

Draft Decision

Essential Energy

Electricity Distribution

Determination 2024 to 2029

(1 July 2024 to 30 June 2029)

Attachment 6

Operating Expenditure

September 2023

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Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601
Tel: 1300 585 165

AER reference: AER212495

Amendment record

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6 Operating expenditure

Operating expenditure (opex) refers to the operating, maintenance and other non-capital expenses incurred in the provision of network services. Forecast opex for standard control services is one of the building blocks we use to determine a service provider's annual total revenue requirement.

This attachment outlines our assessment of Essential Energy (Essential)'s proposed opex forecast for the 2024–29 regulatory control period.

6.1 Draft Decision

Our draft decision is to accept Essential's total opex forecast of \$2,323.8 million (\$2023–24), including debt raising costs, for the 2024–29 regulatory control period. Our alternative estimate of \$2,284.8 million (\$2023–24) is not materially different (\$39.0 million, \$2023–24, or 1.7% lower) from Essential's total opex forecast proposal. Therefore, we consider Essential's total opex forecast reasonably reflects the opex criteria, having regard to the opex factors.¹

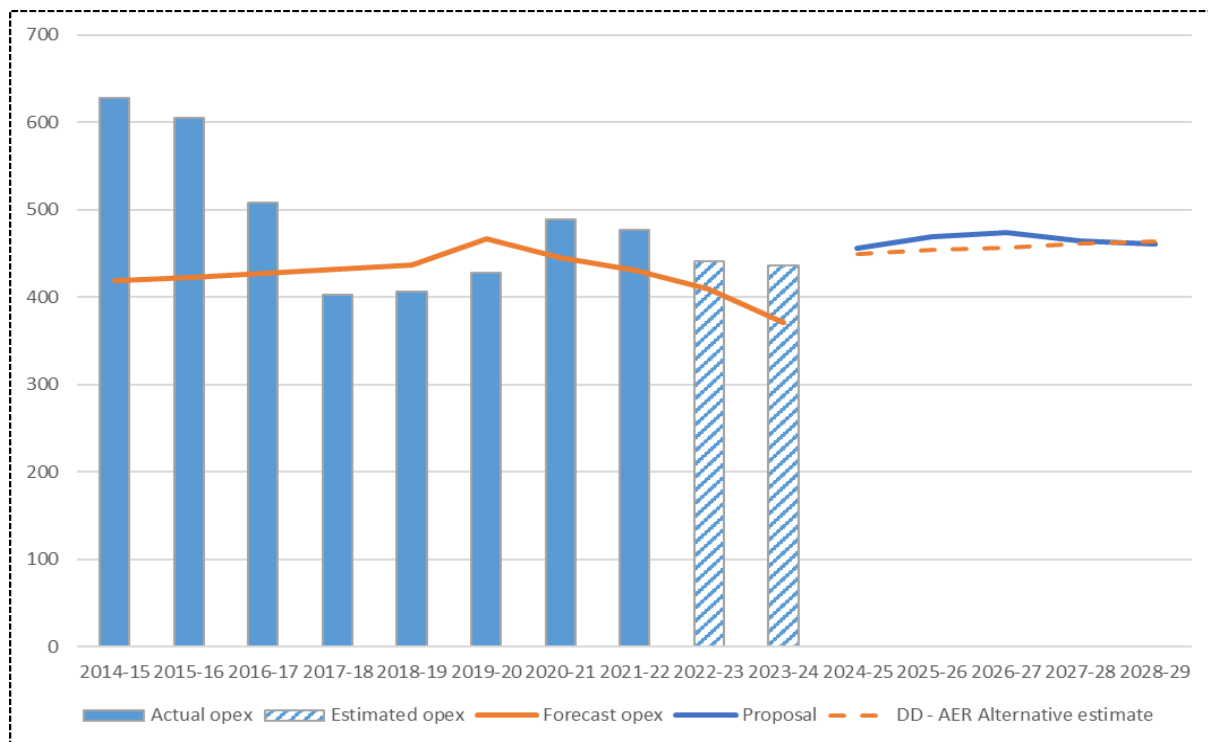
Our draft decision, which is the same as Essential's proposed total opex forecast is:

- \$53.3 million (\$2023–24) or 2.3% higher than Essential's actual (and estimated) opex in the 2019–24 regulatory control period.
- \$201.8 million (\$2023–24) or 9.5% higher than the opex forecast we approved in our final decision for the 2019–24 regulatory control period.

In Figure 6.1 we compare our alternative estimate of opex to Essential's proposal for the next regulatory control period. We also show the forecasts we approved for the last two regulatory control periods and Essential's actual and estimated opex over these periods.

¹ NER, cl. 6.5.6(c) and cl. 6.5.6(e).

Figure 6.1 Historical and forecast opex (\$2023–24)



Source: Essential Energy, *Economic benchmarking – Regulatory Information Notice response 2009–22*; AER, *Final decision PTRM 2009–14*; AER, *Final decision 2014–19 PTRM*; AER, *Final decision 2019–24 PTRM and Opex model*; Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023; AER analysis.

Note: This is annual reported and forecast opex including debt raising cost but excluding movements in provisions.

Table 6.1 sets out Essential’s opex proposal that we accept in this draft decision, our alternative estimate, and the differences between these forecasts.

Table 6.1 Comparison of Essential’s proposal and our draft decision on opex (\$million, 2023–24)

	Essential’s proposal and AER draft decision	AER alternative estimate	Difference
Base (reported opex in 2022–23)	2190.7	2177.0	-13.8
Base year non-recurrent efficiency gains	-	196.7	196.7
Base year adjustments	-	-	-
Remove category specific forecasts	-13.7	-0.1	13.6
Final year increment	4.3	-192.3	-196.5
Trend: Real price growth	46.6	43.6	-3.0
Trend: Output growth	44.0	48.0	4.0
Trend: Productivity growth	-32.9	-32.9	-0.0

	Essential's proposal and AER draft decision	AER alternative estimate	Difference
Total trend	57.8	58.7	0.9
Cloud computing	12.3	–	–12.3
Insurance	14.7	–	–14.7
DER/Data Enablement	31.7	20.0	–11.7
GSL	6.5	6.5	–
Property and fleet	–8.0	–8.0	–0.0
Total Step changes	57.3	18.5	–38.7
Category specific forecasts	–	–	–
Total opex (excluding debt raising costs)	2296.4	2258.5	–37.8
Debt raising costs	27.5	26.3	–1.2
Total opex (including debt raising costs)	2323.8	2284.8	–39.0
Percentage difference			–1.7%

Source: Essential, *9.03.07 Standard Control Operating Expenditure Model*, January 2023; AER analysis.

Note: Numbers may not add up to total due to rounding. Differences of '0.0' and '–0.0' represent small variances and '–' represents zero.

While there is not a material difference between our alternative estimate of total opex and Essential's proposal, we have arrived at our alternative estimate in a different way to Essential. The key difference between Essential's opex proposal, which we have accepted, and our alternative estimate is due to step changes. We have included a lower total forecast amount (\$18.5 million, \$2023–24) compared to Essential's proposal (\$57.3 million, \$2023–24). We have not accepted the cloud computing and insurance step changes. We have also adjusted the DER/Data Enablement step change. We discuss this further in section 6.4.

Essential is one of the first two businesses to participate in the early signal pathway process. As part of this process, Essential provided us with early access to data and information relevant to the expectations set out in our Better Resets Handbook (the Handbook).² In turn, we and Consumer Challenge Panel 26 (CCP26) provided feedback through a check-in prior to Essential submitting its regulatory proposal. At the check-in, we provided feedback indicating where the Handbook expectations were likely to be met, or where more work or adjustments were needed to meet these expectations.

While Essential did not incorporate all of our feedback in its proposal, our alternative estimate of total opex forecast is not materially different from that proposed by Essential.

² AER, [Better Resets Handbook – Towards consumer-centric network proposals](#), December 2021, pp. 24–29.

Table 6.2 provides our assessment of Essential’s proposal against the opex expectations included in the Better Reset Handbook.³

Table 6.2 Assessment of proposal against Better Reset Handbook opex expectations

Opex expectations	Our view about how the expectations have been met
1. Opex forecasting approach	Essential broadly applied our standard base-trend-step approach to forecast opex for the 2024–29 period but did not adopt our approach to estimate final year opex in the current period (2019–2024) – the final year equation. As a result, Essential’s opex forecast is not consistent with the opex forecast used in the EBSS.
2. Base opex	Essential used 2022–23 as the base year. Audited actual opex for this year is not yet available. For the final decision, we will update the base year opex estimate used in the draft decision. As discussed below, we consider Essential’s opex in the base year (2022–23) is not materially inefficient. As a result, we have not applied an efficiency adjustment.
3. Trend	Essential applied our standard approach to forecast the opex rate of change or trend growth forecast for price, output and productivity growth.
4. Step changes	Essential proposed five step changes, representing 2.5% of total forecast opex. We consider this does not meet our expectation of few or no proposed step changes, but in aggregate, the step change in costs is not material. We have undertaken a targeted review of the step change related to Essential’s Consumer Energy Resources (CER) integration strategy for data enablement (DER/Data Enablement). As discussed below, we have not accepted the cloud computing and insurance step changes. We have also adjusted the amount proposed for DER/Data Enablement step change.
5. Category specific forecasts	Essential applied our standard approach to forecast debt raising costs.
6. Genuine consumer engagement on operating expenditure forecasts	We consider Essential has demonstrated a genuine approach to consumer engagement on to its opex proposal. Submissions generally considered that Essential conducted a comprehensive and well executed engagement program in terms of breadth. However, they noted the depth of engagement had not been equally impressive.

Source: AER analysis

³ AER, *Better Rests Handbook – Towards consumer-centric network proposals*, December 2021, pp. 24–29.

6.2 Essential’s proposal

Essential applied a “base-step-trend” approach to forecast opex for the 2024–29 regulatory control period, largely consistent with our standard approach.⁴

In applying our base step trend approach to forecast opex, Essential:⁵

- used reported opex in 2022–23 as the base from which to forecast (\$438.1 million (\$2023–24) or \$2,190.7 million (\$2023–24) over the next regulatory control period)
- adjusted its total base forecast opex by removing \$2.7 million (\$2023–24) of costs relating to demand management innovation allowance mechanism / demand management incentive scheme (DMIAM/DMIS), accounted as category specific opex
- added an estimate of the difference between the base year opex and the opex it will incur in the final year of the current regulatory period, increasing opex by \$0.9 million (\$2023–24)
- applied its overall rate of change forecast to its final year adjusted opex estimate, increasing opex by \$57.8 million (\$2023–24). This included:
 - output growth (\$44.0 million)
 - price growth (\$46.6 million)
 - productivity growth (–\$32.9 million)
- added five step changes totalling \$57.3 million (\$2023–24) for:
 - cloud computing (\$12.3 million)
 - insurance premium (\$14.7 million)
 - DER/data enablement (\$31.7 million)
 - guaranteed service level (GSL) (\$6.5 million)
 - Property and fleet (–\$8.0 million)
- added \$27.5 million (\$2023–24) of debt raising costs to arrive at a total opex forecast of \$2323.8 million (\$2023–24) over the 2024–29 regulatory control period.

