FINAL DECISION

Energex
Distribution Determination
2020 to 2025

Attachment 6
Operating expenditure

June 2020

AUSTRALIAN ENERGY REGULATOR

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Note

This attachment forms part of the AER's final decision on the distribution determination that will apply to Energex for the 2020–25 regulatory control period. It should be read with all other parts of the final decision.

The final decision includes the following attachments:

Overview

Attachment 1 – Annual revenue requirement

Attachment 2 – Regulatory asset base

Attachment 3 – Rate of return

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 6 – Operating expenditure

Attachment 7 – Corporate income tax

Attachment 8 – Efficiency benefit sharing scheme

Attachment 9 – Capital expenditure sharing scheme

Attachment 10 – Service target performance incentive scheme

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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 Energex's revised opex proposal for the 2020–25 regulatory control period.

6.1 Final decision

Our final decision is to accept Energex's revised opex proposal of $1805.8 million ($2019–20), including debt raising costs, for the 2020–25 regulatory control period. We are satisfied that it reasonably reflects the opex criteria.[1] We have tested Energex's proposal by comparing it to our alternative estimate of total opex of $1909.9 million ($2019–20).[2] Our alternative estimate is $104.1 million (or 5.8 per cent) higher than Energex's opex proposal.

For its revised proposal Energex re-submitted the opex in its initial proposal, which we accepted in our draft decision. While Energex re-proposed its initial proposal, in its revised proposal it also provided, for information, an 'internal' opex forecast, which was its internal view of a revised opex forecast using our base-step-trend approach. This took into account updated information, including actual results for base year opex, accounted for the opex savings from its property and ICT capex programs, and used our 0.5 per cent per annum forecast for industry-wide productivity growth.[3] This internal forecast was 5.7 per cent higher than its initial proposal.[4] However, for its revised opex proposal, Energex re-submitted its initial proposal, explaining:

> Recognising this and our commitment to affordable customer outcomes, we have re-submitted the lower opex forecast used in our Regulatory Proposal. This recognised that the AER accepted our January forecast in its Draft Decision, having determined that it was not materially inefficient.[5]

We have drawn on elements of Energex's internal forecast in developing our alternative estimate of opex.

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1 NER, cl. 6.5.6(c).

2 Includes debt-raising costs. We use the Reserve Bank of Australia's May 2020 *Statement on Monetary Policy* trimmed mean inflation forecasts for the year ending June 2020. See below for further details.

3 Energex, *1.003 - Energex Revised Regulatory Proposal 2020-25*, December 2019, p. 34.

4 Energex, *1.003 - Energex Revised Regulatory Proposal 2020-25*, December 2019, p. 34; Energex , *7.001 - Revised Regulatory Proposal for the 2020-25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, p. 1; AER analysis.

5 Energex, *1.003 - Energex Revised Regulatory Proposal 2020-25*, December 2019, p. 34.

Table 6.1 sets out Energex's revised proposal, our alternative estimate for the final decision and the differences between them.

Table 6.1 AER's alternative estimate of total opex compared to Energex's proposal ($ million, 2019–20)

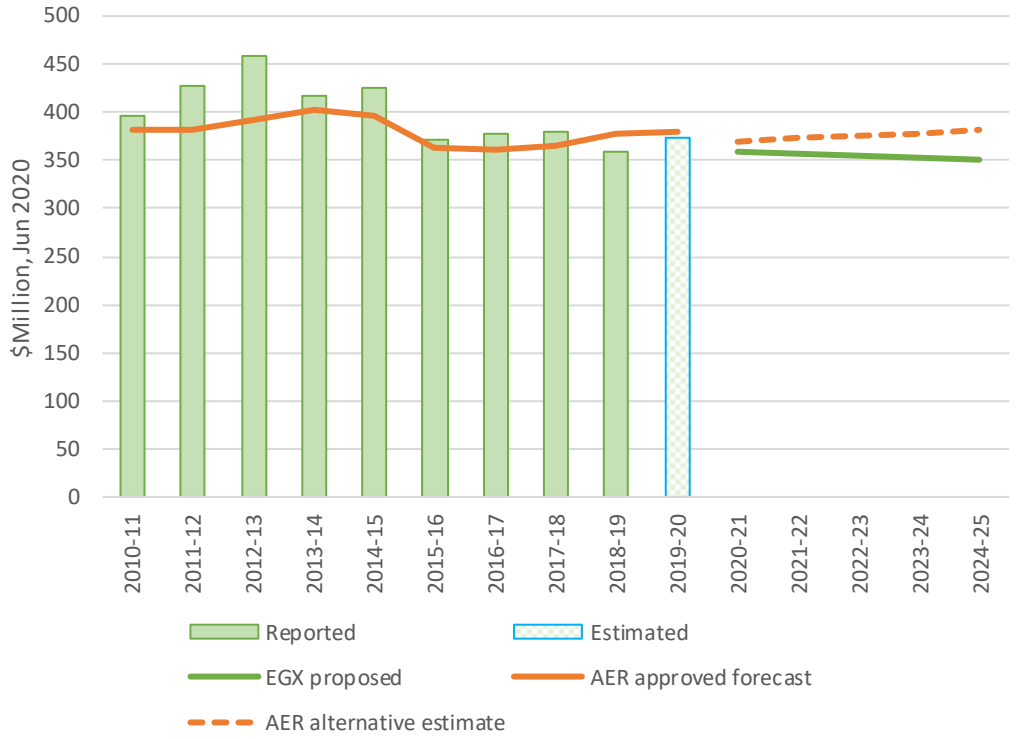
	Energex Revised Proposal	AER alternative estimate Final Decision	Difference $
Based on reported opex in 2018–19	1872.3	1800.0	-72.2
Efficiency adjustment	0.0	0.0	0.0
Negative base adjustments	-123.6	0.0	123.6
Cost Allocation Method adjustments	36.0	14.9	-21.1
Service classification adjustments	12.8	7.1	-5.6
2018–19 to 2019–20 increment	10.6	11.2	0.5
Output growth	54.4	52.3	-2.0
Price growth	3.5	30.6	27.1
Productivity growth	-91.2	-27.3	63.9
Step changes	0.0	-9.2	-9.2
Category specific forecasts	-	-	-
Debt raising costs	31.1	30.2	-0.8
Total opex	1805.8	1909.9	104.1

Source: AER analysis; Energex, *6.007 - Opex forecast - SCS*, January 2019.

Note: Numbers may not add up to total due to rounding.

Figure 6.1 shows actual and allowed opex in the previous and current regulatory control periods and Energex's opex forecast and our alternative estimate in the next period.

Figure 6.1 Historical and forecast opex ($ million, 2019–20)



Source: AER analysis; Energex, *Regulatory Accounts 2010–11 to 2018–19*; Energex, *Economic Benchmarking RIN responses 2010 to 2019,* Energex, *6.007 - Opex forecast - SCS*, January 2019; Energex, *Post Tax Revenue Model (PTRM) PTRM Distribution*, December 2019.

Note: Excludes debt raising costs.

We derive our alternative opex forecast by nominating an annual opex expenditure 'base' and then adjusting the opex base over time to account for wage growth, expansion of the network and expected productivity growth. We then add or subtract any components of opex that are not appropriately compensated for in base opex or the rate of change. Our approach is explained in section 6.3 and applied in section 6.4 of this attachment.[6]

While we accept Energex's revised proposal for total opex, the following sets out how we have calculated our alternative estimate and the key differences that result in our higher forecast (which draws on the updated information included in Energex's 'internal' forecast):

- we have used actual opex in the base year (2018–19) as the starting point for forecast base opex, whereas Energex's initial proposal (and its revised proposal) used a higher estimate for base year opex

[6] Our base-step-trend approach is also set out in our expenditure guideline. See AER, *Expenditure Forecast Assessment Guideline for Electricity Distribution*, November 2013, pp. 22–24.

