Issues Paper

Power and Water Corporation

Electricity Distribution Determination

1 July 2024 to 30 June 2029

March 2023

AUSTRALIAN ENERGY REGULATOR

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1 Introduction

The Australian Energy Regulator (AER) exists to ensure energy consumers are better off, now and in the future. Consumers are at the heart of our work, and we focus on ensuring a secure, reliable and affordable energy future for Australia. We regulate electricity networks in all jurisdictions except Western Australia. Our primary role is in setting the maximum revenue that network businesses can recover from users of their networks. Our goal is to make decisions that ensure consumers pay no more than necessary for safe and reliable energy.

The National Electricity Law and Rules as applied in the Northern Territory (NT NEL and NT NER) provide the regulatory framework governing electricity networks. This will be our second determination for the Northern Territory under this framework.

Power and Water Corporation (PWC) is the electricity distribution network service provider servicing customers in the Northern Territory (NT). On 31 January 2023, PWC submitted its regulatory proposal for the five years commencing 1 July 2024 (2024–29 period).[1] Its proposal set out the revenue it proposes to recover from its customers for the provision of electricity distribution services, and the methodology it proposes to use to set its prices each year. Our Better Resets Handbook (Handbook), together with the regulatory framework, sets out our expectations for each network's revenue proposal. In addition to expectations on consumer engagement it sets out our expectations on the basis of estimation of the key revenue components, such as capital and operating expenditure (capex and opex), depreciation and Tariff structure statements (TSS). These expectations and the regulatory framework provide the framework for our assessment of the revenue components and may help guide stakeholders' submissions on the proposal. As we stated in the Handbook:

> As the economic regulator of energy networks, we are required to make decisions that best advance the long-term interests of consumers, as expressed in the National Electricity Objective and National Gas Objective. If a network business meets our expectations this will increase the likelihood that its regulatory proposal advances the long-term interests of consumers, giving us the confidence to rely on a more targeted assessment to meet our obligations.[2]

However, over the 2024–29 period, there are several additional factors that may affect the total revenue that PWC will recover from its consumers, including:

- contingent projects that have been put forward by PWC as part of its 2024–29 proposal that may trigger
- other initiatives under the NT Governments 2030 vision for renewables
- cost pass through events defined in the National Electricity Rules (NER or Rules) and our decision.
- Impacts of global economic conditions on investment including interest rates and inflation.

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1 PWC regulatory proposal 2024–29
2 AER, *Better Resets Handbook*, December 2021, p.3.

This issues paper highlights some of the key elements of the proposal, and identifies issues that on preliminary review, are likely to be the focus of our assessment[3]. Stakeholders can assist our process by providing their views on these or any other aspects of the proposal.

1.1 How can you get involved?

Consumer engagement is a valuable input to our determinations. When we receive stakeholder submissions that articulate consumer preferences, address issues in a revenue proposal, and provide evidence and analysis, our decision-making process is strengthened.

You can contribute to our assessment by:

- making a written submission on PWC proposal to AERresets2024-29@aer.gov.au by **12 May 2023.**[4]
- joining us, PWC and our Consumer Challenge Panel (CCP27)[5] at an online public forum on **5 April 2023**. Details of how to register for this forum are available on our website and through Eventbrite (external link).

Table 1 sets out the key milestones planned for this review.

Table 1 Key dates for PWC' 2024–29 revenue determinations

Milestone	Date
AER publishes Issues Paper on PWC proposal	28 March 2023
AER holds public forum on Issues Paper and PWC proposal	5 April 2023
Submissions due on PWC proposal	12 May 2023
AER publishes draft decision	September 2023
AER holds public forum on draft decision (predetermination conference)	October 2023
PWC submits revised proposal to AER	December 2023
Submissions due on draft decision and PWC revised proposal	January 2024
AER publishes final decision	April 2024

Note: Timelines are indicative and subject to change.

3 As required under the NER, cl. 6A.11.3(b1)

4 See Power and Water Submission for full details on making a submission. For further information regarding the AER's use and disclosure of information provided to it, see the ACCC/ AER Information Policy.

5 The role of the Consumer Challenge Panel is to assess and advise the AER on the quality of engagement undertaken by network businesses and whether the interests of customers are adequately reflected in regulatory proposals.

2 Our initial observations

PWC's proposal would allow it to recover $1091.1 million ($nominal, smoothed) from its customers over the 2024–29 period. This is 44.7% higher than what we approved for the 2019–24 period.[6] We estimate that the proposal would result in an average increase in nominal network distribution charges of 9.5% per annum (6.4% in real dollar terms).[7]

PWC's proposed charges are for the network component of the electricity bill for their customers and determine the revenue allowance that PWC will use to calculate distribution charges each year in accordance with its approved pricing methodology.

The cost of the network components of the electricity supply chain make up about 57% of the average household electricity bill and 34% of the average small business customer in the NT and are ultimately recovered through electricity retail charges.[8] The majority of PWC customers are covered by the NT Governments Pricing order which caps the amount customers pay. PWC have sought to moderate the impacts to large users on cost-reflective tariffs.[9]

PWC's proposal is the first step in a 15-month review process. Over the course of this process, as we move from proposal to draft decision, and then to revised proposal and final decision, components of forecast revenue are likely to change. These changes may result from our taking a different view on proposed revenue to PWC. In addition, a standard part of our process is to update the forecast revenue for movements in market variables such as interest rates, bond rates and inflation. Movements in these market variables can have a material impact on the final revenue and, therefore, consumer bills. Therefore, projected bill impacts at this stage should be treated as no more than potential impacts subject to changes in interest rates and inflation.

PWC notes in its 2024–29 proposal that:

- Despite ongoing customer growth and increased complexity of network operations, its operating expenditure forecasts are $8 million or 1.9% less that the current period.[10]
- They have listened to consumers and will use technology including more smart meters, better data and 'dynamic operating envelopes' to find alternatives to network investment but also to allow better use of the existing network. This will inform better decisions about asset replacement to avoid cost spikes.
- They will look to connect more than 200MW of new, large-scale generation using contingent project provisions which will support the NT Government's 2030 vision for 50% renewable energy supply.[11]

PWC submits that it prepared its proposals to keep prices affordable and avoid future prices shocks for its customers while maintaining network reliability and safety now and into the future.[12] PWC notes that it has heard its customers consider service levels and reliability to

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6 AER analysis – Reset RIN; in real terms $2023–24, proposed total revenue is $169.1 million (20.4%) higher than approved for the 2019–24 period.
7 AER analysis – Reset RIN.
8 AER analysis – Reset RIN.
9 PWC Regulatory proposal page 30.
10 PWC Regulatory proposal page 14.
11 PWC Regulatory proposal page 14.
12 PWC Regulatory proposal page 14.

be generally acceptable, but affordability is their primary concern. PWC' s customers want to look at the future of the network and allow the technological changes to connect more renewable energy to the grid.[13]

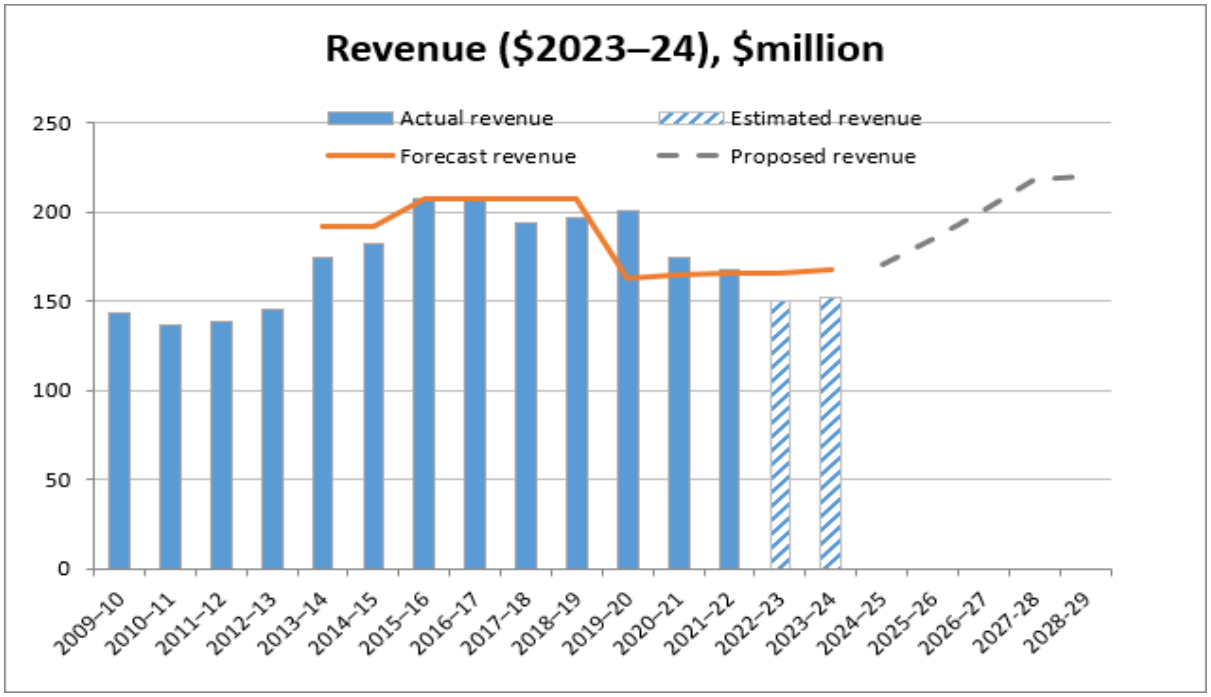
PWC continues to outline a considered and actionable tariff reform pathway for the NT Government to gradually move towards more cost reflective pricing. NT electricity retailers are currently bound by the NT governments pricing order but have shown support for simplifying price signals in tariffs, further segmentation of customers in tariff classes, and support for tariff trials including for electric vehicles.[14]

2.1 Drivers of revenue in the proposal

To compare revenue from one regulatory period to the next on a like-for-like basis, we make an adjustment for the impact of inflation. The do this, we use “real” values based on a common year (in this case, 2022–23) which have been adjusted to remove the impact of inflation.

In real terms, PWC’s proposal, if accepted would allow it to recover $996.2 million (smoothed) from its consumers over the 2024–29 period, or $169.1 million (real) increase compared to the current regulatory period. This is 20.4% higher than the current period and is primarily driven by increasing financing costs, inflation and global financial market uncertainty.

