Attachment 9.01

Operating expenditure

31 January 2023

PowerWater

Contents

Abbreviations

The following table provides a list of abbreviations and acronyms used throughout this document. Defined terms are identified in this document by capitals.

Term	Definition
AER	Australian Energy Regulator
DER	Distributed Energy Resources
EBSS	Efficiency Benefit Sharing Scheme
NER	National Electricity Rules
NT	Northern Territory
Opex	Operating Expenditure
OT	Operational Technology
SOCI Act	Security of Critical Infrastructure Act

Overview

We estimate we will spend $412.1 million of operating expenditure (**opex**) over 2024-29. This is $8.0 million less than what we will spend during the current period.

This downward trend in opex is the result of changes to our maintenance practices and initiatives such as our Operating Model Program, which have reduced our operating costs and allowed us to establish a more efficient base from which to operate our business. We have also taken on board feedback from the previous regulatory review, modifying our overhead allocation approach and aligning our practices more closely with other distribution network service providers nationally.

Our opex forecast for 2024-29 reflects our recent journey to adapt our business to the future needs of the network. In particular, we have:

- Made changes to more accurately allocate our corporate and network overhead resources to maintenance activities and capital projects, in line with Australian Energy Regulator (**AER**) recommendations[1].
- Started to refresh our operating model, upgrading our support and operational hubs, and supply chain systems and processes.

These initiatives have together allowed us to reduce our opex by 32.0 per cent, from $107.8 million to $73.3 million over the first three years of the current regulatory period. Our focus on reducing our operating costs is driven by feedback from our customers and key stakeholders – including the AER – on the importance of reviewing our operating and maintenance practices, with the aim of keeping costs as low as practicable. Moreover, we now apply additional rigour to our forecasting and spend by way of the application of the Northern Territory (**NT**) National Electricity Rules (**NER**) and the various incentive schemes under the rules.

As we have adjusted the allocation of our overhead costs, we have developed a 'backcast' of our historical opex to allow comparison over time on consistent terms. This shows the declining trend in our opex is directly related to our opex efficiency initiatives and is not just a construct of the change in the approach to allocating our overhead costs. On this consistent comparison basis, our annual opex has reduced by $11.5 million or 13.6 per cent from 2018/19 to 2021/22 (our base year).

Our forecast

We have used the base-step-trend method to forecast our operating costs for the next period. This method involves taking the most recent, audited, revealed cost of providing services as the base, adding escalations to account for trends in outputs, prices and productivity, and then adding the costs of changes to our operating environment not already accommodated by escalation.

All dollar values presented in this Attachment are in real 2024 dollars.

[1] AER, *Attachment 6: Operating expenditure Final decision – Power and Water Corporation distribution determination 2019–24*, April 2019, p.7.

We consider the $73.3 million incurred during 2021/22 reasonably reflects the efficient costs of operating the network, and have therefore used this as the base year. The 2021/22 revealed cost incorporates efficiencies achieved to date, reflects a consistent split of controllable capex (i.e. excluding emergency response and other non-controllable categories), and is below the AER's allowance – which included efficiency targets.

We improved our overhead cost allocations and delivered a targeted efficiency program to reduce our operating expenditure. The resulting reduction in our base year will allow us to accommodate the required uplift in capacity and capability in the next period, while keeping our operating costs flat on average.

We have applied trend adjustments accounting for slight growth in the size of the network, which is more than offset by a 0.5 per cent productivity factor and by our forecast of reduced real prices. The overall impact is a cumulative decrease of 1.3 per cent or $7.0 million over the period.

From there, we have added in a number of increases (or 'step changes') that are necessary to meet new obligations and deliver on our customers' expectations over the coming decades. Each directly relates to our strategic priorities.

Customers have told us that while affordability remains a focus, they also expect us to pursue new technologies and facilitate a greener NT. In particular, they want to be able to continue to connect established distributed energy resources (**DER**) such as rooftop solar, and also expect the network to be able to support emerging technologies such as battery storage and electric vehicles. Large users, generators, and the NT Government has also expressed a desire to connect more large scale renewables and continue the nationwide transition towards decarbonisation.

In response to this, we are reinvesting some of our opex savings achieved over the past few years into uplifting our network analysis and planning capabilities, which will allow us to design our future network and connect renewables safely and efficiently. While part of this uplift requires capital investment in new ICT and systems, a key component is having the right licences, people and skills to be able to use these systems and plan the rapidly changing network requirements on an ongoing basis.

Our opex forecast therefore includes an additional $2.8 million in each year (on average) on future network initiatives. This includes licencing costs of new technologies and systems, vendor support, and an increase the number of operations and planning resources in our business. This resourcing uplift will allow us to establish the core teams and skills necessary to plan and manage the network so that we can continue to accommodate DER and more large scale renewables.

This ‘Future Networks’ step change directly links to our strategic priorities to facilitate renewables, improve utilisation of our network and uplift our systems and people.

Stakeholders have also told us they expect us to improve the quality of our data and should aim to establish operational and control systems commensurate with those of a modern distribution network service provider. As discussed in Attachment 8.01, while we are investing in these new operational technology (**OT**) and data systems, we also need to make certain we have the people to make best use of them. Our opex forecast therefore includes a $3.8 million annual average increase to build our internal capabilities (such as network flow modelling) and maximise the value of our new OT systems.

This ‘OT Capability Uplift’ step change directly links to each of our strategic priorities.

Finally, our opex forecast includes a further annual average step change of $3.8 million to meet externally driven obligations placed on our business. These include our cyber security obligations under the Security of Critical Infrastructure Act, information and reporting requirements under NT **NER**, an expected increase in insurance premiums, and digital cloud costs necessary to keep a number of our core systems running securely.