- we have included different adjustments to base opex compared to those in Energex's initial and revised opex proposal. Our alternative estimate:
    - does not include the removal of the negative base adjustments proposed by Energex
    - includes lower amounts for the additional costs proposed to account for the cost allocation method (CAM) and service classification changes (based on revised estimates provided by Energex in its internal forecast)
- based on Energex's internal forecast, we have applied a slightly lower forecast output growth rate compared to Energex's initial and revised opex proposal, reflecting updated output forecasts and the weights applied to the constituent outputs
- we have used a higher forecast input price growth rate compared to Energex's initial and revised opex proposal. We have forecast labour price growth using our standard approach of averaging the forecasts from Deloitte Access Economics (Deloitte), prepared for the AER, and from BIS Oxford Economics, prepared for Energex. This is a change in the approach adopted in our draft decision of using Deloitte's forecast only. Energex's relatively low proposed price growth reflects a 0.59 per cent average annual 'unit rate efficiency factor' discount it had made to its input price growth forecast
- we have applied our 0.5 per cent per year productivity growth forecast from our opex productivity growth review final decision.[7] This is lower than the 1.7 per cent average annual productivity growth forecast Energex used in its initial and revised opex proposal
- we have included two negative step changes, for property and ICT capex-related opex savings
- we have applied the trimmed mean inflation series from the Reserve Bank of Australia's May 2020 inflation update to inflate 2018–19 nominal dollars to June 2019–20 dollars.[8] Our usual implementation is to use the (headline) consumer price index (CPI) forecast for the year ending June 2020. In the current COVID circumstances, we consider that the trimmed mean forecast better reflects core expectations of inflation as set out in the RBA's *Statement on Monetary Policy*. Further, the trimmed mean smooths the transient volatility in the CPI forecasts in the May *Statement on Monetary Policy*.

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7 AER, *Final decision paper, Forecasting productivity growth for electricity distributors*, March 2019.

8 RBA, *Statement on Monetary Policy – May 2020*, *Forecast Table*, May 2020, available at https://www.rba.gov.au/publications/smp/2020/may/forecasts.html.

6.2 Energex's revised proposal

Energex proposed a total forecast opex of $1805.8 million ($2019–20) for the 2020–25 regulatory control period (see Table 6.1).[9] This is the same amount it submitted in its initial proposal and that we accepted in our draft decision. This is 3.3 per cent lower than Energex's actual and estimated opex for the 2015–20 regulatory control period.[10]

Table 6.1 Energex's proposed opex ($ million, 2019–20)

	2020–21	2021– 22	2022–23	2023–24	2024–25	Total
Opex excluding category specific forecasts	358.9	356.6	354.8	353.2	351.2	1,774.7
Debt raising costs	6.2	6.2	6.2	6.2	6.2	31.1
Total opex	365.1	362.9	361.0	359.4	357.4	**1,805.8**

Source: Energex, *6.007 - Opex forecast - SCS*, January 2019.

Note: Numbers may not add up to total due to rounding.

In its initial proposal, Energex adopted our base–step–trend approach to forecast opex for the 2020–25 regulatory control period.[11] We set out its approach and the key elements of its forecast in section 6.2 of our draft decision.

In its revised proposal, Energex also provided an 'internal' opex forecast, which was its internal view of a revised opex forecast using base-step-trend, updated for a range of factors, including actual results for base year opex.[12] This forecast was 5.7 per cent higher than its initial opex proposal.[13] However, for its revised opex proposal, Energex re-submitted its initial proposal, on the basis of its "commitment to affordable customer outcomes" and "AER [acceptance] of our January forecast in its Draft Decision, having determined that it was not materially inefficient."[14]

We have drawn on elements of Energex's internal forecast in developing our alternative estimate of opex.

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9 Including debt raising costs. Energex, *1.003 - Energex Revised Regulatory Proposal 2020–25*, December 2019,, December 2019, p. 38; Energex, *6.007 - Opex forecast - SCS*, January 2019.

10 Including debt raising costs, not including solar feed-in tariffs; AER analysis.

11 Energex, *1.003 - Energex Regulatory Proposal 2020–25*, January 2019, p. 40.

12 Energex, *7.001 - Revised Regulatory Proposal for the 2020–25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, p. 1.

13 Energex, *1.003 - Energex Revised Regulatory Proposal 2020–25*, December 2019, p. 34; Energex , *7.001 - Revised Regulatory Proposal for the 2020–25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, p. 1; AER analysis.

14 Energex, 1.003 - *Energex Revised Regulatory Proposal 2020-25*, December 2019, p. 34.

6.2.1 Stakeholder views

We received five submissions on Energex's opex proposal, including from the AER's Consumer Challenge Panel 14 (CCP14), Origin Energy, AGL, and Energy Consumers Australia (ECA) and the Canegrowers. The ECA included a report by Dynamic Analysis to supplement the ECA's submission. Submissions focused on the issues of efficiency of Energex's opex.

The CCP14 noted that actual opex for 2018–19 was lower than estimated in the initial proposal.[15] It also noted that while pleasing that Energex has not sought to recover the higher alternative estimate in the AER's draft decision, this outcome has effectively been achieved by withdrawing its initial proposal to forfeit its efficiency benefit sharing scheme (EBSS) carryovers. CCP14 also supported the AER's draft decision in relation to real labour price growth and had difficulty in agreeing with the arguments Energex put forward as a part of its internal forecast.[16]

Origin Energy was supportive in principle of Energex's revised proposal, being largely in line with the AER's draft decision recommendations, but encouraged the AER to rigorously assess the prudency and efficiency of the revised expenditure proposals to ensure expenditure remains appropriate.[17] Dynamic Analysis submitted that "given the AER has previously accepted the proposed opex as efficient, we consider the revised [opex] proposal is capable of acceptance."[18]

AGL stated that it "supports the reductions in projected [opex] made by Energex for the 2020–25 regulatory control period and the AER's acceptance of this allowance in the Draft Decision noting that it is a material improvement in Energex's efficiency against historical benchmarks."[19]

Canegrowers noted that we should find that Queensland networks are materially inefficient, as they consistently rank in the bottom quartile in the AER's opex productivity analysis.[20]

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15 CCP14, *Advice to the AER on the Energex and Ergon Energy 2020-25 Revised Regulatory Proposals*, *Revised report*, March 2020, p. 18.

16 CCP14, *Advice to the AER on the Energex and Ergon Energy 2020-25 Revised Regulatory Proposals, Revised* report, March 2020, pp. 25–26.

17 Origin Energy, *Submission on the draft decision and revised regulatory proposals for Queensland electricity distributors,* January 2020, p. 1.

18 Dynamic Analysis, *Technical advice to Energy Consumers Australia; Review of Energex's revised regulatory proposal*, January 2020, p. 7.

19 AGL, *Submission on Energex electricity distribution network - 2020 to 2025: Draft Decision*, January 2020, p. 2.

20 Canegrowers, *Submission on Energy Queensland (Ergon and Energex): Our revised regulatory proposals and revised tariff structure statements 2020–25*, January 2020, p. 2.