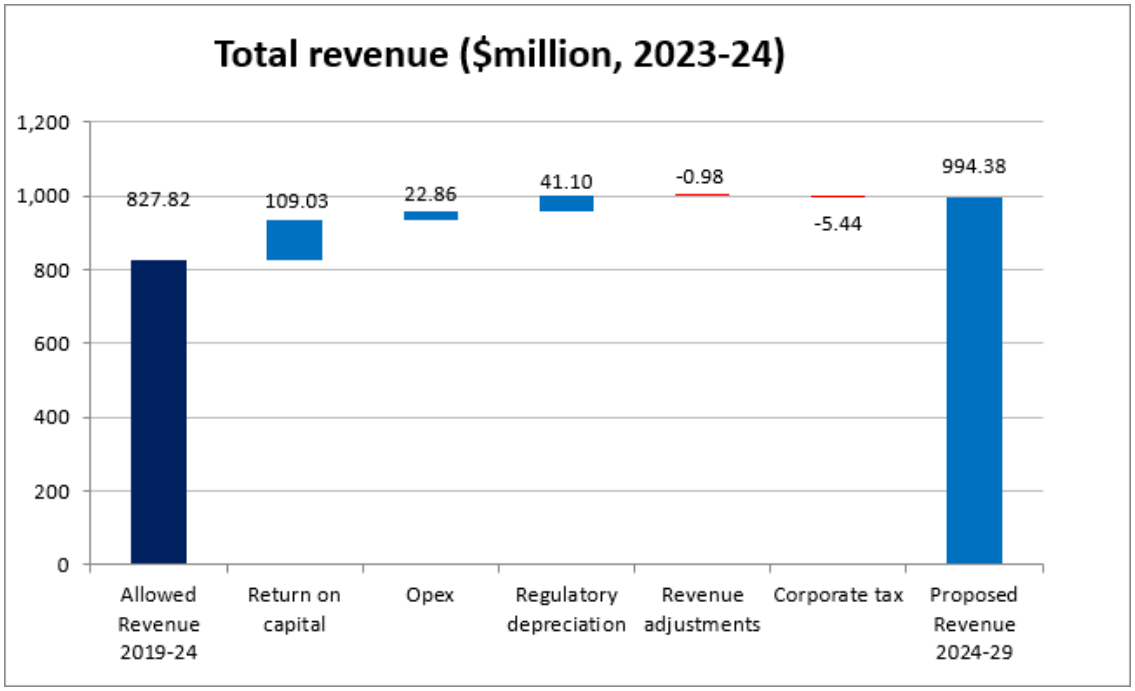
Figure 1 Changes in regulated revenue over time ($2023–24, million)



Source: AER analysis

[13] PWC Regulatory proposal page 66.
[14] PWC Regulatory proposal page 104.

Figure 2 Changes in building blocks: PWC's total revenue 2019–24 to forecast revenue 2024–29



Source: AER analysis
Note: Allowed revenue and proposed revenue in the chart are unsmoothed total revenue for the regulatory period.

Figure 2 highlights changes in PWC's proposal at the "building block" level to illustrate what is driving its proposed increase in real revenue from 2019–24 to 2024–29.

The overall trend in revenue is primarily driven by:

- Economic conditions driving increase in rate of return; the AER delayed its decision to update the Rate of Return instrument and instructed PWC to prepare its proposal using the AERs 2018 Rate of Return Instrument.
- Opening regulated asset base (RAB) value – the value of assets is expected to grow over current and forecast periods largely due to new capital expenditure and the effect of indexation.[15] It should be noted that the impact of the undergrounding work resulting from NT Government Ministerial direction is excluded from RAB in the current period and is also excluded from forecast capex for 2024–29.
- Increased capex which has led to higher financing costs including depreciation; however, a reduction in forecast opex has helped offset any revenue increase from this.[16]

[15] PWC Attachment 10.01 – Revenue page 6.
[16] PWC Regulatory proposal page 98.

3 PWC consumer engagement

PWC is a natural monopoly supplying an essential service provider in the Northern Territory (NT), providing electricity, gas, water and sewerage services to households and businesses. Genuine, high quality consumer engagement by PWC is essential to ensuring that its proposal is driven by consumer preferences, supports delivery of services that meet the needs of its consumers, and does so at a price that is affordable and efficient. We've seen through experience that a regulatory proposal developed through genuine engagement with consumers is more likely to be largely or wholly accepted in our decisions.

Our framework for considering consumer engagement in network revenue determinations is set out in the Handbook.[17] Used in conjunction with our technical analysis, the framework for our regulatory decision making allows us to place weight on the outcomes of the engagement activities undertaken by a business to assist in providing an overall assessment of a proposal.

For PWC, the 2024–29 proposal represents the second revenue reset submitted to the AER and its engagement program demonstrated significant growth and maturity to its previous reset. Over 18 months it met with more than 450 people, held over 35 workshops, and spent more than 150 hours talking with and listening to customers and stakeholders.[18] In the NT, a Pricing Order sets the retail prices that the majority of customers may be charged for electricity and related services.[19] However, engagement with PWC's customers and stakeholders has been a critical and ongoing element of PWC's preparation of its 2024–29 proposal, and where practicable it has built feedback into its expenditure plan.[20]

PWC has engaged through a variety of channels, with a diverse group of stakeholders, including residential and business customers, retailers and generators, government, and local councils.[21] It also established a Reset Advisory Committee (RAC) to engage on the development of its draft plan. The Consumer Challenge Panel, sub-panel 27 (CCP27) and AER staff have had the opportunity to observe a sample of PWC's engagement throughout is pre-lodgement journey, including meetings with its RAC. PWC commissioned a report from experienced consumer advocate Dr Andrew Nance, which provided valuable insights on the experience and outcomes of PWC's approach to date and feedback received from customers.[22]

3.1 Nature of engagement

The nature of engagement is about how networks engage with their consumers. Our expectations are that network businesses will sincerely partner with consumers and equip them to effectively engage in the development of their proposal.

PWC's customer engagement activities for its proposal were scoped across 3-phases, formally commencing in 2021.[23] The phased approach included:

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17 AER, *Better Resets Handbook*, December 2021.
18 PWC, *Regulatory Proposal for the 2024–29 regulatory period*, January 2023, p. 9.
19 PWC, *Regulatory Proposal for the 2024–29 regulatory period*, January 2023, p. 2.
20 PWC, *1.01 Engagement Attachment*, 31 Jan 23, p. iii.
21 PWC, *1.03 Draft plan – feedback summary report,* 31 Jan 23, p. 3.
22 *PWC, 1.02 - Dr Andrew Nance - Independent Consumer Report*, 31 Jan 23; PWC, *Regulatory Proposal for the 2024–29 regulatory period*, January 2023, p.39.
23 See Figure 2-3: PWC 2024–29 engagement activities for a full illustration of the activities that occurred under each phase. PWC, *1.01 Engagement Attachment*, 31 Jan 23, pp. 14-17.

1. Developing baseline and initial deep dives (July to September 2021) – used to develop customer understanding of PWC's role and responsibility.
2. Testing and confirming (October 2021 to February 2022) – assumptions and response were tested to key issues raised in phase 1. Collaboration on issues leading up to the proposal and confirmation that issues have been addressed and reflected (within the constraints PWC operates under and the appetite of consumers).
3. Final proposal testing (March 2023 to January 2023) - finalisation of engagement and refinement of positions prior to lodgement.
4. Post proposal engagement – continuation of engagement with stakeholders.[24]

PWC used phase 1 to identify customer priorities and service expectation, but it was also an opportunity to understand and develop the knowledge base of its stakeholders.[25] Engagement opportunities included the Darwin Show and through targeted customer focus groups. The focus groups were conducted in Darwin and Alice Springs, with one focus group aimed at customers either facing some form of disadvantage or hardship.[26] PWC stated that the focus groups 'were designed to help us establish an understanding of each customer group's understanding of the electricity sector, energy services, electricity pricing, and how it affects them'.[27]

3.2 Breadth and depth of engagement

The breadth and depth of engagement is about the scope of engagement with consumers and the level of detail at which network businesses engage on issues. The breadth and depth of engagement also covers the variety of avenues used to engage with consumers.

PWC also sought feedback from experienced consumer representative, as well as voices across youth, residential, disadvantaged, small/medium business and large business customer segments.[28] PWC's engagement has endeavoured to reach a broad customer base, and for example during phase 2 included activities such as: testing youth perspectives on renewable energy and current network challenges; an online retailer pricing forum; and Alice Springs and Darwin People's Panels.

PWC also recognised the barriers of accessibility faced for disadvantaged and disengaged stakeholders, as well as the difficulties that the dispersion of energy of users across the NT contribute to obstacles of meaningful engagement. To address this barrier, it considers alternate options of engagement for example, using digital channels where possible.[29]

PWC's engagement had regard to the International Association of Public Participation Spectrum (IAP2) and incorporated its core values into its engagement approach.[30] In engaging with its stakeholders, PWC has advised it was open with stakeholders on the issues that it could directly account for stakeholder feedback through its plan and those where its responsibility will be to influence and partner with other participants or agencies.[31] We welcome stakeholder views on their ability to raise and set agenda items and issues for discussion.

The engagement outlined in section 3.1 has led to 3 broad themes being highlighted by its customers:

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24 PWC, *1.01 Engagement Attachment*, 31 Jan 23, p.18.
25 PWC, *1.01 Engagement Attachment*, 31 Jan 23, p. 19.
26 PWC, *1.01 Engagement Attachment*, 31 Jan 23, p. 20.
27 PWC, *1.01 Engagement Attachment*, 31 Jan 23, p. 20.
28 PWC, *1.01 Engagement Attachment*, 31 Jan 23, p. 28.
29 PWC, *1.01 Engagement Attachment*, 31 Jan 23, p. 11.
30 PWC, *1.01 Engagement Attachment*, 31 Jan 23, pp. 7 – 8.
31 PWC, *1.01 Engagement Attachment*, 31 Jan 23, p. 7.

1. Supporting vulnerable customers – that low income and vulnerable customers should not be left behind and more should be done to enable customers to manage costs and access renewable energy.
2. Affordability – keeping prices affordable and avoiding future bill shocks.
3. Enabling renewables – more connection to large- and small-scale renewables, especially pursuing technologies where it can help alleviate network costs (such as batteries).[32]

PWC acknowledge that as a network, it faces challenges posed from global factors as well as unique local challenges. Challenges have also been experienced through its engagement process stating:

> *Customer engagement has required a substantial cultural shift for our business, as well as for customers themselves. Our customer base is dispersed over a large area, and the appetite for engaging on energy issues – while growing – is less profuse than in other jurisdictions.*[33]

This impact was seen clearly with the difficulties experienced with maintaining engagement from stakeholders across multiple consultation activities, most notably its RAC.[34] PWC advise it will look to restructure and reform the RAC in 2023.[35] However, given these challenges and complexities Dr Andrew Nance commented that 'PWC should be commended for the way they have presented the complexities of the regulatory process in a range of ways and sought to understand and incorporate consumer views'.[36]

3.3 Clearly evidenced impact

PWC submitted that its engagement approach on its 2024–29 proposal builds significantly on its experiences from the past. Regard has been given to lessons learned and feedback on its 2019–24 approach, IAP2 Spectrum best practice engagement, and AER staff and CCP27 guidance. It has openly acknowledged the challenges it faces, and that further work will need to be done to build its engagement framework.