Table 6.3 Essential’s opex for the 2024–29 period (\$million, 2023–24)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Total Opex, excluding debt raising costs	451.1	463.5	468.4	458.5	454.9	2296.4
Debt raising costs	5.3	5.4	5.5	5.6	5.6	27.5
Total Opex, including debt raising costs	456.4	468.9	473.9	464.1	460.5	2323.8

Source: Essential, *9.03.07 Standard Control Operating Expenditure Model*, January 2023.

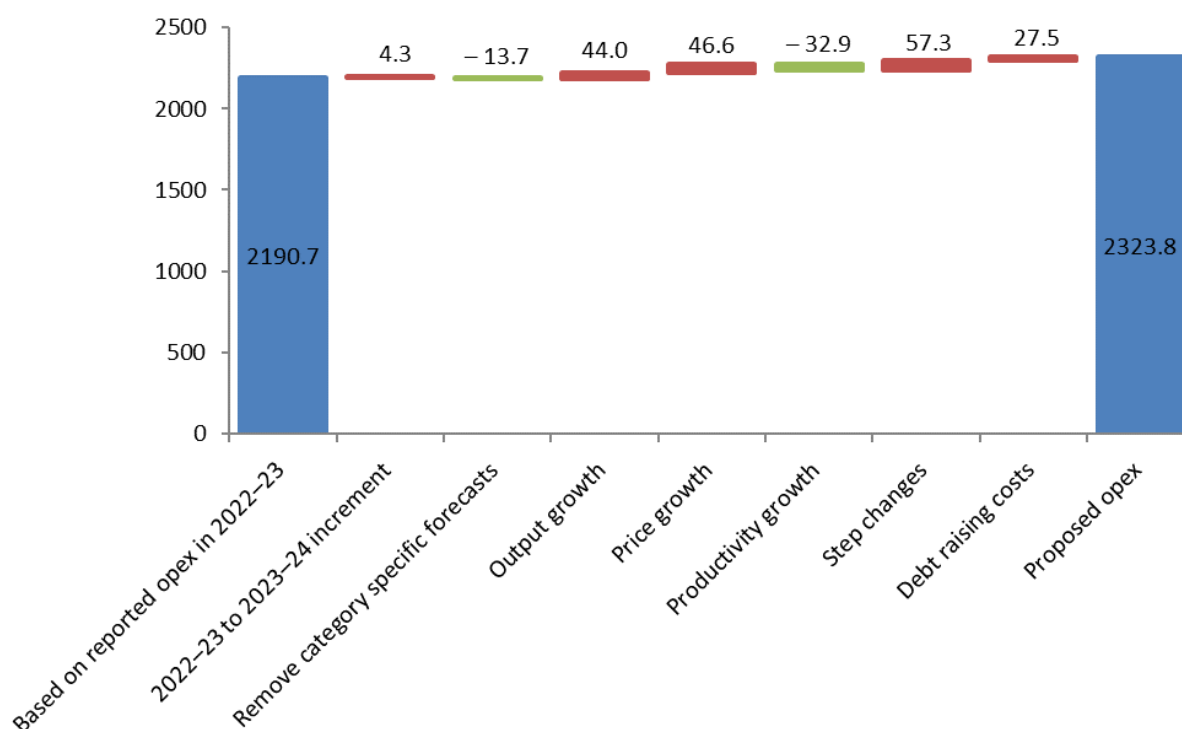
Note: Numbers may not add up to total due to rounding. Values of '0.0' and '-0.0' represent small non-zero amounts and '-' represents zero.

⁴ Essential Energy, *2024–29 Regulatory Proposal*, p. 64–65.

⁵ Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023.

Figure 6.6.2 shows the different components that make up Essential’s opex forecast for the 2024–29 period.

Figure 6.6.2 Essential’s opex for the 2024–29 period (\$million, 2023–24)



Source: AER analysis based on Essential's proposal: Essential Energy, 9.03.07 Standard Control Operating Expenditure Model, January 2023

6.2.1 Stakeholder views

We received four submissions on Essential’s proposal which discussed opex issues. We have taken these submissions into account in developing the positions set out in this draft decision. Table 6.4 summarises the issues raised in submissions in relation to opex.

Table 6.4 Submissions on Essential's 2024–29 opex proposal

Stakeholder(s)	Issue	Description
Essential	Base opex	Essential’s submission in response to our Issues Paper acknowledged the feedback provided by staff as part of the early signal pathway check-in, noting it accepted our recommended changes other than the application of the final year equation in forecasting total opex. It maintained that its alternative final year adjustment produces an opex forecast that better meets the NER opex objectives. Essential also submitted that the opex reduction resulting from applying our standard final year equation would not be achievable given the impacts of COVID-19 and extreme weather events on opex during this current regulatory period.
Consumer Challenge Panel, sub-	Step changes	CCP26 supported our targeted review of Essential’s forecasting approach relating to base opex. It also supported a targeted review of the four positive step changes on the basis that they

Stakeholder(s)	Issue	Description
panel 26 (CCP26), Public Interest Advocacy Centre (PIAC)		<p>have not been reviewed in detail by customers/customer representatives. CCP26 commended Essential for proposing a negative step change to reflect savings in electricity and fuel costs from installing solar panels at depot sites, and the electrification of fleet vehicles.</p> <p>PIAC raised a concern about uplifts in expenditure to acquire smart meter data to improve low voltage network visibility and deliver DER integration programs. While it supported the networks proposals to acquire the data required to implement consumer priorities, PIAC was concerned at networks being required to acquire relatively limited meter data which should be provided to networks consistently, in a timely manner, at no additional cost.</p>
CCP26	Consumer engagement	CCP26 considered that Essential conducted a comprehensive and well executed engagement program. While CCP26 commended the breadth of engagement, they noted the depth of engagement had not been equally impressive.

Source: Essential, *Submission - 2024–29 Electricity Determination - Essential Energy*, May 2023, p. 3; Consumer Challenge Panel 26, *Submission – 2024–29 Electricity Determination - Essential Energy*, May 2023, pp. 10–11; PIAC, *Submission in response to AER issues papers for NSW DNSPs*, 1 June 2023, p. 17; CCP26, *Advice to the AER - 2024–29 Electricity Determination - Endeavour*, May 2023, pp. 8-9.

6.3 Assessment approach

Our role is to decide whether to accept a business's total opex forecast. We are to form a view about whether a business's forecast of total opex 'reasonably reflects the opex criteria'.⁶ In doing so, we must have regard to the opex factors specified in the National Electricity Rules (NER).⁷

The *Expenditure forecast assessment guideline* (the Guideline), together with an explanatory statement, sets out our assessment approach in detail.⁸ While the Guideline provides for greater regulatory predictability, transparency, and consistency, it is not mandatory. However, if we make a decision that is not in accordance with the Guideline, we must state the reasons for departing from the Guideline.⁹

Our approach is to assess the business's forecast opex over the regulatory control period at a total level, rather than to assess individual opex projects. To do so, we develop an alternative estimate of total opex using a 'top-down' forecasting method, known as the 'base-step-trend' approach.¹⁰ We compare our alternative estimate with the business's total opex forecast to form a view on the reasonableness of the business's proposal. If we are

⁶ NER, cl. 6.5.6(c).

⁷ NER, cl. 6.5.6(e).

⁸ AER, *Expenditure forecast assessment guideline for electricity distribution*, November 2013; AER, *Expenditure forecast assessment guideline, Explanatory statement*, November 2013.

⁹ NER, cl. 6.2.8(c).

¹⁰ A 'top-down' approach forecasts total opex at an aggregate level, rather than forecasting individual projects or categories to build a total opex forecast from the 'bottom up.'

satisfied the business's forecast reasonably reflects the opex criteria, we accept the forecast.¹¹ If we are not satisfied, we substitute the business's forecast with our alternative estimate that we are satisfied reasonably reflects the opex criteria.

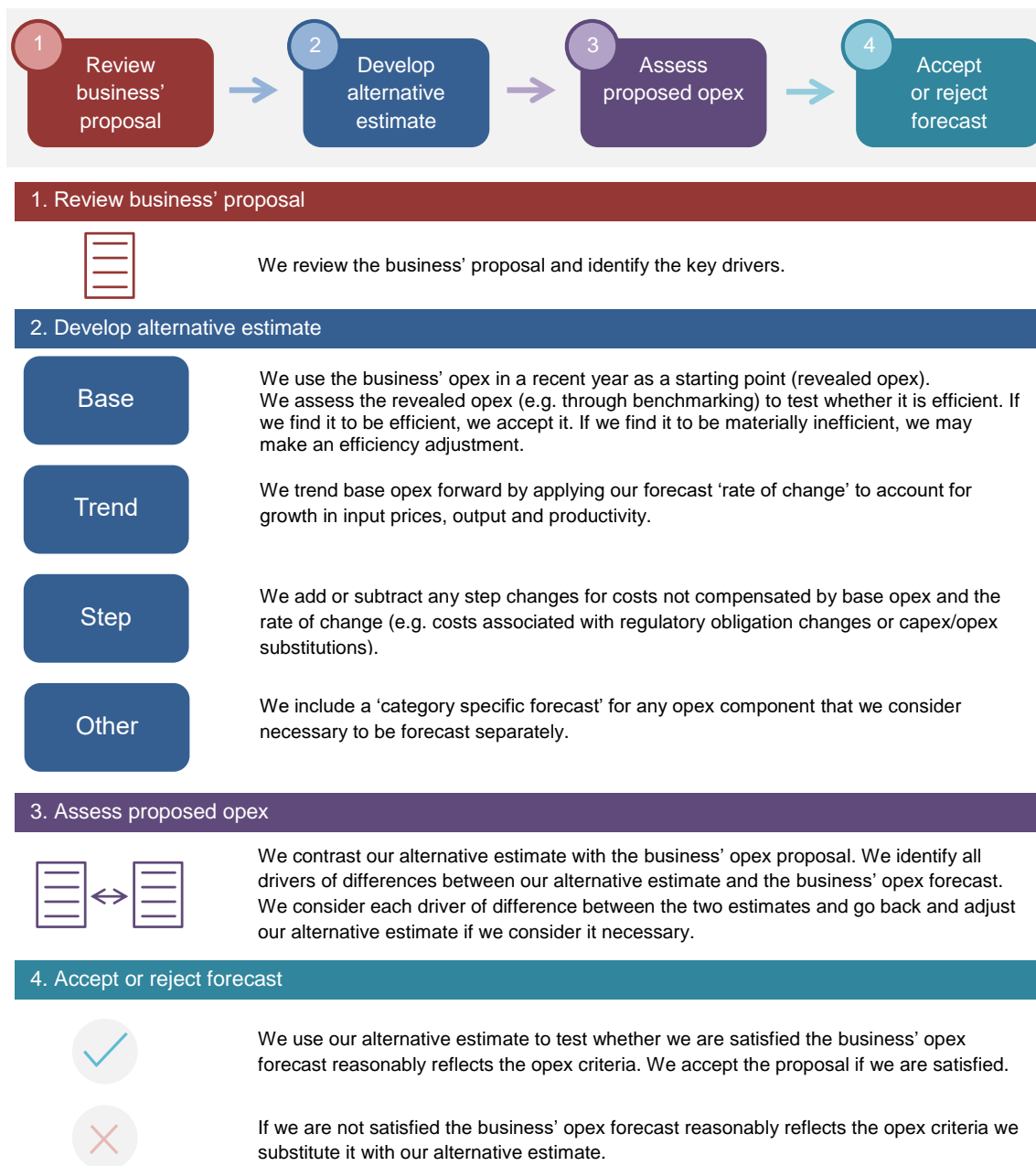
In making this decision, we take into account the reasons for the difference between our alternative estimate and the business's proposal, and the materiality of the difference. Further, we take into consideration interrelationships between opex and the other building block components of our decision.¹²