6.3 Assessment approach

Our role is to form a view about whether a business's forecast of total opex is reasonable. Specifically, we must form a view about whether a business's forecast of total opex 'reasonably reflects the opex criteria'. In doing so, we must have regard to each of the opex factors specified in the National Electricity Rules (NER). If we are satisfied the business's forecast reasonably reflects the opex criteria, we must accept the forecast.[21] If we are not satisfied, we must substitute an alternative estimate that we are satisfied reasonably reflects the opex criteria for the business's forecast.[22] 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 are required to consider interrelationships with the other building block components of our decision.[23]

As set out in our draft decision in detail, we generally assess a business's forecast total opex using a 'base-step-trend' approach, as summarised in Figure 6.2.[24]

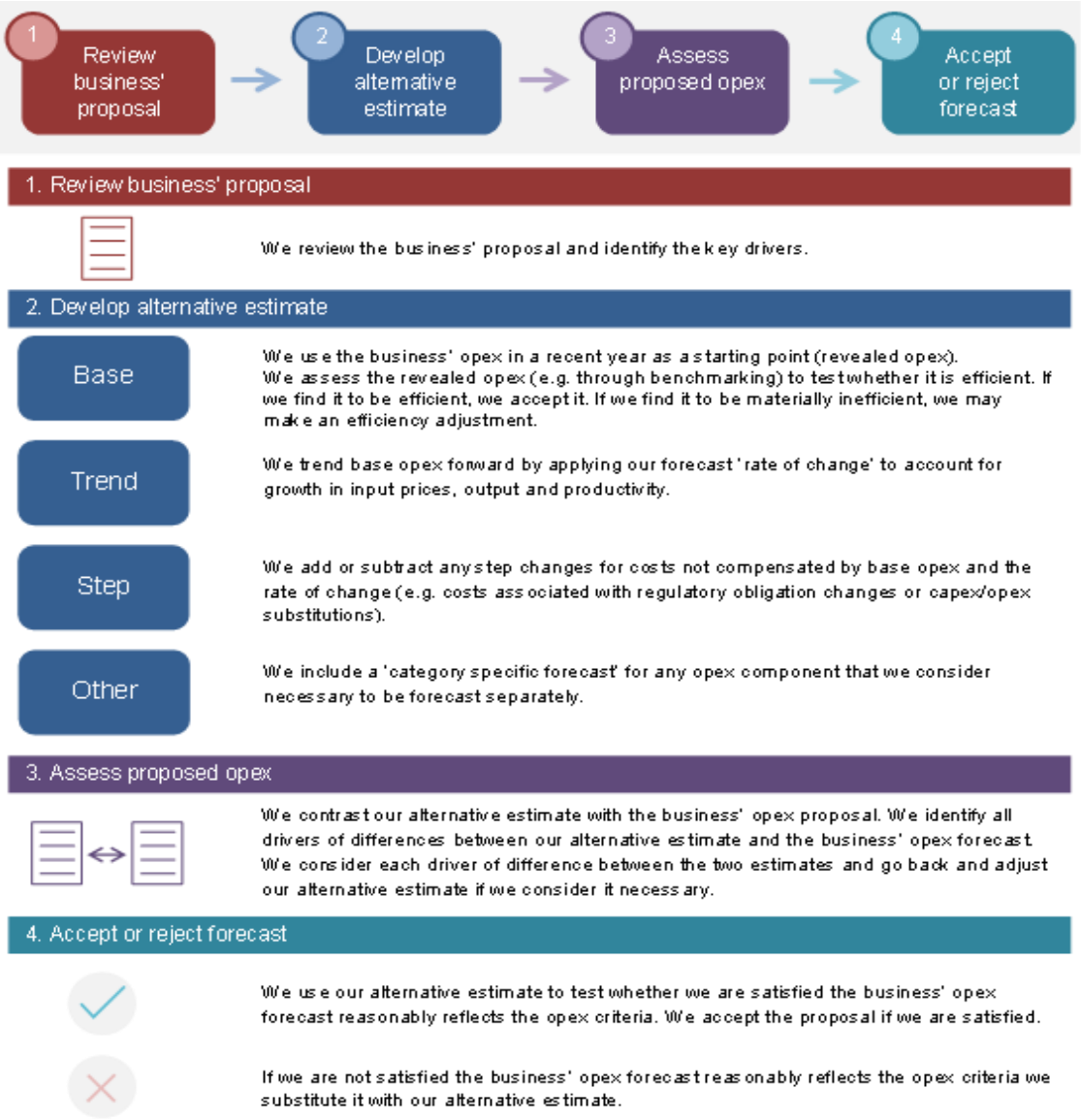
[21] NER, cl. 6.5.6(c).

[22] NER, cll. 6.5.6(d) and 6.12.1(4)(ii).

[23] NEL, s. 16(1)(c).

[24] Our base-step-trend approach is also set out in our expenditure guideline. See AER, *Expenditure Forecast Assessment Guideline for Electricity Distribution*, November 2013, pp. 22–24.

Figure 6.2 Our opex assessment



6.3.1 Interrelationships

In assessing Energex's total forecast opex we also took into account other components of its revenue proposal that could interrelate with our opex decision.[25] The matters we considered in this regard included:

- the EBSS carryover—the level of opex used as the starting point to forecast opex (the final year of the current period) should generally be the same as the level of opex used to calculate the EBSS carryover amounts. This consistency ensures that

[25] When making revenue decisions under the NEL, we must specify the manner in which the constituent components of our decision relate to each other, and the manner in which we take account of these interrelationships: NEL, s. 16(1)(c).

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. In this context, the starting point of our alternative estimate of opex is consistent with the opex used to calculate EBSS carryovers. However, Energex has re-proposed its initial opex proposal for its revised proposal, which we have accepted. We have taken into account this inter-relationship in our decision

- the operation of the EBSS in the 2015–20 regulatory control period, which provided Energex an incentive to reduce opex in the base year
- the impact of cost drivers that affect both forecast opex and forecast 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
- interactions and trade-offs between the opex and capex proposals.

6.4 Reasons for final decision

For its revised opex proposal, Energex re-submitted the opex it proposed in its initial proposal, which we accepted in our draft decision.[26] This provides a degree of comfort that Energex's revised opex proposal is acceptable and reasonably reflects the opex criteria.[27] However, we have tested this by developing an alternative estimate of total opex and comparing it to Energex's revised opex proposal. Our alternative estimate of $1909.9 million ($2019–20) is $104.1 million (or 5.8 per cent) higher than Energex's opex proposal of $1805.8 million ($2019–20).[28] On this basis, we maintain our draft decision to accept Energex's proposed opex forecast.

In this section we set out how we have developed our alternative estimate of opex. This draws on information updated since the draft decision, including actual opex in the base year, further benchmarking analysis and Energex's internal forecast that it included for information in its revised proposal.

6.4.1 Base opex

Consistent with our draft decision, our alternative estimate relies on revealed opex in the 2018–19 base year for establishing base opex. Using our benchmarking tools, we find that Energex's actual opex in the base year is not materially inefficient. As a result, consistent with our draft decision, we have not made an efficiency adjustment to actual base year opex. Our analysis is set out in section 6.4.1.1.

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[26] Energex, *7.001 - Revised Regulatory Proposal for the 2020-25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, p. 1.

[27] NER, cl. 6.5.6(c).

[28] AER analysis; includes debt-raising costs.

Energex's actual base year opex was materially lower ($12.2 million ($2019–20) or 3.3 per cent) than Energex's estimate used in the draft decision. In the draft decision, we relied on Energex's estimated opex in 2018–19 to calculate our alternative estimate. We noted this was because, while our revealed cost and benchmarking analysis indicated that Energex had been historically inefficient, we did not consider its estimated base year opex to be materially inefficient after taking into account the reduction in costs it was forecasting to achieve in 2018–19 and its unique Operating Environment Factors (OEFs). We noted that we would review this position in our final decision, taking into account the actual opex in 2018–19 included in Energex's revised proposal and the results of our *2019 Annual Benchmarking Report*.[29]

In section 6.4.1.2 we assesses the other adjustments to base opex proposed by Energex that are not related to our base opex efficiency assessment, for example, the reclassification of services.

Our conclusions on base opex are summarised in section 6.4.1.3.

