



Attachment 0.06

Addressing the NER requirements

31 January 2023

PowerWater

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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
Capex	Capital Expenditure
CESS	Capital Expenditure Sharing Scheme
DER	Distributed Energy Resources
DMIA	Demand Management Innovation Allowance Mechanism
DMIS	Demand Management Incentive Scheme
EBSS	Efficiency Benefits Sharing Scheme
ICT	Information and Communications Technology
NER	National Electricity Rules
NT	Northern Territory
Opex	Operating Expenditure
RIN	Regulatory Information Notice
SCS	Standard Control Services
STPIS	Service Target Performance Incentive Scheme

Purpose and structure

The purpose of this document is to provide further evidence of why we consider that the forecast capital expenditure (**capex**) and forecast operating expenditure (**opex**) should be accepted by the Australian Energy Regulator (**AER**), with reference to the objectives, criteria and factors included in the Northern Territory (**NT**) National Electricity Rules (**NER**).

This document is set out into the following parts:

- Section 1 addresses the capex and opex objectives, criteria and factors under clause 6.5.6 and 6.5.7 of the NT NER.
- Section 2 relates to the opex objectives, criteria and factors.
- Section 3 provides evidence of how we comply with additional information and matters relating to capex and opex.
- Section 4 identifies how we incorporated AER guidelines and notes when preparing our capex and opex forecasts as discussed in section 4.

Appendix A sets out the key assumptions related to the reset regulatory information notice (**RIN**) discussed in section 2.

We note that this information is in addition to the complement of supporting information submitted to the AER as a part of our Regulatory Proposal, and that these supporting documents form part of our justification on why the AER should accept our proposed forecast capex and forecast opex.

1. Capex objectives, criteria and factors

In this section we identify the supporting evidence to show that our standard control services (SCS) forecast capex meets the objectives, criteria and factors in clause 6.5.7 of the NT NER.

1.1 Addressing the capex objectives

The NT NER requires that our forecast SCS capex achieves the following objectives:

- Objective 1 - Meet or manage the expected demand for SCS over that period
- Objective 2 - Comply with all applicable regulatory obligations or requirements associated with the provision of SCS
- Objective 3 - To the extent that there is no applicable regulatory obligation or requirement in relation to:
 - the quality, reliability or security of supply of SCS
 - the reliability or security of the distribution system through the supply of SCSto the relevant extent:
 - maintain the quality, reliability and security of supply of SCS
 - maintain the reliability and security of the distribution system through the supply of standard control services
- Objective 4 - Maintain the safety of the distribution system through the supply of standard control services.

At a high level, we note that the applicable regulatory obligations identified in Objective 2 overlap and provide specific direction on Objectives 1 and 3. In section 3 and 4 of Attachment 8.01, we identify the key regulatory obligations that drive our capex in the 2024-29 period.

We have categorised our forecast capex to align with the AER's Regulatory Information Notice (**RIN**) including:

- Replacement
- Augmentation
- Distributed energy resources (**DER**)
- Connections
- Non-network information and communications technology (**ICT**)
- Non-network other
- Capitalised overheads

Table 1.1 identifies how the drivers of forecast capex align to the capex objectives.

Table 1.1: Aligning capex categories to capex objectives

Capex category	How we addressed the capex objectives
Replacement	We replace or refurbish network assets to address safety and reliability risks, typically driven by asset condition and related risks, including technical obsolescence. The primary objective is to maintain the reliability, security and safety of the distribution network in accordance with our regulatory obligations. Replacement capex is directly aligned to Objectives 2, 3 and 4.
Augmentation	We augment the network to increase the capacity of the network to meet growth in peak demand in a localised area of our network (demand-driven), as well as compliance with reliability, power quality and performance requirements including to ensure compliance with our jurisdictional planning requirements such as the Network technical Code and Planning Criteria. Our augmentation capex is therefore most closely aligned with Objective 1, and also supports Objective 2 and Objective 3.
DER	We augment the network to increase the hosting capacity of the distribution network to export rooftop solar to customers. This is most closely related to Objective 1 to the extent that we are meeting demand through the deployment of an option that maximises net benefits to customers. However, it is also related to Objective 3 as investment to facilitate DER is required to maintain the reliability and security of the distribution system with the increasing investment in small scale intermittent generation solutions.
Connection	We undertake connection capex to provide a reliable and secure supply of energy to a new customer that meets their expected demand. It is therefore most closely associated with Objective 1, but is also aligned to Objectives 2 and 3 to maintain security, reliability and quality of supply of SCS. Our customers determine the nature, quantum and timing of our connections capex.
Non-network ICT and Non-network other	Investment in ICT, property, fleet and equipment is critical to support our delivery of SCS. Our forecast capex for this category therefore is aligned to each of the Objectives 1 to 4, albeit indirectly. They are also integral to meeting our corporate and network obligations such as network billing, safety, and financial reporting. In this respect, some of the forecast capex is directly aligned to Objective 2.
Capitalised overheads	We incur indirect, overhead costs necessary to support our works program and the delivery of SCS. For this reason our capitalised overhead costs align with Objectives 1 to 4.

1.2 Addressing the capex criteria

In making its capex decision, the AER must be satisfied that our proposed capex reasonably reflects the capex criteria, which includes:

- The efficient costs of achieving the capital expenditure objectives.
- The costs that a prudent operator would require to achieve the capital expenditure objectives.
- A realistic expectation of our demand forecasts and cost inputs required to achieve the capital expenditure objectives.

The following sections show how our approach to developing the 2024-29 capex forecasts align to the capex criteria.

1.2.1 Forecast methodology

The overarching methodology to forecast capex for the 2024-29 period provides assurance that the total forecast capex reasonably reflects the capex criteria. The approach has considered relevant AER guidelines (as discussed in section 4 of this document) and reflects practices of peer networks.

Section 4 of Attachment 8.01 provides an overview of the method used to develop our capex forecasts for the 2024-29 period including:

- **Review and revision of investment strategies** – The starting point of our forecast methods was to review and where appropriate revise our asset management strategies (including network, ICT and non-network). This took into account strategic priorities identified in conjunction with our customers through the engagement process.
- **Developing bottom up plans** – Our forecast capex is based on identifying key drivers with reference to the identification of need, and options analysis. This has included applying risk quantification to identify optimal timing and volumes in projects.
- **Checks** – We have undertaken a series of checks to ensure the program is optimal, including for example, top-down forecast reviews, work program deliverability checks.

The capex forecasts have also been subject to strong internal governance. This has ensured the forecast reflects efficient and prudent investment. This includes certification of the reasonableness of key assumptions by Power and Water's Board (see Attachment 0.04).