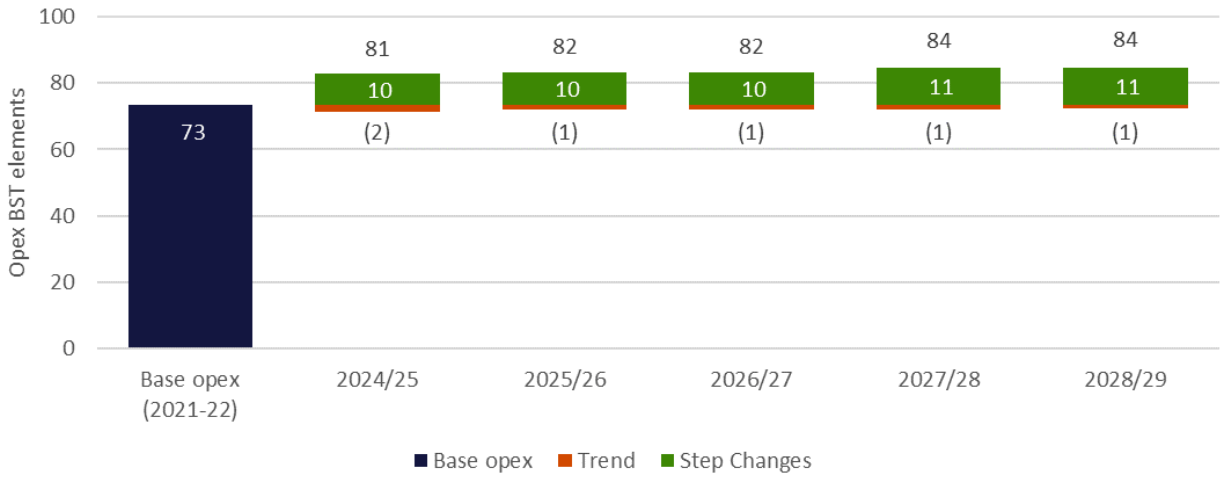
This step change directly relates to our strategic priority to uplift our people.

While these step changes represent a $31.4 million increase compared with the provisional estimates put forward in our August 2022 Draft Plan, the overall opex forecast of $412 million for 2024-29 remains below the $420 million that we expect to incur in the current period. We submit that the opex step increases are necessary to comply with our regulatory obligations and maintain security of supply. Solely escalating and rolling forward our base year costs would not be sufficient to deliver the services our stakeholders expect.

We expect to continue along our current path to reduce our operating costs further over the remaining two years of the current period, and respond to the incentive under the Efficiency Benefit Sharing Scheme (**EBSS**) to continue to drive efficiencies throughout the next period.

Our total opex forecast is shown in Figure OV.1.

Figure OV.1: Forecast and base year operating costs ($ million real 2024)



As required by section 6.5.6(a) of the NT NER, we submit that our opex forecast meets the operating expenditure objectives, in that it only includes costs required to meet the expected demand for services over 2024-29, to comply with applicable regulatory obligations, and to maintain the security of supply and safety of distribution services.

Our forecast has been developed in line with the AER's Guidelines, and our cost estimates are consistent with those a prudent operator would require to achieve the operating expenditure objectives.

Changes since the Draft Plan

We have engaged with our customers and the AER on our proposed opex forecasts throughout the development process. We discussed our initial proposed step changes with customers to get feedback on the merits and drivers of each.

Responding to the feedback received, we removed and amended some of the proposed step changes discussed in our initial information sessions and contained in our Draft Plan, and we have added others where it is necessary to do so.

The Alice Springs People's Panel expressed concerns with closure of shopfronts and restricted ability for face-to-face communications with staff. The Draft Plan included an opex step change for new systems and processes to improve customer service. Since then, we have engaged with retailers and considered how to most efficiently address this concern.

We are now confident that we can make a positive impact on the customer experience, working more closely with our retailers, within the current level of staffing. We consider any improvements to customer service such as improvements to community engagement and information provision can be absorbed, and therefore we have removed the step change.

Since the Draft Plan we have identified additional increases required in the next regulatory period. We have therefore introduced new step changes reflective of the following drivers of costs:

- Government-driven requirements to improve our cyber security resilience.
- Developing greater regulatory expertise, engagement and ensuring compliance with our regulatory obligations.
- The need to establish a small cloud footprint to host a number of our systems not available through on-premise solutions (our preference).
- The need to uplift our OT capabilities to embed and make effective use of new operational and control systems.
- Increases in insurance costs reflecting changes in the economy and greater risks due in part to the effects of climate change.

We also adjusted our base year, moving from our estimate of 2021/22 at the time of the Draft Plan, to our final audited accounts.[2] This increased our adjusted base year (used for trending) by $4.3 million.

These increases have been partially offset by reductions in our output, price and productivity trend factors and overall we are able to maintain our operating costs essentially flat on average compared with the current period.

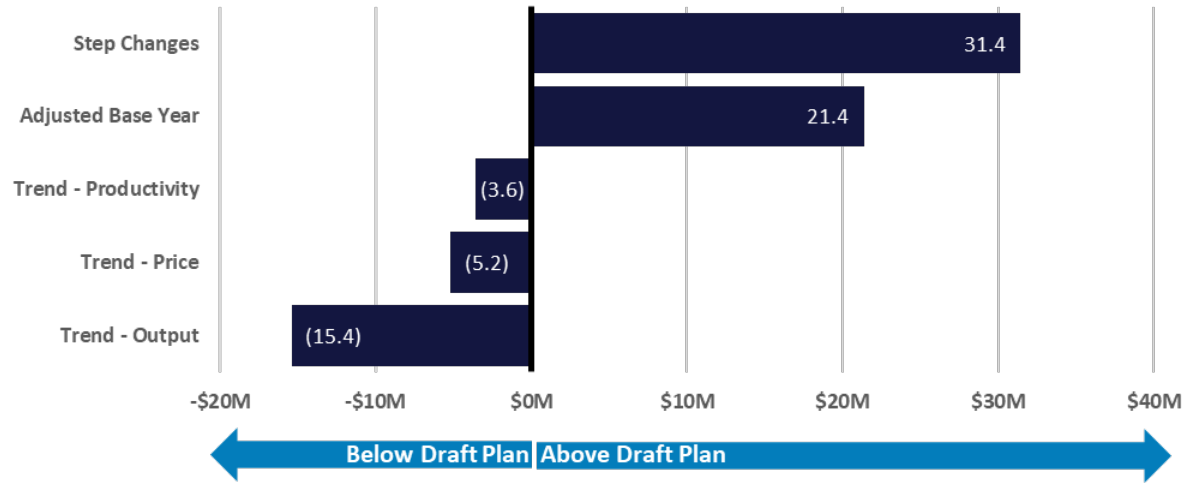
Through the current period we reviewed our operating expenditures to improve our overhead cost allocations and delivered a targeted efficiency program to reduce our operating expenditures. These

[2] As well as updating for actual 2021/22 opex, we also (a) updated 2021/22, 2022/23, and 2023/24 inflation for more recent information from the Australian Bureau of Statistics and the Reserve Bank of Australia, (b) removed base year adjustments, and (c) revised the forecasting approach to trend from 2021/22 rather than 2023/24.

initiatives will allow us to accommodate the required uplift in capacity and capability in the next period, while keeping our operating costs flat on average.