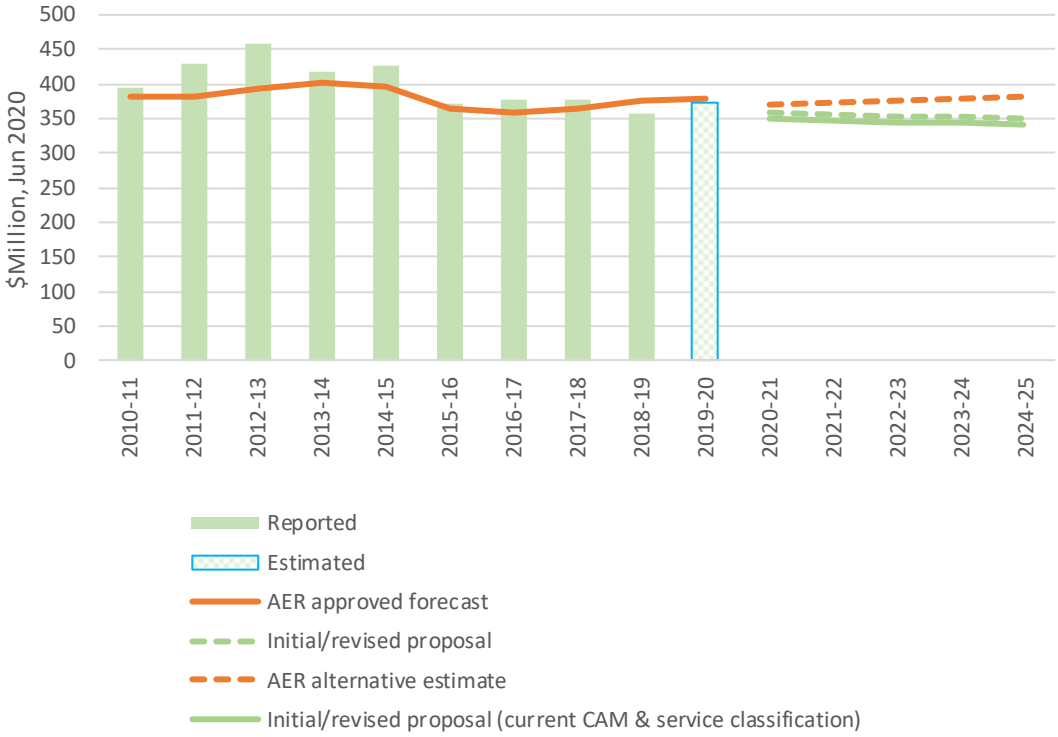
6.4.1.1 Efficiency of base opex

Analysis of Energex's revealed costs

Figure 6.3 shows Energex's actual and forecast opex and our regulatory decisions over the previous, current and next regulatory control periods. Energex has a new CAM that will take effect from 1 July 2020. To allow a like for like comparison, Energex's proposed opex on the basis of its current CAM is shown in the solid green line, while its proposed opex incorporating its new CAM is shown in the green dash line. This new CAM is also reflected in our alternative estimate (the orange dash line).

[29] AER, *Draft decision, Energex distribution determination 2020−25 Attachment 6 – Operating expenditure*, October 2019, p. 37.

Figure 6.3 Energex's historical and forecast opex ($ million, $2019–20)



Source: AER analysis; Energex, *Economic Benchmarking RINs*; Energex, *Economic Benchmarking RINs (recast)*; Energex, *6.007 - Opex forecast - SCS,* January 2019; Energex, *17.046 - 2020–25 Regulatory Determination RIN template*, January 2019.

Note: Reported opex for a given year is based on the CAM which applied in that year, and is calculated by total SCS opex (EB RINs) - debt-raising costs (EB RINs) - feed-in tariffs (AER database for FY11–15 and the EB RINs for FY16–17).

Figure 6.3 shows that Energex's opex has declined between the previous and current regulatory control periods. On an average annual basis, Energex's opex has decreased from $425.5 million ($2019–20) per year over the 2010–15 regulatory control period to an estimated $372.3 million ($2019–20) per year over the current 2015–20 regulatory control period. Energex's opex has decreased from its peak in 2012–13 at $459.3 million ($2019–20) to $370.9 million ($2019–20) in 2015–16. It increased to $379.3 million ($2019–20) in 2017–18, before decreasing to $358.7 million ($2019–20) in 2018–19.

Figure 6.3 also shows that while Energex's reported opex has been above the level of efficient and prudent opex we set in our October 2015 final decision for 2016–17 and 2017–18, it is about 5.0 per cent below this allowance for 2018–19 and estimated to remain just below the allowance for 2019–20.[30]

[30] AER, *Final Decision Energex distribution determination - Attachment 7 - operating expenditure*, October 2015, p. 6.

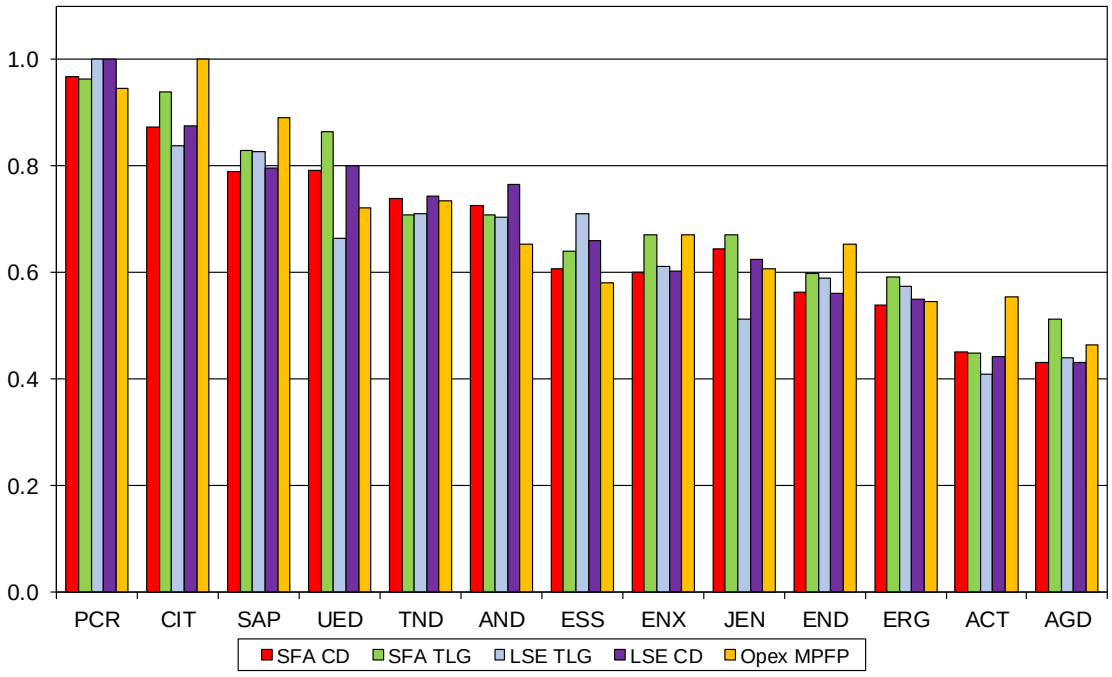
Using our benchmarking tools to assess opex efficiency

While our revealed cost analysis indicates that Energex has been improving its opex efficiency in recent years, we are required to assess the efficiency (or material inefficiency) of Energex's base year opex.[31] To this end, we have used our economic benchmarking tools to test the efficiency of Energex's opex.

Details about our benchmarking approach, including how we take into account OEFs, can be found in section 6.4.1 of our draft decision, and are summarised below.

In terms of historical performance, our benchmarking results indicate that Energex has been relatively inefficient over the 2006–18 period when compared to other distributors in the National Electricity Market (NEM).[32] Figure 6.4 shows that over this period Energex ranks 8th out of 13 distribution businesses based on the average efficiency scores from five economic benchmarking models[33] with an average score of 0.63. These results have not been adjusted for OEFs not already captured in the modelling and so do not account for some factors beyond a distributor's control that can affect its benchmarking performance.

Figure 6.4 Distributors' average opex efficiency scores, 2006–2018



Source: AER, *Annual Benchmarking Report, Electricity distribution network service providers*, November 2019, p. 29.

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31 NER, cll. 6.5.6(d) and 6.12.1(4)(ii).

32 AER, *Annual Benchmarking Report, Electricity distribution network service providers*, November 2019; AER analysis.

33 AER, *Annual Benchmarking Report, Electricity distribution network service providers*, November 2019, p. 29; AER analysis. The five models are the four econometric models - Cobb-Douglas stochastic frontier analysis (SFACD), Cobb-Douglas least squares econometrics (LSECD), Translog stochastic frontier analysis (SFATLG) and Translog least squares econometrics (LSETLG) - and the opex multilateral partial factor productivity (MPFP) model.

