14 - Step changes (\$million real, 2026/27)

Name	Forecast total cost impact (2027-32)	Driver and description
Physical security uplift	16.4	Regulatory obligation. Costs associated with complying with our obligations for physical security under the SOCI Act and subsequent amendments.
Transition to cloud-based solutions	60.0	External factor. There is an ongoing market shift to cloud-based information technology (IT) solutions. The costs associated with the implementation, configuration and customisation of these solutions are generally required to be treated as operating expenditure under Australian Accounting Standards. It is expected that there would be a reduction in future IT capital expenditure.
Enhance overnight network monitoring	8.7	External factor. Costs to address AEMO concerns regarding a single overnight control room operator.

Each of these step changes are discussed in turn below.

5.6.3.1 Physical security uplift

Powerlink, as a provider of critical infrastructure, is required to comply with *Security of Critical Infrastructure Act 2018 (SOCI Act)*. The SOCI Act requires that owners of critical infrastructure assets implement a risk management plan to mitigate material risks associated with cyber and information hazards, personnel hazards, supply chain hazards, and physical and natural hazards.

Powerlink has identified several initiatives to uplift physical (protective) security controls to meet our needs under these regulations. These initiatives aim to upgrade our site security, increase our specialist security capability and enhance our ability to protect our critical infrastructure.

5.6.3.2 Transition to cloud-based solutions

Powerlink's investment in its Information Technology (IT) infrastructure and software solutions includes a mix of on-premise and cloud-based services. Powerlink has identified an IT investment program for the 2027-32 period, which includes a forecast of operating expenditure for cloud-based solutions.

In April 2021, the International Accounting Standards Board clarified its definition of intangible assets¹²⁴ which led to most cloud-based services (or Software-as-a-Service (SaaS)) costs no longer meeting that definition. The International Financial Reporting Standards guidance advised that these costs should be expensed (operating expenditure) rather than capitalised (capital expenditure), shifting the previous approach in relation to cloud-based solutions.

Given the continuing maturity of SaaS offerings by leading technology companies, and the move by those companies to only offer SaaS solutions in the future, Powerlink has determined, in line with the Australian Accounting Standards, that most of the future IT investment will be treated as an operating expense rather than a capital asset.

An overview of the IT investment program for the 2027-32 period is attached in Appendix 4.06 and includes the classification for each proposed element of the program.

5.6.3.3 Enhance overnight network monitoring

The key component to address our sole control room operator risk is to transition to two system controllers on overnight shifts. This shift is driven by a combination of regulatory direction, good industry practice, incident learnings, and broader workforce and safety considerations. It is increasingly recognised as a necessary evolution in transmission network operations given the increasing complexity.

AEMO recommended increased staffing in control rooms to ensure real time system stability and rapid response to contingencies as well as for the timely coordination of increasing customer connections. These require operational coordination in real time, often within short timeframes, to align to power system security guidelines for re-securing post contingent.

Single controller operations can pose significant risks, particularly during complex or cascading events. Increasing resources allows for more effective cross-checking of decisions, reduces the likelihood of human error, supports continuous situational awareness, and helps mitigate workplace health and safety risks.

5.7 Forecast other operating expenditure

We have developed category specific forecasts for AEMO participant and cyber security fees, network support costs and debt raising costs.

Our category specific (zero-based) forecasts use an external or bottom-up cost build to estimate the total cost of a particular activity. For these expenditure items, we do not consider that a trend of base year expenditure will reasonably reflect future operating expenditure requirements.

¹²⁴ Configuration or customisation in a cloud computing arrangement (IAS 38 Intangible Assets), International Financial Reporting Standards (IFRS), 27 April 2021, pp. 1-2

In the normal course of business, we classify our insurance and AEMC levy costs as non-controllable, other operating expenditure. However, for our Revenue Proposal, we have included both insurance and AEMC levy costs in our base year and have applied the rate of change rather than a category specific forecast, consistent with the AER's preferred approach.