Key changes in our operating expenditure forecasts for the next regulatory period since the Draft Plan are shown in Figure OV.2.

Figure OV.2: Changes in operating expenditure, Regulatory Proposal vs Draft Plan ($ million real 2024)



1. Our forecasting method

We have used the AER's preferred base-step-trend method to set our opex for the 2024-29 regulatory period. Building on feedback from the previous regulatory proposal, we have improved the quality of our data and expenditure forecasting capabilities. This has allowed us to adopt the AER's preferred opex forecasting method, which allows us to align more closely with other network businesses and facilitate inclusion of an EBSS.

We applied the AER's preferred base-step-trend method[3] to forecast operating expenditure. This involves:

1. **Establishing an efficient opex base year from which to forecast ongoing costs** – Opex tends to be recurrent from year to year. This means that the most recent year of actual expenditure generally provides a good indication of future levels. As such, we have used our audited Financial Year 2022 as the base year.
2. **Applying trend adjustments to account for growth** – Consistent with the AER's approach we have applied a rate of change to the base year to account for changes in input prices, work activity from increasing network size, and productivity.
3. **Determining and adjusting for step changes** – We have identified and costed changes impacting our business environment that will affect our costs.

Figure 1.1 shows our overall approach to forecast operating expenditure.

The following sections describe each step in more detail. This attachment should be read in conjunction with the Forecast Expenditure Methods paper submitted to the AER on 30 June 2022.

[3] As outlined in the AER's Expenditure Forecast Assessment Guidelines.

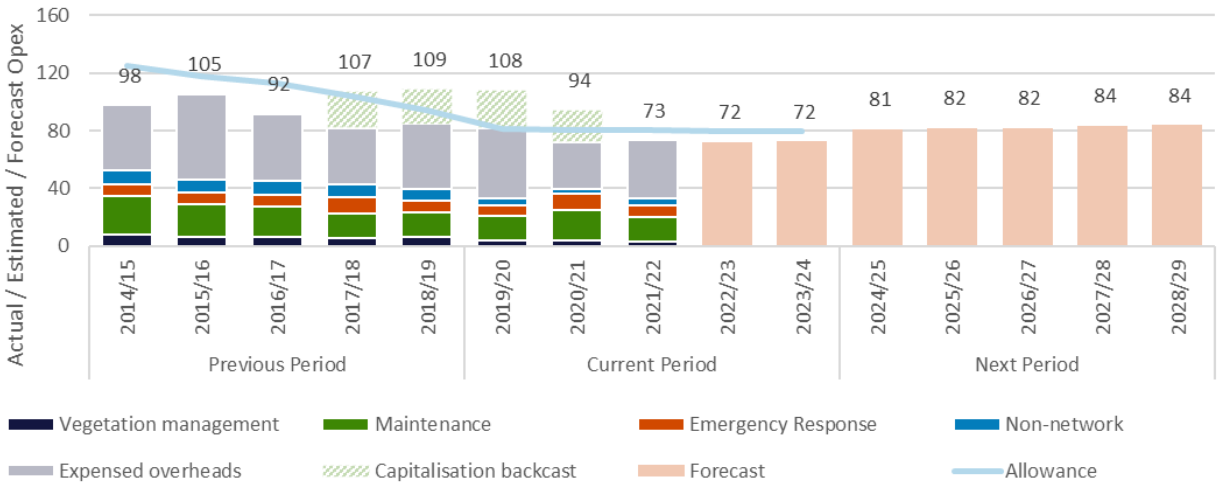
Figure 1.1: Opex forecasting method

2. Setting the base year

In line with the AER's preferred method, we have used our most recent year of audited actual operating expenditure, or the revealed cost, as our base year. At the time of developing our forecasts, this was the $73.3 million incurred in 2021/22. [4]

Over the current regulatory period, we have made significant progress reducing our opex. This is shown in Figure 2.1. We have separated the impact of our change in the allocation of overheads to show the declining trend in our opex is directly related to our opex efficiency initiatives, and is not just a construct of the change in the approach to allocating our overhead costs.

Figure 2.1: Historical and forecast opex ($ million real 2024)



We submit that 2021/22 is an efficient base year because it reflects the results of our and targeted efficiency initiatives and our improvements to allocation of overhead costs, noting that it is also less than the efficient opex allowance that AER determined for the current period. The improvements that we have made give us a solid platform on which we can look to meet the changing needs of our network and customers.

The following sections provide more detail on why 2021/22 is an appropriate base year, and why it is efficient.

2.1 Our base year is the revealed cost of service and is relatively consistent with historical spend

2021/22 is the most recent set of audited opex data. It reflects the revealed costs of providing our services.

More significantly, our recurring, controllable costs have been relatively consistent since 2017/18. While expensed overheads have changed in recent years (discussed below), core controllable opex components

[4] We expect to be able to update this to reflect the penultimate year of the regulatory period prior to the AER making its final decision. The penultimate year of actual expenditure is preferred as there will have been more time for efficiencies to be realised.

such as maintenance, vegetation management and non-network costs have been either constant or trending downwards slightly (in response to our efforts to improve efficiency). We therefore consider 2021/22 actuals are reasonably representative of our business as usual requirements.

As part of the opex forecast process, we have studied the make up of our 2021/22 revealed costs to identify any material one-off or cyclical items that – either absent or included – might distort its use as an efficient base year. On balance, we do not consider that there are any significant anomalies with respect to opex levels that would require a net adjustment – either positive or negative.

The penultimate year of actual expenditure is preferred by the AER as it is the best indication of costs going forward, and provides more time for efficiencies to be realised. Consistent with this, we will look to adopt 2022/23 as our base year if our audited opex is available prior to the AER's final determination.

2.2 Our base year includes improvements to overhead cost allocation

In June 2021, we changed our treatment of shared resources to better allocate the network and corporate overhead costs to the activities they perform.

This included making structural changes to the way we allocate overheads to capital projects to align with standard accounting practices, and cost-reflective pricing. It has resulted in more overhead costs being allocated to direct maintenance activities and capital projects than had been done in prior years.

The change was prior to the 2021/22 year, is already accounted for in the audited statutory accounts for that year, and is therefore incorporated in the base year.