1.2.2 Process to identify level of capex for each category of capex

We applied our forecast methods described in section 4 of Attachment 8.01 to determine the level of capex required to achieve the capex objectives prudently and efficiently. We assessed the forecast drivers that would impact our future forecast capex in the context of the objectives. We considered:

- The expected condition of assets over our 'business as usual' planning horizon of ten years, and the consequent risks to safety, reliability, and security of the network. Based on our risk assessment approaches, we determined a replacement program that would maintain the current level of system reliability and ensure the continued safety of network services.
- We prepared maximum demand forecasts for transmission lines, zone substations and high voltage feeders, and assessed if there were likely to be constraints on our transmission and distribution network that necessitated demand driven augmentation.
- We identified current reliability and power quality performance and undertook analysis of expected performance in the 2024-29 period relative to various drivers of change. This provided an understanding of required capex to meet compliance driven augmentation.
- We prepared minimum demand forecasts for each region to identify any emerging constraints that would limit our intrinsic hosting capacity for solar exports. This provided an understanding of the optimal level of DER capex.
- We prepared connection number forecasts by customer type to determine the likely costs of connecting customers in the period. We also identified the impact of changes to classification of

connection services in the AER’s Framework and Approach paper and the application of our revised Connection Policy (Attachment 8.62). The process enabled us to determine the level of connections capex.

- We undertook analysis of our non-network assets to determine replacement and new needs.
- We applied the method used by the AER to forecast capitalised overheads using 2021/22 actuals as the base year.

1.2.3 A realistic expectation of demand forecasts

We have developed consistent forecasts for regional maximum and minimum demand (Attachment 8.48), spatial maximum demand (Attachment 8.47), customer connection forecasts (Attachment 8.64), and energy consumption (Attachment 11.06). The forecast regional minimum demand is a key input to identifying constraints with our capacity to export small scale solar. The forecast spatial maximum demand forecasts have been the key input to identifying constraints on our transmission network, zone substations, and high voltage feeders, and has consequently been a key assumption to developing our demand driven augmentation.

Our suite of demand forecasts has been based on historical data and utilised methodologies to correct for the impact of weather on reported demand. We have considered relevant drivers that impact the forecasts including population growth, economic activity, solar uptake, large customer connections, and electric vehicle uptake. We have utilised best practice econometric tools to develop forecasts at a regional and spatial level.

1.2.4 A realistic expectation of cost inputs

Our cost estimates relied predominantly on historical data, and therefore provides a reasonable basis for identifying the realistic cost of capital projects and programs. Our cost estimation methods also compared our historical unit costs with external benchmarks including unit costs derived from the AER’s repex model (Attachment 8.12). Further information can be found in Attachment 8.11.

1.3 Addressing the capex factors

The AER will examine particular factors in the NT NER when assessing our forecast capex. Table 1.2 outlines how our forecast capex addresses each factor. We note that factors 1 to 3 have been deleted from the NT NER.

Table 1.2: Addressing the capex factors

Capex factors	How we addressed the capex factors
Capex factor 4 - The most recent <i>annual benchmarking report</i> that has been <i>published</i> under rule 6.27 and the benchmark capital expenditure that would be incurred by an efficient <i>Distribution Network Service Provider</i>	The AER’s 2022 Benchmarking Report for distribution networks does not include Power and Water in the benchmarking analysis on the basis that our data is relatively immature and the potentially challenges of our unique operating environment. ¹ We have outlined how these differences affect our forecast capex in section 2.3 of

¹ AER, 2022 Annual Benchmarking Report – Distribution Network Service Providers, 2022, p63.

Capex factors	How we addressed the capex factors
<p>over the relevant <i>regulatory control period</i>.</p>	<p>Attachment 8.01. Despite this, we have still undertaken checks of our forecast capex with available category benchmarks, for example, we have compared our forecasts to the results under the AER’s ‘replex model’ (see Attachments 8.11 and 8.12).</p>
<p>Capex Factor 5 - The actual and expected capital expenditure of the <i>Distribution Network Service Provider</i> during any preceding <i>regulatory control periods</i>.</p>	<p>Section 2 of Attachment 8.01 provides an overview of our capex in the previous and current periods, and the different drivers of capex. We have explained why our actual/estimated capex in the current period is lower than the AER’s allowance including the steps we have taken to improve our capital forecasting and delivery. We also discuss the drivers of capex in the next period in section 3 of Attachment 8.01. In sections 6 to 12 of Attachment 8.01, we describe key drivers of change for each category of capex including replacement, augmentation, connections, DER capex, non-network ICT capex, non-network other and capitalised overheads.</p>
<p>Capex Factor 5A - The extent to which the capital expenditure forecast includes expenditure to address the concerns of electricity consumers as identified by the <i>Distribution Network Service Provider</i> in the course of its engagement with electricity consumers.</p>	<p>In section 1.4 of Attachment 8.01, we summarise how our forecast capex addresses customer concerns and preferences. Further information on our engagement activities and outcomes can be found in Attachments 1.01 to 1.03.</p>
<p>Capex Factor 6 - The relative prices of operating and capital inputs.</p>	<p>Our opex and capex forecasts both rely mostly on historical data as a basis for forecasting expenditure, providing for a consistent approach to pricing opex and capex inputs. Further information on our method to determine the forecast cost of capital projects is set out in Attachment 8.07. We have also identified the unit costs underlying the preferred solutions in our various business cases submitted as part of our Regulatory Proposal.</p> <p>We also applied consistent values for real changes in input costs for both capex and opex forecasts. Further information on our labour and material cost escalation forecasts is set out in BIS Oxford’s independent reports (see Attachments 2.02 and 2.03).</p>
<p>Capex Factor 7 - The substitution possibilities between operating and capital expenditure.</p>	<p>We considered substitution possibilities between capex and opex including:</p> <ul style="list-style-type: none"> • Non-network solutions – As noted in section 4 of Attachment 8.01, non-network options were considered as part of our bottom-up planning process as reflected in our business cases. We also have a demand