It can take some time for more recent improvements in efficiency by previously poorer performing distributors to be reflected in period average efficiency scores. Considering this, we have also examined Energex's average performance over the shorter and more recent 2012–18 time period. These results show that Energex's average efficiency scores across the models are broadly similar to those in the longer time period.[34] Its average efficiency score over this shorter period from the five economic benchmarking models is 0.62, ranking 10th out of the 13 distributors.

Given the evidence outlined above of the relative inefficiency of Energex's opex over the 2006–18 and 2012–18 time periods, we have undertaken additional analysis, including further economic benchmarking, to more directly test the efficiency of Energex's actual opex in the base year. Energex submitted that 2018–19 is the most suitable year for its base year because it is the most recent year for which audited data will be available, and because the level of opex in 2018–19 will be more reflective of ongoing requirements than other recent years.[35] As in the draft decision, we accept 2018–19 as a suitable base year.

Figure 6.5 presents the results of opex multilateral partial factor productivity (MPFP) benchmarking, which allows for the comparison of opex productivity levels between service providers and across time. The chart shows all distributors in the NEM using actual opex up to 2017–18 and actual opex in 2018–19 for Ergon Energy and Energex's proposed base year. We note these opex MPFP results have also not been further adjusted for OEFs and so do not account for some factors beyond a distributor's control that can affect its costs and benchmarking performance.

Energex's opex MPFP score has steadily improved since 2012–13. Energex's MPFP scores based on its 2018–19 base year opex indicate ongoing improvement, placing it fifth against other distributors' opex MPFP performance in 2017–18.[36] We note that this comparative performance has also occurred during a time of significant improvement in opex MPFP of some of the other distributors in the NEM.

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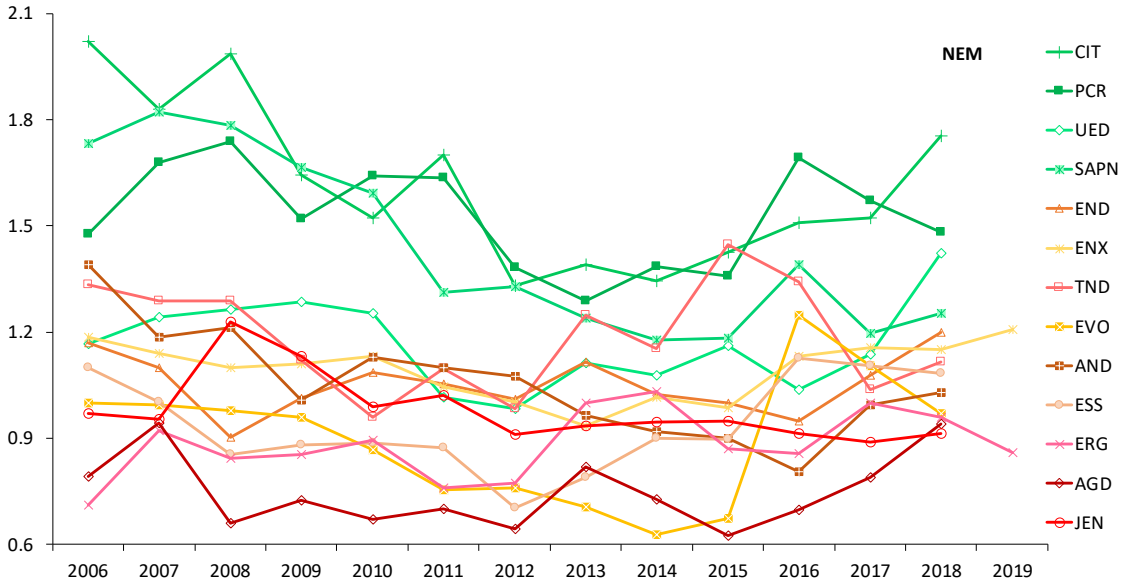
[34] AER, *Annual Benchmarking Report, Electricity distribution network service providers*, November 2019, p. 30.

[35] Energex, *1.003 - Energex Regulatory Proposal 2020–25*, January 2019, pp. 45, 47–48.

[36] A comparison of Ergon Energy and Energex's opex MPFP scores in 2018–19 and opex MPFP scores in 2017–18 involves comparing actual scores in 2017–18 with the scores for 2018–19 based on Ergon Energy and Energex's actual base year opex. This comparison assumes other distribution businesses scores do not change in 2018–19.

Figure 6.5 Opex multilateral partial factor productivity, 2006–2018, with Ergon Energy and Energex data to 2019



Source: Economic Insights, *Memorandum Productivity of Energex's and Ergon Energy's proposed base year opex*, 25 March 2020.

Note: The opex MPFP scores have not been further adjusted for OEFs. Consistent with our approach of using the most recently available data, the chart uses actual opex for all distributors up to 2017–18 and actual opex for Energex and Energex for 2018–19.

In the draft decision, we examined the efficiency of Energex's estimated 2018–19 base year opex using the results of our econometric modelling as contained in our *2018 Annual Benchmarking Report* and the data update for that report, adjusted for cost differences driven by OEFs not already captured in the modelling.[37] We used these results to estimate the level of opex an efficient distributor operating in Energex's circumstances would require to deliver its network services (which comprise by far the major proportion of distributors' standard control services opex) in 2018–19.

In the draft decision we concluded that these econometric models provide evidence that Energex's 2018–19 estimated base year opex is not materially inefficient.[38] This is because we found that Energex's estimated base year opex was below the range and average of our estimates of efficient rolled-forward opex over both the longer and shorter time periods. For the final decision this finding continues to hold as since the draft decision Energex's actual base year opex was materially ($12.2 million ($2019–20) or 3.3 per cent) lower than the estimate used in the initial proposal and draft

[37] AER, *Draft decision, Energex distribution determination 2020−25 Attachment 6 – Operating expenditure*, October 2019, pp. 33–38.

[38] AER, *Draft decision, Energex distribution determination 2020−25 Attachment 6 – Operating expenditure*, October 2019, p. 37.

decision. In addition, Energex's benchmarking performance did not materially change with the addition of one further year's data to the benchmarking analysis.[39]

Further details on our methodology and results can be found in section 6.4.1 of our draft decision and in a spreadsheet published alongside that decision.

Energex and Frontier Economics and other stakeholder views on base opex efficiency, and our response

Energex's initial and revised proposals included benchmarking and category analysis supporting its view of the efficiency of its base year opex.[40] For its revised proposal Energex also engaged Frontier Economics to assess the robustness and reliability of the AER's benchmarking approach used in the draft decision and to advise on the efficiency of the actual 2018–19 base year opex in light of our 2019 Annual Benchmarking Report released following our draft decision.[41] On the basis of Frontier Economics' report, and in light of actual base year opex being significantly less than estimated, Energex submitted that its base year opex is not materially inefficient.[42]

In relation to our benchmarking approach, Frontier Economics' report stated that the AER's benchmarking approach suffers from major methodological shortcomings that mean the AER should interpret its benchmarking results very cautiously. Frontier Economics' report stated that there is no evidence that Energex's base year opex is materially inefficient. Frontier Economics considers that this conclusion holds under several scenarios, including both under the AER's approach and its own modelling.[43]

Economic Insights, engaged by us, reviewed Frontier Economics' report in relation to benchmarking and outlined several areas of concern with Frontier Economics' analysis.[44] We consider that Economic Insights' review of Frontier Economics' arguments is sound. In light of Frontier Economics' arguments, and Economic Insights' response, we are satisfied that our current benchmarking approach remains appropriate. For further discussion of Frontier Economics' report, and Economic Insights' response, see section 6.4.1.1 and Appendix A of Attachment 6 of our final decision for Ergon Energy's 2020–25 regulatory determination.[45] Appendix B of that

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39 AER, *Annual Benchmarking Report, Electricity distribution network service providers*, November 2019.

40 Energex, *6.003 - Base Year Opex Overview 2020-25*, January 2019, pp. 19–34; Frontier Economics, *AER Benchmarking - A report prepared for Energy Queensland,* 15 January 2019; Energex , *7.001 - Revised Regulatory Proposal for the 2020-25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, pp. 16–17 and 42–45.