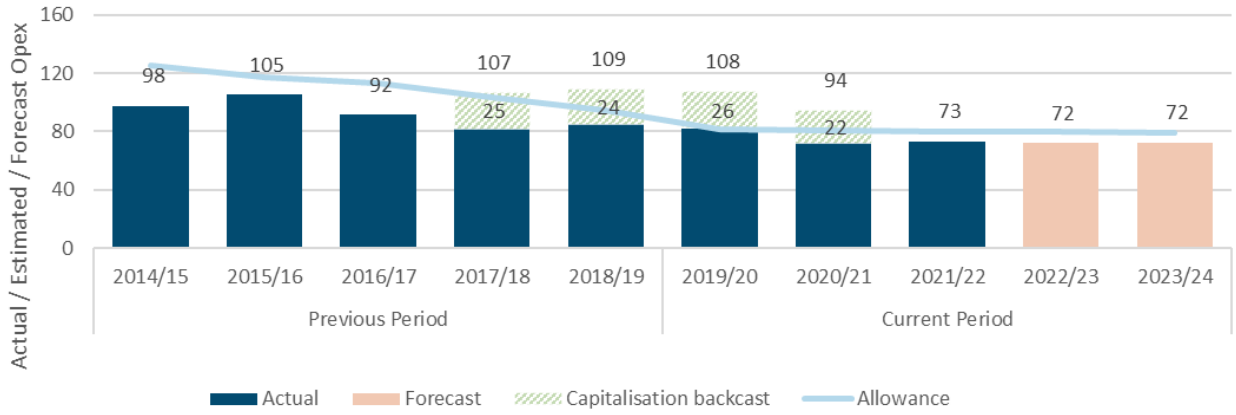
This change means current and future accounts reflect:

- **A better way of measuring labour costs of operational activities** (maintenance, emergency response, vegetation management, augmentation, replacement, connections, etc.). Put simply, the cost of employing people directly involved in maintenance activities and capital projects is more accurately attributed to those activities. In comparison to historical accounts, the current approach leads to a lower proportion of the labour cost of operational staff remaining as an 'unallocated' cost in overheads.
- **A more systematic approach to attributing overhead costs to operational activities**. Overheads are assigned in our financial system to individual work orders and overheads that are assigned to capital work orders are capitalised. In comparison to historical accounts, a higher portion of the overhead costs will be capitalised, as a consequence of the change in attributing overheads to work orders. This method aligns with the assumption made by the AER in setting our capitalised overheads allowances for the 2019-24 period.

These changes did not trigger a 'backcast' under the Reset RIN as there was no corresponding change to our cost allocation method or service classification. However, in order to provide a view of our historical opex that is consistent with, and therefore comparable with, our current (2021/22) opex and our forecast for the next period, we have backcast our Standard Control Services opex by applying our current regulatory accounting policies from 2017/18 to 2020/21. An outcome of this process is that it results in a reduction in total opex in these years, relative to previously reported RIN data.

Figure 2.2 shows that, on a consistent basis (i.e. after removing the capitalisation backcast), we have achieved a declining trend of underlying opex.

Figure 2.2: Impact of change to treatment of overhead costs ($ million real 2024)



This change in our treatment of overheads and reporting also helps us move closer to having expenditure data that is comparable with other DNSPs.

It should be highlighted that our Cost Allocation Method (i.e. allocation between business units) has not changed, only the allocation of overhead costs between services within our regulated electricity network business.

2.3 Our base year includes the outcomes of targeted efficiency initiatives

We have continued to progress targeted, long-term efficiency programs across the business, such as moving to proactive asset management programs to reduce reactive maintenance over time, and increasing our IT capability to make better use of our resources.

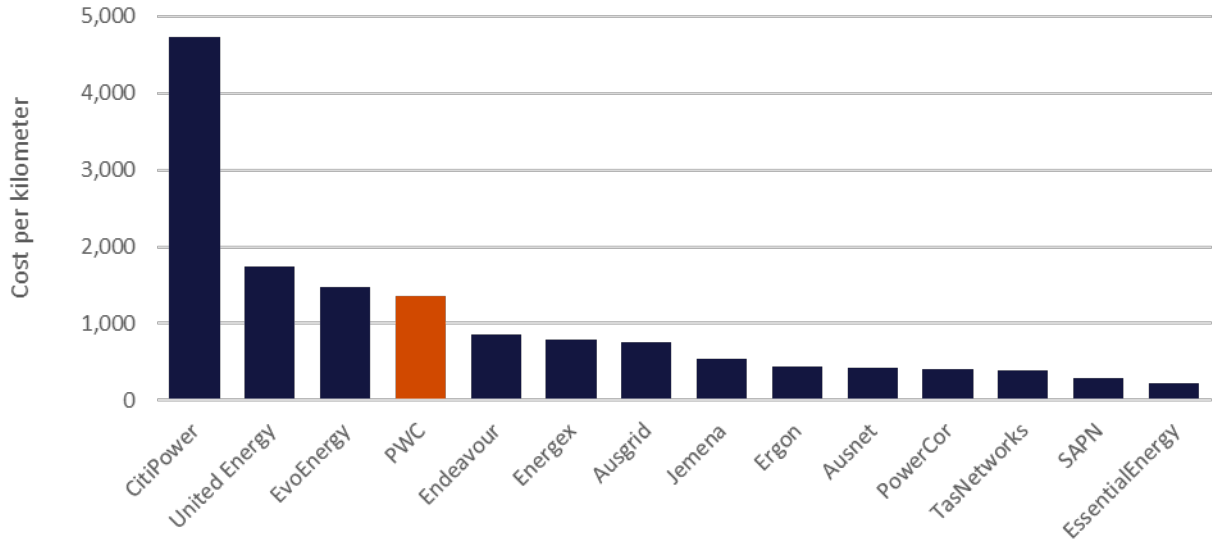
Following feedback from the AER in our last regulatory determination that our maintenance costs seemed high compared to industry peers, we looked for opportunities to improve some of our routine activities, and embed improved risk management practices for management of defects. One such improvement is a change to our distribution asset inspection frequencies. Historically we conducted annual line patrols, which given the length and remoteness of our network, were higher cost than many of our peers. We have since revised our practices and established more comprehensive three-yearly inspections. This subtle change has allowed us to eliminate the annual line patrols, without materially increasing asset risk.

We have looked at how our maintenance costs compare with other Australian distribution network operators, as a way to driver further improvements in our practices. As shown in Figure 2.3, while the

An example of our asset management efficiencies includes a change to our philosophy for distribution asset inspections that has changed significantly. We have enhanced our three-yearly inspections to be more comprehensive which has allowed us to eliminate annual line patrols.

characteristics of our network length and harsh operating environment impact the cost of service, our routine maintenance costs per kilometre of line are comparable with many of our peers. [5]

Figure 2.3: Routine maintenance cost per route line length ($ per km real 2024)[6]



We have also improved our internal and external controls in relation to asset management, procurement and financial governance. Together, these processes promote efficient works planning and delivery, in accordance with good industry practice.