Figure 6.3 summarises the 'base-step-trend' forecasting approach.

¹¹ NER, cl. 6.5.6(c).

¹² NEL, s. 16(1)(c).

Figure 6.3 Our opex assessment approach



6.3.1 Interrelationships

In assessing Essential's total forecast opex, we also take into account other components of its proposal that could interrelate with our opex decision. The matters we considered in this regard included:

- the EBSS carryover—the estimate of opex for 2023–24 (the final year of the current regulatory control period) that we use to forecast opex should be the same as the level of opex used to calculate EBSS carryover amounts. This consistency ensures that the business is rewarded (or penalised) for any efficiency gains (or losses) it makes in the final year the same as it would for gains or losses made in other years;
- the operation of the EBSS in the 2019–24 regulatory control period, which provided Essential's an incentive to reduce opex in the base year;

- the impact of cost drivers that affect both forecast opex and forecast capital expenditure (capex). For instance, forecast labour price growth affects forecast capex and our forecast price growth used to estimate the rate of change in opex;
- the approach to assessing the rate of return, to ensure there is consistency between our determination of debt raising costs and the rate of return building block; and
- the outcomes of Essential's engagement with consumers and stakeholders in developing its proposal and any feedback we have had.

6.4 Reasons for draft decision

Our draft decision is to accept Essential's total opex forecast of \$2,323.8 million (\$2023–24), including debt raising costs, for the 2024–29 regulatory control period. Our alternative estimate of \$2,284.8 million (\$2023–24) is not materially different (\$39.0 million, \$2023–24, or 1.7% lower) from Essential's total opex forecast proposal. Therefore, we are satisfied that Essential's total opex forecast reasonably reflects the opex criteria, having regard to the opex factors.¹³

Table 6.1 above sets out Essential's proposal, our alternative estimate that is the basis for the draft decision, and the difference between our alternative estimate and the proposal.

The main drivers for the differences are set out in section 6.1 and we discuss the components of our alternative estimate, and our assessment of Essential's proposal, below. Full details of our alternative estimate are set out in our opex model, which is available on our website.

6.4.1 Base opex

This section provides our view on the prudent and efficient level of base opex that we consider Essential would need for the safe and reliable provision of electricity services over the 2024–29 regulatory control period. We discuss the choice of base year in section 6.4.1.1 and set out our analysis of the efficiency of base year opex in section 6.4.1.2.

6.4.1.1 Proposed base year

Essential proposed a base year of 2022–23 and used an estimate of base year opex of \$438.1 million (\$2023–24) or \$2,190.7 million (\$2023–24) over the five years of the next regulatory period.¹⁴ Essential stated that it selected 2022–23 as its base year because it will be the most recent year with audited actual data by the time of our final decision.¹⁵

We consider it is feasible to use 2022–23 as the base year. This is because it will be based on actual opex in the final decision. Based on the estimate provided by Essential it appears representative of base opex required for the next regulatory control period. While there will be year to year fluctuations in reported opex over the current regulatory period, due to the interaction with the EBSS we do not have concerns with the choice of base year, provided we find Essential's opex in the base year to be not materially inefficient. However,

¹³ NER, cl. 6.5.6(c) and cl. 6.5.6(e).

¹⁴ Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023.

¹⁵ Essential Energy, *9.03 Opex approach*, January 23, p. 4.

because we do not yet have audited opex for 2022–23, we will not be able to confirm this until our final decision.

We have adjusted the base opex amount for 2022–23 from \$438.1 million to \$435.4 million (\$2023–24). The difference between Essential's proposed amount and our alternative is mainly due to a difference in the approach taken when excluding the DMIAM expenditure from base opex. Essential has removed this expenditure via a base adjustment whilst we removed it directly from reported opex in the base year. This is our preferred treatment of these costs as we do not provide DMIAM as part of our forecast opex but include it as a revenue adjustment in our post-tax revenue model. While this difference in approach resulted in our alternative estimate containing a smaller base year opex adjustment than Essential's proposal and a lower base opex amount, it had no overall impact on the total difference between Essential's proposal and our alternative estimate of total opex.

6.4.1.2 Efficiency of Essential's opex

As summarised in section 6.3, and in our Guideline, our preferred approach for forecasting opex is to use a revealed cost approach. This is because opex is largely recurrent and stable at a total level. Where a distribution business is responsive to the financial incentives under the regulatory framework, the actual level of opex it incurs should provide a good estimate of the efficient costs required for it to operate a safe and reliable network and meet its relevant regulatory obligations. However, we do not rely on the a priori assumption that the business's revealed opex is efficient. We examine the trend in opex and use our top-down benchmarking tools, and other assessment techniques, to test whether the business is operating efficiently historically and particularly in the base year.

Essential proposed that its base year is efficient because it had assessed the efficiency of its base year opex using the AER's standard benchmarking approach and the latest Annual Benchmarking Report and the results indicated that its forecast base year opex was efficient.¹⁶

As set out below, we consider that although Essential's actual opex in the current regulatory control period and its estimated base year opex is higher than our forecast, our analysis, particularly the results of our estimated efficient opex in the base year, indicates that Essential's base year opex is not materially inefficient. Consequently, we have used its 2022–23 estimate of base year opex to develop our alternative estimate.

6.4.1.2.1 Analysis of Essential's revealed costs

Figure 6.1 shows that while Essential's revealed costs have fluctuated over recent years (i.e. declining then rising such that its current level of opex exceeds our opex forecast), Essential's opex over the longer term has trended downward. In particular, Essential's opex decreased significantly over the previous regulatory control period (2014–19), declining from a peak of \$628.6 million (\$2023–24) in 2014–15 (the first year of the previous period) to a low of \$402.5 million (\$2023–24) in 2017–18. Since then, however, Essential's opex has increased, and is estimated to exceed the AER's forecast over the current regulatory control

¹⁶ Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023; Essential Energy, *9.03 Opex approach*, January 2023, p. 4.

period by 7.0%, with opex in its base year 2022–23 estimated to exceed our opex forecast for that year by \$31.9 million (\$2023–24) or 7.8%.

Figure 6.1 also shows that in spite of this recent increase in costs, Essential's opex remains below the level of the previous regulatory control period. In particular, its estimated average annual opex over the current regulatory control period (2019–24) of \$454.1 million (\$2023–24) is \$56.0 million (\$2023–24) or 11.0% less than the average \$510.1 million (\$2023–24) per year it incurred over 2014–19.¹⁷

We consider this analysis demonstrates that while Essential's opex has trended downward over time, the recent increase in its operating costs since 2019–20 (the first year of the current regulatory control period) to a level above our opex forecast warrants further analysis. This analysis is outlined below.

6.4.1.2.2 Benchmarking the efficiency of Essential's opex over time

We have used our benchmarking tools and other cost analysis to assess and establish whether Essential is operating relatively efficiently, both over time and in the base year. Our benchmarking results over the long and short time periods indicate that Essential has historically been amongst the mid to lower performing distributors in terms of its benchmarking results, and while Essential made improvements in its relative opex efficiency over the 2012–2018 period, its relative performance has declined in recent years. Consequently, we have undertaken additional analysis to check the relative efficiency of Essential's estimated base year opex.

We have used a variety of economic benchmarking tools to test the efficiency of Essential's opex. Benchmarking broadly refers to the practice of comparing the economic performance of a group of service providers that all provide the same service as a means of assessing their relative performance. Our annual benchmarking reports include information about the use and purpose of economic benchmarking, and details about the techniques we use to benchmark the efficiency of distribution businesses in the NEM.¹⁸

While opex at the total level is generally recurrent, year-to-year fluctuations can be expected. To shed light on Essential's general level of operating efficiency, in this section we first look at the efficiency of Essential's opex over time, using our top-down benchmarking tools. This is followed in section 6.4.1.2.3 by looking at the efficiency of opex in the 2022–23 base year.

Period-average econometric opex cost function and productivity index number efficiency results

This section presents the results of four econometric opex cost function models that compare the relative opex efficiency of DNSPs in the NEM. These models the relationship between opex (as the input) and outputs, and so measure opex efficiency. The results presented reflect an average efficiency score for each DNSP over a specified period – the long period (2006 to 2021) and the short period (2012 to 2021). We examine the short period as it can

¹⁷ Essential Energy, *Economic benchmarking – Regulatory Information Notice response 2009–22*; AER, *Final decision PTRM 2009–14*; AER, *Final decision 2014–19 PTRM*; AER, *Final decision 2019–24 PTRM and Opex model*; Essential Energy, *2024–29 Regulatory proposal*, January 2023; Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023; AER analysis.