PWC's customers want affordable energy and without price shocks in the future, if these can be avoided and this is reflected in the change in investment focus between the draft plan and the regulatory proposal with change to asset replacement spend.[37] PWC have instead proposed additional investment in ICT systems and process to improve asset management capabilities and make better decisions.[38]

Questions

1. To what extent do you consider you were able to influence the topics engaged on by PWC? Please give examples.

2. Do the key themes from PWC's engagement resonate with your own preferences? Are there additional issues you would like to see influence PWCs proposal and our assessment of the proposal?

3. Do you think PWC has engaged meaningfully with consumers on all key elements of its 2024–29 proposal? Are there any key elements that require further engagement?

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32 PWC, *1.01 Engagement Attachment*, 31 Jan 23, pp. iii – iv.
33 PWC, *Regulatory Proposal for the 2024–29 regulatory period*, January 2023, p. 35.
34 PWC, *1.01 Engagement Attachment*, 31 Jan 23, p. 9.
35 PWC, *1.01 Engagement Attachment*, 31 Jan 23, p. 29.
36 *PWC, 1.02 - Dr Andrew Nance - Independent Consumer Report*, 31 Jan 23, p. 4.
37 PWC, Regulatory Proposal for the 2024–29 regulatory period, January 2023, p13
38 Ibid.

4 Key elements of PWC's revenue proposal

The regulatory framework governing electricity networks and our assessment of PWC proposal is set out in the National Electricity Law and Rules (NEL and NER). Our work is guided by the National Electricity Objective (NEO) which promotes efficient investment in, and operation and use of, electricity services in the long-term interests of consumers.[39]

The foundation of our regulatory approach is a benchmark incentive framework to setting maximum revenues: once regulated revenues are set for the five-year period, a network that keeps its actual costs below the regulatory forecast of costs retains part of the benefit. Service providers have an incentive to become more efficient over time, as they retain part of the financial benefit from improved efficiency. This delivers benefits to consumers as efficient costs are revealed over time and drive lower cost benchmarks in subsequent regulatory periods. By only allowing efficient costs in our approved revenues, we promote delivery of the NEO and ensure consumers pay no more than necessary for the safe and reliable delivery of electricity.

PWC's proposed revenue reflects its forecast of the efficient cost of providing distribution network services over the 2024–29 period. Its 2024–29 proposal, and our assessment of it under the Law and Rules, are based on a "building block" approach which looks at five cost components:

- return on the RAB – or return on capital, to compensate investors for the opportunity cost of funds invested in this business
- depreciation of the RAB – or return of capital, to return the initial investment to investors over time
- forecast operating expenditure (opex) – the operating, maintenance and other noncapital expenses, incurred in the provision of network services
- revenue increments/decrements – resulting from the application of incentive schemes and allowances, such as for opex, capex and demand management innovation
- estimated cost of corporate income tax.[40]

4.1 Rate of return

The return each business is to receive on its capital base ("return on capital") is a key driver of proposed revenues. We calculate the regulated return on capital by applying a rate of return to the RAB value. We estimate the rate of return by combining the returns of two sources of funds for investment: equity and debt. The allowed rate of return provides the business with a return on capital to service the interest rate on its loans and give a return on equity to investors.

The approach that PWC, and we, must take to estimate the rate of return, including the return on debt and the return on equity, as well as the value of imputation credits, is set out in our binding Rate of Return Instrument. We publish a new Rate of Return Instrument every 4 years. For the purpose of its proposal, PWC has applied the 2018 Rate of Return Instrument (2018 Instrument). Our final decision on PWC proposal, which will be made in April 2024, will apply the new 2022 Rate of Return Instrument which was published in February 2023.

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39 National Electricity Law (NEL or Law), s.7.
40 See figure 3.4 in AER, *State of the Energy Market*, June 2022, p65.

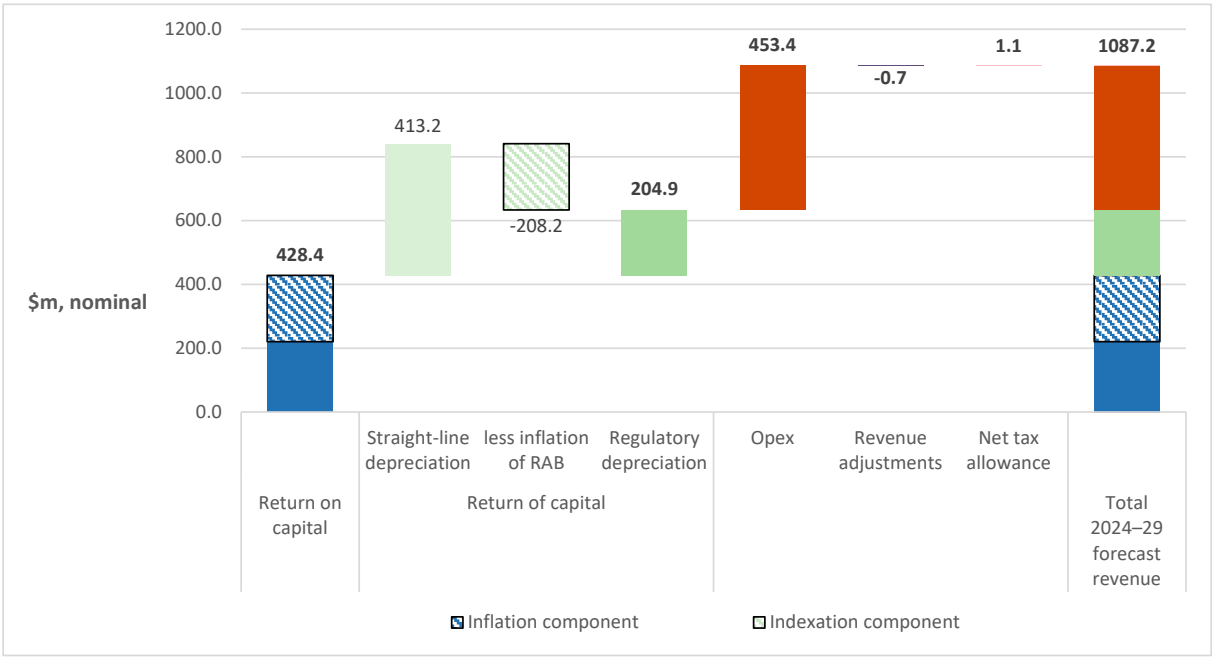
4.1.1 Inflation

In 2020, we concluded a review of our approach to estimating expected inflation. PWC has applied the approach we established in that review, but once again, the estimates provided by PWC should be considered indicative because estimates of inflation may change as we move through the process.

An allowance for expected inflation provides compensation for the risk to investors for the prospect of inflation eroding the investor's purchasing power. Figure 3 shows the interaction of expected inflation on the forecast building block revenue.

- The return on capital building block applies a nominal rate of return to the RAB. As the nominal rate of return includes expected inflation, part of that building block compensates for expected inflation. Higher expected inflation increases the return on capital mainly due to RAB and capex.
- The return of capital building block removes expected inflation indexation of the RAB from forecast depreciation. This avoids compensation arising from the effects of inflation being double counted by including it in the return on capital building block and also as a capital gain (through the indexation of the RAB). Higher expected inflation therefore reduces the regulatory depreciation allowance.
- Other building blocks (such as operating expenditure or opex, and revenue adjustments) include an inflation component, as the costs forecast in real dollar terms are escalated to nominal dollars using expected inflation in determining the required nominal revenues. Higher expected inflation will increase opex and revenue adjustments.

Figure 3 Inflation components in proposal revenue building blocks ($nominal, million)



Source: AER analysis.
Note: Proposed revenue in the chart is unsmoothed total revenue for the regulatory period.

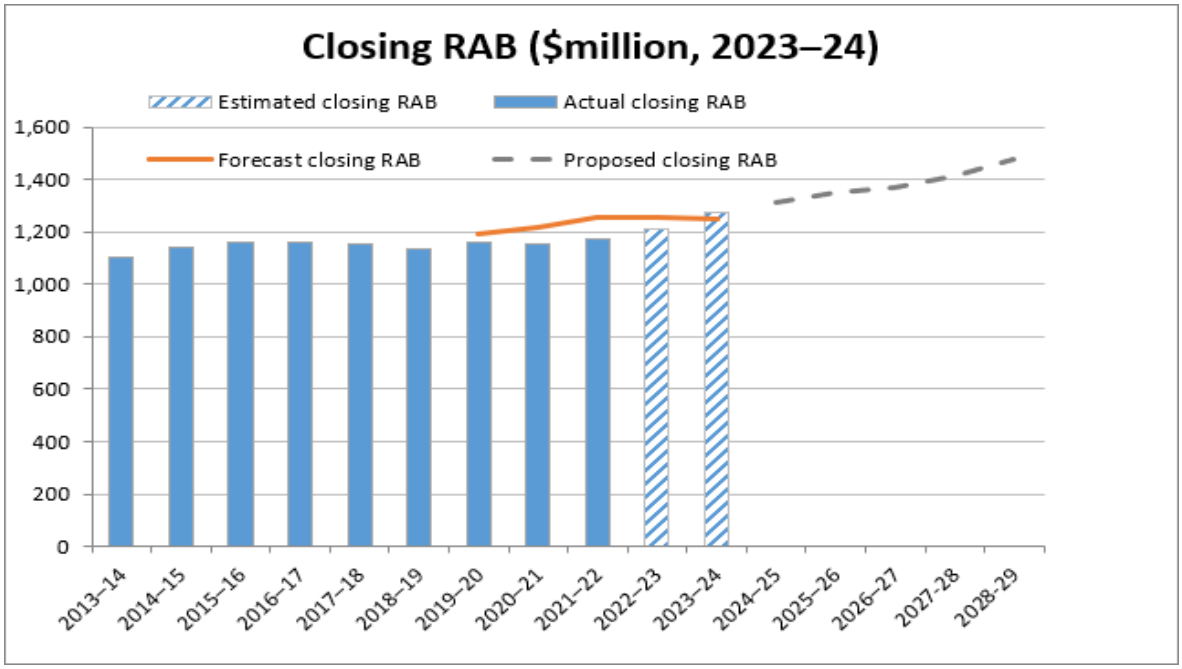
4.2 Regulatory asset base and depreciation

The RAB is the value of assets used by PWC to provide network services. The value of the RAB substantially impacts PWC revenue requirement, and the price consumers ultimately

pay. Other things being equal, a higher RAB would increase both the return on capital and depreciation components of the revenue determination.

PWC proposed a forecast RAB of $1707.2 million ($ nominal) by the end of the 2024–29 period, which is $427.6 million higher than the estimated RAB at the end of the 2019–24 period. This follows an increase of $317.6 million ($ nominal) in the estimated RAB over the 2019–24 period. The proposed RAB increase (both in nominal and in real terms) for the 2024–29 period is primarily driven by a higher forecast of capex for that period. Figure 4 shows the value of PWC's RAB over time.