Capex factors	How we addressed the capex factors
	<p>engagement strategy underlying our ‘business as usual’ planning processes.</p> <ul style="list-style-type: none"> • Replacement and maintenance opex – Our business case assessment considered whether the solution to address condition needs could be addressed through a maintenance solution. • Capex and opex joint solutions – Our business case assessment examined feasible options including solutions that entailed capital and operating expenditure. For example, the preferred option to address solar hosting constraints was the implementation of a Dynamic Operating Envelope solutions that included activities that were both operating and capital expenditure.
<p>Capex Factor 8 - Whether the capital expenditure forecast is consistent with any incentive scheme or schemes that apply to the Distribution Network Service Provider under clauses 6.5.8A or 6.6.2 to 6.6.4.</p>	<p>Our forecast capex provides a neutral target to apply the Capital Expenditure Sharing Scheme (CESS) This incentive scheme will provide strong incentives to undertake efficient capex in the future and allow benefits to be shared with our customers.</p> <p>We propose that the Service Target Performance Incentive Scheme (STPIS) will not apply in the next regulatory period, which is consistent with the approach outlined in the AER’s Framework and Approach paper.</p> <p>The Demand Management Incentive Scheme (DMIS) and Demand Management Innovation Allowance Mechanism (DMIA) will provide incentives to undertake efficient non-network investments that have not been included in our capex and opex forecast. We have not identified any viable and efficient non-network solutions for forecast capex at this stage of the planning process. We consider that these schemes will provide continuous incentives to pursue non-network solutions if opportunities arise in the planning process.</p> <p>No small-scale incentive scheme will apply in the forthcoming period, consistent with the AER’s Framework and Approach paper.</p>
<p>Capex Factor 9 - The extent the capital expenditure forecast is referable to arrangements with a person other than the <i>Distribution Network Service Provider</i> that, in the opinion of the AER, do not reflect arm’s length terms.</p>	<p>We have not identified capex that does not reflect arm’s length terms.</p>

Capex factors	How we addressed the capex factors
<p>Capex Factor 9A - Whether the capital expenditure forecast includes an amount relating to a project that should more appropriately be included as a contingent project under clause 6.6A.1(b).</p>	<p>We have identified five contingent projects as part of our regulatory proposal. Section 13 of Attachment 8.01 provides project information, identifies triggers for the project, and provides information to identify that the project satisfies the requirements for the AER to include as a contingent project.</p>
<p>Capex Factor 10 - The extent the Distribution Network Service Provider has considered, and made provision for, efficient and prudent non-network options.</p>	<p>We have assessed non-network solutions in each business case and have not found a viable non-network alternative at this stage of the planning process. We note that certain projects where a non-network solution had been identified were deferred to future periods on the basis of our risk assessment.</p>
<p>Capex Factor 11 - Any relevant final project assessment report (as defined in clause 5.10.2) <i>published</i> under clause 5.17.4(o), (p) or (s).</p>	<p>We have not published any final project assessment report under clause 5.17.4.</p>
<p>Capex Factor 12 - Any other factor the AER considers relevant and which the AER has notified the <i>Distribution Network Service Provider</i> in writing, prior to the submission of its revised <i>regulatory proposal</i> under clause 6.10.3, is a <i>capital expenditure factor</i>.</p>	<p>The AER has not notified us of any other relevant factor.</p>

2. Opex objectives, criteria and factors

In the sections below, we identify the supporting evidence to show that our SCS forecast opex meets the opex objectives, criteria and factors found in clause 6.5.6 of the NT NER.

2.1 Addressing the opex objectives

The NT NER require that our forecast opex for SCS achieves the following objectives:

- Objective 1 - Meet or manage the expected demand for SCS over that period
- Objective 2 - Comply with all applicable regulatory obligations or requirements associated with the provision of SCS
- Objective 3 - To the extent that there is no applicable regulatory obligation or requirement in relation to:
 - the quality, reliability or security of supply of SCS
 - the reliability or security of the distribution system through the supply of SCS
 to the relevant extent:
 - maintain the quality, reliability and security of supply of SCS
 - maintain the reliability and security of the distribution system through the supply of standard control services
- Objective 4 - Maintain the safety of the distribution system through the supply of standard control services.

The opex objectives mirror the capex objectives.

Attachment 9.01 outlines our approach to forecasting opex for the next regulatory period. We have used the AER’s preferred method of forecasting opex, the base-step-trend method, to develop our forecasts.

Our opex categories align with the AER’s RIN requirements. Table 2.1 shows how each category aligns to the opex objectives.

Table 2.1: *Aligning opex activities to opex objectives*

Opex category	Alignment to opex objectives
Routine and non-routine maintenance	This includes operational repairs and maintenance of the distribution system. The activities are required to comply with our regulatory obligations, and to maintain the safety, security, reliability and quality of supply. In this respect, maintenance activities are aligned to Objectives 2, 3 and 4.
Emergency response	This only includes expenditure associated with our initial response to outages and other high-risk events that require the immediate dispatch of crews. We have specific emergency response obligations to arrange for restoration following an interruption. Our restoration

Opex category	Alignment to opex objectives
	activities are also vital to maintaining the safety, security, reliability and quality of the network. To this extent, our emergency response activities relate to Objectives 2, 3, and 4.
Vegetation management	This includes managing vegetation to maintain safe clearances from network assets. It also includes activities that prevent fast-growing vegetation. These activities maintain the safety, security, reliability and quality of network services by preventing outages and preventing safety incidents. To this extent, vegetation management activities relate to Objectives 3 and 4.
Non-network	This relates to the maintenance and operation of non-network assets, excluding motor vehicles and equipment, building and property and ICT assets. Non-network activities support our network activities and are therefore indirectly aligned to Objectives 1 to 4. They are also integral to meeting our corporate and network obligations such as billing, safety, and financial reporting. In this respect, some of the forecast opex is directly aligned to Objective 2.
Overhead costs	These relate to indirect expenses such as corporate functions (as allocated under our CAM), and strategy and planning including network development and planning, asset management, major projects and network engineering. It also includes indirect costs associated with service delivery and business management. These are activities required to deliver our network activities and therefore are a critical input to achieving all four objectives.

2.2 Addressing the opex criteria

In making its opex decision, the AER must be satisfied that our proposed opex reasonably reflects the opex criteria, which includes:

- The efficient costs of achieving the operating expenditure objectives.
- The costs that a prudent operator would require to achieve the operating expenditure objectives.
- A realistic expectation of our demand forecasts and cost inputs required to achieve the operating expenditure objectives.

The following sections show how our approach to developing the 2024-29 opex forecasts align to the opex criteria.

2.2.1 Forecast methodology

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 Efficiency Benefits Sharing Scheme (EBSS).

We have applied the AER's preferred base-step-trend method 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 most recent audited actual opex, for 2021/22 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 (see Attachments 2.02 and 2.03), work activity from increasing network size, and productivity.
3. **Determining and adjusting for step changes** – We have considered the changing environment and regulatory framework in which we operate. Solely escalating and rolling forward our base year costs would not be sufficient to meet increasing customer expectations and our compliance requirements of the next regulatory period. We have therefore identified and costed changes impacting our business environment that will affect our costs that we have added as step changes (see Attachment 9.02).

Sections 2 to 4 of Attachment 9.01 outline how we have prepared our forecasts for each component of the base-step-trend method.