¹⁸ AER, *Annual Benchmarking Report, Electricity distribution network service providers*, November 2022.

take some time for more recent improvements in efficiency by previously poorer performing distribution businesses to be reflected in period-average efficiency scores. These efficiency scores do not account for the presence of operating environment factors (OEFs), as discussed further below.

The results in our *2022 Annual Benchmarking Report* from the four econometric opex cost function models indicate that when examined over time Essential's opex has been relatively inefficient. Over the long period Essential was ranked seventh out of 13 DNSPs (with an efficiency score of 0.66) and in the short period it was ranked sixth out of 13 DNSPs (with an efficiency score of 0.68).¹⁹ Our standard approach is to use an efficiency score 0.75 comparison point, rather than 1.0, to recognise data and modelling imperfections when assessing the relative efficiency of distribution businesses. Where the econometric model-average score is below 0.75, we take this as prima facie evidence that a DNSP has been operating materially inefficiently over the relevant period. With Essential having a model-average scores below 0.75 (i.e. 0.66 and 0.68) this is the case with Essential's efficiency score performance.

For this draft decision, we have updated the econometric opex cost function model results from the *2022 Annual Benchmarking Report*. Most importantly this is for our approach to addressing the impact of differences in capitalisation on the benchmarking results.²⁰ We consider making these updates is appropriate for this draft decision as it reflects the most up-to-date data/approaches which will be incorporated into the *2023 Annual Benchmarking Report* that will inform our final decision. These updated results reduced Essential's rankings based on the econometric opex cost function model-average efficiency scores. Its ranking in the long period fell from seventh to ninth out of 13 DNSPs while its ranking in the short period fell from sixth to eighth out of 13 DNSPs, although in the long period its efficiency score remained unchanged at 0.66 while over the short period its score increased from 0.68 to 0.69.²¹

We also use productivity index number techniques to enable comparisons of productivity levels over time and between businesses. The multilateral total factor productivity (MTFP) index measures the total factor productivity of each business, whereas the opex and capital multilateral partial factor productivity (MPFP) indexes measure the productivity of opex or capital inputs respectively. Our opex MPFP efficiency results are also not adjusted for material OEFs. Our *2022 Annual Benchmarking Report* results show Essential was:²²

- ninth in 2021 in terms of MTFP, which is a relative decline from seventh position in 2017–18 and 2014–15

¹⁹ Quantonomics, *Benchmarking results for the AER*, November 2022, pp. 35 & 39; AER analysis.

²⁰ AER, *How the AER will assess the impact of capitalisation differences on our benchmarking – Draft guidance note*, May 2023. Note that we have also updated the ratcheted maximum demand estimates for Evoenergy as included in its proposal. See AER, *Draft Decision Evoenergy Regulatory Proposal 2024 to 2029 Attachment 6 Operating Expenditure*, September 2023 for more details.

²¹ These updated results are discussed and presented in more detail in AER, *Draft Decision Evoenergy Regulatory Proposal 2024 to 2029 Attachment 6 Operating Expenditure*, September 2023.

²² Quantonomics, *Benchmarking results for the AER*, November 2022, pp. 26-30.

- eighth in terms of opex MPFP, which is a relative decline from fifth position in 2017–18 and 2014–15.

Unlike the econometric opex cost function modelling, at this stage we have not updated the MTFP / MPFP modelling from the *2022 Annual Benchmarking Report* for our preferred approach to addressing capitalisation issues. We are considering implementation issues which need to be worked through to determine if and how this can be undertaken. The absence of updating to the MTFP / MPFP modelling somewhat moderates direct comparability to the econometric results.

6.4.1.2.3 Benchmarking the efficiency of Essential’s estimated base year opex

Given the evidence outlined above about the relative inefficiency of Essential’s opex over time, and noting the increase in opex to a level above our opex forecast for this period and the relative recent declines in MTFP and opex MPFP scores, we have undertaken additional analysis to check the relative efficiency of Essential’s estimated base year opex. Following past decisions, this involves application of our economic benchmarking roll-forward-model, which includes adjusting for OEFs, to test the efficiency of Essential’s estimated opex in the base year more directly. We use the results from our econometric opex cost function benchmarking and our benchmarking roll-forward model to derive an estimate of efficient base year opex, and compare this to Essential’s estimated base year opex, to determine whether there is an efficiency “gap” and if so, what size this ‘gap’ is. Where modelled efficient rolled-forward base year opex is above actual opex in the base year, we infer there is no efficiency ‘gap’ and estimated opex is not materially inefficient. We reach this conclusion for Essential’s estimated opex in the base year.

The results of using our benchmarking roll-forward model to derive estimated efficient base year opex and compare it to estimated base year opex for Essential are set out in Figure 6.4 for the long benchmarking period and in Figure 6.5 for the short period.²³ These use the econometric opex cost function benchmarking results from the *2022 Annual Benchmarking Report* updated as outlined above, including to take into account the AER’s approach to addressing capitalisation differences in benchmarking. Further detail about how we derive estimated efficient base year opex can be found in our draft decision for Evoenergy as well as in recent decisions.²⁴

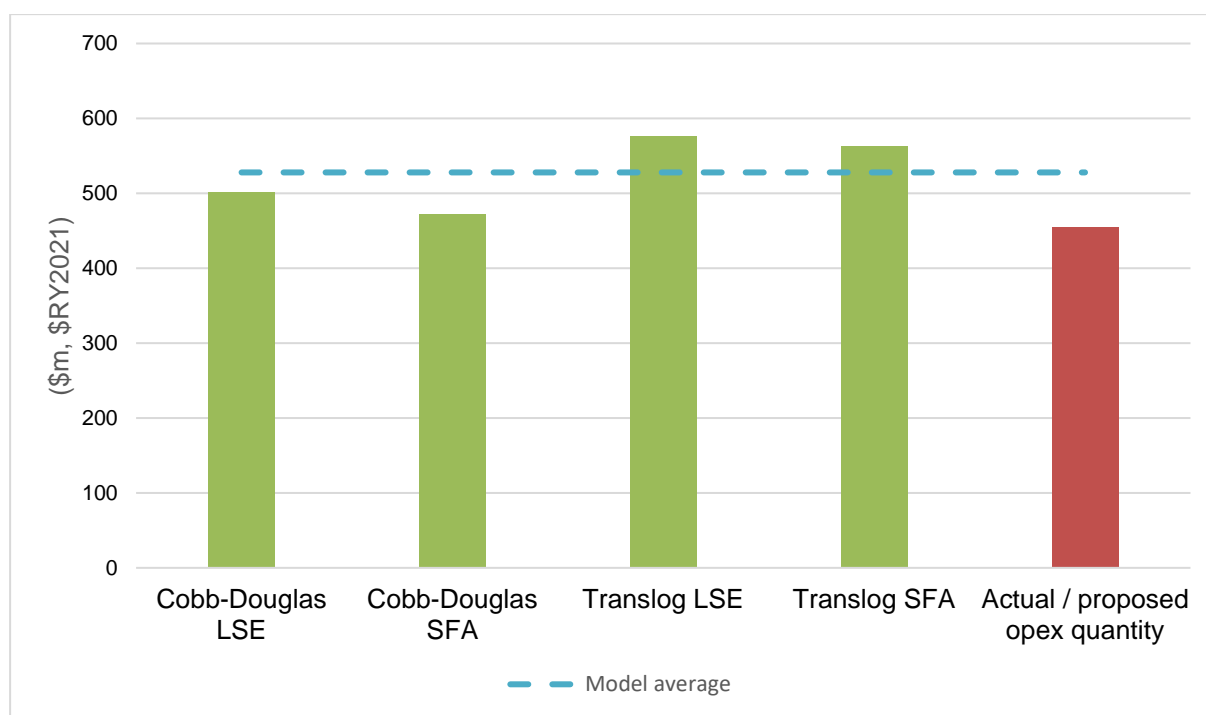
In Figure 6.4, our estimates of efficient network services opex plus capitalised corporate overheads (over the long period including adjustments for OEFs) in the base year are shown

²³ We benchmark distribution businesses on the basis of the network services component of standard control services opex, which comprises the majority of standard control services opex. Network services opex excludes opex categories that are part of standard control services opex, such as opex for metering, customer connections, street lighting, ancillary services and solar feed-in tariff payments.

²⁴ AER, *Draft Decision Evoenergy Regulatory Proposal 2024 to 2029 Attachment 6 Operating Expenditure*, September 2023; AER, *Final Decision, Jemena determination 2021–26, Attachment 6 – Operating Expenditure*, April 2021, p. 25.

in green, with an average of \$527.9 million (\$RY 2021)²⁵ as shown by the blue dashed line. Essential’s estimated network services opex plus capitalised corporate overheads in the base year of 2022–23 is shown in red (\$454.2 million (\$RY 2021)). As can be seen, our estimated efficient base year opex plus capitalised corporate overheads (the blue dashed line) is above Essential’s estimated network services opex plus capitalised corporate overheads, indicating that opex in the base year is not materially inefficient.

Figure 6.4 Estimates of efficient network services opex using data over the 2006–21 period (\$ million, RY21)



Source: Quantonomics, *Benchmarking results for the AER – Distribution*, November 2022; AER analysis.

Similarly, in Figure 6.5 our estimates of efficient network services opex plus capitalised corporate overheads in the base year over the short period (shown in green, with an average of \$475.7 million (\$RY 2021) as per the blue dashed line), are above Essential’s estimated network services opex plus capitalised corporate overheads in the base year of 2022–23. Again, this further indicates that Essential’s estimated opex in the base year is not materially inefficient.

²⁵ Consistent with our benchmarking, the figures in our benchmarking roll-forward model are expressed in constant-price or ‘opex quantity’ terms, whereby the nominal (mid-year) opex series is deflated into constant-price dollars of the last year of the dataset used in the benchmarking for the most recent Annual Benchmarking Report. The benchmarking roll-forward model used in this decision draws on the results of our 2022 *Annual Benchmarking Report*, which incorporates data up to regulatory year 2021, which in the case of the NSW/ACT DNSPs is Financial Year 2021. This means the opex figures are in constant-price \$December 2021 dollars. They are therefore not comparable to figures expressed in \$2023–24 terms. However, the purpose and output of the roll-forward model analysis is the efficiency gap, expressed in percentage terms.

Figure 6.5 Estimates of efficient network services opex using data over the 2012–21 period (\$ million, RY 2021)



Source: Quantonomics, *Benchmarking results for the AER – Distribution*, November 2022; AER analysis.