Figure 4 PWC's RAB value over time ($million, 2023–24)



Source: AER analysis

Regulatory depreciation is provided so investors recover their investment over the economic life of the asset ("return of capital"). The Handbook sets our expectations for depreciation. In summary, we expect a network business:

- to use the AER's post-tax revenue model, roll forward model, and depreciation tracking module (where relevant) without amendments
- to apply the same asset classes from the last regulatory determination and the asset lives would also reflect those approved in previous decisions.

PWC proposes regulatory depreciation of $187.1 million ($2022–23) for the 2024–29 period, which is $41.1 million (28.2%) higher than for the 2018–23 period. The higher depreciation is due to the larger opening RAB value to be depreciated combined with a higher capex forecast. PWC proposes to continue using the year-by-year tracking approach for implementing straight-line depreciation for the 2024–29 period.

PWC also proposes to maintain the same asset classes and standard asset lives as approved for the 2019–24 period, except for its capitalised property and fleet leases asset classes which have been updated to reflect the value weighted average of the lives of leases expected to be entered over the 2024–29 period. Further, PWC proposes to add a new

asset class for batteries, with a standard asset life of 10 years, although no forecast capex has been proposed for batteries in the 2024–29 period.

Overall, based on our initial assessment, we consider PWC has performed well against the depreciation expectations as set out in the Handbook.

Questions

4. Do you have views on PWC's proposed depreciation approach, particularly the updates to standard lives for its leases asset classes and the inclusion of a new asset class for batteries, as set out in its 2024–29 proposal?

4.3 Capital expenditure

Capital expenditure (capex) refers to the capital cost and expenditure incurred in the provision of PWCs distribution services. Capex is added to the RAB, and so forms part of the capital costs of the building blocks used to determine total revenue. Top-down testing is a starting point when assessing the overall reasonableness of a business' capex proposal. Where a business is responding to the incentives created by the capital efficiency sharing scheme, we consider current period spend is a good initial basis to test the reasonableness of capex required to maintain the network in the forecast period. This is particularly the case for recurrent types of expenditure such as replacement capex (repex) and recurrent information and communication technology (ICT).

The Handbook sets our expectations for capex forecasts. In summary:

- The business should demonstrate that the proposed expenditure is not significantly above current period spending
- The components of capex should be well-justified, consistent with past spending for recurrent components, and, for repex, not materially above our repex model
- The business shows evidence of prudent and efficient decision-making on key projects/programs
- There should be evidence of genuine consumer engagement.

Based on our initial assessment, PWC has increased its proposed capex for 2024–29 regulatory control period relative to the actual/estimated capex in the current 2019–24 regulatory control period due mainly to the substantial increase in its capex forecast for property. PWC has also used the AER repex model to cross-check and validate its repex forecast. Subject to our further review, PWC proposed $65 million (or 38%) more modelled repex compared to the AER repex model threshold.[41]

4.3.1 PWC's capex proposal

PWC proposes forecast capex of $568.0 million ($2023–24) for the 2024–29 period. This represents a 39% increase compared to its actual/expected expenditure for the 2019–24 period.

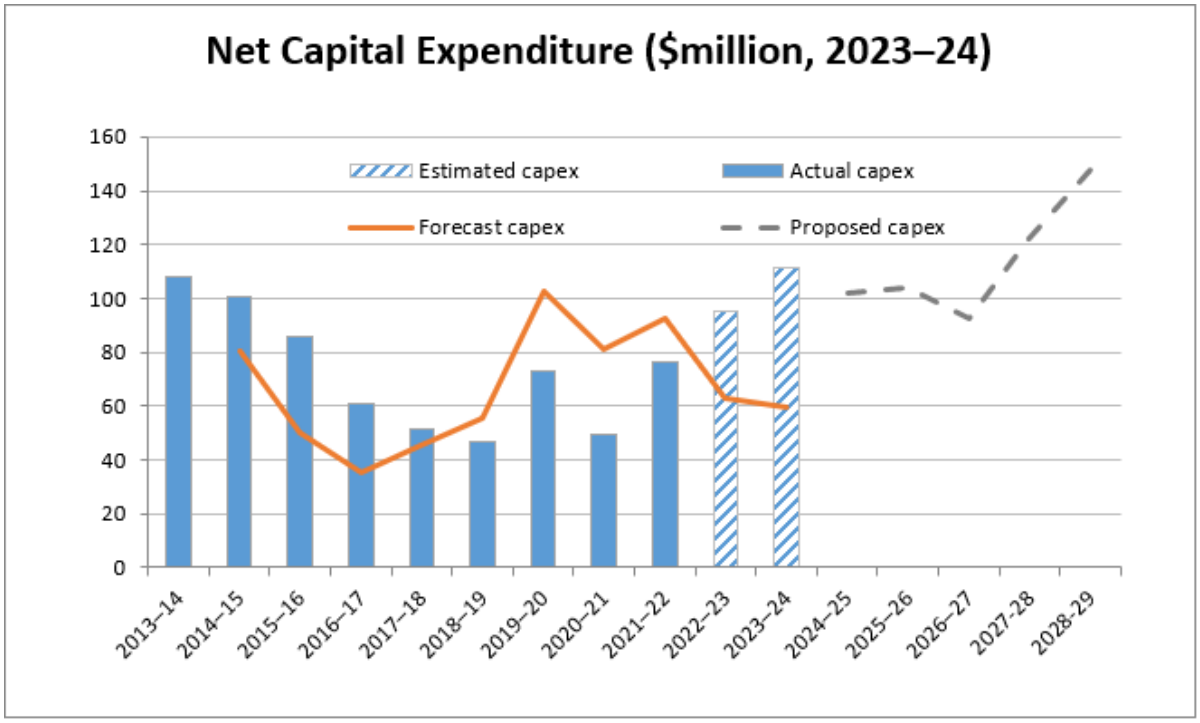
The increase in capex over the 2024–29 regulatory period arises from an uplift in PWC's asset management capabilities, with a focus on information and communication technology (ICT) systems, operating technology and the replacement of aging assets. PWC is seeking

[41] PWC, *Attachment 8.01*, January 2023, p. 36.

to improve its asset data and risk-based asset management practices and undertake further asset replacement in order to establish a smoother level of network replacement capex in the future by investing in its people and systems (non-network capex).[42] The high proportion of non-network (property) capex reflects PWCs plans to co-locate staff into one PWC owned location and is the primary driver of the proposed capex uplift in the later years of the regulatory control period shown Figure 5. The site consolidation project, together with the uplift in ICT systems is a recent change to PWC's strategic direction and was not part of its draft plan released in August 2022.[43]

PWC's estimated capex in the current 2019–24 regulatory period is $26.6 million lower (5.7%) than our capex forecast.[44] Figure 5 shows actual capex in the first three years of the current regulatory period has been lower than the forecast, but PWC expects to increase capex significantly in the last two years of the 2019–24 period.[45] PWC state that the lower-than-expected delivery of network capex in the first three years has primarily been driven by externals factors that have constrained its existing resources. This included a need to connect more large-scale renewable generation to its transmission network, human resourcing issues as well as a re-prioritisation of the core capabilities as part of its ICT program.[46]

Figure 5 Comparison of past and forecast capex ($million, 2023–24)



Source: AER analysis.

[42] PWC, *PWC - 0.00 – Regulatory Proposal*, 31 January 2023, p. 76.
[43] PWC, Attachment 8.01, January 2023, p. xi
[44] PWC, *Revenue Proposal - Attachment 8.01 - Capital Expenditure*, January 2023, p. 10.
[45] PWC, *Revenue Proposal - Attachment 8.01 - Capital Expenditure,* January 2023, p. 10.
[46] PWC, *Revenue Proposal - Attachment 8.01 - Capital Expenditure,* January 2023, p. 11.

4.3.2 Key drivers of the capex proposal

Table 2 shows the breakdown of PWC's proposed capex by driver category.

Table 2 PWC's forecast capex categories verses current period actual/estimates ($2023–24)

Category	2024–29 forecast	% of total forecast	2019–24 actual/estimate	Difference
Replacement	176,628	31%	150,455	17%
Augmentation	33,215	6%	62,924	-47%
Connections	6,998	1%	37,900	-82%
Property	106,659	19%	24,223	340%
ICT	70,651	12%	49,494	43%
Fleet	13,999	2%	23,759	-41%
Non-network capex - other	8,711	2%	7,726	13%
DER	13,220	2%	-	-
Capitalised overheads	144,727	25%	94,343	53%
Gross Total	**574,807**		**450,824**	**28%**
Customer connections	5,938		40,611	-85%
Disposals	840		796	6%
Net Total	**568,029**		**409,417**	**39%**

Source: AER analysis.

The key drivers of PWC's proposed capex are non-network capex (property and ICT), replacement capex and capitalised overheads and are discussed further below. The remaining categories of augmentation, connections, DER, fleet and spares make up 13% of PWC's total capex.

Non-network capex

PWC proposed $200 million for non-network capex representing 35% of total gross capex with an overall increase of 340% compared to the current period actual/estimated capex. Non-network capex relates to assets that are used to support the operation of PWC's network and delivery of services to customers. Non-network expenditure is grouped into four separate categories:

- Property ($106.7 million or 19% of proposed capex)
- Non-network ICT ($70.7 million or 12% of proposed capex)
- Fleet ($14 million or 2% of proposed capex)
- Non-network other capex ($8.7 million or 2% of proposed capex)

The property capex reflects a 'one-off' new project of $89.8 million for a single site consolidation project to co-locate some of PWC's Darwin staff, who are located across five sites, into one PWC owned location. Total project cost is estimated at $159.1 million, and the portion allocated to PWC's electricity network business is forecast at $89.8 million.[47]

[47] PWC, *Revenue Proposal - Attachment 8.01 - Capital Expenditure,* January 2023, p. 92.

PWC's $70.7 million forecast for ICT non-network capex includes recurrent ICT capex of $17.7 million (25% of ICT) and non-recurrent ICT capex of $53 million (75% of ICT).[48]

Some of the system replacements PWC had initially intended to commence in the 2019–24 period are proposed to occur in the 2024–29 period, including a new asset management system, mobility and capital delivery system, and the physicals-to-financials ICT systems.[49] PWC commenced its ICT Transformation Program in the 2019–24 period but states that several external factors, including the impact of COVID-19, resulted in the project being reprioritised.

Key drivers of ICT expenditure in the 2024–29 period relate to continued investment in PWC's systems capability uplift to replace legacy systems, and the growing need to manage cyber-security threats. PWC's $17.7 million forecast for recurrent ICT capex includes hardware and software replacement, field devices and other minor projects.

PWC's non-recurrent ICT capex includes the following major projects:

- new ICT applications ($2.2 million)
- cyber security ($8 million)
- Capability Uplift project ($20.8 million); and
- Operational Technology Capability Uplift ($21.6 million).