2.2.2 Process to identify level of opex

We consider our forecast method and supporting inputs demonstrate that we have met the opex criteria as follows:

- **We used a base-step-trend method to forecast opex.** This is a well-accepted method to forecast opex, and is consistent with the AER's preferred approach as detailed in its Expenditure Forecast Assessment Guideline.
- **We provided robust justification for our proposed 2021-22 base year expenditure.** This year is the most recent full regulatory year of actual reported expenditure that we have at the time of preparing this regulatory proposal, and is therefore our best view of what it costs to meet current demand and regulatory obligations. It also reflects the efficiencies that have been achieved in the current regulatory period.
- **Our base year is the revealed cost of service and is relatively consistent with historical spend.** This included a review of each category of opex expenditure to identify activities and obligations.
- **Our base year includes improvements to overhead cost allocation.** In June 2021, we changed our treatment of shared resources to better allocate these 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 of overhead costs being allocated to direct maintenance activities and capital projects. The

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

- **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 ICT capability to make better use of our resources
- **Our opex is trending downward and our base year is below the AER's allowance.** 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.
- **We also sought to compare our performance with other distribution network service providers, noting where we had unique drivers that explained differences in performance.**
- **Our rate of change factors and weightings were informed by previous AER decisions, and were justifiable in relation to our circumstances.** We applied forecast real changes in input costs, forecast output levels, and assumed productivity. We have provided further justification of our proposed inputs and weightings to determine the rate of change in Attachments 2.02 and 2.03 including advice on real cost escalation.
- **We identified justifiable and efficient step changes from the base year.** Our analysis identified how changes in regulation are expected to impact our SCS opex activities. We also examined the most efficient options to address the change in regulatory obligation. Further information can be found in the Attachment 9.02.

2.2.3 A realistic expectation of demand forecasts

We have developed consistent forecasts for regional maximum and minimum demand (Attachment 8.48), spatial maximum demand (Attachment 8.47), customer connection forecasts (Attachment 8.64), and energy consumption (Attachment 11.06). The forecast regional minimum demand is a key input to identifying constraints with our capacity to export small scale solar. The forecast spatial maximum demand forecasts have been the key input to identifying constraints on our transmission network, zone substations, and high voltage feeders, and has consequently been a key assumption to developing our demand driven augmentation.

Our suite of demand forecasts has been based on historical data and utilised methodologies to correct for the impact of weather on reported demand. We have considered relevant drivers that impact the forecasts including population growth, economic activity, solar uptake, large customer connections, and electric vehicle uptake. We have utilised best practice econometric tools to develop forecasts at a regional and spatial level.

2.2.4 A realistic expectation of cost inputs

The base-step-trend method relies on historical actual costs, adding forecast growth in prices, output growth and productivity. This makes the roll-forward of our base expenditure a realistic expectation of our costs. Our forecast step changes have been scoped at a detailed level, and actual or independently estimates applied. They reflect our best estimate of the costs of new activities.

2.3 Addressing the opex factors

The opex factors mirror the capex factors. Table 2.2 provides information to the AER on how we have addressed each opex factor. We note that opex factors 1 to 3 are no longer part of the NT NER.

Table 2.2: Addressing the opex factors

Opex Factors	How we addressed the opex factor
<p>Opex Factor 4 - The most recent <i>annual benchmarking report</i> that has been <i>published</i> under rule 6.27 and the benchmark operating expenditure that would be incurred by an efficient <i>Distribution Network Service Provider</i> over the relevant <i>regulatory control period</i>.</p>	<p>We have reviewed the AER’s 2022 Benchmarking Report and the supporting material to it. Power and Water is not included in this annual benchmarking report.</p> <p>We have examined the underlying techniques in the AER’s report – and the category analysis data collected annually by the AER – and used these metrics and data to compare our opex to that of our peers.</p> <p>Based on some high-level opex benchmarking (see section 2.3 of Attachment 9.01), we conclude that, at a high level we have improved as a result of the initiatives we have undertaken. While it remains difficult to compare our costs to our peers at a detailed level, one thing that is clear is how we have shown significant improvement when compared to our own outcomes under the last benchmarking study.</p> <p>We have not relied on this assessment in determining an efficient level of opex.</p>
<p>Opex Factor 5 - The actual and expected operating expenditure of the <i>Distribution Network Service Provider</i> during any preceding <i>regulatory control periods</i>.</p>	<p>Attachment 9.01 provides more detail on our opex trends in the previous and current periods.</p> <p>We have also provided information on the impact of the change in capitalisation (from 2017/18) to allow the AER to draw better comparisons to historical opex.</p> <p>Section 2 of Attachment 9.01 provides information about the efficiency of our base year.</p>
<p>Opex Factor 5A - The extent to which the operating expenditure forecast includes expenditure to address the concerns of electricity consumers as identified by the <i>Distribution Network Service Provider</i> in the course of its engagement with electricity consumers</p>	<p>Attachments 1.01 to 1.03 summarise how we responded to customers’ concerns and preferences.</p>
<p>Opex Factor 6 - The relative prices of operating and capital inputs.</p>	<p>Our opex and capex forecasts both rely mostly on historical data as a basis for forecasting expenditure, providing for a consistent approach to pricing opex and capex inputs.</p> <p>We also applied consistent values for real changes in input costs for both capex and opex forecasts. Further information on our labour and material cost escalation</p>

Opex Factors	How we addressed the opex factor
<p>Opex Factor 7 - The substitution possibilities between operating and capital expenditure.</p>	<p>forecasts is set out in BIS Oxford’s independent reports (see Attachments 2.02 and 2.03).</p> <p>We considered substitution possibilities between capex and opex including:</p> <ul style="list-style-type: none"> • Non-network solutions – we considered these as a part of our options analysis for relevant network capex business cases. • Replacement and maintenance opex – we considered whether replacement activity would have a consequential impact on maintenance opex. We did not identify a consequential impact as our replacement program only seeks to maintain current system reliability. • Step changes – we have included step changes, where there are instances of additional opex to meet the required level of services i.e. cloud hosting) and licence and fees for services provided for DER and OT capability uplift projects.
<p>Opex Factor 8 - Whether the operating expenditure forecast is consistent with any incentive scheme or schemes that apply to the <i>Distribution Network Service Provider</i> under clauses 6.5.8 or 6.6.2 to 6.6.4.</p>	<p>We propose to apply the EBSS to our opex in the next period. The inclusion of an EBSS (on top of an opex productivity factor of 0.5 per cent) will provide us with a more powerful incentive to outperform our forecasts, and share these benefits with customers.</p> <p>The use of the base-step-trend method to forecast opex is consistent with the application of the EBSS.</p> <p>We do not propose to apply the STPIS in the next regulatory period.</p> <p>There are no demand management costs included in our forecast opex, as we are not aware of any viable and efficient non-network solutions at this stage of the capital planning process. This means there is no possibility of double counting a reward under the DMIS.</p> <p>No small scale incentive will apply in the forthcoming period consistent with the AER’s Framework and Approach paper.</p> <p>A discussion of our performance under incentive schemes in the current period is provided in section 5.2 of Attachment 10.01.</p> <p>An overview of the incentive schemes we propose to apply to the next regulatory period is included in Attachment 12.01.</p>