Note: We exclude the efficiency score for the Translog SFA model for Essential as it does not satisfy the monotonicity requirement. Monotonicity is a key economic property required for these econometric opex cost function models, which is that an increase in output can only be achieved with an increase in inputs (opex), holding other things constant.

We consider that, even though Essential's actual opex in the current regulatory control period and its estimated base year opex is higher than our forecast for the current period, our analysis, particularly the results of our estimated efficient opex in the base year, indicates that Essential's estimated base year opex is not materially inefficient. Consequently, we have used Essential's 2022–23 estimate of base year opex to develop our alternative opex estimate. We will update this analysis in our final decision when we will have audited actual opex data for 2022–23 to confirm this result.

6.4.1.3 Adjustments to base year opex

Essential proposed a total adjustment to its base opex of $-\$1.9$ million (\$2023–24) or $-\$9.4$ million (\$2023–24) over the regulatory control period. These adjustments were for the removal of category specific forecasts from base year opex for forecasting purposes and its final year increment. We have considered these proposed adjustments and have adjusted our alternative estimate of opex in the base year of $\$435.4$ million by $\$0.9$ million (\$2023–24) or $\$4.3$ million (\$2023–24) over the regulatory control period to:

- add $\$39.3$ million (\$2023–24) via a non-recurrent efficiency adjustment to align Essential's final year (2023–24) opex estimate using its proposed approach with our alternative estimate of 2023–24 opex under our standard approach. This increases our alternative estimate of total opex by $\$196.7$ million (\$2023–24) over the 2024–29 regulatory control period. We explain this adjustment in section 6.4.1.3.1;

- remove \$0.0 million (\$2023–24)²⁶ for the estimated final year opex for categories forecast specifically. This decreases our alternative estimate by \$0.1 million (\$2023–24) over the 2024–29 regulatory control period. We explain this adjustment in 6.4.1.3.2;
- remove \$38.5 million (\$2023–24) for the decrease in opex between base year 2022–23 and the final year of the current period (2023–24) (final year increment). This decreases our alternative estimate by \$192.3 million (\$2023–24) over the 2024–29 regulatory control period. We explain this adjustment in 6.4.1.3.3.

6.4.1.3.1 Non-recurrent efficiency adjustment to align our alternative estimate with Essential's proposal

In its proposal, Essential used an approach to forecasting opex for the final year of the current period (2023–24) that was not consistent with our standard approach.²⁷ It considered our standard approach was unlikely to produce a realistic estimate of actual operating expenditure for 2023–24. As such, Essential has adapted the base-step-trend approach we use to forecast efficient opex over the next regulatory period to forecast its estimated opex in the final year of the current regulatory period (2023–24).²⁸ It has done this by rolling forward the efficient level of opex in its base year (2022–23) by one year.

We have considered Essential's proposal and agree that, in this specific instance, our standard approach would be unlikely to produce a realistic estimate of 2023–24 opex. We consider this is primarily due to the ambitious productivity growth rate proposed by Essential in the 2019–24 regulatory period which resulted in a decreasing opex forecast over the period. Under our standard approach, this causes Essential's estimated opex in the final year (2023–24) to be significantly below its 2022–23 actual opex, and this has flow on impacts to incentives under the EBSS.

As we consider the opex in Essential's 2022–23 base year opex to be not materially inefficient, forecasting a significant opex reduction in the final (current) year is not a likely outcome at this time, as rate of change and inflation pressures will likely act as a counterweight against efficiency gains Essential makes. As such, we are satisfied with Essential's proposed approach to estimating its opex for 2023–24. However, to maintain the integrity of incentives under the EBSS, it is necessary to apply opex forecasts consistently between the opex and EBSS modelling. As such, we have used our standard approach when calculating the EBSS carryover penalties Essential has accrued over the 2019–24 period, but also included a non-recurrent efficiency adjustment as we have for opex to ensure fair sharing of efficiency gains and losses between customers and Essential.

In our alternative estimate we have included a non-recurrent efficiency adjustment of \$39.3 million (\$2023–24) (or \$196.7 million (\$2023–24) over the regulatory control period) to align the 2023–24 opex estimate under our standard approach with Essential's proposed 2023–24 estimate. We have also included a non-recurrent efficiency adjustment of

²⁶ Rounded to two decimal places this number is \$0.02 million (\$2023–24). Throughout this document, values of '0.0' and '-0.0' represent small non-zero amounts and '-' represents zero.

²⁷ Essential Energy, *9.03 Opex approach*, January 2023, p. 4.

²⁸ Essential Energy, *9.03 Opex approach*, January 2023, p. 4.

\$39.3 million (\$2023–24) to opex for the purposes of calculating EBSS carryover amounts (see Attachment 8 for further information on this adjustment).

6.4.1.3.2 Removal of category specific forecasts

In some circumstances, particularly where a category of opex is not being forecast on a revealed cost basis, it may be removed from the base year expenditure. We refer to these as 'category specific forecasts' (see section 6.4.4).

We have removed debt raising costs from base opex, to be forecast separately. This is consistent with our standard approach as well as Essential's proposal. However, we have not removed costs associated with DMIAM via this mechanism, as Essential proposed. Whilst we have excluded the same amount of DMIAM costs as Essential proposed (\$2.7 million (\$2023–24) in 2022–23)²⁹, we have excluded it from Essential's reported opex directly instead of removing it via a base year opex adjustment. This is our preferred treatment of these costs as we do not provide a DMIAM as part of our forecast opex but include it as a revenue adjustment in our post-tax revenue model. While this difference in approach resulted in our alternative estimate containing a smaller base year opex adjustment than Essential's proposal and a lower base opex amount, it has no overall impact on the total difference between Essential's proposal and our alternative estimate of total opex.

We have removed \$0.1 million (\$2023–24) from base opex to account for category specific forecasts, which is \$13.6 million (\$2023–24) less than the \$13.7 million (\$2023–24) Essential proposed.

6.4.1.3.3 Final year increment

Our standard practice to calculate final year opex is to add the estimated change in opex between the base year (2022–23) and the final year (2023–24) of the current (2019–24) period to the base year opex amount.³⁰

We have included an adjustment of –\$192.3 million (\$2023–24) for the final year increment in our alternative estimate, which is –\$196.5 million (\$2023–24) lower than Essential's proposed increase of \$4.3 million (\$2023–24).

The variance between our alternative estimate and Essential's proposal is due to:

- the difference in approaches taken when forecasting the final year opex estimate (discussed above in section 6.4.1.3.1)
- our use of the latest inflation figures when we escalated base year opex into \$2023–24.

6.4.2 Rate of change

Having determined an efficient starting point, or base opex, we trend it forward to account for the forecast growth in prices, output and productivity. We refer to this as the rate of change.³¹

²⁹ This equates to the \$2.5 million (nominal, \$2022–23) reported in Essential's opex model; Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023.

³⁰ AER, *Expenditure forecast assessment guideline for electricity distribution*, November 2013, pp. 25–26.

³¹ AER, *Expenditure forecast assessment guideline for electricity distribution*, November 2013, pp. 22–24.

Essential applied our standard approach to forecasting the rate of change. It proposed:

- **Price growth:** to adopt a weighted average of forecast labour price growth (59.2%) and non-labour price growth (40.8%), and to forecast labour price growth using an average of BIS Oxford Economics' wage price index (WPI) growth forecasts and a placeholder for an AER WPI forecast. It also added the legislated superannuation guarantee increases to its labour price growth forecasts.
- **Output growth:** to apply the output weights from all four econometric models determined in our most recent annual benchmarking report.
- **Productivity growth:** to use our 0.5% per year productivity growth forecast.

As discussed in section 6.4.1.3.1, Essential did not use our standard approach when it used its forecast rate of change to estimate final year (2023–24) opex, and instead estimated it by rolling forward the efficient level of opex in 2022–23 by one year. The rate of change referred to in this section (6.4.2) does not include the rate of change used to calculate Essential's proposed 2023–24 opex estimate.

The rate of change proposed by Essential contributed \$57.8 million (\$2023–24), or 2.5% to Essential's total opex forecast of \$2323.9 million (\$2023–24). This equates to opex increasing by 0.8% each year. We have also included a rate of change that increases opex by 0.8% each year in our alternative estimate.

We compare both forecasts in Table 6.5, and reasons for the differences are set out below.

Table 6.5 Forecast annual rate of change in opex, %

	2024–25	2025–26	2026–27	2027–28	2028–29
Essential's proposal					
Price growth	1.0	0.9	0.4	0.3	0.4
Output growth	0.5	0.8	0.7	0.7	0.6
Productivity growth	0.5	0.5	0.5	0.5	0.5
Rate of change	1.0	1.2	0.6	0.5	0.5
AER alternative estimate					
Price growth	0.7	0.8	0.5	0.4	0.6
Output growth	0.7	0.7	0.7	0.7	0.7
Productivity growth	0.5	0.5	0.5	0.5	0.5
Rate of change	1.0	1.1	0.7	0.6	0.8
Difference	0.0	-0.2	0.1	0.1	0.3

Source: Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023; Essential Energy, *9.03 Opex approach*, January 2023, p. 5; AER analysis.

Note: The rate of change = $(1 + \text{price growth}) \times (1 + \text{output growth}) \times (1 - \text{productivity growth}) - 1$.
Numbers may not add up to totals due to rounding. Amounts of '0.0' and '-0.0' represent small non-zero values and '-' represents zero.

6.4.2.1 Forecast price growth

Essential proposed average annual price growth of 0.6% over the 2024–29 regulatory period, which increased its total opex forecast by \$46.6 million (\$2023–24). We have used a real average annual price growth forecast of 0.6% over the 2024–29 regulatory control period in our alternative estimate of total opex. This increases our total opex alternative estimate by \$43.6 million (\$2023–24).

Both we and Essential forecast price growth as a weighted average of forecast labour price growth and non-labour price growth:

- both we and Essential used an average of two WPI growth forecasts for the electricity, gas, water and waste services (utilities) industry in New South Wales to forecast labour price growth, consistent with our standard approach. Essential used forecasts from its consultant, BIS Oxford Economics, and a placeholder for our WPI forecast. It sourced the placeholder WPI forecast from our consultant's (KPMG's) September 2022 WPI forecast report commissioned for our draft decision on AusNet Services (gas distribution) 2023–28 access arrangement.³² In our alternative estimate, we have replaced the placeholder WPI forecasts with more recent forecasts from our consultant KPMG.³³
- both we and Essential applied a forecast non-labour price growth equal to CPI growth (i.e., real price growth rate of zero).³⁴
- both we and Essential have applied the same weights to account for the proportions of opex that is labour and non-labour, 59.2% and 40.8%, respectively.