Replacement capex (repex)

PWC proposed $176.6 million for repex, representing 31% of its total gross capex. This is an increase of 17% compared to actual/estimated repex capex for the current regulatory control period. $85.0 million is related to specific planned programs including replacement of the Darwin high voltage cables, delayed completion of the Berrimah zone substation which has been largely deferred from the 2019–24 period, protection relay replacement and replacement of corroded poles in Alice Springs.

PWC also included $38 million for volumetric asset replacements reflecting reactive replacement of network assets that do not relate to a planned program of works.[50]

Capitalised overheads

PWC proposed $144.7 million for capitalised overheads in the 2024–29 period compared to $91.9 million actual/estimated capex in the current 2019–24 period, an increase of 58%. Capitalised overheads account for 25% of PWC's forecast capex. This forecast is also $65.5 million higher than our forecast for 2019–24. PWC considers that there are three drivers underlying its capitalised overhead forecasts compared to the current regulatory period:

- Low level of capitalised overheads in 2020–21; PWC largely attributed the significantly lower level of capitalised overheads in 2020–21 to lower levels of capital activity than expected due to delivery constraints.
- Change in accounting method for overheads in 2021–22; PWC has changed its treatment of shared resources and the allocation of the network and corporate overhead

48 PWC, *Revenue Proposal - Attachment 8.01 - Capital Expenditure,* January 2023, p. 77.
49 PWC, *Revenue Proposal - Attachment 8.01 - Capital Expenditure,* January 2023, p. 77.
50 PWC, *Revenue Proposal - Attachment 8.01 - Capital Expenditure,* January 2023, p. 33.

costs to the activities it performs. This change would be expected to reduce its forecast opex.
- Higher levels of direct capex from 2022–23; PWC has used our method to forecast capitalised overheads that relies on trending actual total overheads in the 2021–22 base. PWC consider that as a consequence, this results in higher capitalised overheads in the last two years of the 2024–29 regulatory period, consistent with the higher levels of direct capex in those years.

Questions

5. Do you consider PWC's capex proposal addresses the concerns of electricity consumers as identified in the course of its engagement on the proposal?

6. Do you consider that PWC has adequately engaged with customers regarding its proposed increase in property and non-network ICT capex? In particular, do you consider PWC has adequately explained the rationale for the new site expansion and consolidation at the Ben Hammond complex?

7. Do you consider PWC approach to forecasting replacement capex is appropriate and likely to produce a forecast of efficient replacement capex?

4.3.3 Contingent projects

PWC's proposal includes 5 contingent projects with a total indicative cost of $342 million. The projects relate to significant potential augmentations to PWC's network to enable dispatch of low-cost renewable generation or to meet localised new demand associated with development of specific commercial projects in the NT:

- $120.8 million for shared transmission works to transport generation from a Renewable Energy Hub in Darwin-Katherine
- $45.7 million for unlocking existing large scale renewable generation in Darwin-Katherine
- $60.8 million for the Holtze-Kowandi land development project to build distribution network infrastructure to meet demand for electricity from customers associated with a land development project committed by the NT Government in Darwin
- $69.1 million for the Middle Arm commercial development project to build distribution network infrastructure to meet demand for electricity from new industrial and commercial customers
- $45.6 million for the Wishart commercial development project to construct a new zone substation in place of the existing temporary 'Nomad' modular substation.

In our determination, we will assess whether PWC's proposed trigger events for these new contingent projects are appropriate. We may amend the wording of trigger events, if necessary, to ensure consistency across our determinations.

Our determination will not include pre-approved capex for any contingent projects. If, during the 2024–29 period, PWC considers an approved contingent project is 'triggered', a second assessment and consultation process will commence where the AER will assess under the Rules.

Question

8. Do you consider PWC's proposed contingent projects should be included as contingent projects for the 2024–29 period? Are the proposed project triggers appropriate?

4.4 Operating expenditure

Operating expenditure (opex) refers to the operating, maintenance and other non-capital expenditure incurred in the provision of network services. It includes labour costs and other non-capital costs that a prudent service provider is likely to require for the efficient operation of its network.

The Handbook sets our expectations for opex forecasts. In summary:

- the business will use our base-trend-step approach, including our standard assumptions
- step changes will be small in number and well-justified
- category specific costs will be small in number and well-justified
- there should be evidence of genuine consumer engagement.

Based on our initial assessment, PWC's opex proposal adopts our base-trend-step approach. Within this approach, a key area of focus will be its opex in the base year of 2021–22. This reflects both the concerns identified in the last revenue determination process around the efficiency of PWC's opex and the recent change in the approach to capitalising more corporate and network overheads.

PWC's opex proposal has a large number of step changes (six) totalling $52.2 million ($2023–24) in additional opex (or 12.6% of total opex forecast). These will be another key focus of our review as they potentially have a material impact on our alternative estimate of total opex.

PWC stated that it undertook an engagement program in the early development stage of its opex forecast via stakeholder feedback on a Draft Plan and consulted on the merits and drivers of an initial number of step changes.[51] It noted that its customers highlighted key priorities as being affordability, and the ability to connect established distributed energy resources such as rooftop solar as well as emerging technologies such as battery storage and electric vehicles. PWC also stated that large users, generators, and the NT Government prioritised the connection of more large-scale renewables and the transition towards decarbonisation.[52] In response to this feedback, PWC stated that it is investing in the Future Networks step change to uplift its network analysis and planning capabilities to allow it to design a future network and connect renewables safely and efficiently.[53]

PWC also stated that stakeholders expected it to improve the quality of its data and establish operational and control systems commensurate with those of a modern distribution network service provider. In response to this feedback, PWC noted that it is proposing to invest in new operational technology and data systems through the Operational Technology Capability Uplift step change.[54]

PWC noted that since the above consultation its total opex forecast increased by a net $28.6 million. PWC did not indicate in its regulatory proposal what level of consultation it undertook on this revised opex forecast or how it had considered and balanced customers competing priorities of affordability against additional actions, such as facilitating distributed energy

[51] PWC, *Attachment 9.02 Operating expenditure step changes*, 31 January 2023, p.vii.
[52] PWC, *Attachment 9.01 Operating expenditure*, 31 January 2023, p.2.
[53] PWC, *Attachment 9.01 Operating expenditure*, 31 January 2023, pages 2-3.
[54] PWC, *Attachment 9.01 Operating expenditure*, 31 January 2023, p. 3.

resource integration and improving its operational capabilities. This will be another area of focus for our assessment.

4.4.1 PWC opex proposal

PWC proposed total opex of $415.3 million ($2023–24)[55] for the 2024–29 period, or:

- $43.4 million (11.6%) more than PWC's actual/estimated opex for the 2019–24 period
- $10.6 million ($2023–24) (2.6%) more than the opex forecast we approved for the 2019–24 period.[56]

Figure 6 shows the trend in PWC total opex over time.

PWC's reported opex has decreased by 32.0% in this period from $107.8 million ($2023–24) in 2019–20 (the first year of the current regulatory period) to $73.3 million ($2023–24) in 2021–22, (PWC's proposed base year). The primary driver of this decrease is a change made by PWC in June 2021, under its existing Cost Allocation Method, to reallocate corporate and network overheads from opex to maintenance and capital project-related capex.[57] In Figure the impact of this change can be seen in the total opex columns for years 2017–18 to 2020–21, which show the amount of reported opex incurred in those years that would have been capitalised had the change been made then (i.e. the capitalisation backcast).

PWC's total opex decreased between 2019–20 and 2021–22 (the first and third years of the current regulatory period) by $8.5 million ($2023–24) or 10.4% due to cost reductions not attributable to the capitalisation changes. PWC stated these reductions were achieved as a result of targeted efficiency initiatives it has undertaken since its last regulatory determination.[58]

Total actual opex for 2021–22, PWC's proposed base year, and PWC's estimated and proposed opex going forward reflects its new approach to capitalising overheads.

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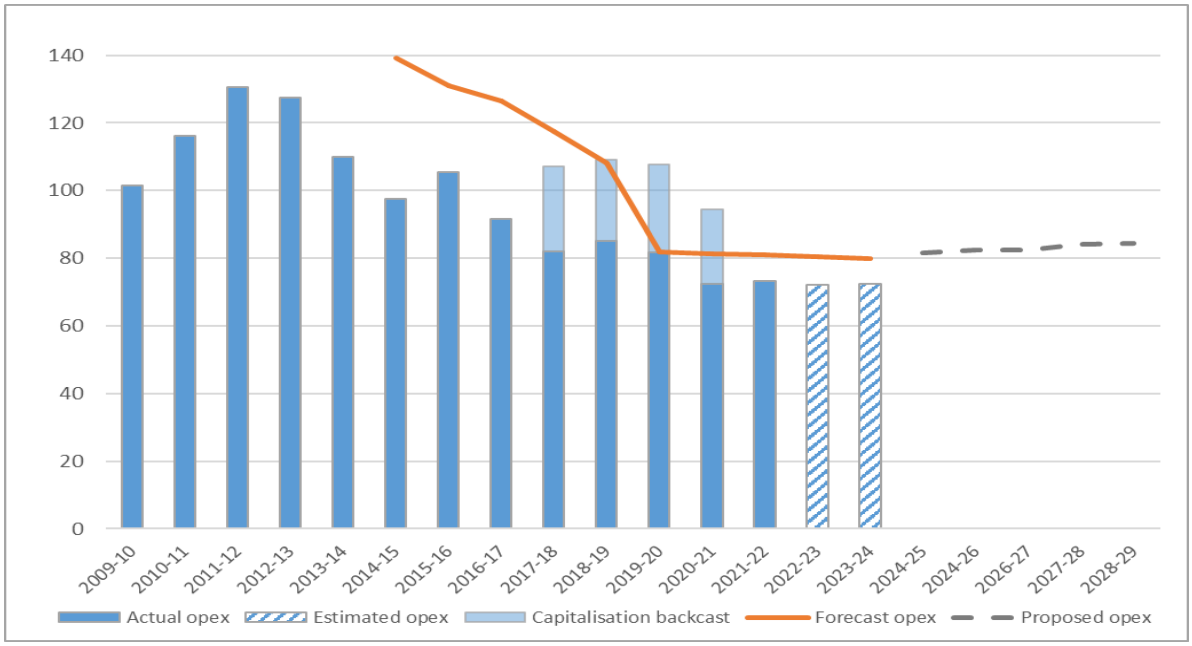
55 Including debt raising costs.

56 The comparison of PWC's actual/estimated opex for the 2019–24 period and its proposed opex for the 2024–29 period are on a like-for-like basis, removing all corporate and network overhead costs, which PWC began to capitalised from 1 July 2021. While PWC stated in its proposal that opex in the 2024–29 period is $8.0 million less than what it will spend during the current period, the basis for this is unclear. The comparison with the AER opex forecast we approved for the 2019–24 period is not on a like-for-like basis as we currently do not have sufficient information to adjust our forecast to account for PWC's change to its capitalisation policy.

57 PWC, *Attachment 9.01 Operating expenditure*, 31 January 2023, p. 9-10.

58 PWC, *Attachment 9.01 Operating expenditure*, 31 January 2023, p. 10-11.

Figure 6 PWC opex trend over time ($2023–24, million)



Source: PWC, Regulatory accounts, AER Power and Water 2019–24 Post-tax revenue model; AER analysis.
Note: In June 2021, under its existing Cost Allocation Method, PWC changed its capitalisation policy to reallocate corporate and network overheads from opex to maintenance and capital project-related capex. PWC's reported opex for 2021-22 (its proposed base year), its estimated opex for 2022-23 and 2023–24, and its proposed opex are based on this reallocation of opex to capex. The AER's opex forecast for the 2019–24 period is not on a like-for-like basis with PWC's reported, estimated and proposed opex from 2021-22 onwards as we do not have sufficient information to adjust our 2019–24 forecast to account for PWC's change to its capitalisation policy. The AER did not provide an opex forecast for the 2009-2014 regulatory period as PWC was regulated by the NT Utility Commission.

4.4.2 Key drivers of the opex proposal

PWC used a base-step-trend approach to forecast opex for the 2024–29 period.[59] This is broadly consistent with our approach to assessing opex, as outlined in our Expenditure Forecast Assessment Guideline.[60] PWC used actual opex in 2021–22 as the base to forecast ($73.3 million ($2023–24)) because "…it reflects the results of our targeted efficiency initiatives and our improvements to allocation of overhead costs…".[61]

PWC then:

- calculated the increment from its 2021-22 base year to the end of the current period ($2023–24) of -$8.9 million ($2023–24). PWC applied its forecast rate of change to do this instead of using the AER's final year increment formulae. This approach is consistent with that used by networks not subject to the Efficiency Benefit Sharing Scheme (EBSS) in the current regulatory control period.
- applied a rate of change comprised of:
  - forecast output growth, averaging 0.1% per year (-$0.4 million, $2023–24) driven by PWC's expectations of network size, maximum demand and customer numbers, in particular a forecast decline in customer numbers in 2024-25, the first year of the next regulatory period. PWC stated its approach is consistent with the AER's method.

[59] PWC, *Attachment 9.01 Operating expenditure*, 31 January 2023, p.1.
[60] AER, *Expenditure Forecast Assessment Guideline*, November 2013.
[61] PWC, *Attachment 9.01 Operating expenditure*, 31 January 2023, p.4. PWC noted that it will look to adopt 2022-23 as its base year if audited opex is available prior to the AER's final determination.

  - forecast growth in the real price of inputs, averaging 0.6% per year ($7.7 million, $2023–24) based on the wage price index forecasts from its consultant, BIS Oxford Economics. PWC did not adopt our standard approach, which is to forecast labour price growth using an average of the BIS Oxford Economics forecasts and the forecasts from our consultant.
  - forecast productivity growth, averaging 0.5% per year (-$5.3 million, $2023–24), which is consistent with our standard approach for electricity distributors.[62]

- added six step changes totalling $52.2 million ($2023–24) (or 12.6% of total opex forecast):
- $18.8 million ($2023–24) to increase network operations capabilities to industry standards and improve PWC's ability to manage existing levels of distributed energy resources (**Operational Technology Uplift**). This involves replacing existing manual systems with automated tools and systems that can remotely monitor and control the network, better manage planned and emergency outages, and optimise power-flow management, fault location analysis, fault isolation and fault restoration capabilities.[63]
  - $14.1 million ($2023–24) to integrate future growth in distributed energy resources into PWC's network, including the expansion of rooftop solar and new large scale renewable sources expected as a result of the NT Government's 50% renewables energy target for electricity supply by 2030 and the Darwin-Katherine Electricity System Plan (**Future Network**).[64]
  - $6.0 million ($2023–24) to increase resourcing and expertise to meet the regulatory requirements PWC faces from its transition in 2019 to the NT NER, in particular obligations related to relating to the Network Technical Code, managing and coordinating consultation and regulatory investment tests and consultation on NT NER matters (**Regulatory Obligations**).[65]
  - $4.9 million ($2023–24) to account for forecast increases to insurance premiums reflecting a tighter market based on increased risk (Insurance Premiums).[66]
  - $4.4 million ($2023–24) to uplift PWC's capability to meet the minimum compliance requirements to move to the Security Profile 2 cyber security milestone as required by the Security Legislation Amendment (Critical Infrastructure) Act 2021 and the Security Legislation Amendment (Critical Infrastructure Protection) Act 2022 (Cyber Security).[67]
  - $4.0 million ($2023–24) to cover migration costs for software only offered in the cloud format (Cloud Migration).[68]
- added $3.3 million ($2023–24) for debt raising costs.

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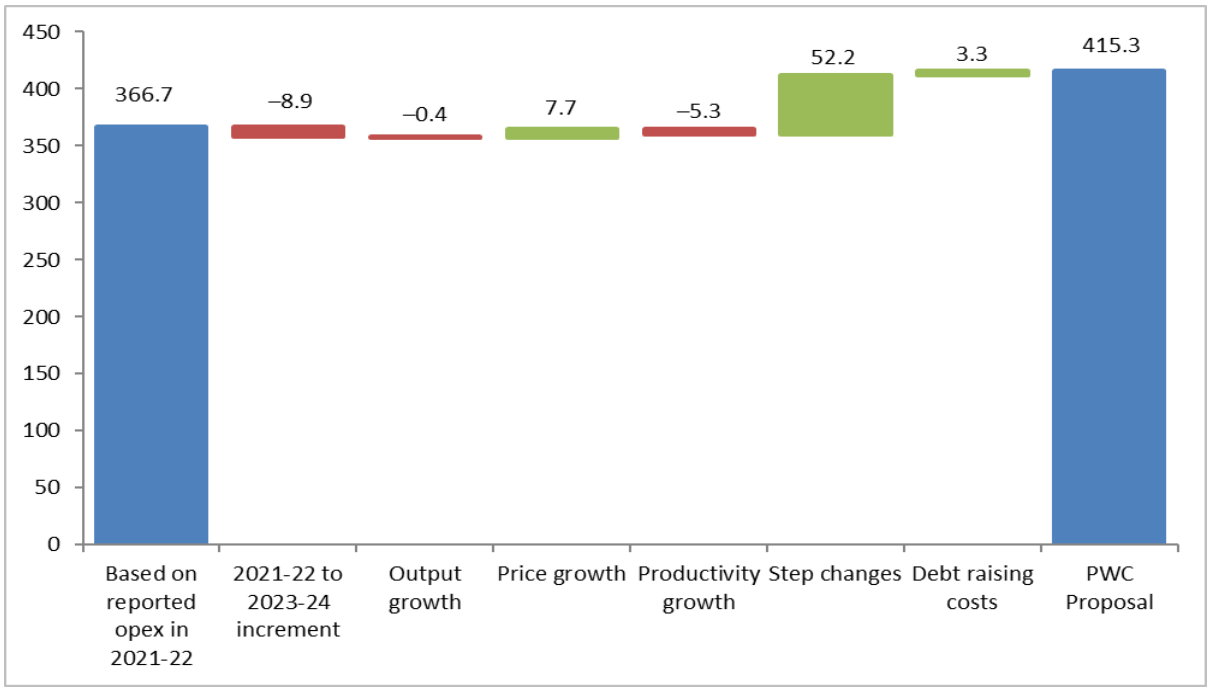
62 AER, *Final decision paper – Forecasting productivity growth for electricity distributors,* March 2019.
63 PWC, *Attachment 9.02 Operating expenditure step changes*, 31 January 2023, p. 18.
64 PWC, *Attachment 9.02 Operating expenditure step changes*, 31 January 2023, pages 23-24.
65 PWC, *Attachment 9.02 Operating expenditure step changes*, 31 January 2023, pages 6-7.
66 PWC, *Attachment 9.02 Operating expenditure step changes*, 31 January 2023, pages.14-15.
67 PWC, *Attachment 9.02 Operating expenditure step changes*, 31 January 2023, p.1.
68 PWC, *Attachment 9.02 Operating expenditure step changes*, 31 January 2023, p. 18.

Figure 7 shows how each of these components contributes to PWC total opex forecast.

Figure 7 Breakdown of PWC's opex forecast ($2023–24, million)



Source: PWC, *Attachment 9.03 – 2024–29 SCS Opex Model*, 31 January 2023; AER analysis.

Question

9. Do you consider PWC's forecast opex for the 2024–29 period reasonably reflects the efficient costs of a prudent operator?

10. Do you consider PWC's opex in its base year of 2021–22 provides an efficient basis for forecast base opex for the 2024–29 period?

11. Do you support the step changes, particularly the operational technology capability uplift and future network programs, and consider that they meet stakeholder expectations, including on affordability?

12. Do you consider PWC's opex proposal adequately addresses the issues identified by electricity customers and other stakeholders during its engagement on the 2024–29 proposal?

4.5 Corporate income tax

The building block approach to calculating the annual revenue includes an amount for the estimated cost of corporate income tax payable by the business. We forecast tax in accordance with the requirements of the Rules.[69]

Using the approach set out in the post-tax revenue model, PWC proposes a forecast corporate income tax amount of $1.1 million ($2023–24) for the 2024–29 period. We note that PWC has:

[69] NER, cl. 6.5.3.

- forecast around 25% of its capex to be immediately expensed for the 2024–29 period. This is broadly consistent with the proportion of actual capex that PWC has claimed for immediate expensing over the 2019–24 period, however, it is somewhat higher than previously forecast for that period.
- adopted the diminishing value method for tax depreciation to all future capex, except for a limited number of assets which must be depreciated using the straight-line depreciation method under the tax law.

We will assess the appropriateness of the proposed amounts of immediate expensing and capex allocated for straight-line depreciation, based on the approach we have taken in recent revenue determinations.

Question

13. Do you have views on the approach to corporate income tax in PWC's 2024–29 proposal?

5 Incentive schemes

Incentive schemes are a component of incentive-based regulation and complement our approach to assessing efficient costs. They provide important balancing incentives under network determinations, encouraging businesses to pursue expenditures efficiencies while maintaining the reliability and overall performance of its network. Our Framework and Approach Paper for PWC noted our intention to apply the four incentive schemes and allowances in the 2024–29 period that are set out below. PWC agreed with this approach in its 2024–29 proposal.

- **Efficiency benefit sharing scheme** (EBSS): provides continuous incentive to pursue efficiency improvements in opex and provide to fairly share these between a business and network users. Consumers benefit from improved efficiencies through lower opex in regulated revenues for future periods.
  The EBSS does not apply to PWC in the current 2019–24 regulatory control period because they did not rely on revealed costs in making our opex forecast for this period and were uncertain whether we would rely on revealed costs to forecast opex in the 2021-27 period.[70] We will apply the EBSS over the 2024–29 period, if we are satisfied that we can rely on revealed costs to forecast PWC's opex allowance in the next regulatory control period.
  PWC proposed to apply the EBSS in the coming regulatory control period. This is because it noted it does not propose to adjust its revealed costs in the current regulatory period and as a result revealed costs could be used as base opex in forecasting its 2024–29 opex allowance.[71] As a result, it considered applying the EBSS remains appropriate and should ensure that it can fairly share efficiency gains and losses.