In the five years to 2021/2022, we have undertaken the organisational realignment program, part of the Target Operating Model project. The realignment program is designed to achieve efficiencies by improving our business structure and the ways we work. As part of this, we have seen a number of staff transferred to the corporate areas of our business resulting in reduced duplication and therefore real cost reductions for our shared services (e.g. Finance and Business Services and Organisational Governance). Centralising roles in corporate areas to reduce duplication has also contributed to the reduction in overall opex as shown in our base year.

We propose that the EBSS be applied to the next regulatory period to incentivise us to continue driving efficiencies for our customers. The EBSS provides a strong financial incentive to make further improvements to operating expenditure through the upcoming regulatory period. More information on the EBSS is provided in Attachment 12.01.

5 The analysis presented in this section is based on our reported RIN data and was undertaken prior to FY22 actual costs being available and prior to 'backcasting' these components of our opex for the years prior to FY22. We have broadly reviewed the analysis in light of these updates and, while use of more recent and backcast data will present lower metrics for PWC, we consider that such an update will not materially affect PWC's rankings against other DNSPs.

6 This chart does not include the change in overhead cost allocation, however, we do not consider this would change our position relative to other DNSP costs compared.

2.4 Our opex is trending downward and our base year is below the AER's allowance

Our controllable opex has continued to trend downward since 2017/18 and is below our current period forecast.

Our 2021/22 audited, revealed costs are below the AER's opex allowance, which included adjustments to the base year, an overall productivity factor of 0.5 per cent, and a 10 per cent reduction in network and corporate overhead costs over the period.

The AER established our opex allowance for the current period by undertaking a review of our actual costs incurred, making adjustments in consideration of our increasing actual costs over the previous five year, and higher costs compared to our peers.

In the current period we have progressed initiatives to reduce our opex cost base (see sections 2.2 and 2.3). We have highlighted our progress in reducing our overall opex by separately showing the impact of our change in the allocation of overhead costs. Figure 2.2 clearly shows our opex, once adjusted to be on comparable terms, has trended downwards.

We have conducted some high-level opex benchmarking to show at a macro level how we have improved as a result of these initiatives. While it remains difficult to compare our costs to our peers at a detailed level[7], one thing that is clear is that we have shown significant improvement when compared to our own outcomes under the last benchmarking study.

Figure 2.4 and *Figure* 2.5 shows comparative analysis using data from other DNSPs' RIN responses to help us to assess our expenditure levels and operational practices. Using our original RIN data, as was the case when we and AER benchmarked our costs for the current period, we appeared as an outlier. We have updated our costs to reflect our improved allocation of overheads, and which provides a more realistic basis for comparison with other DNSPs. While we have not relied on this analysis to establish our base year opex, it indicates that revealed costs, while still towards the upper end relative to our those of our peers, are more in line with what could be expected given the characteristics of our business and networks.

7 While we have tried to compare our opex to other DNSPs, it remains difficult to compare our costs to those of larger networks that can achieve more economies of scale and scope, have been subject to regulation for a longer period, and are less affected by geographically-driven factors such as prices and weather. However, we will continue to work to improve our regulatory data to allow us and the AER to make more accurate comparisons. We observe that, for these reasons, AER did not include Power and Water in its own latest benchmarking report.

Figure 2.4: Total cost per customer, average 2016-20[8] ($ real 2024)

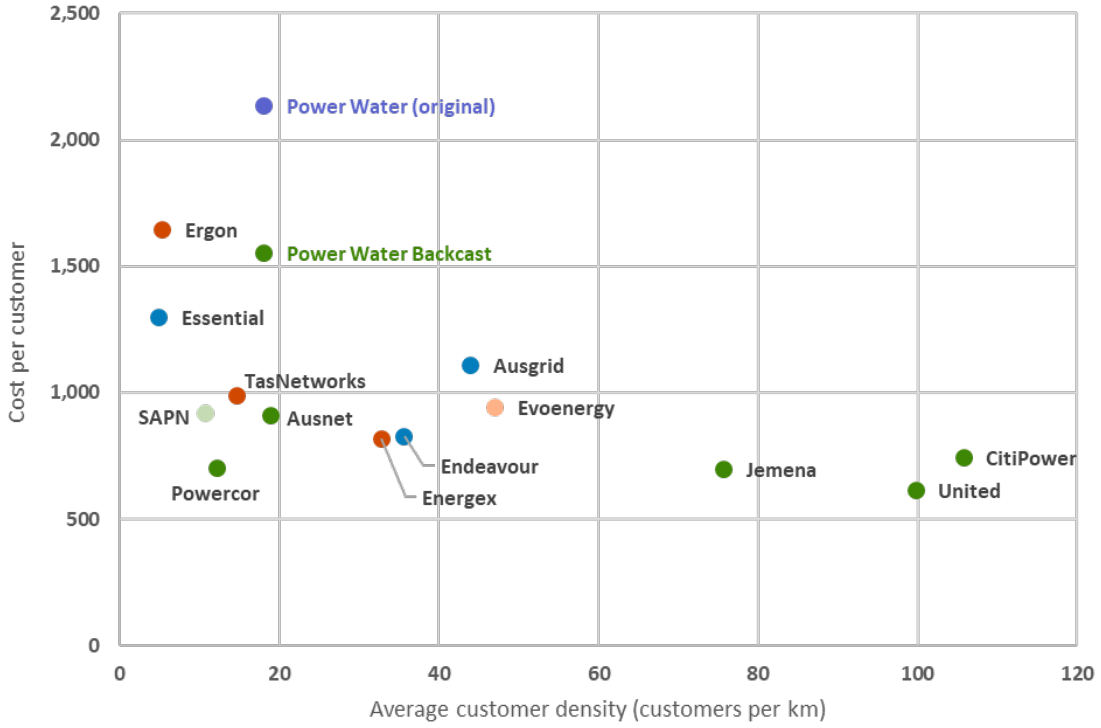
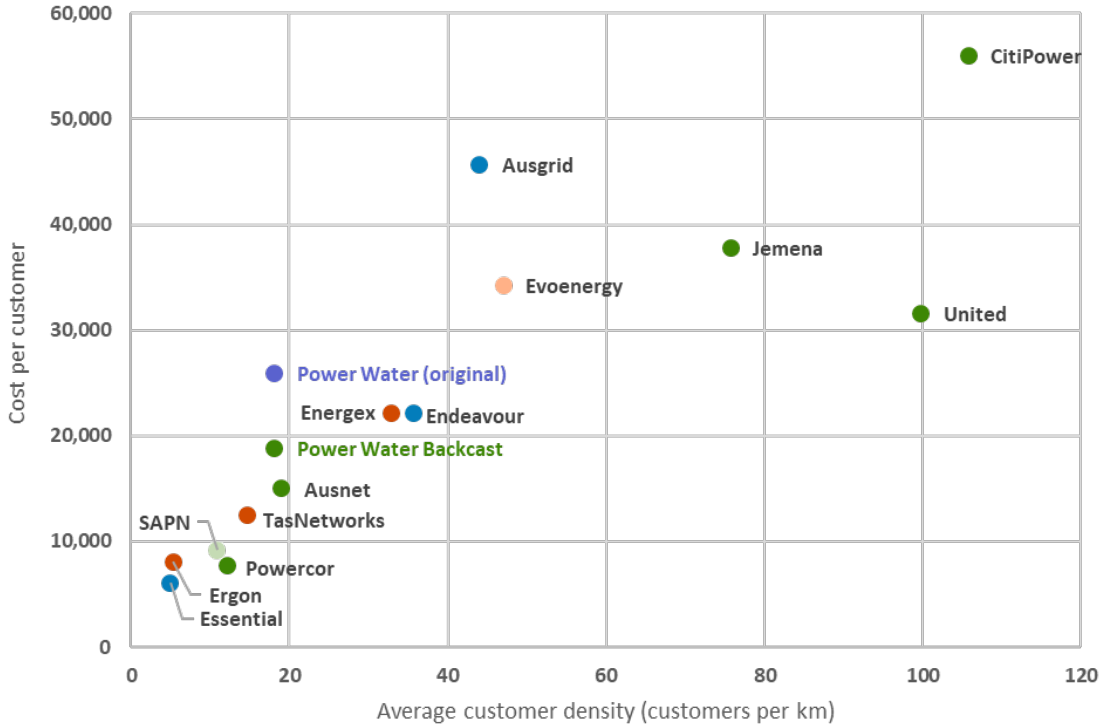