Consequently, the key difference between our real price growth forecasts and Essential's forecasts is that we have updated our labour price growth forecast to include the more recent forecasts from KPMG, instead of the older placeholder WPI forecasts from September 2022.

Table 6.6 compares our forecast labour price growth with Essential's proposal.

³² KPMG, *WPI forecast report*, September 2022, p. 40.

³³ KPMG, *WPI forecast report*, August 2023, p. 38.

³⁴ Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023.

Table 6.6 Forecast labour price growth, %

	2024–25	2025–26	2026–27	2027–28	2028–29
Essential’s proposal					
AER consultant	1.1	0.9	0.5	0.5	0.5
BIS Oxford Economics	1.2	1.1	0.9	0.5	0.9
Superannuation guarantee increases	0.5	0.5	–	–	–
Average, including superannuation guarantee increases	1.7	1.5	0.7	0.5	0.7
AER’s alternative estimate					
KPMG (AER consultant)	0.3	0.7	0.8	0.9	0.9
BIS Oxford Economics	1.2	1.1	0.9	0.5	0.9
Superannuation guarantee increases	0.5	0.5	–	–	–
Average, including superannuation guarantee increases	1.2	1.4	0.9	0.7	0.9
Overall difference	–0.4	–0.1	0.2	0.2	0.2

Source: BIS Oxford Economics, *Essential Energy: Labour Escalation Forecasts to 2028/29*, p. 4; KPMG, *WPI forecast report*, August 2023, p. 38; AER analysis.

Note: Numbers may not add up to totals due to rounding. Values of '0.0' and '-0.0' represent small non-zero amounts and '-' represents zero.

We will receive updated labour price growth forecasts for the purpose of our final decision and will update our price growth forecasts in the final decision.

6.4.2.2 Forecast output growth

Essential proposed average annual output growth of 0.7%, which increased its proposed opex forecast by \$44.0 million (\$2023–24). We have forecast average annual output growth of 0.7%. This increases our alternative estimate of total opex by \$48.0 million (\$2023–24).

We and Essential have forecast output growth by:

- Calculating the growth rates for three outputs (customer numbers, circuit line length, and ratcheted maximum demand).
- Calculating four weighted average overall output growth rates using the output weights from the four econometric opex cost function benchmarking models in our *2022 Annual Benchmarking Report*.
- Averaging the four-model specific weighted overall output growth rates.

We discuss these below.

6.4.2.2.1 Forecast growth of the individual output measures

We are satisfied that Essential's forecast of the growth in customer numbers, circuit length and ratcheted maximum demand reflect a realistic expectation and are largely consistent with forecast trends from external sources that have been previously tested and validated or historical growth rates. Specifically:

- **Customer numbers:** Essential proposed forecast customer numbers based on National Institute of Economic and Industry Research forecasts, which we have reviewed and validated.³⁵
- **Circuit length:** Essential forecast growth in its circuit length consistent with its historical growth rate.
- **Ratcheted maximum demand:** Essential forecast ratcheted maximum demand based on Frontier Economics' forecasts of maximum demand at the transmission connection point.³⁶ Frontier Economics is forecasting demand to surpass its historic peaks in 2021–22, indicating growth in ratcheted maximum demand. We discuss our maximum demand forecasts further in Attachment 5 of this draft decision.

Adjustment to align Essential's opex model output measure data with its RIN responses

While we are satisfied with Essential's forecasts of customer numbers, circuit length and ratcheted maximum demand growth, we note that Essential's opex model forecasts of customer numbers, circuit length and annual maximum demand are not consistent with its Reset RIN forecasts. In response to our requests for information, Essential advised that its:³⁷

- opex model forecasts of customer numbers and circuit length were based on earlier estimates, and that it expects to adopt the updated forecasts of customer numbers and circuit length from the Reset RIN into its opex model as part of its Revised Proposal; and
- opex model forecasts of annual maximum system demand values are based on financial year values whereas the forecasts provided in the RINs are based on underlying April to March values.

For the purposes of using the best available inputs to forecast opex, we have relied upon Essential's Reset RIN forecasts for customer numbers, circuit length and annual maximum demand in our alternative estimate. This is consistent with our standard approach.

Table 6.7 compares our forecast output measure growth rates with Essential's proposal.

Table 6.7 Forecast growth in individual output measures, %

	2024–25	2025–26	2026–27	2027–28	2028–29
Essential's proposal					
Customer numbers	0.8	0.8	0.7	0.7	0.7

³⁵ Essential Energy, *Response to IR#035 – Opex and model inputs*, 9 June 2023.

³⁶ Essential Energy, *11.01 Customer number, energy consumption and demand forecasts - Frontier*, May 2022

³⁷ Essential Energy, *Response to IR#035 – Opex and model inputs*, 9 June 2023; Essential Energy, *Response to IR#043 – Cloud computing step change*, 19 July 2023.

	2024–25	2025–26	2026–27	2027–28	2028–29
Circuit length	0.1	0.1	0.1	0.1	0.1
Ratcheted maximum demand	0.3	1.2	0.9	1.0	0.5
AER alternative estimate					
Customer numbers	0.8	0.8	0.8	0.8	0.8
Circuit length	0.1	0.1	0.1	0.1	0.1
Ratcheted maximum demand	0.9	0.9	0.9	0.8	0.8
Difference					
Customer numbers	0.0	0.0	0.0	0.0	0.0
Circuit length	–0.0	–0.0	–0.0	–0.0	–0.0
Ratcheted maximum demand	0.6	–0.3	–0.1	–0.1	0.3

Source: Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023; AER analysis.

Note: Numbers may not add up to totals due to rounding. Values of '0.0' and '–0.0' represent small non-zero amounts and '–' represents zero.

6.4.2.2.2 Output weights

The output weights that both we and Essential have used are set out in Table 6.8.

Table 6.8 Output weights, %

	Cobb-Douglas SFA	Cobb Douglas LSE	Translog LSE	Translog SFA	AER alternative estimate Average	Essential proposal
Customer numbers	43.1	60.9	45.1	47.6	49.2	49.2
Circuit length	10.8	15.7	17.2	8.4	13.0	13.0
Ratcheted maximum demand	46.1	23.4	37.6	43.9	37.8	37.8

Source: Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023; Quantonomics, *Annual benchmarking reports 2022, Benchmarking results for the AER - Distribution*, November 2022, pp. 137–139; AER, *Draft decision - Essential Energy - Determination 2024–29 - Opex model*, September 2023; AER analysis.

We will publish our *2023 Annual Benchmarking Report* for distribution in late November 2023. In our final decision, we will update our output growth rate forecasts to reflect the

output weights in the *2023 Annual Benchmarking Report*. Full details of our approach to forecasting output growth are set out in our opex model, which is available on our website.

6.4.2.3 Forecast productivity growth

Essential proposed average productivity growth of 0.5% per year. We have forecast the same average productivity growth of 0.5% per year, which reflects our standard approach. This decreases our alternative opex estimate by \$32.9 million (\$2023–24) over the regulatory control period which is the same as Essential’s proposal.

6.4.3 Step changes

In developing our alternative estimate for the draft decision, we include prudent and efficient step changes for cost drivers such as new regulatory obligations or efficient capex / opex trade-offs. As we explain in the *Expenditure forecast assessment guideline*, we will generally include a step change if the efficient base opex and the rate of change in opex of an efficient service provider does not already include the proposed cost for such items and they are required to meet the opex criteria.³⁸

Essential’s proposal included five step changes totalling \$57.3 million (\$2023–24) or 2.5% of its proposed total opex forecast. These are shown in Table 6.9 along with our alternative estimate for the draft decision, which is to include step changes totalling \$18.5 million (\$2023–24), being \$38.7 million (\$2023–24) lower than Essential’s proposal. Our lower alternative estimate is largely due to us not accepting the step changes for insurance and cloud computing, as well as adjusting the proposed amount for the CER/Data enablement step change. We discuss this below.

Table 6.9 Essential’s proposed step changes and the AER’s draft decision (\$million, 2023–24)

Step change	Essential’s proposal	AER’s alternative estimate	Difference
Cloud computing	12.3	–	–12.3
Insurance	14.7	–	–14.7
DER / data enablement	31.7	20.0	–11.7
GSL	6.5	6.5	–
Property and fleet	–8.0	–8.0	–0.0
Total step changes	57.3	18.5	–38.7

Source: Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023, p. 6; AER analysis.

Note: Numbers may not add up to totals due to rounding. Values of '0.0' and '-0.0' represent small non-zero amounts and '-' represents zero.

³⁸ AER, *Expenditure forecast assessment guideline for electricity distribution*, August 2022, p. 26.

6.4.3.1 Cloud computing

Essential proposed a step change of \$12.3 million (\$2023–24) for cloud computing over the 2024–29 regulatory period. This relates to an accounting standards guidance change which clarifies that most software as a service (SaaS) costs should be treated as opex (previously treated as capex). Our draft decision is to not include a forecast for the proposed cloud computing step change in our alternative estimate. We have not included this step change in our alternative estimate as we consider that it results in forecast expenditure that we are not satisfied is likely to be prudent and efficient.

Table 6.10 Essential’s cloud computing step change (\$million, 2023–24)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Essential’s proposal	3.1	9.8	11.3	–3.3	–8.6	12.3
AER draft decision	–	–	–	–	–	–
Difference	–3.1	–9.8	–11.3	3.3	8.6	–12.3

Source: Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023, p. 6; AER analysis.

Note: Numbers may not add up to totals due to rounding. Values of '0.0' and '-0.0' represent small non-zero amounts and '-' represents zero.

In its proposal, Essential noted that in April 2021 the International Financial Reporting Standards Interpretations Committee (IFRIC) released additional guidance in the form of agenda decisions in relation to Configuration or Customisation Costs in a Cloud Computing Arrangement under IAS 38 Intangible Assets.³⁹ Under this latest guidance, expenditure associated with implementation or upgrades to SaaS systems must now be expensed (treated as opex) instead of capitalised (treated as capex) as was the historical accounting treatment for these costs. Essential submitted that this means for IT projects that are implementing cloud software, almost all aspects of the project must now be expensed.⁴⁰ Essential also submitted that it had followed our standard approach and continued to treat costs identified as SaaS under the new guidance as capex in the current (2019–24) period for regulatory reporting purposes.⁴¹

Essential’s proposal provided detailed business cases outlining the drivers behind each ICT project and NPV analysis to support their prudence and efficiency. In response to our request for further information, Essential provided a detailed cost build-up of its proposed step change and reconciled these costs against the costs provided in its NPV analysis.⁴² It also confirmed any costs related to other opex step changes such as DER / data enablement and undefined costs such as cyber security ICT had been excluded from the costs proposed in its cloud computing step change.