5.7.1 Insurance

As a business, we take a holistic approach to risk management. We propose to adopt a combination of insurance policies, self-insurance and pass through arrangements in the 2027-32 regulatory period to efficiently manage the risks associated with operating our network and deliver cost-effective outcomes for customers and Powerlink.

We engaged our insurance brokers, Marsh Pty Ltd (Marsh), to advise us on our insurance and risk management approach for the 2027-32 regulatory period. Marsh also discussed the insurance market with the RPRG in November 2025. Forecasts from Marsh can be found in Appendix 5.06 and indicate that total insurance costs¹²⁵ may increase by \$4.0 million (7%) in total over the 2027-32 regulatory period compared to our total actual/forecast insurance costs for the 2022-27 regulatory period.

We noted in our Expenditure Forecasting Methodology, published in June 2025, that we intended to include a category specific forecast for our insurance costs. Based on the forecasts received from Marsh and discussions with the RPRG, we have now decided to include these costs as part of the base-trend-step forecast. The adoption of a trend-based forecast for both categories of insurance for the 2027-32 regulatory period results in \$0.1 million less overall for insurance costs compared to a category specific approach.

The elements of our insurance requirements are defined in more detail in the following sections.

5.7.1.1 External insurance

A key component of our risk management strategy is the establishment and maintenance of a prudent and efficient insurance program that provides financial coverage for most of our major risk exposures. We seek advice from our insurance brokers for domestic insurance and international cover, to ensure that our insurance coverage is effective and is delivered at a competitive cost.

Table 5.15 outlines our insurance premium cost forecast, trended from the 2025/26 base year expenditure, and the forecast from Marsh. We have included the base-trend-step forecast in our operating expenditure forecast.

Table 5.15 - Insurance premiums (\$million real, 2026/27)

Insurance premiums	2028	2029	2030	2031	2032	Total
Base-trend-step forecast	9.2	9.3	9.4	9.5	9.7	47.1
Marsh forecast	7.8	8.1	8.5	8.8	9.6	42.8
Variance	1.4	1.2	0.9	0.7	0.1	4.3

5.7.1.2 Self-insurance

Self-insurance costs relate to losses that are below the insurance deductible amounts contained in our insurance portfolio. We engaged Marsh to review historical levels of these losses and develop a forecast of prudent self-insurance amounts for the 2027-32 regulatory period.

¹²⁵ Forecasts from Marsh have been adjusted to reflect the costs attributable to prescribed transmission services only.

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Table 5.16 outlines the self-insurance cost forecast, trended from the 2025/26 base year, and the forecast from Marsh. In this case, the Marsh forecast is considerably higher than the base-trend-step forecast largely due to the inclusion of an additional self-insurance allowance to provide for the anticipated increase in towers and lines in this category (previously included as part of the external insurance premium). We have adopted the base-trend-step forecast in our operating expenditure forecast.

Table 5.16 - Self-insurance (\$million real, 2026/27)

Self-insurance	2028	2029	2030	2031	2032	Total
Base-trend-step forecast	2.0	2.0	2.0	2.0	2.1	10.1
Marsh forecasts	2.5	2.7	2.9	3.1	3.3	14.5
Variance	(0.5)	(0.7)	(0.9)	(1.2)	(1.2)	(4.4)

5.7.1.3 Pass through events

Residual risk events outside our control, that cannot be commercially insured or self-insured, can be addressed through the cost pass through mechanism in the Rules. Our nominated pass through events are discussed in Chapter 11 Pass Through Events.

5.7.2 AEMC levy

The AEMC is the rule maker for Australian electricity and gas markets. Under changes to the *Electricity Act 1994 (Qld)*¹²⁶ made in 2014, Powerlink, as holder of a Transmission Authority in Queensland, must pay an annual fee that is a portion of the Queensland Government's funding commitments to the AEMC.