Figure 2.5: Total cost per kilometre of circuit line length ($ real 2024) (average 2017-20)



8 This figure is based on figure 15 in AER's 2021 Annual Benchmarking Report (page 37)

3. Adjusting for trends

Applying the AER's methodology, the three trend adjustments applied to our forecast results in an annual average decrease of 0.2 per cent, which results in a cumulative reduction of 1.3 per cent or $7.0 million of opex over the regulatory period.

We have considered the extent to which our costs are expected to change over the forthcoming regulatory period as a result of change in:

1. Network scale, or output growth.
2. Prices.
3. Productivity.

These three factors are accounted for by applying a trend rate of change to the base year opex, where the rate of change reflects the network scale escalation + price escalation – productivity improvement.

Table 3.1: Forecast growth factors, per cent

Forecast growth factor	22/23	23/24	24/25	25/26	26/27	27/28	28/29
Network scale	0.44%	0.46%	(0.86%)	0.37%	0.38%	0.37%	0.36%
Prices	(2.17%)	(0.14%)	1.01%	0.89%	0.43%	0.25%	0.44%
Productivity	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
Rate of change, year-on-year	(2.24%)	(0.18%)	(0.37%)	0.76%	0.30%	0.12%	0.30%
Rate of change, cumulative	(2.24%)	(2.42%)	(2.77%)	(2.04%)	(1.74%)	(1.63%)	(1.33%)

The input assumptions and growth factors for each are discussed in the following sections.

3.1 Network scale

As our network and business grows, we expect our costs to grow accordingly. The network scale escalation factor accounts for the additional opex we will incur as a result of the forecast growth in output reflective of the size of the network.

Our proposed network scale escalation factor is consistent with the AER's method, as it uses the growth in forecast customer numbers, circuit length and ratcheted maximum demand over the next regulatory period as input parameters.

Table 3.2 shows the forecasts for each of the network scale input parameters, and the resulting weighted growth-related rate of change.

Table 3.2: Network scale input parameters

Input parameters	22/23	23/24	24/25	25/26	26/27	27/28	28/29
Customer numbers (#)	0.75%	0.74%	(1.84%)	0.69%	0.69%	0.68%	0.68%
Circuit Length (km)	0.43%	0.65%	0.34%	0.23%	0.27%	0.21%	0.207%
Ratcheted Maximum Demand (MW)	-	-	-	-	-	-	-
Average network scale	**0.44%**	**0.46%**	**(0.86%)**	**0.37%**	**0.38%**	**0.37%**	**0.36%**

The application of these assumptions results in an annual average output growth rate of 0.1 per cent over the 2024-29 regulatory period.

3.2 Prices

The price escalation factor accounts for input costs that are expected to increase at a different rate to inflation (real cost escalation).

We based our labour costs on an independent forecast produced by BIS Oxford (see Attachment 2.02). BIS Oxford has forecast the Wage Price Index for Electricity, Gas and Wastewater Services, together with an allowance for the increasing superannuation guarantee, weighted by our average proportionate labour cost. We have not adopted any other specific real cost increases.

Table 3.3: Forecast real price change assumptions

Input parameters	22/23	23/24	24/25	25/26	26/27	27/28	28/29
WPI – BIS Oxford	(4.17%)	(0.74%)	1.20%	1.00%	0.72%	0.43%	0.75%
WPI – Super guarantee	0.50%	0.50%	0.50%	0.50%	-	-	-
Total WPI	(3.67%)	(0.24%)	1.70%	1.50%	0.72%	0.43%	0.75%
CPI	-	-	-	-	-	-	-
Weight - WPI	59.20%	59.20%	59.20%	59.20%	59.20%	59.20%	59.20%
Weight - CPI	40.80%	40.80%	40.80%	40.80%	40.80%	40.80%	40.80%
Forecast price change	**(2.17%)**	**(0.14%)**	**1.01%**	**0.89%**	**0.43%**	**0.25%**	**0.44%**

The application of these assumptions results in a real annual average price escalation of 0.6 per cent over the 2024-29 regulatory period.

3.3 Productivity

In applying the roll forward method, the AER considers whether there should be an adjustment to capture expected changes in the productivity of the business. We propose a 0.5 per cent productivity factor, largely based on the expected benefits from our ongoing Operating Model Program (see Attachment 2.01).