Question
14. Do you consider applying the EBSS to PWC in the 2024–29 period would provide it with a continuous incentive to reduce its opex?

- **Capital expenditure sharing scheme** (CESS): This incentivises PWC to undertake efficient capex throughout the period by rewarding efficiency gains and penalising efficiency losses. PWC is forecasting a capex overspend of $6.9 million ($2023–24) for 2019–24. Under the CESS, this results in a forecast revenue decrement of $2.7 million ($2023–24) to be applied during the 2024–29 period.[72]
- **Demand management innovation allowance Mechanism (DMIAM)/ Demand management innovation scheme** (DMIS): encourages PWC to pursue demand side alternatives to opex and capex. The DMIS and DMIAM fund research, development and implementation of demand management projects that have the potential to reduce long-term network costs. Projects to be funded under the DMIAM and DMIS must meet the approval criteria in both schemes.[73]

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70 AER, *Final Decision Overview*, April 2019, p. 38.
71 PWC, *Attachment 12.01 Incentive schemes*, 31 January 2022, p. 7.
72 PWC's CESS overspend of $6.9 million contrasts to PWC's reported estimated capex underspend of $26.6 million in the 2019–24 regulatory period because of the modelling inputs in the CESS model. The CESS model applies different capex inputs than that used by PWC to estimate its capex underspend of $26.6 million. These differences include an adjustment for capital contributions and disposals, as well as different discount rates for each year of the 2019–24 regulatory period.
73 AER, *Demand Management Incentive Scheme for Electricity distribution network service providers*, December 2017, clause 2. AER, *Demand Management Innovation Allowance Mechanism Electricity distribution network service providers*, December 2017, clause 2.

6 Network Pricing

In the Framework and Approach paper we published last year, we set out our intended classification of the distribution services PWC provides its customers:[74]

Standard control services are those that can only be provided by PWC, and are common to most, if not all, of PWC' customers. The costs of providing these services are captured in the building block revenue determination (we discussed in section 4) and shared between all customers.

Alternative control services cost are recovered from users of those services only., which are either:

- services that can only be provided by PWC, but will only be required by some of its customers, some of the time; or
- services that can be purchased from PWC, but which can also—or have the potential to be—purchased from a competing provider.

PWC has proposed changes in its tariffs in its new tariff structure statement (TSS), which sets out the tariff structures through which PWC will recover its regulated revenue for standard control services. It has also proposed a number of changes to prices for alternative control services.

6.1 Control mechanisms

A distribution determination must impose controls over the prices and/or revenues of direct control services (standard and alternative control services). The form and formulae of the control mechanisms in our distribution determination are set out in the relevant Framework and Approach – PWC accepted these. There are only limited circumstances in which the AER can depart from this.

In our distribution determinations, we provide further definition for elements of these control mechanisms. We also define other mechanisms that are not required to be incorporated in the Framework and Approach, such as the side constraint and unders/overs mechanisms. In November 2022, we published our final decision on the side constraint mechanism that will be applied in our draft decisions, following stakeholder engagement.[75]We are interested in stakeholder's feedback in relation to the aspects detailed below.

6.1.1 Quoted services price cap control formula

As set out in section 6.3.1, quoted services prices are determined at the time of a customer's enquiry and reflect each customers' individual requirements. They are subject to a price cap form of control based on a build-up of inputs such as labour, contactor costs, materials.

In our framework and approach paper, we identified the quoted services price cap control formulae was inconsistently applied across jurisdictions. As such, we proposed the inclusion of margin and tax components to reflect the desirability of consistency between regulatory arrangements for similar services, as well as cost reflectivity. However, we did not define the margin and tax components. This will be done in our distribution determinations.

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74 AER, *Framework and approach PWC (NT) Regulatory control period commencing 1 July 2024*, July 2022

75 https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/annual-pricing-process-review.

The distributors have proposed various definitions for the margin and tax components. Some distributors proposed the margin to be the nominal WACC either for a particular year or an average of the forecast nominal WACC over the 2024–29 period (at present, these values are around 6%). Others have proposed a fixed value margin set close to the forecast nominal WACC, such as 6%.

For the tax component, a pragmatic approach would be to set the rate at the corporate tax rate of 30%. However, some distributors have proposed the tax rate could be set at a rate that better reflects the actual tax payable, which may differ from the corporate tax rate. We are interested in stakeholder views on the appropriate definitions for these components.

6.1.2 Metering form of control

The AEMC is currently undertaking a review of the regulatory framework for metering services which includes an indicative timeline to retire legacy meters by 2030. The AEMC's final report is due prior to our draft decision on PWC's 2024–29 determination.

The AEMC's review does not apply to PWC's network as retail competition does not exist for metering services in the Northern Territory. However, we generally seek consistency in the form of control for services across all jurisdictions. As such, if we consider a material change in circumstances has occurred to review the form of control applicable to other jurisdictions as a result of the AEMC's review, we may seek to reconsider PWC's form of control for metering services as well. We are interested in stakeholder views on whether we should review the current form of control for consistency with other jurisdictions where applicable.

Questions

15. What do you consider to be an appropriate rate for a margin recovered on quoted services? Should this be set at the average nominal WACC for the period, or some fixed number (e.g., 6%)?

16. Do you consider the tax component of the quoted services price control formulae should be set at the corporate tax rate of 30%, or an alternative rate?

17. Do you consider the AER should review the current price cap form of control for metering services for consistency with other jurisdictions following the AEMC's decision?

18. More generally, do you have any comments on PWC's proposed control mechanisms?

6.2 Tariff structure statement

As part of their regulatory proposal, distributors are required to submit to us a tariff structure statement (TSS).[76] The TSS will apply for the 5-year regulatory control period. A TSS must set out a distributor's:

- proposed network tariffs
- network tariff structures
- charging parameters

[76] This requirement came out of the AEMC 2014 rule change for distribution pricing.

- policies and procedures the distributor will use to assign customers to network tariffs or reassign customers from one network tariff to another.

The tariff structures provide the charging framework through which distributors collect their annual allowed revenue. Once approved, a TSS becomes a compliance document against which the AER assesses the distributor's annual pricing proposals. TSSs are also how distributors progressively reform their network tariffs for standard control services to better signal to customers the cost of providing network services. As customers ultimately pay for upgrades to network services, tariff reform that encourages more efficient use of the network will lead to lower network costs for all customers.

We note that network tariffs are targeted at retailers who package them with other costs, such as the cost of wholesale energy, in their service offerings to electricity customers. As such, the retail electricity tariff may not directly reflect the network tariff. Additionally, in the Northern Territory, retail customers are even less exposed to network charges because retail bills are regulated by the Northern Territory Government's Electricity Pricing Order (pricing order).[77]

This is the third regulatory period for which PWC has submitted a TSS and it continues the process of incremental tariff reform.

Based on our high-level review we consider PWC has provided a TSS that meets our expectations. However, we will closely review the flat tariff it proposed for its largest energy users. While this proposed tariff responds to customer feedback, we will assess whether the tariff structure satisfactorily reflects PWC's cost to serve those customers. We are looking for feedback on whether PWC's flat tariff for HV customers consuming more than 10,000 GWh pa is a reasonable reflection of network costs imposed by those users.

Question

19. Do you consider PWC has demonstrated its proposed super users tariff for HV customers consuming more than 10,000 GWh pa meets the requirements of the pricing principles?

20. Do you consider there are any aspects of PWC's proposed TSS that requires adjustment?

6.2.1 Expectations for tariff structure statements – Better Resets Handbook

The Handbook sets out our expectations for TSSs:

- **Demonstrate progression of tariff reform consistent with the network pricing objective and pricing principles set out in the Electricity Rules:** PWC's progress is focussed on segmenting its low voltage smart tariffs to support retail competition and pricing order reform, and shifting the default tariff for customers consuming below 750MWh to a time of use (TOU) tariff.
- **Demonstrate incorporation of its tariff strategy in its overall business plan:** PWC explained how its tariff strategy linked to its future network strategy, its investment in

[77] The pricing order sets prices and pricing structures for all customers consuming less than 750 MWh of electricity per annum.

dynamic operating envelope capability and the potential to use demand management tools.

- **Demonstrate significant stakeholder engagement and broad stakeholder support:** PWC conducted forums with a representative panel of residential customers but predominantly engaged with the Northern Territory Government and retailers, as most retail customers face regulated retail tariffs.
- **Demonstrate insight into and management of any adverse customer impacts:** PWC modelled customer bill impacts but noted its small customers would not be impacted by the proposed changes due to the pricing order. Its modelling showed that most HV customers consuming less than 10,000 GWh pa would face bill increases while most HV customers consuming more than 10,000 GWh pa would face bill decreases.

6.2.2 Progress on tariff reform

PWC proposed:

- splitting its low voltage smart meter tariff (Tariff 3) into three tariffs: residential, small commercial (<160 MWh pa) and medium-sized commercial (>160 MWh pa) to facilitate pricing order reform
- removing demand charges for residential, small and medium commercial customers, introducing instead a TOU structure with a new super off-peak period between 9am and 3pm with a zero network charge
- reducing the peak demand period for large customers by three hours
- introducing revenue recovery for large customers during the 'off season' instead of only during the 'on season'
- introducing a new, flat 'super user' tariff for customers connected to the high voltage network consuming above 10,000 MWh pa.

6.2.3 Electric vehicles

The uptake of electric vehicles poses opportunities but also challenges for electricity networks. PWC's proposed tariff for residential customers with smart meters (incorporating peak, off-peak and super off-peak charging windows) aims to encourage customers with electric vehicles to shift electric vehicle charging to periods of lower network load. It is not introducing electric vehicle -specific tariffs.

Due to PWC's removal of demand charges from its proposed small and medium commercial customer tariffs, electric vehicle fast charging stations consuming less than 750MWh pa would no longer face demand charges and would be able to access TOU tariffs instead. Those consuming over 750MWh would be assigned to demand tariffs.

6.2.4 Two-way pricing

Under the AEMC's Access, pricing and incentive arrangements for distributed energy resources rule change, distributors can now introduce two-way pricing (providing rewards

and charges for customers export electricity to the grid).[78] PWC did not propose to introduce two-way pricing in the 2024–29 regulatory period.

All distributors are required to submit an export tariff transition strategy as part of their TSSs, regardless of whether they propose to introduce two-way pricing. Our Export Tariff Guidelines set out what distributors should include in their export tariff transition strategy.[79]

PWC submitted that increasing uptake of rooftop solar will lead to the number of 'minimum demand events' increasing over time, particularly in 2028 in the Darwin Katherine region. In response, PWC undertook a business case assessment of options. While PWC identified dynamic operating envelope (DOE)[80] capability as the best option to meet its needs it also proposed to trial two-way pricing during the 2024–29 period.[81] [82]

6.3 Alternative control services

Alternative control services are requested, and paid for, only by customers using those services.