41 Frontier Economics, *Assessment of the AER's Benchmarking Analysis - A report prepared for Ergon Energy and Energex*, December 2019.

42 Energex , *7.001 - Revised Regulatory Proposal for the 2020-25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, pp.16–17.

43 Frontier Economics, *Assessment of the AER's Benchmarking Analysis*, December 2019, pp.1–2.

44 Economic Insights, *Memorandum: Comments on 2019 Frontier Economics Benchmarking Reports for EQ*, 11 March 2020. We have published this memo with this decision.

45 AER, *Final decision, Ergon Energy distribution determination 2020−25 Attachment 6 – Operating expenditure*, May 2020.

attachment also summarises the arguments raised by Frontier Economics on our approach to OEFs and our response to each of these arguments, noting some of these are more relevant to Ergon Energy.

The assessment of the efficiency of Energex's base year opex was also raised in submissions to the AER in response to the initial proposal. In response to the draft decision and revised proposal, CCP14 made submissions on the importance of benchmarking for consumers:

> Consumers advocated for many years for the AER to undertake benchmarking and have strongly supported it since its introduction. We believe it now serves as a crucial role in allowing consumers to advocate on the need for networks to constantly improve their efficiency replicating what happens in a workably competitive market.[46]

Canegrowers noted that we should find that Queensland networks are materially inefficient, as they consistently rank in the bottom quartile in the AER's opex productivity analysis.[47] Origin Energy noted that it supports the significant progress that the AER has made in driving the Queensland networks towards achieving more efficient expenditure levels and the resultant impact on affordability.[48]

Efficiency of Energex's base year opex

Taking the above analysis and stakeholder views into account, we have concluded that on balance these results indicate that Energex has been relatively inefficient over the benchmarking periods. However, as outlined above and set out in detail in our draft decision, our benchmarking analysis of Energex's base year opex supports a finding that the level of opex in base year 2018–19 is not materially inefficient.

6.4.1.2 Other adjustments to base year opex (apart from efficiency)

Apart from efficiency adjustments, other adjustments may be made to base year opex prior to applying the rate of change.

Energex proposed base opex adjustments in both its initial proposal and the internal forecast provided in its revised proposal.[49]

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[46] CCP14, *Advice to the AER on the Energex and Ergon Energy 2020–25 Revised Regulatory Proposals*, *Revised report*, March 2020, p. 21.

[47] Canegrowers, *Submission on Energy Queensland (Ergon and Energex): Our revised regulatory proposals and revised tariff structure statements 2020–25*, January 2020, p. 2.

[48] Origin Energy, *Submission on the draft decision and revised regulatory proposals for Queensland electricity distributors,* January 2020, p. 1.

[49] As noted in section 6.1, Energex's revised proposal also included an 'internal' opex forecast, which was its internal view of a revised opex forecast using our base-step-trend approach. This took into account updated information, including actual results for base year opex. As this reflected updated information and addressed issues raised in our draft decision we have drawn on elements of Energex's internal forecast in developing our alternative estimate of opex.

The adjustments Energex included in its internal forecast, which we have used to inform our alternative estimate, are forward-looking base opex adjustments relevant to opex in the next regulatory control period, comprising:

- a positive adjustment to include the impact of the new CAM taking effect from July 2020, which increases its base opex by $3.0 million ($2019–20) per year, and its forecast opex over the 2020–25 regulatory control period by $14.9 million ($2019–20)[50]
- a positive adjustment for service classification changes, which increases its base opex by $1.4 million ($2019–20) per year, and its forecast over the 2020–25 regulatory control period by $7.1 million ($2019–20).[51]

In our alternative estimate we have included these adjustments. In the sections below we provide more detailed discussion of each of these adjustments and the reasons for our final decision.

Separate to the above adjustments, we have also made adjustments to base year opex for movements in provisions and Demand Management Innovation Allowance (DMIA) costs, in line with our standard approaches. In arriving at final base opex, we have also added the estimated change in opex between the base year and the final year, in line with our standard approach.

Cost allocation method

We have included in our alternative estimate the additional $3.0 million ($2019–20) per year of costs Energex included in its internal forecast to account for the new CAM.

Our draft decision did not include this adjustment, on the basis that Energex was not able to adequately explain and justify this proposed increase in opex. In the draft decision, we detailed our views about the gaps in the information we received from Energex and what information we would require should Energex wish to propose similar adjustments in its revised proposal.

On the basis of the new information provided in its internal forecast, we are satisfied that Energex has made the case and provided sufficient information to justify inclusion of these CAM changes as a base opex adjustment. As a part of its internal forecast, Energex provided a clear explanation of the various adjustments, including detailed spreadsheet modelling of underlying calculations.[52] It also provided a report by audit firm PwC, which attested to the rigor and veracity of the proposed adjustment.[53]

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[50] Energex, *7.001 - Revised Regulatory Proposal for the 2020-25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, p. 18 and pp. 31-41. Numbers may not add up to total due to rounding.

[51] Energex, *7.001 - Revised Regulatory Proposal for the 2020-25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, pp. 17-18. Numbers may not add up to total due to rounding.

[52] Energex, *7.001 - Revised Regulatory Proposal for the 2020-25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, p. 18 and pp. 31–41; Energex, *7.007 - CAM Reconciliation model*, December 2019.

[53] PwC, *7.008 - Report on your Cost Allocation Model (CAM) mode*l, December 2019.

Service classification change

In line with our draft decision,[54] and as Energex included in its internal forecast, we have included an increase in our alternative estimate of base opex of $1.4 million ($2019–20) to account for the service classification change. This positive adjustment was proposed for changes in service classification related to emergency recoverable works costs incurred when a customer or third party damages the network.[55] For reasons set out in section 6.4 in the draft decision we maintain our draft decision to accept this adjustment. However, as noted in the draft decision, we do not propose to accept a similar adjustment in future revenue determinations.

We have included in our alternative estimate an adjustment of $1.4 million ($2019–20). In line with the draft decision, we have calculated our adjustment on the basis of the approach adopted in our previous determinations of using the historical average unrecovered unregulated Emergency Recoverable Works costs. Specifically, our adjustment is based on the annual cost of repairing third party damage to its network (calculated using 3-year average historic actual costs) less the revenue recovered from parties found liable for causing the damage (calculated using 3-year average historic receipts from liable parties).[56] Energex agreed and adopted this approach in its internal forecast.[57]

6.4.1.3 Conclusion on revised base opex for our alternative estimate

Taking into account the efficiency and other base opex adjustments we have made, we have derived our alternative base opex number as shown in detail in our opex model, which is published on our website with this decision. At a high level, it is built up as follows:

- start with reported base year opex (after adjusting for movement in provisions and the DMIA) of $360.0 million ($2019–20)
- add other base opex adjustments (accounting, service classification, and estimated change in opex between the base year and the final year) of net $6.6 million ($2019–20).[58]

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54 AER, *Draft decision, Energex distribution determination 2020–25 Attachment 6 – Operating expenditure*, October 2019, pp. 44–46.

55 Energex, *7.001 - Revised Regulatory Proposal for the 2020–25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, pp. 17–18.

56 Energex, *Information request 41 – Q10*, 9 July 2019, p. 6.

57 Energex, *7.001 - Revised Regulatory Proposal for the 2020-25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, pp. 17–18.

58 AER, *Final decision Energex distribution determination 2020–21 to 2024-25, Opex model*, May 2020.

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.[59]

In its revised proposal, reflecting its initial proposal, Energex adopted the approach we have used in our previous determinations to forecasting the rate of change with some variations.