Opex Factors	How we addressed the opex factor
<p>Opex Factor 9 - The extent the operating expenditure forecast is referable to arrangements with a person other than the <i>Distribution Network Service Provider</i> that, in the opinion of the <i>AER</i>, do not reflect arm's length terms.</p>	<p>We have not identified opex that does not reflect arm's length terms.</p>
<p>Opex Factor 9A - Whether the operating expenditure forecast includes an amount relating to a project that should more appropriately be included as a contingent project under clause 6.6A.1(b).</p>	<p>Our forecast opex does not include any amount relating to a project that should be more appropriately included as a contingent project.</p>
<p>Opex Factor 10 - The extent the <i>Distribution Network Service Provider</i> has considered, and made provision for, efficient and prudent non-network options or SAPS options.</p>	<p>Our forecast opex does not include an amount for the provision of a non-network option or SAPS options. Further information on our approach to forecast capex including assessment of non-network options is provided in section 5.2 of Attachment 8.01.</p>
<p>Opex Factor 11 - Any relevant final project assessment report (as defined in clause 5.10.2) <i>published</i> under clause 5.17.4(o), (p) or (s).</p>	<p>No final project assessment report has been published by Power and Water under clause 5.17.4.</p>
<p>Opex Factor 12 - Any other factor the AER considers relevant and which the AER has notified the <i>Distribution Network Service Provider</i> in writing, prior to the submission of its revised regulatory proposal under clause 6.10.3, is an operating expenditure factor.</p>	<p>The AER has not notified Power and Water of any other relevant factor.</p>

3. Information and matters required under the NT NER

The purpose of this section is to demonstrate where we have complied with information requirements under the NT NER as they relate to SCS capex and opex. This includes:

- Information and matters relating to capital expenditure under Schedule 6.1.1 of the NT NER.
- Information and matters relating to operating expenditure under Schedule 6.1.2 of the NT NER.
- Information on proposed contingent projects under clause 6.6A.1 and Schedule 6.1.3 (14) of the NT NER.
- Information on our connection policy under clause 6.7A and 6.8.2(c)(5A) of the NT NER.

We have identified confidential information relating to our SCS capex and opex forecasts consistent with clause 6.8.2 (c)(6) of the NT NER. This has been provided at Attachment 0.02.

We have provided information required by the AER’s Expenditure Forecast Assessment Guidelines as required under clause 6.8.2(c2) in section 4.

3.1 Information and matters relating to capex

Table 3.1 identifies where the information required under Schedule 6.1.1 of the NT NER relating capex has been provided in the suite of material submitted as part of our Regulatory Proposal.

Table 3.1: Information and matters relating to capital expenditure

Matter	Reference
<p>(1) A forecast of the required capital expenditure that complies with the requirements of clause 6.5.7 and identifies the forecast capital expenditure by reference to well accepted categories such as:</p> <p>(i) asset class (eg. distribution lines, substations etc); or</p> <p>(ii) category driver (eg. regulatory obligation or requirement, replacement, reliability, net market benefit, business support etc),</p> <p>and identifies, in respect of proposed material assets:</p> <p>(iii) the location of the proposed asset;</p> <p>(iv) the anticipated or known cost of the proposed asset; and</p> <p>(v) the categories of distribution services which are to be provided by the proposed asset</p>	<p>We have provided a table in Attachment 8.03 which sets out the forecast capex projects and programs.</p>
<p>(2) The method used for developing the capital expenditure forecast</p>	<p>This is provided in section 4 of Attachment 8.01, with specific information on methods for each</p>

Matter	Reference
	category of expenditure set out in sections 6 to 12 of that document.
<p>(3) The forecasts of load growth relied upon to derive the capital expenditure forecasts and the method used for developing those forecasts of load growth</p>	<p>Demand driven augex relies on spatial demand forecasts and methods which are provided in Attachment 8.47. DER capex relies on minimum system demand forecasts and methods which are provided in Attachment 8.48.</p>
<p>(4) The key assumptions that underlie the capital expenditure forecast</p>	<p>This is provided in Attachment 8.01.</p>
<p>(5) a certification of the reasonableness of the key assumptions by the directors of the <i>Distribution Network Service Provider</i></p>	<p>This is provided in Attachment 0.04.</p>
<p>5(B) in the case of a building block proposal for a distribution determination for a <i>Distribution Network Service Provider</i> in this jurisdiction that will apply during the 2nd regulatory control period:</p> <p>(i) capital expenditure for each of the past years of the 2014-19 NT regulatory control period and each of the past regulatory years of the 1st regulatory control period, and the expected capital expenditure for each of the last two regulatory years of the 1st regulatory control period, categorised in the same way as for the capital expenditure forecast and separately identifying for each such year:</p> <p>(A) margins paid or expected to be paid by the <i>Distribution Network Service Provider</i> in circumstances where those margins are referable to arrangements that do not reflect arm's length terms; and</p> <p>(B) expenditure that should have been treated as operating expenditure in accordance with the policy submitted under paragraph (8) for that year; and</p> <p>(ii) an explanation of any significant variations in the forecast capital expenditure from capital expenditure in the 2014-19 NT regulatory control period and 1st regulatory control period</p>	<p>Our capex forecasts are presented by AER category and described in Attachment 8.01.</p> <p>We have also provided a table at Attachment 8.03 which sets out capital expenditure by AER category for the period 2014-15 to 2028-29.</p> <p>In our response we have made clear that we have not identified any arrangements that do not reflect arm's length terms.</p> <p>We identify expenditure that would have been treated as opex in accordance with the Capitalisation Policy (Attachment 8.82) we have submitted in relation to that year.</p> <p>Section 2 of Attachment 8.01 identifies how forecast capex varies to actual and estimated capex in the 2014-19 and 2019-24 periods, and the key drivers that explain significant variations.</p>
<p>(8) The policy that the <i>Distribution Network Service Provider</i> applies in capitalising operating expenditure</p>	<p>The policy is provided at Attachment 8.82.</p>

3.2 Information required for operating expenditure

Table 3.2: Information and matters relating to capital expenditure

<p>(1) a forecast of the required operating expenditure that complies with the requirements of clause 6.5.6 and identifies the forecast operating expenditure by reference to well accepted categories such as:</p> <ul style="list-style-type: none"> (i) particular programs; or (ii) types of operating expenditure (eg. maintenance, payroll, materials etc), <p>and identifies in respect of each such category:</p> <ul style="list-style-type: none"> (iii) to what extent that forecast expenditure is on costs that are fixed and to what extent it is on costs that are variable; and (iv) the categories of distribution services to which that forecast expenditure relates 	<p>Attachment 9.01 provides a discussion of our forecast opex that is recurrent and therefore is proposed to be rolled forward into the next regulatory period, as well as the various escalations applied.</p> <p>Attachment 9.02 provides a discussion of the step changes that we will incur in the next regulatory period, the basis for these changes and the impact of each.</p>
<p>(2) The method used for developing the operating expenditure forecast</p>	<p>Section 1 of Attachment 9.01 provides an overview of the forecasting method applied to opex. Each of the steps are then detailed in sections 2 to 4 of that document.</p>
<p>(3) the forecasts of key variables relied upon to derive the operating expenditure forecast and the method used for developing those forecasts of key variables</p>	<p>Attachment 9.01 provides a discussion of our forecast opex that is recurrent and therefore is proposed to be rolled forward into the next regulatory period, as well as the various escalations applied.</p> <p>Attachment 9.02 provides a discussion of the step changes that we will incur in the next regulatory period, the basis for these changes and the impact of each.</p> <p>Attachments 2.02 and 2.03 provide information on the labour and materials cost escalations applied to our opex forecasts.</p>
<p>(4) the method used for determining the cost associated with planned maintenance programs designed to improve the performance of the relevant distribution system for the purposes of any service target performance incentive scheme that is to apply to the <i>Distribution Network Service Provider</i> in respect of the relevant regulatory control period;</p>	<p>We do not propose to apply the STPIS in the next regulatory period.</p>

<p>(5) the key assumptions that underlie the operating expenditure forecast</p>	<p>The key assumptions that underpin our opex forecasts are provided in Appendix A of this document and detailed in Attachments 9.01 and 9.02.</p>
<p>(6) a certification of the reasonableness of the key assumptions by the directors of the Distribution Network Service Provider</p>	<p>This is provided in Attachment 0.04.</p>
<p>(6B) in the case of a building block proposal for a distribution determination for a <i>Distribution Network Service Provider</i> in this jurisdiction that will apply during the 2nd regulatory control period:</p> <p>(i) operating expenditure for each of the past years of the 2014-19 NT regulatory control period and each of the past regulatory years of the 1st regulatory control period, and the expected operating expenditure for each of the last two regulatory years of the 1st regulatory control period, categorised in the same way as for the operating expenditure forecast; and</p> <p>(ii) an explanation of any significant variations in the forecast operating expenditure from operating expenditure in the 2014-19 NT regulatory control period and the 1st regulatory control period;</p>	<p>A comparison of our forecast, estimated and actual opex is provided in Attachment 9.01.</p>

3.3 Information on proposed contingent projects

Schedule 6.1.3 (14) of the NT NER requires us to provide specific information on proposed contingent projects included in our regulatory proposal. The Schedule refers to specific requirements in clause 6.6A.1. Section 13 of Attachment 8.01 addresses these matters for each of the five contingent projects proposed including providing:

- A description of the proposed contingent project.
- Reasons why we considers the project should be accepted as a contingent project in the 2024-29 period.
- The forecast capex we consider is reasonably required.
- The methodology and assumptions that underlie the forecast capex.
- Alignment to the capex objectives.
- Information to demonstrate that we comply with clause 6.6A.1(b)(2) of the NT NER
- Proposed trigger events that addresses 6.6A.1(c) of the NT NER.

3.4 Information on connection policy

6.8.2(c)(5A) of the NT NER requires that we must submit a proposed connection policy. Our Connection Policy is provided at Attachment 8.62.

The connection policy satisfies the requirements of Clause 6.7A.1 of the NT NER, as it sets out the circumstances in which it may require a retail customer or real estate developer to pay a connection charge for the provision of a connection service under Chapter 5A of the NT NER and the circumstances in which it may specify a static zero export limit in a connection offer for a retail customer.

The connection policy also sets out the matters we are required to address under Clause 6.7A.1(b) of the NT NER as follows:

- Section 1.2 identifies how the proposed connection policy is consistent with the connection charge principles and the connection charge guidelines.
- Section 3.1 specifies the categories of persons that may be required to pay a connection charge and the circumstances in which such a requirement may be imposed and the aspects of a connection service for which a connection charge may be made.
- Section 7.1 identifies the basis on which connection charges are determined.
- Section 7.1 identifies the manner in which connection charges are to be paid (or equivalent consideration is to be given).
- Section 7.2 identifies a threshold below which a retail customer (not being a non-registered embedded generator, a real estate developer, a Registered Participant or an Intending Participant) will not be liable for a connection charge for an augmentation other than an extension.

4. Alignment with AER guidelines and notes

The AER has published a series of guidelines and notes that we have incorporated when preparing our capex and opex forecasts. In some cases, the documents require us to provide information or categorise information in a manner that is consistent with the guideline.

Table 4.1 sets out the key guidelines and notes, and how we have addressed key components.

Table 4.1: Summary of how capex and opex forecast has addressed key components

Item	Response
<p>Better Resets Handbook, December 2021- Sections 4 and 5</p>	<p>We have complied with the AER’s expectations with respect to capex as follows:</p> <ul style="list-style-type: none"> • Top-down testing – This is addressed in Attachment 8.01, as this includes reasons why our forecast capex in 2024-29 is higher than the 2019-24 period (sections 3 and 4), how we intend to deliver the program of work (section 5), and a comparison of past expenditure in the previous two regulatory periods to forecasts in the 2024-29 period for each AER capex category (sections 6 to 12). • Prudent and efficient decision making for projects – This is addressed in Attachment 8.01 and the suite of supporting business cases. Section 4 identifies the approach to developing bottom-up plans including rigorous business case analysis of need, options and timing, reflecting a prudent and efficient approach to project planning. Sections 6 to 12 provide a description of each project or program underlying our capex forecast for 2024-29 including the need, risks, options considered (including non-network options) and basis for the preferred option. This is supplemented by the business cases which provide detailed information. • Alignment with industry standards on good asset and risk management – This is addressed in Risk Quantification Procedure provided at Attachment 8.09. The approaches identify relevant risks to our network that align with peers, and provide for a consistent framework in assessing risks with reference to probability and consequence. • Genuine customer engagement – This is evidenced in our suite of engagement documents provided at Attachment 1.01 to 1.03. These outline our approach to eliciting and incorporating customer feedback into our expenditure, revenue and tariff plans. • Targeted review – This is evidenced in section 4 of Attachment 8.01 where we identify the series of checks we undertook on our bottom up plans and the internal governance process to finalise our capex forecasts for 2024-29.