6.3.1 Ancillary network services

Ancillary network services are non-routine services provided to individual customers on request. These services are either charged on a fee or quotation basis. Fee-based services tend to be homogeneous in nature and can be costed in advance of supply with reasonable certainty. Quoted service prices are determined at the time of a customer's enquiry and reflect each customers' individual requirements.

Prices for these services are developed using a cost build up. In March 2022, we published a standardised model for use by electricity distributors to develop their prices. The standardised model streamlines our assessment, increases consistency, and provides stakeholders greater scope to engage in our distribution determinations.

Labour costs make a large proportion of ancillary network service costs. Another significant cost element is the time taken to perform the service, including travel time. Our assessment includes review of these elements for the most requested ancillary network services. We also benchmark proposed labour rates and prices for fee-based services across distribution networks as well as with prices from the current regulatory period.

Ancillary network services are regulated by price cap. Our distribution determination sets first year price caps for fee-based services, labour escalators used to escalate prices for the remaining years of the regulatory period, and capped labour rates used in quoted services.

6.3.1.1 Distributors' engagement and service offering

PWC had no engagement with stakeholders for its proposed ancillary network services.

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[78] On 12 August 2021 the AEMC made a new rule change, *Access, pricing and incentive arrangements for distributed energy resources*, to integrate distributed energy resources such as small-scale solar and batteries more efficiently into the electricity grid and to allow two-way pricing.
[79] AER, *Export tariff Guidelines*, May 2022, p. 6.
[80] Dynamic operating envelopes are where import and export limits can vary over time and location. Dynamic rather than fixed export limits could enable higher levels of energy exports from customers' solar and battery systems by allowing higher export limits at times when there is more hosting capacity on the local network.
[81] PWC, *Attachment 8.08 - Future Network Strategy* – 31 January 2023, p. 26.
[82] PWC, *Attachment 8.08 – Future Network Strategy* – 31 January 2023, p. 28.

PWC proposed to add two new fee-based services: the installation of a modem on a smart ready meter and an after-hours fee for all non-reconnection services. The fee for the after-hours service is 1.23 times the equivalent business hours charge[83]. It also proposed to add former standard control services as quoted services because they were reclassified in our framework and approach decision[84].

6.3.1.2 Benchmarking labour rates

Labour rates are a key cost input for ancillary network service prices. The distributors proposed labour rates are assessed against benchmark efficient maximum labour rates developed using a bottom-up cost build up across six categories (administration, field worker, technical specialist, engineer, senior engineer, and engineering manager)[85].

The benchmark rates include increases to the superannuation allowance and the vehicle allowance because of the changes in the superannuation guarantee and inflation. The 'transmission line design engineer' have been removed from the engineer benchmark category as this occupation is not an appropriate benchmark for distributors' engineers.

PWC's proposed labour rates are mostly higher than our preliminary maximum efficient benchmark rates (these preliminary rates are based on inputs which will be updated for our draft decision). These labour rates are also higher than PWCs current approved rates (we escalate the current rates to compare them on a like-for-like basis). Our draft decision on PWC's labour rates will be dependent on the updated maximum efficient benchmark rates we determine after applying the most recent inputs.

6.3.1.3 Benchmarking fee-based services prices

Proposed fee-based services are also benchmarked against prices from the current regulatory control period as well as similar services supplied by other distributors. Cost inputs may also be benchmarked.

PWC proposed significant price increases for its fee-based services relative to other distributors. In response to our information request, it explained that the three main drivers for the price increases were: higher inflation, labour costs, and an increase in the overheads allocated to fee-based services.[86] The network and corporate overhead assumptions increased from 37.38% in the current period to the proposed 83.08%, reflecting PWC's approved cost allocation methodology.

Questions

21. Do you consider that sufficient justification has been provided in the provision of new services?

22. Do you consider the proposed labour rates and fee-based prices to be reasonable?

23. Do you consider the allocation of corporate overheads to ancillary network services to be reasonable?

[83] PWC, *Attachment 13.10 – ACS attachment Fee-based and quoted services*, 31 January 2023, p. 5.
[84] PWC, *Attachment 13.10 – ACS attachment Fee-based and quoted services*, January 2023, p. iii.
[85] Marsden Jacob Associates, *Review of ancillary network services: Advice to the AER*, September 2018.
[86] PWC, *Response to information request IR002*, Received 24 February 2023

6.3.2 Metering

PWC is responsible for providing metering services. These services include the installation and replacement of meters, as well as the operation and maintenance of meters. As the Northern Territory is not subject to the Power of Choice reforms, PWC is responsible for these activities for both 'legacy' interval and accumulation meters, as well as 'smart' remote-red meters.

We are interested in stakeholder's feedback in relation to the aspects detailed below. As PWC is not subject to the Power of Choice reforms, the AEMC's current review of the regulatory framework for metering services is not relevant for PWC. Our consideration of these aspects may reflect on outcomes of the AEMC's review as similar concepts are considered, and we seek consistency across all jurisdictions where possible to reduce complexity for stakeholders and consumers.

6.3.2.1 Smart meter roll-out

PWC has proposed to continue its current trajectory of the roll-out of smart meters across its network. This includes an intended completion of the rollout in the 2029–34 regulatory control period, with >70% of customers having smart meters in 2029.

Benefits of smart meters include the ability to remotely read the meters, access to new technologies such as solar and batteries, and better data for both users (for improving usage behaviour) and the network (for power quality management). Over time the operating and maintenance of these meters is expected to be lower, particularly due to the removal of site visits for meter reads and other activities.

These benefits are to be balanced with the costs of smart meter installation. The per unit costs of smart meters is generally higher than most historical meters. In addition, some of the meters being replaced are past their asset life and may not otherwise need to be replaced. Many sites also require some remediation before smart meters can be installed (including asbestos removal). This leads to higher overall metering charges in the short-term for consumers.

We are interested in stakeholder views on whether the proposed timeframe for the rollout of smart meters is appropriate. Our initial view is that the program proposed by PWC is a reasonable compromise between minimising cost impact on consumers while achieving the benefits available through smart meters.

Questions

24. Do you consider PWC's proposed rate of smart meter rollout appropriate?

25. Do you consider the cost recovery framework of combining legacy meter and smart meter cost recovery appropriate?

26. More generally, do you have any comments on PWC's proposed cost recovery for legacy metering services?

Summary of questions

Consumer engagement

1. To what extent do you consider you were able to influence the topics engaged on by PWC? Please give examples.
2. Do the key themes from PWC's engagement resonate with your own preferences? Are there additional issues you would like to see influence PWCs proposal and our assessment of the proposal?
3. Do you think PWC has engaged meaningfully with consumers on all key elements of its 2024–29 proposal? Are there any key elements that require further engagement?

Regulatory asset base

4. Do you have views on PWC's proposed depreciation approach, particularly the updates to standard lives for its leases asset classes and the inclusion of a new asset class for batteries, as set out in its 2024–29 proposal?

Capital expenditure

5. Do you consider PWC's capex proposal addresses the concerns of electricity consumers as identified in the course of its engagement on the proposal?
6. Do you consider that PWC has adequately engaged with customers regarding its proposed increase in property and non-network ICT capex? In particular, do you consider PWC has adequately explained the rationale for the new site expansion and consolidation at the Ben Hammond complex?
7. Do you consider PWC approach to forecasting replacement capex is appropriate and likely to produce a forecast of efficient replacement capex?

Contingent Project

8. Do you consider PWC's proposed contingent projects should be included as contingent projects for the 2024–29 period? Are the proposed project triggers appropriate?

Operating expenditure

9. Do you consider PWC's forecast opex for the 2024–29 period reasonably reflects the efficient costs of a prudent operator?
10. Do you consider PWC's opex in its base year of 2021–22 provides an efficient basis for forecast base opex for the 2024–29 period?
11. Do you support the step changes, particularly the operational technology capability uplift and future network programs, and consider that they meet stakeholder expectations, including on affordability?
12. Do you consider PWC's opex proposal adequately addresses the issues identified by electricity customers and other stakeholders during its engagement on the 2024–29 proposal?

Corporate income tax

13. Do you have views on the approach to corporate income tax in PWC's 2024–29 proposal?

Incentive schemes and allowances

EBSS

14. Do you consider applying the EBSS to PWC in the 2024–29 period would provide it with a continuous incentive to reduce its opex?

Pricing

Control mechanisms

15. What do you consider to be an appropriate rate for a margin recovered on quoted services? Should this be set at the average nominal WACC for the period, or some fixed number (e.g., 6%)?
16. Do you consider the tax component of the quoted services price control formulae should be set at the corporate tax rate of 30%, or an alternative rate?
17. Do you consider the AER should review the current price cap form of control for metering services for consistency with other jurisdictions following the AEMC's decision?
18. More generally, do you have any comments on PWC's proposed control mechanisms?

Tariff structure statement

19. Do you consider PWC has demonstrated its proposed super users tariff for HV customers consuming more than 10,000 GWh pa meets the requirements of the pricing principles?
20. Do you consider there are any aspects of PWC's proposed TSS that requires adjustment?

Ancillary network services

21. Do you consider that sufficient justification has been provided in the provision of new services?
22. Do you consider the proposed labour rates and fee-based prices to be reasonable?
23. Do you consider the allocation of corporate overheads to ancillary network services to be reasonable?

Metering

24. Do you consider PWC's proposed rate of smart meter rollout appropriate?
25. 25. Do you consider the cost recovery framework of combining legacy meter and smart meter cost recovery appropriate?
26. 26. More generally, do you have any comments on PWC's proposed cost recovery for legacy metering services?

Shortened forms

Terms	Definition
ACS	alternative control services
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulatory
ASP	Accredited Service Provider
capex	capital expenditure
CCP26	Consumer Challenge Panel, sub-panel 26
CESS	capital expenditure sharing scheme
CSIS	customer service incentive scheme
DER	Distributed Energy Resources
DMIAM	demand management innovation allowance mechanism
DMIS	demand management incentive scheme
DNSP or distributor	Distribution Network Service Provider
DUoS	Distribution Use of System Charges
EBSS	efficiency benefit sharing scheme
ECA	Energy Consumers Australia
ENA	Energy Networks Australia
ESB	Energy Security Board
F&A	framework and approach
GSL	guaranteed service level
ICT	information and communication technologies
NEL	National Electricity Laws
NEM	National Electricity Market
NEO	National Electricity Objectives
NER	National Electricity Rules
opex	operating expenditure
PIAC	Public Interest Advocacy Centre
RAB	regulated asset base
repex	replacement expenditure
SAIDI	system average interruption duration index
SAIFI	system average interruption frequency index
SAPS	stand-alone power systems
SCS	standard control service
Service classification guideline	Electricity distribution service classification guideline 2018
STPIS	service target performance incentive scheme
VCR	value of customer reliability
WACC	weighted average cost of capital