



FINAL DECISION

Energex Distribution Determination 2020 to 2025

Attachment 1 Annual revenue requirement

June 2020

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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

Attachment 12 – Classification of services

Attachment 13 – Control mechanisms

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Attachment 15 – Alternative control services

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1 Annual revenue requirement

This attachment sets out our final decision on Energex's annual revenue requirement (ARR) for the provision of standard control services (SCS) over the 2020–25 regulatory control period. Specifically, it sets out our final decision on:

- the ARRs (unsmoothed), which are the sum of annual building block costs
- the total revenue requirement, which is the sum of the ARRs
- the annual expected revenues (smoothed)
- the X factors.

We determine Energex's ARR using a building block approach. We determine the X factors by smoothing the ARR over the regulatory control period. The X factor is used in the CPI–X methodology to determine the annual expected revenue (smoothed).

1.1 Final decision

We determine a total ARR of \$6017.2 million (\$ nominal, unsmoothed) for Energex for the 2020–25 regulatory control period, reflecting our final decision on the various building block costs. This is an increase of \$117.9 million (\$ nominal) or 2.0 per cent to Energex's revised proposed total ARR of \$5899.4 million.

We determine the annual expected revenue (smoothed) and X factor for each regulatory year of the 2020–25 regulatory control period by smoothing the ARR. Our final decision is to approve total expected revenues of \$6009.6 million (\$ nominal) for Energex for the 2020–25 regulatory control period.

Table 1.1 shows our final decision on the ARR, annual expected revenue, and X factor for each year of the 2020–25 regulatory control period.

Table 1.1 AER's final decision on Energex's ARR, annual expected revenue, and X factors (\$ million, nominal)

	2020–21	2021–22	2022–23	2023–24	2024–25	Total
Return on capital	608.8	604.7	600.3	594.8	587.5	2996.1
Regulatory depreciation ^a	158.2	147.3	169.3	192.1	215.6	882.5
Operating expenditure ^b	373.4	379.6	386.2	393.3	399.9	1932.3
Revenue adjustments ^c	-14.6	59.8	58.9	56.9	22.9	183.9
Net tax allowance	5.9	1.7	2.1	4.0	8.9	22.5
Annual revenue requirement (unsmoothed)	1131.7	1193.0	1216.7	1241.1	1234.8	6017.2
Annual expected revenue (smoothed)	1185.7	1193.8	1201.9	1210.0	1218.2	6009.6
X factor ^d	n/a ^e	1.56%	1.56%	1.56%	1.56%	n/a

Source: AER analysis.

- (a) Regulatory depreciation is straight-line depreciation net of the inflation indexation on the opening regulatory asset base (RAB).
- (b) Includes debt raising costs.
- (c) Includes revenue adjustments from the efficiency benefit sharing scheme (EBSS), the capital expenditure sharing scheme (CESS) and the demand management innovation allowance mechanism (DMIAM).
- (d) The X factors will be revised to reflect the annual return on debt update. Under the CPI-X framework, the X factor measures the real rate of change in annual expected revenue from one year to the next. A negative X factor represents a real increase in revenue. Conversely, a positive X factor represents a real decrease in revenue.
- (e) