

Essential Energy

9.03 Opex approach

January 2023

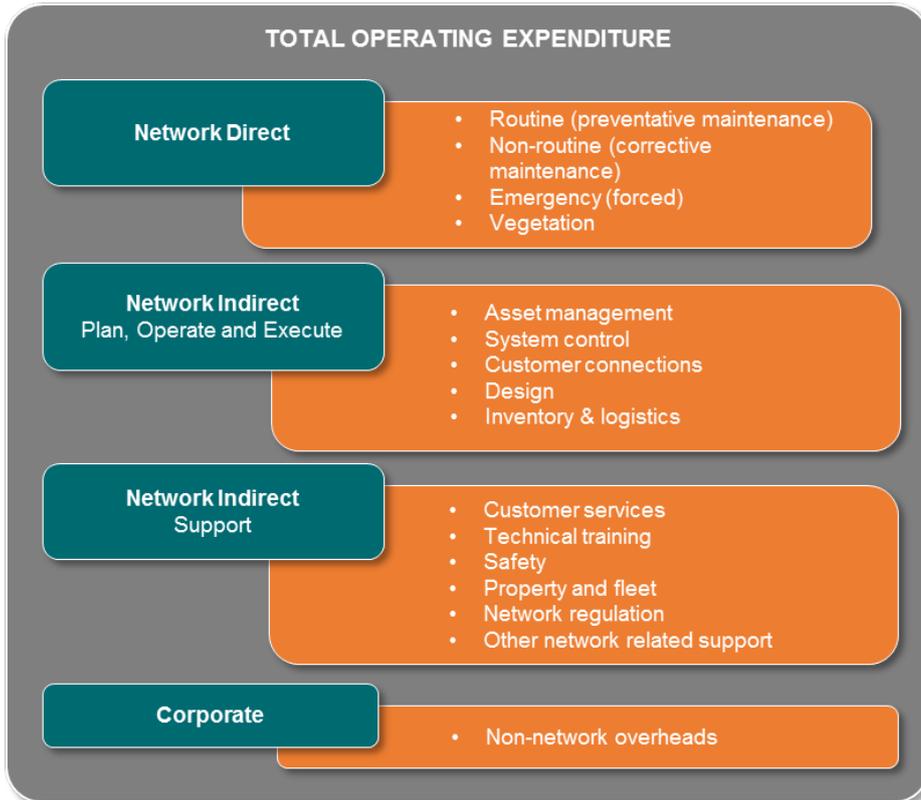


Operating expenditure categories

Operating expenditure includes a wide range of non-capital costs we incur in providing our network services to customers. These include vegetation management, maintenance, emergency response, system control, network support and corporate overheads.

These costs can be categorised as direct expenditure on the network, indirect expenditure on the network, and corporate costs (see figure below). All of these categories of operating expenditure contribute to ensuring the network is efficient, safe, resilient, and reliable, consistent with the needs of customers.

Figure 1: Operating expenditure categories



Approach to forecasting operating expenditure over the 2024–29 regulatory period

Operating expenditure forecast method

We have prepared the operating expenditure forecast in line with our previously submitted forecasting methodology, which was published by the Australian Energy Regulator (AER).¹ We adopted the AER’s preferred methodology for forecasting standard control operating expense (opex) – the base-step-trend approach – using a six-stage process. This method is described further in this document and the model provided in **supporting document 9.03.07**. The table below sets out the components by year.

¹ Essential Energy, *Expenditure Forecasting Methodology, 2024–29 Regulatory Proposal*, June 2022

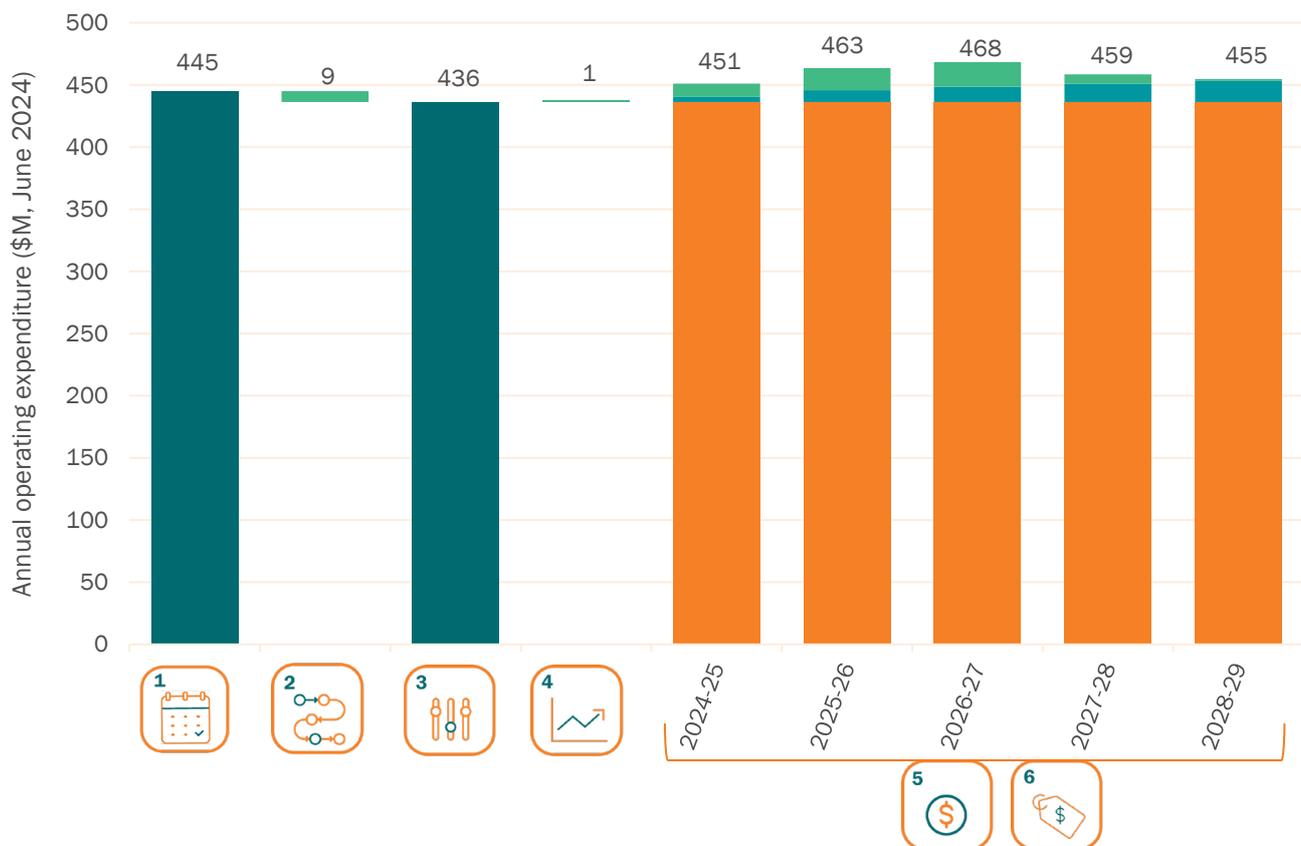
Table 1: Proposed operating expenditure base step trend 2024–29 (\$m, real June 2024)

	2022–23	2023–24	2024–25	2025–26	2026–27	2027–28	2028–29	Total 2024–29
Base operating expenditure	445	436	436	436	436	436	436	
Real price growth			0.98%	0.89%	0.39%	0.30%	0.42%	
Output growth			0.49%	0.83%	0.73%	0.75%	0.57%	
Productivity growth			0.50%	0.50%	0.50%	0.50%	0.50%	
Step changes			11	18	20	8	2	
Category specific								n/a
Proposed operating expenditure			451	463	468	459	455	2,296

Numbers may not add up due to rounding

The chart below shows how the base-step-trend approach has been used to calculate our proposed operating expenditure for the 2024–29 regulatory period.

Figure 2: 2024–29 regulatory period proposed operating expenditure



Stage 1: Selecting our preferred base year

We propose 2022–23 as the base year for developing our operating expenditure forecast for the 2024–29 regulatory period. We selected 2022–23 because it will be the most recent financial year, based on actuals, at the time the AER makes its final determination in early 2024. As this financial year was only partly completed at the time of submitting this Regulatory Proposal, a combination of year-to-date actuals and forecast to year end was used to determine the unadjusted base year costs.

The actual operating expenditure in 2023–24 will also be unknown at the time the AER makes its final determination, so it will be necessary to derive an estimation. This will be used as the starting point to forecast efficient opex over the 2024–29 regulatory period.

Our approach to forecasting opex for the 2023–24 financial year varies from the approach usually adopted by the AER. For estimating actual expenditure in the final year of a regulatory period, the AER's preferred approach involves first estimating the change in the opex allowance between the penultimate and final year of the current regulatory period, and then applying this change to the actual opex in the penultimate year.²

Our approach is different because we consider the AER's standard approach is unlikely to produce a realistic estimate of actual operating expenditure for 2023–24.

- > The AER's approach assumes that the change in actual opex between the penultimate and final year of the regulatory period will be the same as the change in the allowed opex in these years. In practice, the year-on-year difference in actual opex does not mirror the year-on-year difference in allowed operating expenditure. Actual opex varies over the regulatory period to reflect a wide range of factors in our operating environment, including weather and supply chain issues. These are not reflected in forecast operating cost allowances.
- > The issue with this underlying assumption means adopting the AER's usual approach is likely to result in an inaccurate estimate of actual opex for the final year of the regulatory period. The opex forecast is used to estimate efficient opex over the next regulatory period. Any error in the estimate will therefore result in the opex allowance being set either too high or too low. This, in turn, would affect our Efficiency Benefit Sharing Scheme (EBSS) carryover amounts over the following regulatory period.

Given our concerns with the AER's usual approach, we have adopted an alternative approach for the 2023–24 financial year. The AER uses the base-step-trend approach to forecast efficient opex over the next regulatory period. This approach can also be used to estimate expenditure in the final year of the current regulatory period, avoiding the issues with the AER's usual approach. We therefore estimate opex for the 2023–24 financial year by applying the AER's base-step-trend methodology. We do this by rolling forward the efficient level of opex in 2022–23 by one year. This ensures a consistent, AER approved methodology is used to forecast operating expenditure for the last year of the 2019–24 regulatory period and over the 2024–29 regulatory period.

The unadjusted 2022–23 base year costs are \$445M (\$M, June 2024).

Stage 2: Adjusting the base year

Adjustments were made to base year operating expenditure to account for category specific forecasts. We have made two small adjustments:

- > movement in provisions (\$6M, June 2024)
- > category specific – Demand Management Innovation Allowance \$3M (\$M, June 2024).

We estimate operating expenditure for the 2023–24 financial year will be \$436M (\$M, Jun 2024).

Stage 3: Assessing the efficiency of our base year

The most recent AER annual benchmarking report was an important consideration in determining our efficient level of opex. We assessed the efficiency of our base year opex using the AER's standard benchmarking approach. The results of this modelling indicate that our forecast base year opex is efficient.

The AER uses a number of econometric benchmarking models to assess the efficiency of distribution network service providers (DNSPs) base year opex. However, these benchmarking models cannot account directly for all of the differences in operating environments faced by DNSPs. To make more like-with-like comparisons between DNSPs, the AER takes into account a number of 'material' operating environment factors (OEFs), which it

² This 'final year equation' is set out in the AER's August 2022 Expenditure Forecasts Assessment Guideline (p. 25).

developed through a comprehensive consultation process with stakeholders and advice from Sapere Merz in 2018.³ We submit that any benchmarking analysis used by the AER to assess the efficiency of our base year opex should take into account these material OEFs identified by the AER.

In recent decisions, the AER has considered several additional OEFs for individual DNSPs, such as OEF adjustments to account for bushfire obligations and the division of responsibility for vegetation management between DNSPs and local councils. These OEFs were developed during individual reset determinations for a small number of DNSPs. As such, they were not consulted on to the same wide extent as the OEFs developed through the AER’s 2017 OEF review. Given the limited consultation undertaken when developing the ‘bushfire obligations’ and ‘division of responsibility’ OEFs, we submit that these OEFs should not be applied to us or other DNSPs until the AER can consult widely and extensively, via a standalone process.

We note that the AER has commenced consultation on other potential OEFs, for instance, ways to take account of differences in capitalisation practices. We submit that the ‘bushfire obligations’ and ‘division of responsibility’ OEFs should be consulted on through a similar process before they are adopted and applied widely by the AER.

Stage 4: Applying trends to the base year

Once we determined our efficient base year opex, we applied trends to reflect the following.

- > **Output growth** – this considers growth in customer numbers, circuit length and ratcheted maximum demand. Our output growth is between 0.49 per cent and 0.83 per cent for each year in the 2024–29 regulatory period. We used econometric analysis to determine the relationship between forecast changes in our outputs (for example, customer numbers, line length, ratcheted maximum demand) and our efficient operating expenditure. In broad terms, growth in the size of our network increases operating and maintenance expenditure, although asset growth may not necessarily result in a one-for-one increase in operating expenditure if DNSPs can benefit from economies of scale.
- > **Price growth** – this takes into account the real growth of labour and non-labour inputs that comprise opex. The difference between the nominal wage index and the consumer price index was used to forecast changes in real labour prices. We did not allow for real price changes in materials despite our expectation that the supply chain and other disruptions related to COVID-19 and the global geopolitical environment could result in real growth in the cost of materials. Our price growth ranges between 0.30 per cent and 0.98 per cent for each year in the 2024–29 regulatory period.
- > **Productivity** – this considers our commitment to improve the efficiency of our business. We have assumed an annual productivity improvement of 0.5 per cent for each year of the next regulatory period, which is in line with the AER’s preferred productivity growth forecast.

The rate of change is shown in the table below.

Table 2: Rate of change in growth

	2024–25	2025–26	2026–27	2027–28	2028–29
Real price growth	0.98%	0.89%	0.39%	0.30%	0.42%
Output growth	0.49%	0.83%	0.73%	0.75%	0.57%
Productivity growth	0.50%	0.50%	0.50%	0.50%	0.50%
Rate of change (year-on-year)	0.96%	1.22%	0.62%	0.54%	0.49%

³ Sapere-Merz, *Independent review of Operating Environment Factors used to adjust efficient operating expenditures for economic benchmarking*, August 2018.

Stage 5: Adding step changes for other costs not included in the base year

We have identified several items that will increase our opex over the 2024–29 regulatory period, relative to our historical opex. These costs are not captured in the base year but need to be considered in the forecast of our efficient opex over the 2024–29 regulatory period. This is to ensure we comply with our regulatory obligations and continue to deliver the services our consumers value. Therefore, our base year opex has been adjusted to account for the following costs.

- > **Cloud computing** – an accounting change has meant some cloud computing costs that were previously treated as capital expenditure are now treated as opex. This reclassification of costs arises in addition to our business efficiently substituting capital-based ICT solutions with cloud computing.
- > **Insurance** – insurance premiums, particularly for bushfire cover, have increased materially following the substantial claims in Australia and elsewhere following a series of natural disasters (such as the 2019–20 bushfires and major floods) and tightening conditions in the insurance market. The rise in insurance costs are beyond our control and would be incurred by any efficient and prudent DNSP in our circumstances.
- > **Future networks** – we have increased investments in data and systems to improve power quality and to enable more distributed energy resources (DER) on our network. These investments are necessary to facilitate consumers' desire to participate actively in the major energy transition to support net zero targets.
- > **Guaranteed Service Levels (GSL)** – changes in our licence conditions mean that GSL payments are forecast to increase. These changes represent more stringent regulatory obligations that are beyond our control as they are set by the Independent Pricing and Regulatory Tribunal (IPART) in NSW.
- > **Property and fleet** – investment in solar panels at 20 depot sites and moving a portion of our light and heavy vehicles to electric vehicles, where cost effective, will result in savings in electricity and petrol costs reflected in a negative step change.

Table 3: Forecast step changes (\$ million, June 2024)

	2024–25	2025–26	2026–27	2027–28	2028–29
IT cloud computing	3.14	9.77	11.35	- 3.31	- 8.61
Insurance	1.36	2.25	3.13	3.84	4.09
Future networks, incorporating DER	5.74	5.68	5.66	7.62	7.04
Guaranteed Service Level payments	1.30	1.30	1.30	1.30	1.30
Property and fleet savings	- 0.91	- 1.32	- 1.64	- 1.93	- 2.15

Further information on each of these step changes is set out in the sections below.

IT cloud computing

Recent years have seen a sharp increase in the number of Australian businesses embarking on digital transformation projects, many of which incur significant upfront implementation costs.

Under the International Financial Reporting Standards (IFRS), the accounting for costs incurred in relation to Software as a Service (SaaS) arrangements has not been clear. As a result, the IFRS Interpretations Committee (IFRIC) released additional guidance in the form of agenda decisions in April 2021 in relation to Configuration or Customisation Costs in a Cloud Computing Arrangement under IAS 38 Intangible Assets.

A customer in a SaaS or cloud computing arrangement often incurs various upfront implementation costs. Many companies capitalise the costs of configuring or customising a supplier's application software in a SaaS arrangement.

Historically, IT cloud computing expenditure has been predominately capital in nature. However, as a result of the IFRS Interpretation Committee's 2021 decision on the accounting treatment of Cloud Computing investments, expenditure associated with implementation or upgrades to SaaS systems must now be expensed (that is, treated

as opex).⁴ For IT projects that are implementing Cloud software, almost all aspects of the project must now be expensed (except hardware purchases, development of bridging modules to in-house systems and purchase/development of training materials).

For regulatory reporting purposes, we will implement this change as of 1 July 2024. This aligns with the AER's consideration of and guidance on the issue through the early signal pathway process, which stipulated that the accounting change should not be implemented mid-period, and instead continue to align with the approved expenditure treatment for that period (2019–24).

This step change relates to the impact of the IFRS decision on our forecast operating expenditure. More information is provided in **Attachment 10.07 ICT business plan**.

Future networks

Our forecast opex and capital expenditure reflects our Future Networks program, which represents a set of initiatives in response to changes in the energy market over the coming decades, particularly as the customer take-up of consumer energy resources (CER) continues to accelerate.

The majority of expenditure proposed as part of our Future Networks program is capital expenditure. However, we have also included an opex step change that forms part of our 'Enabling DER'. Under our strategy, customers can connect and operate DER easily, understand their value to the network and wider system, and become active participants.

It is important that we start making incremental investments to gradually build the strategy, skills and capabilities enabling export, supporting electrification, including electric vehicles (EVs). Failing to undertake this program now will mean that many new CER connections will have limited ability to export excess generation. It will also materially curtail the ability of solar customers to export excess power and have detrimental impacts on energy reliability for other customers. This, in turn, would hinder or limit our customers' ability to participate in the energy transition, thus delaying the benefits that would otherwise occur if consumers were able to engage in CER activities.

Our Future Networks program will enable CER to be connected and managed to promote network utilisation, and benefit our customers by improving reliability, enabling exports and lowering overall costs. In particular, our Future Networks program will benefit customers by:

- > upgrading a digitalised network that can be managed in real time to respond to our customers' evolving needs, resulting in more efficient network use and lowered customer cost
- > delivering a detailed, real time network model to inform decision making, improve our management of network changes and restoration, and result in fewer and shorter outages for our customers
- > integrating systems and automation, enabling us to respond to power quality issues efficiently and proactively, reducing response times for our customers
- > establishing dynamic operating envelopes to maximise energy imports and exports informed by real time data, enabling our customers to export more energy
- > employing alternative energy supply options to deliver electricity more reliably and cost-effectively, reducing the cost to our customers
- > expanding our toolkit to use modern technology where appropriate (including batteries and dynamic assets) to increase exports and reduce manual interventions for our customers.

Further information is provided in **Attachment 10.05 – Future Networks business case overview**.

Insurance premiums

It is increasingly difficult to obtain commercial insurance policies on affordable terms that are comparable to those in recent years.

The severity and frequency of extreme weather events in the past decade has resulted in larger and more frequent levels of Australian and international bushfire liability claims, leading to a material increase in bushfire liability premiums. The number of major floods has also been increasing.

⁴ IFRS Interpretation Committee, March 2021, <https://www.ifrs.org/news-and-events/updates/ifric/2021/ifric-update-march-2021/#3>; International Accounting Standards Board, April 2021, <https://www.ifrs.org/news-and-events/updates/iasb/2021/iasb-update-april-2021/>

Consequently, insurers, including international insurers, have passed on to their customers the rising costs of claims. This has led to an increase in premiums and a narrowing of the scope of available bushfire liability insurance (that is, lower limits, broader exclusions and increased deductibles).

The current strategy for sourcing insurance is to utilise both Insurance and Care NSW (iCare, the state government self-insurance facility), and the commercial insurance market where appropriate. iCare, as administrator of the Treasury Managed Fund (TMF), serves as self-insurance and re-insurance provider for most of our insurance programs. Marsh, an independent insurance specialist (see confidential **supporting document 9.03.02**), concludes that our current strategy of using both iCare and the commercial insurance market delivers much better value for money for our customers than procuring all insurance from the commercial insurance market. Marsh, using commercial market knowledge plus guidance from iCare, has undertaken premium projections for the next regulatory period, which has been utilised as the basis of the step change proposed.

Based on information supplied confidentially in **supporting document 9.03.01**, iCare forecast increases to our annual insurance contributions from the 2023–24 costs over the next five years. This increase is primarily driven by the commercial cost and availability of re-insurance to cover associated risks, and the increased frequency and severity of severe weather events. Notably, the escalated risk of bushfires and floods (including two major flood claims submitted following damage to Essential Energy corporate properties in calendar year 2022).

These insurance premium rises are significantly higher than those historically observed and present material cost increases outside our control. As such, we are proposing a step change to allow us to continue to meet the National Electricity Objective while addressing them.

Guaranteed Service Level payments

This step change relates to the introduction of new regulatory obligations with IPART commencing from 1 July 2024. The new arrangements will substantially increase payments made by us related to a revised Guaranteed Service Level (GSL) scheme.⁵

Under the current GSL scheme in NSW, customers with poor service can apply for an \$80 payment from their distributor. Distributors are required to take reasonable steps to notify customers about the scheme. However, our uptake has been very low.

Under the new scheme, if we are unable to meet the GSL standards for a particular customer, then we are obliged to make the payment available to that customer on request. Table 4 sets out the minimum levels of reliability and associated payments, as specified by the GSL.

Table 4: Minimum levels of reliability and associated payments

GSL	Minimum level of reliability	Payment
Level 1	36 hours or 20 outages per calendar year	\$120 at 1 July 2024, escalated annually by the change in inflation
Level 2	120 hours or 50 outages per calendar year	Typical annual distribution network service charge for residential customer

IPART expects an uplift in the customers being paid under the new GSL scheme compared with the current scheme. This is due to the additional requirements to notify customers about the scheme and the increased value of potential payments. Under the new scheme we will be required to:

- > take reasonable steps to ensure eligible customers are aware of the scheme and follow any directions provided by IPART to inform customers
- > report on the steps we have taken, and how many customers were eligible, applied for payments and received payments
- > take all reasonable steps to pay eligible customers within 12 weeks of receiving an application.

⁵ IPART, *Review of the Electricity Distribution Reliability Standards*, May 2021

Our forecast GSL step change is based on an estimated 50 per cent take up of eligible customers. Please refer to **supporting document 9.03.05** for details on the methodology used to estimate this increase in expenditure.

Property and fleet costs

This negative step change relates to modifying our fleet and properties to lower our environmental impact where cost effective.

We are proposing to power our fleet and properties using renewable energy. This would enable us to reduce costs to customers and lower our environmental impact. We have over 1,800 fleet vehicles that travel a combined 35 million kilometres a year across our vast service area. We operate from 96 depots and four office buildings.

We will deliver cost savings to our customers and lower our carbon emissions by using solar panels and batteries to power our depots, and transitioning our fleet to EVs when the benefits exceed the costs. Investing in solar panels and batteries at our depots will also improve their resilience, providing a source of power even when the network is down. This will help us to restore power quickly following extreme weather events. To date, we have trialled 30 EVs and solar panels on the roofs of five depots. This allowed us to confirm the potential costs and benefits of using solar panels to power our depots and transition to electric vehicles.

We have undertaken a thorough cost benefit analysis to confirm the optimal level of investment in renewable energy over the 2024–29 regulatory period. We will only undertake investments in solar panels, batteries and EVs where the benefits exceed the costs, ensuring prudent and efficient expenditure.

This step change includes investment in solar panels at the top 20 depot sites for solar returns and moving a portion of our light and heavy vehicles to EVs where cost effective. This would deliver operating cost savings of nearly \$8 million over the regulatory period, lower our vehicle emissions and collectively reduce our carbon emissions by more than 15,000 tonnes.

We consider this to be an efficient opex–capex trade-off. Consequently, we have included the investment in these solar panels and EVs in our capital expenditure proposal.

Stage 6: Determining forecast operating costs

The final step is to apply the trends and steps above to each year of the 2024–29 regulatory period so that the resulting forecast reflects likely changes in future operating costs.

Interactions between operating and capital expenditure

Capital and operating expenditure trade-offs

We are focused on achieving the lowest whole-of-life costs for customers, which includes considering optimal and efficient opex and capital expenditure trade-offs.

Our capital investment options consider a range of possible network and non-network solutions, each considering opex trade-offs in a risk versus value framework. We have invested in program and portfolio optimisation tools (for example, Copperleaf C55) to assist in building the investment portfolio and program of works. To develop an optimised portfolio, we use this capability to enhance program priorities and options against the risks and value.

As the models that support Copperleaf C55 are continually refined, we expect to see further optimisation of our investment program and subsequent improvements in capital and opex trade-offs.

Asset life-cycle cost optimisation

The direct opex forecast enables the delivery of our maintenance program, which was developed considering risk and value. Our capital options analysis includes an analysis of optimised life cycle costs that deliver defined levels of service and safety, and these inform our operating expenditure programs.

Drivers of operating expenditure – fixed and variable costs

Our operating expenditure includes both fixed and variable costs. Fixed costs do not vary with changes in our network and the services we provide to our customers (for example, some of our corporate costs). Many of our operating costs are variable, meaning they change with movements in output, including the number of customers we serve and the line length of our network. Table 5 sets out our major operating expenditure categories, the primary drivers, what factors influence the actual quantum of expenditure required to service the business and whether the cost is predominantly fixed or variable in nature.

Table 5: Cost determinants in operating expenditure categories

Cost category	Activities	Primary drivers	Determinant of costs			Cost type
			Customers	Line length	Maximum Demand	
Routine inspections	<ul style="list-style-type: none"> > Pole and line inspection > Zone substation preventative maintenance > Specialised inspections 	Routine (preventative) inspections ensure that assets remain serviceable over their lifespan and their condition is understood.	Low	High	Low	Fixed, assuming inspection cycles and line length do not materially change
Planned maintenance	<ul style="list-style-type: none"> > Urgent planned maintenance > Overhead planned maintenance > Underground planned maintenance > Secondary systems planned maintenance > Zone substations planned maintenance 	Planned (corrective) maintenance predominantly involves the planned rectification of asset condition defects (that is, non-emergency work).	Low	High	Low	Fixed, assuming inspection cycles, defects identified and line length do not materially change
Unplanned maintenance	<ul style="list-style-type: none"> > Rectifying assisted failures > Rectifying unassisted failures 	Unplanned maintenance is reactive maintenance generally triggered by asset failure caused by events outside our control, and undetected asset defects.	Low	High	Low	Variable, depending on uncontrollable events (for example, severe weather) and asset failures
Vegetation management	<ul style="list-style-type: none"> > Cyclic vegetation treatment > Contract and customer management > Reactive programs 	Vegetation management is required to ensure vegetation is kept clear of the network to manage risks associated with bushfires, reliability and public safety.	Low	High	Low	Fixed, assuming inspection cycles, defects identified and line length do not materially change
Corporate	<ul style="list-style-type: none"> > Finance > ICT > HR, organisational development and Industrial Relations > Company secretary /General Counsel 	Planning, operating and support services that underpin our operation	Medium	Medium	Low	Mixture of fixed (Finance, Company Secretary) and variable (ICT and HR) that is partially driven by employee numbers
Network indirect – plan	<ul style="list-style-type: none"> > Network strategy and risk > Network optimisation > Network intelligence > Asset engineering 	Planning, operating and support services that underpin our operation	Medium	High	Medium	Fixed, assuming line length does not materially change

Cost category	Activities	Primary drivers	Determinant of costs			Cost type
			Customers	Line length	Maximum Demand	
	> Secondary systems					
Network indirect – operate and execute	<ul style="list-style-type: none"> > Network services > Network design > Network and customer technology > Commercial services > Customer connections > Inventory and logistics 	Planning, operating and support services that underpin our operation	Medium	Medium	Medium	Fixed, assuming asset management plans do not materially change
Network indirect – support	<ul style="list-style-type: none"> > Business transformation > Customer service > Property > Network regulation > Innovation > Corporate affairs > Health, safety and environment > Technical training > Procurement > Electrical safety and authorisations > Fleet 	Planning, operating and support services that underpin our operation	Medium	Medium	Low	Fixed, assuming line length and customers do not materially change