Item	Response
	We have also complied with the AER’s expectations with respect to forecast opex as we have use the AER’s preferred forecasting approach – the base-step-trend method to forecast opex (see Attachment 9.01).
Expenditure Forecast Assessment Guidelines, August 2022	The information we have provided in our regulatory proposal has been structured to satisfy the assessment process set out in these guidelines.
Repex Model Outline for Electricity Distribution Feb 2020 and Explanatory Note AER review of repex modelling assumptions Dec 2019	We have undertaken a review of our forecast repex for 2024-29 with reference to the outcomes under the AER’s repex model. The model is provided at Attachment 8.12. In undertaking our comparisons we have considered the information and guidance in both the repex model and the explanatory note. Attachment 8.11 identifies differences between our forecast capex and the scenarios in the AER’s repex model.
Asset Replacement Planning Jan 2020 (Industry Practice application note)	The suite of business cases identified in our repex forecast consider credible options including opportunities to retire or de-rate an asset. Our Risk Quantification Procedure provided at Attachment 8.09 outlines our approach to assessing risks with reference to probability and consequence, consistent with that included in the Industry Practice application note.
Capex Assessment Outline for Electricity Distribution Determinations	<p>The assessment techniques described in this guidance note has been reflected in the materials in Attachment 8.01 as follows:</p> <ul style="list-style-type: none"> • Trend analysis – sections 3 and 4 describe our forecast compared to actual/estimated capex in the past two previous periods, noting drivers of change. • Category analysis – sections 6 to 12 provide information on each of the AER’s capex categories.
Distributed Energy Resources Integration Expenditure Guidance Note June 2022	Information on our DER driven capex is provided in section 8 of Attachment 8.01.
AER Customer export curtailment value methodology June 2022	We have applied this methodology in developing our business case for Dynamic Operating Envelopes provided at Attachment 8.61.
AER Network Resilience - A note on key issues April 2022	We have not proposed specific expenditure on measures to improve network resilience. However, our future network strategy provided at Attachment 8.08 identifies the need to undertake studies in the 2024-29 period, and this has been reflected in our step change proposal for future network opex provided at Attachment 9.02.
AER Forecasting productivity growth for electricity distributors March 2019	This has been reflected in section 3.3 of Attachment 9.01.

Item	Response
AER Connection Charge Guidelines (currently under review)	This has been reflected in our proposed Connection Policy provided at Attachment 8.82.
AER Distribution Confidentiality Guidelines 2017	We have identified confidential information in our Confidentiality response provided at Attachment 0.02 which has involved an assessment of confidentiality claims in respect of our capex and opex forecasts as provided in our Regulatory Proposal.

Appendix A

Key assumptions underpinning the reset RIN

A.1 Key assumptions

We are required to identify key assumptions that underlie the capex and opex forecasts under Schedules 6.1.1(4) and 6.1.2 (5) of the NT NER. A certification of the reasonableness of the key assumptions by the directors of Power and Water Corporation is provided at Attachment 0.04.

Table 4.2 identifies the key assumptions together with the information required under our response to Schedule 1 of AER’s Reset RIN:

- a. its source or basis;
- b. if applicable, its quantum;
- c. whether and how the assumption has been applied and was taken into account; and
- d. the effect or impact of the assumption on the capex and opex forecasts in the forthcoming regulatory control period taking into account:
 - i. the actual expenditure incurred during the current regulatory control period; and
 - ii. the sensitivity of the forecast expenditure to the assumption.

Table 4.2: Key assumptions and information required under the RIN

Assumption	(a) Source/basis	(b) Quantum	(c) Applicability	(d) Effect or impact
Company Structure and Ownership Arrangements Power and Water’s current company structure and ownership arrangements (including its obligation to obtain capital through its NT government shareholding and NT Treasury Corporation processes) will be in	Our structure and ownership arrangements are set out in our Cost Allocation Method which has been approved by the AER.	N/A	Capex and opex	We have not undertaken impact analysis, as counterfactual scenarios are difficult to reasonably estimate. We have included a new pass through event to cover potential energy sector reform that may impact our structure or accountabilities.

Assumption	(a) Source/basis	(b) Quantum	(c) Applicability	(d) Effect or impact
place for the 2024-2029 regulatory period.				
<p>Regulatory obligations and requirements</p> <p>The legislative and regulatory instruments applicable to Power and Water as in force 1 July 2022 will continue to apply for the 2024-2029 regulatory period.</p> <p>Specifically, the ICT forecasts with respect to cyber and information security hazard requirements are based on the assumption that Power and Water will only be required to comply with Security Profile Level 2 under the Australian Energy Sector Cyber Security Framework 2022 (AEMO, published 19/04/2022) in relation to the Security of Critical Infrastructure Act 2018 (SOC1). Other SOC1 impacts are currently excluded from the forecast.</p>	<p>We have set out key regulatory obligations and requirements in Attachment 8.01. Our compliance register has informed our assessment of current regulatory obligations.</p> <p>Section 10.2 of our capex overview identifies the assumptions we have adopted in respect of our Security Profile Level in relation to the SOC1 Act.</p>	<p>We have identified regulatory obligations and requirements that directly drive capex and opex in Attachments 8.01, 9.01 and 9.02 as applicable.</p>	<p>Capex and opex</p>	<p>Identified changes in our obligations that drive increases to our forecast capex and opex for 2024-29 are discussed Attachments 8.01, 9.01 and 9.02 as applicable.</p> <p>We have included a new cost pass through event to cover potential energy sector reform that may impact our structure or accountabilities (see Attachment 12.02).</p>
<p>Service Classification</p> <p>The service classification in the AER's Framework and Approach paper dated July 2022 will apply to the 2024-2029 period.</p>	<p>Section 7.2 of our Regulatory Proposal and section 9.2 of Attachment 8.01 provide a description of how the change in definition</p>	<p>The removal of gifted assets has reduced our connection capex from historical levels. More information is provided in Attachment 8.01.</p>	<p>Capex and opex</p>	<p>The removal of gifted assets has reduced our connection capex from historical levels.</p>