- Price growth: To forecast labour price growth Energex took the average of the wage price index (WPI) forecast applied by us in our draft decisions for the New South Wales distributors and that of the consultants BIS Oxford Economics. However, Energex applied an annual 'unit rate efficiency factor' discount of -0.6 per cent to the average of its labour price growth forecast. It then estimated overall input price growth by calculating the weighted average of its forecast labour and non-labour price growth using our input price weightings. [60]
- Output growth: Energex used our previous approach to estimate output growth using forecasts of growth in customer numbers, circuit line length, maximum demand and energy throughput weighted using all four benchmarking models.[61] Energex provided two forecasts of growth of the four outputs: one set in its opex model and a second and more recent set in its regulatory determination regulatory information notice (RIN) response.
- Productivity growth: Energex used a 1.7 per cent annual productivity growth forecast in contrast to our 0.5 per cent per annum forecast.[62]

The rate of change proposed by Energex decreases its base opex by approximately 0.6 per cent each year.[63]

Contrasting this approach, in its internal forecast of the rate of change for price growth, Energex updated the WPI forecasts, using an average of the two forecasts from Deloitte and BIS Oxford Economics, and did not apply the annual 'unit rate efficiency factor' discount of -0.6 per cent.[64] Energex applied our standard approach to output growth, with updated output forecasts.[65] Further, for productivity growth it used our 0.5

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59 AER, *Expenditure Forecast Assessment Guideline for Electricity Distribution*, November 2013, pp. 22–24.

60 Energex, *1.003 - Energex Regulatory Proposal 2020-25*, January 2019, p. 51.

61 Energex, *1.003 - Energex Regulatory Proposal 2020-25*, January 2019, p. 52.

62 Energex, *1.003 - Energex Regulatory Proposal 2020-25*, January 2019, p. 53.

63 Energex, *6.007 - Opex forecast - SCS*, January 2019.

64 Energex, *7.001 - Revised Regulatory Proposal for the 2020–25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, pp. 20–23.

65 Energex, *7.001 - Revised Regulatory Proposal for the 2020–25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, pp. 21–22.

per cent annual forecast rather than a 1.7 per cent annual forecast.[66] This results in a rate of change of 1.1 per cent per year.[67]

In our alternative estimate, we have included an average rate of change forecast of 1.0 per cent per year.[68] We explain how we forecast rate of change in our alternative estimate and how it differs from Energex's forecast below.

6.4.2.1 Forecast price growth

We have included forecast average annual real price growth of 0.6 per cent in developing our alternative opex estimate.[69] This increases opex by $30.6 million ($2019–20). In contrast, Energex forecast annual real price growth of 0.2 per cent in its revised and initial proposal[70] and 0.5 per cent in its internal forecast.[71]

As per our previous approach, our price growth forecast is a weighted average of forecast labour price growth and non-labour price growth.

To forecast labour price growth, we use an average of the real WPI growth forecasts for the relevant jurisdiction's electricity, gas, water and waste services (utilities) sector produced by Deloitte, for the AER, and BIS Oxford Economics, for Energex.

This is in line with our standard approach, and is a change from the approach in the draft decision of using the WPI growth forecasts provided by Deloitte only, which reflected our analysis that over the period 2007 to 2018 Deloitte's real WPI growth forecasts had been more accurate.[72] As discussed in section 6.4.2.1 of attachment 6 of the SA Power Networks final decision,[73] in light of further analysis and stakeholder feedback, we have reverted to our standard approach. We have used updated WPI forecasts from Deloitte and BIS Oxford Economics since the draft decision.

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66 Energex, *7.001 - Revised Regulatory Proposal for the 2020–25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, p. 22.

67 Energex, *7.006 - Opex forecast - SCS*, December, 2019.

68 AER, *Final decision Energex distribution determination 2020–21 to 2024–25, Opex model*, May 2020.

69 AER, *Final decision Energex distribution determination 2020–21 to 2024–25, Opex model*, May 2020.

70 Energex, *6.007 - Opex forecast - SCS*, January 2019.

71 Energex, *7.006 - Opex forecast - SCS*, December, 2019.

72 Stakeholders raised concerns with the labour price growth forecasts in submissions to SA Power Networks' proposal for the 2020–25 revenue determinations. Consequently, we analysed at a national level how close the forecasts from both Deloitte and BIS Oxford Economics have been to actual WPI growth over the period 2007 to 2018. We found BIS Oxford Economics persistently over-forecast real WPI growth. In contrast, Deloitte's real WPI growth forecasts have been more accurate. See AER, *Draft decision, SA Power Networks distribution determination 2020–25 Attachment 6 – Operating expenditure,* October 2019, pp. 28–33.

73 AER, *Final decision, SA Power Networks distribution determination 2020−25 Attachment 6 – Operating expenditure*, May 2020, pp. 15–21.

To forecast real non-labour price growth, we have applied the forecast change in CPI resulting in zero real non-labour price growth. Energex has adopted the same approach in its forecasts.[74]

We and Energex have applied the same weights to account for the proportion of opex that is labour and the proportion that is non-labour (59.7:40.3).[75]

6.4.2.2 Forecast output growth

We have included forecast average annual output growth of 0.9 per cent in developing our alternative estimate of forecast opex.[76] This increases our base opex by $52.3 million ($2019–20). In contrast, Energex forecast annual output growth of 1.0 per cent in its revised and initial proposal[77] and 1.1 per cent in its internal forecast.[78]

Our output growth forecast is a weighted average of the output growth rates forecast using the specification and weights from the five benchmarking models presented in the *2019 Annual Benchmarking Report*.[79] The details of how we forecast our year-on-year output growth are set out in section 6.4 of our draft decision.

In our draft decision we stated that we would update our output weights to reflect the results from all four of our economic benchmarking models in the *2019 Annual Benchmarking Report*, which we published in late November 2019. We have used the updated weights to forecast our alternative estimate of forecast opex for this final decision. We note that this includes adding the weights from a fifth benchmarking model, being the stochastic frontier analysis translog model. The stochastic frontier analysis translog model previously did not perform well in regards to monotonicity for the longer time period (2006–17). With the data updates and revisions for the *2019 Annual Benchmarking Report*, the model now performs relatively well and was included in the results. The updated weights are shown in Table 6.2.

Table 6.2 Output specification and weights derived from economic benchmarking models

Output	MPFP	SFACD	LSECD	LSETLG	SFATLG
Customer numbers	31.00%	67.43%	68.95%	52.95%	69.51%
Circuit length	29.00%	15.08%	15.56%	15.74%	14.84%

74 Energex, *1.003 - Energex Regulatory Proposal 2020-25*, January 2019, p. 51.

75 We applied Economic Insights' benchmark opex price weightings for labour and non-labour as reflected in our 2017 Annual benchmarking report. For more detail, see: Economic Insights, *Economic benchmarking results for the Australian Energy Regulator's 2017 DNSP benchmarking report*, 31 October 2017, p. 2.

76 AER, *Final decision Energex distribution determination 2020-21 to 2024-25, Opex model*, May 2020.

77 Energex, *6.007 - Opex forecast - SCS*, January 2019.

78 Energex, *7.006 - Opex forecast - SCS*, December, 2019.

79 AER, *Annual Benchmarking Report, Electricity distribution network service providers*, November 2019.

Output	MPFP	SFACD	LSECD	LSETLG	SFATLG
Ratcheted maximum demand	28.00%	17.50%	15.48%	31.31%	15.65%
Energy throughput	12.00%				

Source: Economic Insights, *AER DNSP 2019 benchmarking data files: AER DNSP Opex Eff Scores 2006–2018*, 15 July 2019. AER, *Annual Benchmarking Report, Electricity distribution network service providers*, November 2019; AER analysis.

Note: Numbers may not appear to add up to 100 per cent in this table due to rounding.

6.4.2.3 Forecast productivity growth

We have included forecast productivity growth of 0.5 per cent per year in our alternative estimate.[80] This decreases our alternative estimate by $27.3 million ($2019–20). This is consistent with our final decision in the industry wide review to forecasting opex productivity growth, which we concluded in March 2019.[81] In its initial and revised proposal, Energex forecast opex productivity growth of 1.7 per cent per year for the 2020–25 regulatory control period.[82] In contrast, in its internal forecast Energex included a forecast of 0.5 per cent per year productivity growth.[83]

Our productivity growth forecast is a sector-wide productivity forecast that we believe reflects the level of productivity that an efficient distributor engaging in good industry practice should be able to achieve as part of business-as-usual operations. These improvements come from such things as the adoption of new technology, changes to management practices and other factors that contribute to improved productivity within the industry over time.