We engaged, Energy Market Consulting associates (EMCa) to assist us in our assessment of Essential’s proposed ICT projects, including the Customer Relationship Management

³⁹ Essential Energy, *9.03 Opex approach*, January 2023, pp. 6–7.

⁴⁰ Essential Energy, *9.03 Opex approach*, January 2023, p. 7.

⁴¹ Essential Energy, *9.03 Opex approach*, January 2023, p. 7.

⁴² Essential, *Response to IR#043 – cloud computing step change*, 19 July 2023.

(CRM) and portal project (which represented a significant portion of its SaaS ICT costs). EMCa's assessment found that:⁴³

- the CRM and portal project required 20% of its proposed costs to maintain service and the remaining 80% provided an 'expansion' of Essential's service capabilities;
- Essential's identified benefits comprised of avoided charges from its legacy systems and that Essential had not identified any benefits which could reasonably be considered to accrue to its expansion of capabilities;
- the proposed CRM and portal project does not meet AER ICT expenditure assessment guidelines which require that non-recurrent ICT projects which improve service capability should be demonstrated to have a positive NPV.

EMCa concluded that, whilst Essential had selected the best option of those considered, it has not identified any benefits arising from the expansion of capability from the CRM and portal project, and these costs are therefore not justified.⁴⁴ However, EMCa also stated that it expects that there are quantifiable benefits that could be determined, and which may be sufficient to provide a positive NPV for this project. See Attachment 5 of this draft decision – capital expenditure, for further discussion on EMCa's assessment and our draft decision on Essential's proposed ICT expenditure.

We consider there was no double counting of costs already covered in other aspects of Essential's proposal. However, we agree with EMCa's conclusion and recommendation that it is not prudent for Essential to implement the CRM and portal project as proposed. Using the same method for calculating the step change as Essential proposed (with the exclusion of the CRM and portal project), we consider that Essential does not require a step up in opex from its base year SaaS costs as it proposed in its cloud computing step change. Therefore, in our alternative estimate we have not included a step change for cloud computing.

However, we note that Essential stated that it recorded all SaaS costs as capex in the current period,⁴⁵ but calculated its proposed step change amount as the forecast increase in SaaS costs relative to SaaS costs it incurred in its base year.⁴⁶ We note that Essential's approach therefore appears to account for any step up in SaaS opex required from its base year, but it is not clear that this includes the base year SaaS amount. We consider Essential should consider this further in preparing its revised proposal and, if this is the case, it may be appropriate for Essential to include a base adjustment for SaaS costs (including those incurred in its base year) in its revised proposal. If Essential includes a base adjustment for SaaS costs in its revised proposal, it should have regard to our draft decision on this cloud computing step change, including the concerns identified in relation to the CRM and portal project.

⁴³ EMCa, *Essential Revenue Proposal 2024–29 Review of proposed expenditure on CER and Non-recurrent ICT*, August 2023, p. 57.

⁴⁴ EMCa, *Essential Revenue Proposal 2024–29 Review of proposed expenditure on CER and Non-recurrent ICT*, August 2023, pp. 63, 65.

⁴⁵ Essential Energy, *9.03 Opex approach*, January 2023, p. 7.

⁴⁶ Essential Energy, *Response to IR#043 – cloud computing step change*, 19 July 2023.

6.4.3.2 Insurance

Essential proposed a step change of \$14.7 million (\$2023–24) for an increase in insurance premiums over the 2024–29 regulatory period.⁴⁷ This relates to forecast increases in insurance premiums, for which Essential considers the efficient costs are not provided by other components of total forecast opex, including base year opex. Our draft decision is not to include the proposed insurance premium step change in our alternative estimate. We consider the insurance premium increases are likely to be captured in the non-labour price growth (CPI) component of the rate of change.

Table 6.11 Essential’s insurance step change (\$million, 2023–24)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Essential’s proposal	1.4	2.2	3.1	3.8	4.1	14.7
AER draft decision	–	–	–	–	–	–
Difference	–1.4	–2.2	–3.1	–3.8	–4.1	–14.7

Source: Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023; AER analysis.
Note: Numbers may not add up to totals due to rounding. Values of '0.0' and '-0.0' represent small non-zero amounts and '-' represents zero.

In its proposal, Essential stated its insurance premiums, particularly for bushfire cover, have increased materially in response to global climatic events and tightening market conditions.⁴⁸ Essential engaged Marsh to provide insurance premium cost forecasts for the full spectrum of its insurance program over the 2024–29 regulatory control period.⁴⁹

We recently engaged Taylor Fry to assess the prudence and efficiency of forecast insurance premiums for our 2023–28 ElectraNet⁵⁰ and Transgrid⁵¹ revenue determinations. We consider Essential's forecast insurance premiums, prepared by Marsh, are largely consistent with Taylor Fry's expectation of future premiums in that context, given prevailing market conditions. On this basis we consider Essential's forecast insurance costs likely to be reasonable.

However, our review also identified that Essential applied the incorrect inflation rate to convert its insurance costs from nominal to real dollars. Our alternative estimate of total forecast insurance premium costs has applied our standard approach for the escalation of annual costs to real dollars, resulting in an alternative estimate of \$11.8 million (\$2023–24).

Our assessment considers the rate of change forecast, which includes an amount for non-labour price growth of CPI, which covers potential increases in costs like insurance premiums. We expect some non-labour components in opex will increase by more than CPI and some less than CPI. To the extent that insurance premiums rise by more than CPI, we expect this will to an extent be offset by other non-labour costs rising by less than CPI. We

⁴⁷ Essential Energy, *9.03 Opex approach*, January 2023, p. 6.

⁴⁸ Essential Energy, *2024–29 Regulatory Proposal*, January 2023, p. 65.

⁴⁹ Marsh, *Essential Energy – 9.03.02 Insurance premium projections*, 5 October 2022, p. 2.

⁵⁰ AER, *ElectraNet 2023-28 – Draft decision – Attachment 6 – Operating expenditure*, September 2022, p. 19.

⁵¹ AER, *Transgrid 2023-28 – Draft decision – Attachment 6 – Operating expenditure*, September 2022, p. 20.

note, however, that there may be specific circumstances where it is appropriate to consider increasing costs of individual cost categories, particularly where they represent a material proportion of total opex.

Our insurance premium step change alternative estimate of \$11.8 million (\$2023–24) represents 0.5% of our alternative estimate of total forecast opex. We consider the costs are not materially above the non-labour price growth (CPI) included in the rate of change, with the higher insurance premiums therefore likely to be offset by other non-labour costs rising by less than CPI. As such, we have not included this step change in our alternative estimate of total forecast opex.

6.4.3.3 DER / data enablement

Essential proposed a step change of \$31.7 million (\$2023–24), with an associated \$86.6 million (\$2023–24) in capex, for enabling DER over the 2024–29 regulatory period. This step change relates to acquiring and utilising data to improve network visibility, and ICT expenditure to enable dynamic operating envelopes (DOEs) and improve network planning (linked to the proposed capex). Our draft decision is to include a forecast of \$20.0 million (\$2023–24) for the DER / data enablement step change⁵² in our alternative estimate, which is \$11.7 million (\$2023–24) lower than Essential’s proposal.

We have included a reduced amount for this step change in our alternative estimate as we consider this amount results in a level of forecast expenditure that is likely to be prudent and efficient.

Table 6.12 Essential’s DER / data enablement step change (\$million, 2023–24)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Essential’s proposal	5.7	5.7	5.7	7.6	7.0	31.7
AER draft decision	3.6	3.6	3.6	4.8	4.4	20.0
Difference	-2.1	-2.1	-2.1	-2.8	-2.6	-11.7

Source: Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023; AER analysis.
Note: Numbers may not add up to totals due to rounding. Values of '0.0' and '-0.0' represent small non-zero amounts and '-' represents zero.

Essential stated that a key driver of its DER / data enablement program and the expenditures was the accelerated uptake of DER by its customers.⁵³ It noted that the proposed expenditures will enable more DER to be connected and better managed to promote network utilisation, while improving reliability, enabling more exports and lowering overall costs for its customers. The expenditures were supported by a business case,⁵⁴ our assessment of which is discussed in more detail in Attachment 5.

⁵² This step change is also referred to as the 'Future Networks' step change in some sections of Essential’s proposal.

⁵³ Essential Energy, *9.03 Opex approach*, January 2023, p. 7.

⁵⁴ Essential Energy, *Attachment 10.05, Future Network Business Case Overview*, January 2023.

Approximately one third of the proposed opex step change is to fund increased network visibility (to achieve up to 30% coverage of all customers) by acquiring and utilising smart meter data and solar irradiance data, installing distribution transformer monitors, and purchasing licences to enable low voltage (LV) analytics and monitoring.⁵⁵ The other approximately two thirds of the step change is for ICT-related expenditures to enable DOEs and improve network planning operations, including the addition of a number of full time equivalent roles (FTEs) to manage these new capabilities.⁵⁶ This ICT-related opex is largely dependent on components of the proposed capex.

In undertaking our assessment, we jointly reviewed the proposed capex and opex for this step change. Our technical consultant EMCa also reviewed the prudence and efficiency of the proposed expenditure.⁵⁷ We considered the network visibility and ICT expenditure components of this step change separately in coming to our alternative estimate of \$20.0 million (\$2023–24). Our assessment of each is summarised below.

For network visibility, EMCa advised that Essential had not sufficiently justified its target of 30% smart meter data coverage or specified the volume of solar irradiance data required. EMCa considered it reasonable for Essential to target 20-25% data coverage for the purpose of transformer tapping, phase balancing and voltage management, however this level of coverage is only required for the feeders where there are over-voltage constraints, not across the whole LV network. EMCa also noted that Essential can leverage off its LV network modelling and customer complaints to target areas of the network with the highest levels of over-voltage and secure the minimum LV visibility in those areas to identify the best solution.⁵⁸ Given the network visibility provided by these additional types of network monitoring, and noting EMCa's advice that monitoring should focus on areas experiencing export constraints, we consider that a lower level of smart meter data is likely to be necessary to provide sufficient network visibility. Therefore, our alternative opex estimate assumes a level of smart meter data which will achieve 20% network visibility.