Assumption	(a) Source/basis	(b) Quantum	(c) Applicability	(d) Effect or impact
	and classification of connection services in the F&A paper has impacted our capex forecasts.			
<p>Maximum Demand, customer and connection growth</p> <p>Our capital expenditure and operating expenditure forecasts have applied on demand and customer connection forecasts that rely on historical data and reasonable inputs and values for the forecast period.</p>	<p>System demand forecasts are at Attachment 8.48. Spatial demand forecasts are set out at Attachment 8.47. Connection forecasts are set out at Attachment 8.64.</p> <p>These documents describe the methodology and assumptions underlying the forecasts.</p>	<p>Our forecasts of system minimum demand is the principal driver of expenditure on the Dynamic Operating Envelopes project (see Attachment 8.01 and 9.02).</p> <p>Our spatial maximum demand forecasts have influenced our demand driven capex (see Attachment 8.01). We also considered ratcheted maximum demand as an input into calculating the opex trend, although this was not material (see Attachment 9.01).</p> <p>Customer growth numbers have driven connections capex and network scale escalation applied to opex (see Attachments 8.01 and 9.01 respectively)</p>	Capex and opex	<p>Investing in new DER capex to address the impact of minimum demand on our networks is a significant change from actuals/estimates in the 2019-24 period.</p> <p>While maximum demand forecasts are increasing, demand driven capex is lower than actuals/estimated in the previous period, due to timing of spot loads.</p> <p>While we expect similar levels of connection capex to actuals in 2019-24, more capex will be in ACS rather than SCS due to the change in classification of services.</p>
<p>Connection Policy</p> <p>Power and Water’s revised Connection Policy meets the requirements of Chapter 5A of the NT NER and the AER’s revised</p>	Attachment 8.62 is Power and Water’s revised connection policy to apply in the 2024-29 period.	It is difficult to quantify the impact of revisions to the connection policy due to the more material impact of changes in classification discussed in Assumption 3.	Capex and opex	The revised connection policy incorporates changes in the Connection Charging Guidelines that are relevant to our customers such as the

Assumption	(a) Source/basis	(b) Quantum	(c) Applicability	(d) Effect or impact
Connection Charge Guidelines and will apply to the 2024-2029 period.		However, the overall impact is low material given that connections capex makes up a small proportion of SCS capex.		criteria to apply static export limits for micro embedded generators. The policy also aligns to changes in service classification. A key change has been the threshold for basic connection services for residential and non-residential customers which ensure that small rural customers connections are SCS.
Cost Allocation and Capitalisation Our forecasts reflect the cost allocation method approved by the AER at the time our forecasts were submitted including our approach to capitalisation.	The Cost Allocation Method approved by the AER is the source of our cost allocation methods and remains unchanged from the previous period. Attachment 9.01 provides an overview of our changes to the capitalisation of overhead costs undertaken in 2021/22.	We have undertaken backcast analysis of the impact of changes in our capitalisation of overhead costs that were applied to our 2021/22. This can be found in Attachment 9.01.	Capex and opex	The changes to the capitalisation of overhead costs are embedded in our opex base year and included in the actuals reported in the RIN for 2021/22. Further information on how this impacts comparisons to actuals in 2017/18 to 2020/21 is shown in Attachment 9.01.
Efficient operational expenditure base year Power and Water's revealed opex in 2021/22 is representative of the efficient underlying opex required in PWC's circumstances	Section 2 of the Attachment 9.01 provides information and evidence to support our approach to determining the opex base year.	See chapter 9 of our Regulatory Proposal and Attachment 9.01.	Opex	We have not undertaken analysis on the impact, as counterfactual scenarios are difficult to reasonably estimate.

Assumption	(a) Source/basis	(b) Quantum	(c) Applicability	(d) Effect or impact
for the provision of standard control services for the 2024-2029 regulatory period.	This reflects the AER's preferred approach to forecasting opex.			
Unit Rates The unit rates that Power and Water has applied in developing its capex forecasts are representative of the costs that can reasonably be expected to be incurred in the 2024-2029 period and relies on historical data including labour rates and material costs.	Attachment 8.07 read in conjunction with individual business cases provide further detail on estimation methods, including how the approach aligns with historical data.	We have not prepared any forecasts other than on the basis of our proposed CAM and estimation methodology. For this reason, we are not in a position to identify an alternative.	Capex	Not able to be estimated.
Cost Escalations The cost escalations that Power and Water has applied (based on a report from BIS Oxford dated 2022) in developing its forecasts are representative of the increased costs that Power and Water can reasonably expect in the 2024-2029 regulatory control period.	The BIS Oxford cost escalation reports are provided at Attachments 2.02 and 2.03.	The impact of escalation on capex and opex is discussed in Attachments 8.07 and 9.01 respectively.	Capex and opex	We have not undertaken impact analysis, due to difficulty in quantifying reasonable maximum and minimum ranges over time.
Inflation That the inflation forecast applied (calculated using the method required by the AER for	Attachment 10.01 identifies our approach to forecast inflation in the 2024-29 period.	A discussion of the impact of the inflation forecast applied to the expenditure forecasts is provided in Attachments 10.01 and 10.06.	Capex and opex	We have not undertaken impact analysis, due to difficulty in quantifying

Assumption	(a) Source/basis	(b) Quantum	(c) Applicability	(d) Effect or impact
populating the PTRM) in developing the expenditure forecasts represents the inflation-related costs expected over the 2024-29 regulatory control period.				reasonable maximum and minimum ranges over time.
<p>Capacity to deliver programs in the capital forecasts</p> <p>Power and Water will have sufficient resourcing capability to deliver the capital expenditure forecasts.</p>	Attachment 8.01 summarises Power and Water’s delivery plan for 2024-29. Attachment 8.06 is our Network Capital Delivery Plan, and ICT delivery is incorporated in our ICT Strategy (see Attachment 8.65).	This is not applicable, as there is no reasonable counter-factual.	Capex	<p>We are forecasting higher levels of capex in 2024-29 compared to the first three years of actuals in the 2019-24 period.</p> <p>This is supported by our assessment of delivery capability.</p>
<p>Opex forecast assumes delivery of the forecast capex as programmed</p> <p>PWC’s workforce is utilised across the forecast capital programme for the 2024-2029 regulatory control period, ensuring the labour cost in opex remains consistent with the level in the base year.</p>	Attachment 8.01 summarises Power and Water’s delivery plan for 2024-29. Attachment 8.06 is our Network Capital Delivery Plan, and ICT delivery is incorporated in our ICT Strategy (see Attachment 8.65).	This is not applicable, as there is no reasonable counter-factual.	Opex	<p>We are forecasting higher levels of capex in 2024-29 compared to the first three years of actuals in the 2019-24 period.</p> <p>This is supported by our assessment of delivery capability.</p> <p>Should capex be lower than forecast, opex will increase.</p>

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