6.4.3 Step changes

Energex's revised proposal (reflecting its initial proposal) did not include any step changes.[84] However, the internal opex forecast prepared by Energex and submitted for information with its revised proposal included two negative step changes totalling -$9.2 million for opex/capex trade-offs in relation to its ICT and property capex.[85]

We have examined Energex's internal forecast to inform our alternative estimate of opex. Based on information provided by Energex, we agree with Energex's submission that the increased capex in these two areas leads to a reduction in opex over the next

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80 AER, *Final decision Energex distribution determination 2020–21 to 2024–25, Opex model*, May 2020.

81 AER, *Final decision paper, Forecasting productivity growth for electricity distributors*, March 2019.

82 Energex, *1.003 - Energex Regulatory Proposal 2020–25*, January 2019, p. 53.

83 Energex, *7.006 - Opex forecast - SCS*, December, 2019; Energex, *7.001 - Revised Regulatory Proposal for the 2020-25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, p. 22.

84 Energex, *1.003 - Energex Regulatory Proposal 2020–25,* January 2019, p. 41.

85 Energex, *7.006 - Opex forecast - SCS*, December, 2019; Energex, *7.001 - Revised Regulatory Proposal for the 2020-25 Regulatory Period - Internal Operating Expenditure Forecasts*, December 2019, pp. 25-30.

regulatory control period. We are satisfied with the evidence put forward on the existence and materiality of these capex/opex trade-offs. We have therefore included these negative step changes in our alternative estimate.

6.4.4 Category specific forecasts

We have included a debt raising cost forecast of $30.2 million ($2019–20) in our alternative estimate.[86]

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 for consistency with the forecast of the cost of debt in the rate of return building block. We discuss this in attachment 3 - Rate of Return of this final decision.

6.4.5 Assessment of opex factors under NER

In deciding whether or not we are satisfied the service provider's forecast reasonably reflects the 'opex criteria' under the NER, we must have regard to the 'opex factors'.[87]

We attach different weight to different factors when making our decision to best achieve the National Electricity Objective. This approach has been summarised by the Australian Energy Market Commission as follows:[88]

> As mandatory considerations, the AER has an obligation to take the capex and opex factors into account, but this does not mean that every factor will be relevant to every aspect of every regulatory determination the AER makes. The AER may decide that certain factors are not relevant in certain cases once it has considered them.

Table 6.3 summarises how we have taken the opex factors into account in making our final decision.

Table 6.3 Our consideration of the opex factors

Opex factor	Consideration
The most recent Annual Benchmarking Report that has been published under rule 6.27 and the benchmark opex that would be incurred by an efficient distribution network service provider over the relevant regulatory control period.	There are two elements to this factor. First, we must have regard to our most recent annual benchmarking report. Second, we must have regard to the benchmark opex that would be incurred by an efficient service provider over the forecast period. The Annual Benchmarking Report is intended to provide an annual snapshot of the relative efficiency of each service provider.

[86] AER, *Final decision Energex distribution determination 2020–21 to 2024–25, Opex model*, May 2020.

[87] NER, cl. 6.5.6(e).

[88] AEMC, *National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012*, Final Rule Determination, 29 November 2012, p. 115.

Opex factor	Consideration
	The second element, that is, the benchmark opex that would be incurred by an efficient provider during the forecast period, necessarily provides a different focus. This is because this second element requires us to construct the benchmark opex that would be incurred by a hypothetically efficient provider for that particular network over the relevant forecast period. We have estimated an alternative opex estimate and have compared it with Energex's proposal over the relevant regulatory control period. In doing this we had regard to the information set out in our most recent benchmarking report.
The actual and expected opex of the Distribution Network Service Provider during any proceeding regulatory control periods.	To assess Energex's opex forecast and develop our alternative estimate, we have used Energex's actual opex in 2018–19 as the starting point. We have examined Energex's historical actual opex and compared it with that of other distribution network services providers.
The extent to which the opex forecast includes expenditure to address the concerns of electricity consumers as identified by the Distribution Network Service Provider in the course of its engagement with electricity consumers.	This factor directs us to have regard to the concerns of consumers, as revealed to us in their engagement with the distributors. Additionally, this factor requires us to have regard to the extent to which service providers have engaged with consumers in preparing their proposals, such that they are aware of, communicate and factor in the needs of consumers. Based on the information provided by Energex's in its proposal and CCP14's advice, we consider Energex consulted adequately in developing its revised opex proposal, although note CCP14's view that this was made more difficult by the amount of new information following the AER's draft decision and limited customer resources.[89]
The relative prices of capital and operating inputs	We have adopted price growth forecasts that account for the relative prices of opex and capex inputs. We generally consider capex/opex trade-offs in considering proposed step changes. One reason we will include a step change in our alternative opex forecast is if the service provider proposes a capex/opex trade-off. We consider the relative expense of capex and opex solutions in considering such a trade-off. In the internal opex forecast provided in its revised proposal, Energex included two step changes as capex/opex trade-offs, which we included in our alternative estimate of opex.
The substitution possibilities between operating and capital expenditure.	Some of our assessment techniques examine opex in isolation—either at the total level or by category. Other techniques consider service providers' overall efficiency, including their capital efficiency. We have relied on several metrics when assessing efficiency to ensure we appropriately capture capex and opex substitutability. In developing our benchmarking models we have had regard to the relationship between capital, opex and outputs.
Whether the opex forecast is consistent with any incentive scheme or schemes that apply to the Distribution Network Service Provider under clauses 6.5.8 or 6.6.2 to 6.6.4.	The incentive scheme that applied to Energex's opex in the 2015–20 regulatory control period, the EBSS, was intended to work in conjunction with a revealed cost forecasting approach. We have had regard to the EBSS and the consistency of it and Energex's opex forecast for the 2020–25 regulatory control period.

[89] CCP14, *Advice to the AER on the Energex and Ergon Energy 2020–25 Revised Regulatory Proposals*, *Revised report*, March 2020, pp. 14–17.

Opex factor	Consideration
The extent the opex forecast is referable to arrangements with a person other than the Distribution Network Service Provider that, in the opinion of the AER, do not reflect arm's length terms.	Our assessment techniques assess the efficiency of a network service provider's opex and/or capital expenditure at a total level. Given the use of our top-down tools, and given stakeholders have not raised issues in relation to related parties, we did not consider it proportionate in this context to examine any of Energex's related party arrangements in any detail.
Whether the opex forecast includes an amount relating to a project that should more appropriately be included as a contingent project under clause 6.6A1(b).	We have not identified any opex project in the forecast period that should more appropriately be included as a contingent project.
The extent the Distribution Network Service Provider has considered, and made provision for, efficient and prudent non-network alternatives.	Energex stated it accepts the AER's framework and approach position to the demand management incentive scheme and demand management innovation allowance.[90]
Any relevant final project assessment report (as defined in clause 5.10.2) published under clause 5.17.4(o), (p) or (s)	In having regard to this factor, we identify any RIT-D project submitted by the business and ensure the conclusions are appropriately addressed in the total forecast opex. Energex did not submit any RIT-D project for its distribution network.
Any other factor the AER considers relevant and which the AER has notified the Distribution Network Service Provider in writing, prior to the submission of its revised proposal under clause 6.10.3, is an operating expenditure factor.	We did not identify and notify Energex of any other opex factor.

Source: AER analysis.

[90] Energex, *1.003 - Energex Regulatory Proposal 2020–25*, January 2019, pp. 108–109.

Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
CAM	cost allocation method
capex	capital expenditure
CCP14	Consumer Challenge Panel, sub-panel 14
CPI	consumer price index
DMIAM	demand management innovation allowance mechanism
distributor	distribution network service provider
EBSS	efficiency benefit sharing scheme
ECA	Energy Consumers Australia
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Rules
NSP	network service provider
opex	operating expenditure
PTRM	post-tax revenue model
RBA	Reserve Bank of Australia
RIN	regulatory information notice