We are well underway with this program, with a staged delivery through to 2027/28. The Operating Model Program activities are focused on achieving efficiency improvements across the businesses and it will cost approximately $7.7 million in SCS opex allocated to deliver this in the next period. We expect to achieve SCS opex reduction benefits of around $15 million from the Program over the next regulatory period, predominantly in the outer years. This results in a $7.3 million net benefit to SCS.

We have chosen not to seek an opex step change for the $7.7 million additional opex cost of the Operating Model Program, as we are confident it will deliver a net benefit overall. Achieving the assumed productivity improvement will rely heavily on the success of this program, its associated capex, and it being delivered according to our current timetable.

Our proposed productivity factor of 0.5 per cent per annum is in line with that applied by other DNSPs, and is therefore considered to be broadly representative of the general level of productivity expected from the industry. As discussed above, we consider that we are now in a position from which the inherent incentives of the regulatory regime, including the EBSS, will incentivise productivity improvements at the level expected of our peers.

4. Adding step changes

In developing our forecasts, we have considered the changing environment and regulatory framework in which we operate. Customer expectations around the network being able to accommodate more renewables, batteries and EVs, coupled with obligations stemming from our recent move to the national regulatory framework, are imposing new costs on our business. These costs are not included in our base year.

Solely escalating and rolling forward our base year costs would not be sufficient to meet customer expectations or our compliance requirements of the next regulatory period. We have identified four key areas where we require an increase in recurrent opex.

4.1 Meeting technology and regulatory requirements

The changing technology and regulatory environment is placing new, recurrent cost requirements on our business. Specifically, we need to:

- Satisfy new and ongoing cyber security costs, driven by legislated requirements to uplift our ability to prevent cyber attack and data breaches.
- Meet current and forthcoming obligations imposed on our business under the NT NER.
- Establish a small digital cloud to support core systems that are only available via cloud services.

These items require an uplift in recurrent opex, to cover the cost of resourcing the new activities. These step changes are discussed further below.

4.1.1 Cyber security

We forecast an annual average increase of $0.9 million to meet minimum compliance requirements to move to SP-2 cyber security milestone as expected for all distribution network service providers under the *Security of Critical Infrastructure Act (***SOCI Act***)*.

In response to heightened cyber security and critical infrastructure concerns, the Federal Government passed the SOCI Act, which introduced obligations in the electricity, gas, water and ports sectors to ensure the physical and electronic security of Australia's critical infrastructure.

A significant proportion of the incremental opex is to build the internal capability of the cyber security team and to build on existing service agreements for external expertise (e.g. for undertaking cyber security

exercises and undertaking vulnerability assessments). Additional resources will be outposted to the OT area and added to the existing IT team progressively from 2024/25.[9]

4.1.2 Regulatory obligations

We forecast an annual average increased requirement of $1.2 million to ensure we can meet our regulatory obligations, including new obligations that commence in the next regulatory period.

The introduction of recent NT NER rule changes and new obligations will impose additional responsibilities in planning and managing an increasingly complex electricity network, requiring additional specialist resources. Specifically, we will require additional resources to:

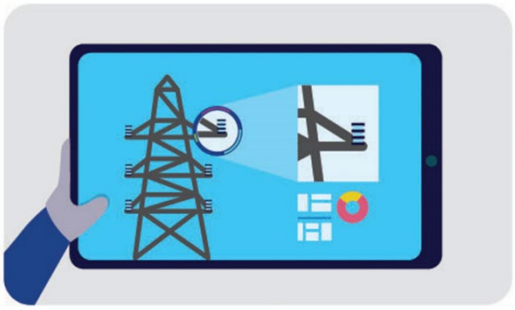
- Maintain the Network Technical Code.
- Manage and coordinate consultation and regulatory investment tests.
- Manage and coordinate consultation on NT NER matters.

4.1.3 Cloud migration

We forecast we will need an annual average increase of $0.8 million to establish a small cloud-presence. Our ICT strategy does not include comprehensive or proactive migration to the cloud as we consider it is likely to be less cost effective than on-premise solutions. However, there are a number of instances where existing and potential future vendors only offer only cloud-based methodologies. This applies to several of our critical software programs in the next regulatory period.

[9] The working assumption is that additional internal resources will be appointed progressively to help sustain the SP-1 and SP-2 practices to reduce reliance on external resources.

Strategic priorities



Uplifting our systems and people

Managing health of network

4.2 OT Capability Uplift Program

We forecast we will need an annual average increased spend of $3.8 million to build our internal capability to embed and make effective use of our operational and control systems. This will bring our network operations capability up to the standard expected of a modern distribution network service provider.

The OT Capability Uplift Program will provide an integrated solution with tools to remotely monitor and control the network, better manage planned and emergency outages, and to optimise power-flow management, fault location analysis, fault isolation and fault restoration capabilities.

While the new OT solutions will be established and much of the project costs will be capital or capitalised opex, there will be three types of ongoing opex required to provide ongoing maintenance support and to actually manage and deploy the functionality afforded by the new systems:

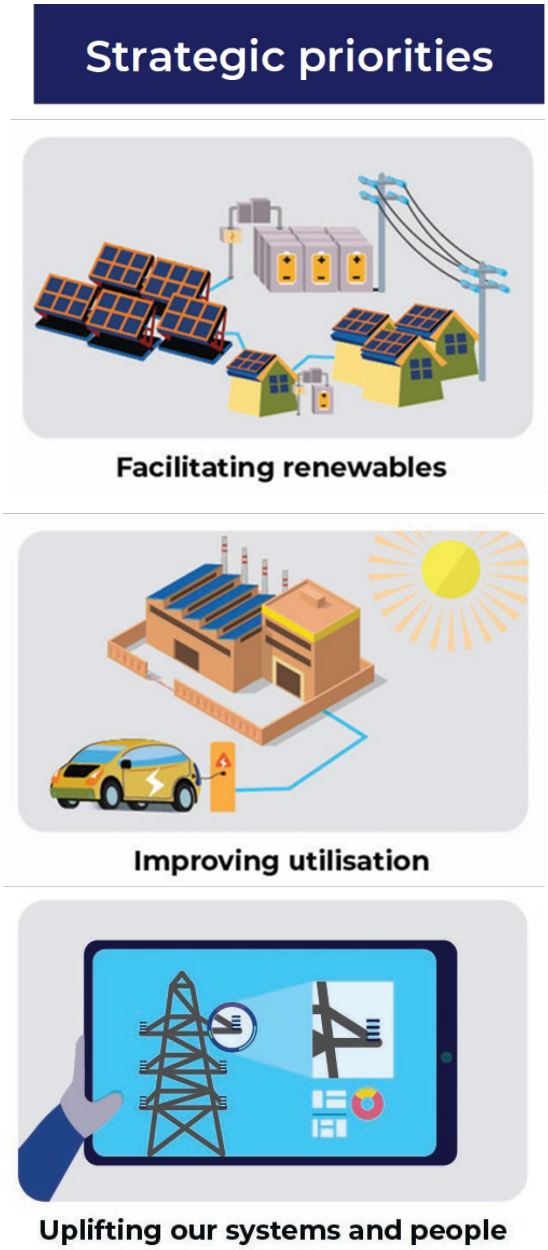
1. Additional vendor support for the new hardware and software introduced.
2. Additional application development support from external consultants.
3. Additional staff to both manage the network and apply the increased functionality.