The AEMC levy is applied to all jurisdictions across the NEM to cover the operations of the AEMC. In Queensland, the majority of the AEMC levy is passed through to Powerlink and we incur this cost as operating expenditure. Forecast expenditure for the AEMC levy over the 2027-32 regulatory period, shown in Table 5.17, is higher than the corresponding rate of change derived base-trend-step forecast. Notwithstanding this, we propose to include the base-trend-step forecast in our operating expenditure forecast, which is in line with the AER's preferred approach to such costs.

Table 5.17 - AEMC levy (\$million real, 2026/27)

AEMC Levy	2028	2029	2030	2031	2032	Total
Base-trend-step forecast	6.0	6.0	6.1	6.2	6.4	30.8
AEMC forecast	6.6	6.7	6.7	6.6	6.6	33.2
Variance	(0.6)	(0.7)	(0.6)	(0.5)	(0.2)	(2.5)

5.7.3 AEMO participant and cyber security fees

This is a new category of other operating expenditure for the 2027-32 regulatory period. Due to the uncertainty around future forecasts and the absence of revealed actual costs to trend these fees we have included these as a category specific forecast.

¹²⁶ Electricity and Other Legislation Amendment Bill 2014, Queensland Government, Part 2, Amendment of Electricity Act, 1994.

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In 2020, AEMO conducted a review of its current Electricity Market Participant Fee Structure. An outcome of this review was a change to the fee structure of the NEM, with a portion of the NEM fees to be levied on TNSPs starting from 1 July 2023. A Transitional Rule¹²⁷ that supported the recovery of the AEMO participant fees by passing them directly through to customers through annual prescribed transmission service prices will end on 30 June 2027 for Powerlink. Thereafter, the Rules require that these costs be recovered through existing mechanisms under the incentive-based revenue determination framework, in other words, as part of a revenue determination process with the AER.

In December 2024, the AEMC published a final determination and final Rule to confirm and clarify AEMO's cyber security role in the Rules. Consequently, in June 2025, AEMO established an additional cyber security fee structure to recover the costs of the new cyber security roles and responsibilities declared NEM project. AEMO will commence the recovery of these costs in July 2025.

The fee structure that will apply in the 2027-32 regulatory period in relation to the AEMO participant and cyber security fees is currently under review by AEMO, with the final determination expected to be published in February 2026. Powerlink has engaged with AEMO as part of the fee structure review and lodged a submission in relation to the Draft Determination which was published in September 2025.

We have based our forecast participant and cyber security fees for the Revenue Proposal on the fee structure presented in AEMO's Draft Report and Determination on NEM Participant Fee Structures¹²⁸ and subsequent AEMO update to Powerlink in December 2025.

While the fee structure defines how the fees will be allocated to participants, it does not provide a forward forecast of the fees for the five-year fee structure period from July 2026 to June 2031. For this reason, we have forecast a nominal annual increase to the expected participant fee of 6%¹²⁹ in line with the fee pathway of 6-8% indicated by AEMO in their budget and fees for 2025/26¹³⁰. There is no similar fee pathway published in relation to the cyber security fee and therefore, we have applied no real growth to this fee. The AEMO participant and cyber security fees are shown in Table 5.18.

Table 5.18 - AEMO participant and cyber security fees (\$million real, 2026/27)

	2028	2029	2030	2031	2032	Total
AEMO participant fee	14.0	14.5	15.0	15.5	16.0	75.1
AEMO cyber security fee	1.0	1.0	1.0	1.0	1.0	5.0
Total AEMO fees	15.0	15.5	16.0	16.5	17.0	80.1

5.7.4 Network support

We have included a \$0 network support allowance in our operating expenditure forecast, as has been the case in previous Revenue Proposals. While Powerlink may incur system security network support costs, these have not been included in our operating expenditure forecast as they are assessed under an annual forecasting and recovery process. This approach is consistent with the Rules¹³¹ and the AEMC's final Rule for the Improving

¹²⁷ National Electricity Amendment (Recovering the Cost of AEMO's Participant Fees) Rule 2022, Australian Energy Market Commission, October 2022.