For ICT-related expenditure associated with DOE enablement and improved network planning, the proposed opex is largely dependent on the related capex. As noted in Attachment 5, we are proposing an alternative capex estimate of \$41.3 million or 52% less than Essential's proposal of \$86.6 million (\$2023–24) and so have adjusted our alternative opex estimate for this component of the step change to be broadly commensurate with the alternative capex estimate. This reflects EMCa's advice and our position on the proposed capex. We concluded that customer benefits are overstated based on the forecast level of export curtailment, and a smaller level of investment in DOE capability is likely to be justified when modelling assumptions are updated.

Two submissions made comments directly relevant to Essential's DER / data enablement step change. PIAC raised a concern about the proposed increases in CER expenditures by

⁵⁵ Essential Energy, *Attachment 10.05, Future Network Business Case Overview*, January 2023.

⁵⁶ Essential Energy, *Attachment 10.05, Future Network Business Case Overview*, January 2023.

⁵⁷ EMCa, *Essential Revenue Proposal 2024–29 Review of proposed expenditure on CER and Non-recurrent ICT*, August 2023, pp. 18–47.

⁵⁸ EMCa, *Essential Revenue Proposal 2024–29 Review of proposed expenditure on CER and Non-recurrent ICT*, August 2023, p. 29.

NSW businesses to acquire smart meter data.⁵⁹ While it supported the NSW networks' proposals to acquire the data required, PIAC expressed concerns that the networks are being required to pay for smart meter data, which it states should be provided to networks consistently, in a timely manner, and at no additional cost. The CCP26 noted in its submission that it supported a targeted review of the Essential's step changes on the basis that they had not been reviewed in detail by customers and the cost of the DER / data enablement step change had increased materially since the draft plan.⁶⁰

We note the AEMC's final report for its review of the regulatory framework for metering services was published shortly before we published our draft decision.⁶¹ We will consider any relevant outcomes of this review in making our final decision for Essential's DER / data enablement step change.

Overall, and consistent with our position in Attachment 5, we have included \$20.0 million (\$2023–24) for the DER / data enablement step change in our alternative estimate of total forecast opex.

6.4.3.4 Guaranteed Service Level (GSL) payments

Essential proposed a step change of \$6.5 million (\$2023–24) for GSL payments over the 2024–29 regulatory period. This relates to the introduction of new regulatory obligations by the Independent Pricing and Regulatory Tribunal (IPART) in NSW commencing from 1 July 2024. Our draft decision is to include a forecast of \$6.5 million (\$2023–24) for the proposed GSL payments step change in our alternative estimate, which is the same as Essential's proposal.

We have included this step change in our alternative estimate of total forecast opex as we consider these costs are associated with a new regulatory obligation, and represents an increase in Essential's opex costs beyond Essential's control.

Table 6.13 Essential's GSL payments step change (\$million, 2023–24)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Essential's proposal	1.3	1.3	1.3	1.3	1.3	6.5
AER draft decision	1.3	1.3	1.3	1.3	1.3	6.5
Difference	–	–	–	–	–	–

Source: Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023; AER analysis.

Note: Numbers may not add up to totals due to rounding. Values of '0.0' and '-0.0' represent small non-zero amounts and '-' represents zero.

In its proposal, Essential noted that under the current GSL scheme in NSW, customers with poor service can apply for an \$80 payment from their distributor. Distributors are required to

⁵⁹ PIAC, *Submission – 2024–29 Electrical Determination - NSW*, June 2023, p. 17.

⁶⁰ Consumer Challenge Panel 26, *Advice to the AER - Submission – 2024–29 Electricity Determination - Essential Energy*, May 2023, pp. 10–11.

⁶¹ AEMC, *Review of the regulatory framework for metering services, Final report*, August 2023.

take reasonable steps to notify customers about the scheme.⁶² However, the general customer uptake for this scheme has been very low due to lack of consumer knowledge around compensation and low payment value of GSL payments.⁶³ IPART expects an uplift in customers being paid under the new GSL scheme compared with the current scheme, and stated that if there is no increase in the customers applying for the scheme it may impose additional requirements on distributors to notify customers about the scheme.⁶⁴

Essential's proposal also stated that under the new scheme commencing from 1 July 2024 distributors will be required to:⁶⁵

- take reasonable steps to ensure eligible customers are aware of the scheme and follow any directions provided by IPART to inform customers
- make the payment available to a customer upon request, if it is unable to meet the GSL standards for that customer
- report on the steps taken, and how many customers were eligible, applied for payments and received payments
- take all reasonable steps to pay eligible customers within 12 weeks of receiving an application.

Essential's proposal seeks to recover the direct GSL claim costs as well as the additional resources required to process the claims under the new scheme, and it provided a cost build-up of its proposed step change.⁶⁶ It also assumed that 50% of eligible customers will take up the GSL payments under the new scheme.⁶⁷

We consider that the GSL payments step change costs proposed by Essential are associated with a new regulatory obligation, and represent a step increase in Essential's opex costs beyond Essential's control. We are satisfied that Essential's GSL payments step change amount reasonably reflects the costs anticipated by IPART under the new GSL scheme.⁶⁸ However, we note that Essential's assumed 50% take up of the new GSL scheme is substantially higher than the take up under the old scheme, and not supported by empirical evidence. Despite this, we believe that it is not unreasonable given IPART's intention in amending the GSL scheme was to increase the uptake by eligible customers, and its intention to enact further amendments if this does not occur. As such, in our alternative estimate we have included a step change of \$6.5 million (\$2023–24) for increased opex costs under the new GSL scheme.

⁶² Essential Energy, *9.03 Opex approach*, January 2023, p. 8.

⁶³ Essential Energy, *9.03.05 GSL Step Change*, January 2023.

⁶⁴ IPART, *Review of the Electricity Distribution Reliability Standards*, May 2021, pp. 58–59.

⁶⁵ Essential Energy, *9.03 Opex approach*, January 2023, p. 8.

⁶⁶ Essential Energy, *9.03.05 GSL Step Change*, January 2023.

⁶⁷ Essential Energy, *9.03 Opex approach*, January 2023, p. 9.

⁶⁸ IPART, *Review of the Electricity Distribution Reliability Standards*, May 2021, p. 51.

6.4.3.5 Property and fleet

Essential proposed a step change of $-\$8.0$ million ($\$2023-24$) for property and fleet savings over the 2024–29 regulatory control period.⁶⁹ This relates to modifications made to Essential’s fleet and properties to lower its environmental impact, and reduce costs. Our draft decision is to include a forecast of $-\$8.0$ million ($\$2023-24$) for the proposed property and fleet step change in our alternative estimate, which is the same as Essential’s proposal (adjusted for the latest inflation data).

We have included this step change in our alternative estimate as we consider the property and fleet step change represents an efficient capex/opex trade off which results in a lower forecast expenditure for Essential.

Table 6.14 Essential’s property and fleet step change (\$million, 2023–24)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Essential’s proposal	-0.9	-1.3	-1.6	-1.9	-2.1	-8.0
AER draft decision	-0.9	-1.3	-1.6	-1.9	-2.1	-8.0
Difference	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0

Source: Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023; AER analysis.
Note: Numbers may not add up to totals due to rounding. Values of '0.0' and '-0.0' represent small non-zero amounts and '-' represents zero.

In its proposal, Essential proposed to power its fleet and properties using renewable energy where cost effective. Essential intends to install solar panels at 20 depot sites and move a portion of its light and heavy vehicles to electric vehicles, where the benefits exceed the costs, ensuring prudent and efficient expenditure.⁷⁰ Essential expects this investment will result in savings in electricity and petrol costs which would enable it to reduce costs for customers and lower its environmental impact.

We note that Essential has undertaken a cost benefit analysis to confirm the optimal level of investment and will only undertake investments in solar panels, batteries and EVs where the benefits exceed the costs.⁷¹ We also acknowledge that the proposed property and fleet step change is a negative step change with positive impacts for both customers and the environment from a reduction in costs and carbon emissions. We consider that Essential’s proposed property and fleet step change likely represents an efficient capex/opex trade off which results in lower forecast opex over the 2024–29 regulatory period. As such we have included a step change of $-\$8.0$ million ($\$2023-24$) in our alternative estimate.

In terms of stakeholder submissions, CCP26 commended Essential for proposing a negative step change which reflects savings in electricity and fuel costs, stating that identifying this

⁶⁹ Essential Energy, *9.03 Opex approach*, January 2023, p. 6.

⁷⁰ Essential Energy, *9.03 Opex approach*, January 2023, pp. 6, 9.

⁷¹ Essential Energy, *9.03 Opex approach*, January 2023, p. 9.

step change is a tangible acknowledgement by Essential of the affordability concerns consistently raised by customers.⁷²

6.4.4 Category specific forecast

Essential’s proposal included one category specific forecast, debt raising costs, which were not forecast using the base-step-trend approach. We have included category specific forecasts for debt raising costs in our alternative estimate of total opex.

6.4.4.1 Debt raising costs

We have included debt raising costs of \$26.3 million (\$2023–24) in our alternative estimate. This amount is \$1.2 million (\$2023–24) lower than the \$27.5 million (\$2023–24) proposed by Essential.

Table 6.15 Debt raising costs (\$million, 2023–24)

	2024–25	2025–26	2026–27	2027–28	2028–29	Total
Essential’s proposal	5.3	5.4	5.5	5.6	5.6	27.5
AER alternative estimate	5.1	5.2	5.3	5.3	5.4	26.3
Difference	-0.2	-0.2	-0.2	-0.2	-0.2	-1.2

Source: Essential Energy, *9.03.07 Standard Control Operating Expenditure Model*, January 2023; AER analysis.
Note: Numbers may not add up to totals due to rounding. Values of '0.0' and '-0.0' represent small non-zero amounts and '-' represents zero.

Debt raising costs are transaction costs incurred each time a business raises or refinances debt. Our preferred approach is to forecast debt raising costs using a benchmarking approach rather than a service provider’s actual costs in a single year. This provides consistency with the forecast of the cost of debt in the rate of return building block.

We used our standard approach to forecast debt raising costs, which is discussed further in Attachment 3 to the draft decision.

⁷² Consumer Challenge Panel 26, *Advice to the AER - Submission - 2024–29 Electricity Determination - Essential Energy*, May 2023, p. 10.

Shortened forms

Term	Definition
ACS	alternative control services
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CCP26	Consumer Challenge Panel, sub-panel 26
DER	Distributed Energy Resources
DMIAM	demand management innovation allowance mechanism
DMIS	demand management incentive scheme
DNSP or distributor	Distribution Network Service Provider
EBSS	efficiency benefit sharing scheme
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
SCS	standard control service