4.3 Future network

We forecast we will need an annual average increased spend of $2.8 million to increase the number of operations and planning resources to enable the development of the future network, including continuing to accommodate rooftop solar and new large scale renewable sources.

While we are investing to bring our systems and distribution network management capabilities up to industry standard, we also need to build additional capability to allow us to keep pace with the increasingly dynamic use of our network. In particular, we will need additional resources to respond to:

- Increasing complexity associated with connecting renewables.
- The need for dynamic operating envelopes (**DOE**) to manage minimum demand.
- The need for more network planning and system support services.
- An uplift in engagement with stakeholders and our customers to facilitate change management programs.



4.4 Insurance

We forecast we will need an annual average increased spend of $1.0 million in insurance costs reflecting changed market conditions and associated premiums.

Increases in aggregate insurance payouts are globally leading to substantial increases in premiums. To a significant extent, these are climate change-related, due to increasing costs associated with bushfires, floods and other weather events such as cyclones. Power and Water is not shielded from such impacts and, consequently, our insurance costs have risen 29.9% (in nominal terms) from 2022 to 2023.

Consistent with other DNSPs, we are expecting further significant increases over the next regulatory period. We have used an estimate reflective of other DNSPs' rate increases, with an intention of going to market to get a more accurate assessment of costs prior to the AER's final decision.

4.5 Impact of step changes

Table 4.1 shows the overall impact of these step changes on our SCS opex forecast. Step changes are allocated in accordance with the Cost Allocation Methodology (approved by the **AER** to SCS and Alternative Control Services (**ACS**). The allocation to ACS is shown in Attachment 13.01.

Table 4.1: Allocation of step changes to SCS opex ($ million real 2024)

Opex step change	2024/25	2025/26	2026/27	2027/28	2029/29	Total
Meeting technology and regulatory requirements						
– **Cyber security**	0.7	0.9	0.9	0.9	0.9	**4.4**
– **Regulatory obligations**	1.1	1.4	1.1	1.3	1.0	**6.0**
– **Cloud migration**	0.8	0.8	0.8	0.8	0.8	**4.0**
OT capability uplift	4.0	4.0	2.8	4.0	4.0	**18.8**
Future network	2.3	2.0	3.2	3.3	3.4	**14.1**
Insurance premium	0.7	0.8	1.0	1.1	1.3	**4.9**
Total allocation to SCS opex	**9.7**	**10.0**	**9.8**	**11.4**	**11.4**	**52.2**

More detail on each of the step changes is provided in Attachment 9.02.

5. Our forecast opex

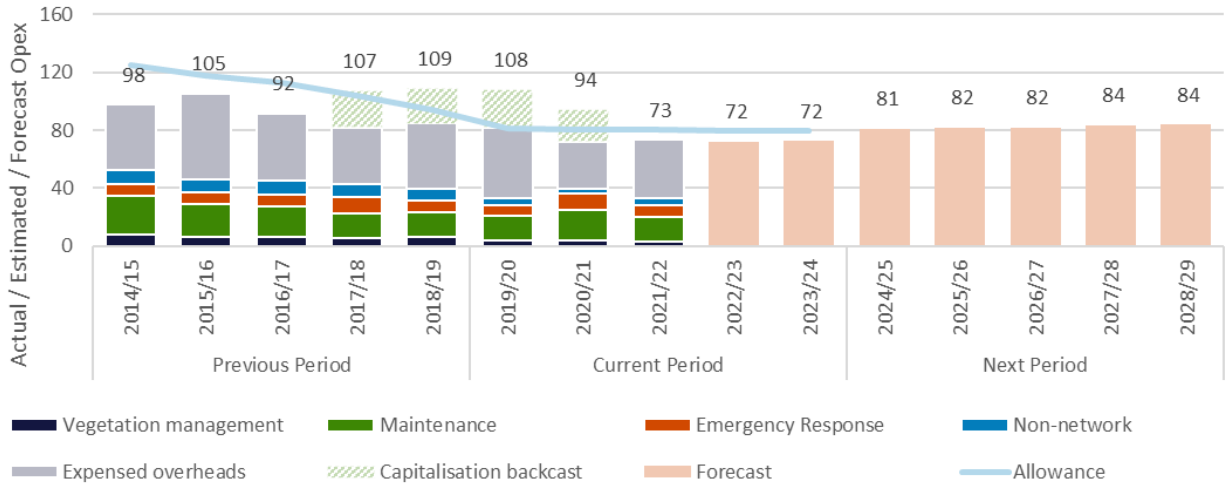
We have applied the base step trend approach to calculate our opex forecast. The net result of applying the rate of change parameters to our base year opex alone would be a slight reduction in opex. However, the cost of step changes necessary to continue to meet the need of our customers and network lead to a slight increase relative to our base year opex.

Despite our significantly increased obligations, we expect opex to be lower than our current period actuals, and only slightly higher than the AER's allowance for the current period.

We forecast we will spend $412.0 million of opex in the 2024-29 regulatory period. This is $8.0 million lower than our estimated opex in the current period. Figure 5.1shows our recent pathway to reduce opex to its current level. Over the first three years of the current period, we have reduced our opex by 32.0 per cent, from $107.8 million to $73.3 million. While our improved cost allocation accounts for some of this reduction, even once we remove this (by backcasting our opex prior to 2021/22 onto a consistent basis), our annual opex has reduced by $11.5 million or 13.6 per cent from 2018/19 to 2021/22 (our base year).

We expect to continue along this path to reduce our costs further over the remaining two years of the period and to use the incentive under the EBSS to continue to drive efficiencies throughout the next period.

Figure 5.1: Historical and forecast opex ($ million real 2024)



The calculation of this forecast is contained in the SCS Opex Model provided at Attachment 9.03.

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