¹²⁸ NEM Participant Fee Structures - Draft Report and Determination, Australian Energy Market Operator, September 2025.

¹²⁹ In AEMO's Budget and Fees FY26, AEMO indicates an annual fee pathway of 6-8% in relation to their NEM Core fee.

¹³⁰ Budget and Fees FY26, Australian Energy Market Operator, June 2025.

¹³¹ National Electricity Rules, clause 6A.7.2.

Security Frameworks for the Energy Transition Rule change. These changes to cost recovery for system security network support costs commenced in December 2024.

5.7.5 Debt raising costs

Debt raising costs relate to transaction costs incurred when new debt is raised, or current lines of credit are renegotiated or extended. These costs include arrangement fees, legal fees, company credit rating fees and other transaction costs. Debt raising costs would be incurred by a prudent service provider and are an unavoidable aspect of raising debt.

The AER's standard approach is to provide an annual allowance for debt raising costs as part of operating expenditure. This is based on an efficient benchmark rather than a business's actual costs. This is consistent with the approach used to set the forecast cost of debt in the rate of return (refer Chapter 8 Rate of Return, Taxation and Inflation).

We have forecast debt raising costs of 8.61 basis points per annum based on independent advice from Incenta¹³² in December 2025. Applying this basis point assumption results in forecast debt raising costs for the 2027-32 regulatory period as shown in Table 5.19.

Table 5.19 - Debt raising costs (\$million real, 2026/27)

	2028	2029	2030	2031	2032	Total
Debt raising costs	4.3	4.4	4.4	4.4	4.5	22.0

5.8 Interaction between forecast capital and operating expenditure

The Rules¹³³ require that a Revenue Proposal identify and explain any significant interactions between forecast capital and operating expenditure.

We have a legislative responsibility to provide safe, reliable and cost-effective prescribed transmission services to customers and other NEM participants. To meet this obligation, we ensure network assets deliver the required reliability, availability and quality of supply through an appropriate balance of capital and operating expenditure. Consistent with our asset management framework, we use life-cycle cost analysis to deliver prudent and efficient outcomes for our customers.

There are several key network and market trends that may impact our combined capital and operating expenditure approach over the 2027-32 regulatory period. As referenced in Chapter 4 Capital Expenditure, reinvestment in the transmission network is required as our assets reach end of life, with reinvestment decisions also needing to respond to the changing energy environment. These capital investments are not only essential for maintaining the safety, reliability and security of the transmission network, but they also have direct and ongoing impacts on operating expenditure. Delays to reinvestment may result in increased operating expenditure to manage deterioration of asset condition. Conversely, additional operating expenditure to undertake enhanced maintenance of assets may enable the efficient deferral of reinvestment decisions.

Chapter 4 also references capital expenditure proposed to enhance situational awareness and decision support to improve network utilisation and customer outcomes in response to the increasing complexity of operating the transmission network. This is included in Other network capital expenditure. Delays to investment in these

¹³² Incenta, Benchmark debt and equity raising costs, December 2025.

¹³³ National Electricity Rules, Schedule 6A.1, clause S6A.1.3(1).

enabling supportive capital expenditure initiatives may result in increased operating expenditure for network operations and asset management support.

Other non-network initiatives proposed to be undertaken in the 2027-32 regulatory period that are expected to involve interaction between capital and operating expenditure activities include:

- continuing to investigate opportunities to extend the capability of transmission network assets through non-network solutions. Contracts with generators, batteries and large loads may mitigate the power system impact from contingency events and improve power system security, allowing us to deliver additional market benefits without network augmentation or reinvestment.
- investment in IT infrastructure and software solutions including a mix of on-premise and cloud-based services. This expenditure is expected to deliver operating efficiencies, address cyber security risks, focus IT delivery for better customer outcomes, rationalise systems, and facilitate upgrades to specific programs. The IT investment program for the 2027-32 period includes both capital and operating expenditure as identified in our forecasts.

Powerlink considers the interaction of capital and operating expenditure in its investment decisions.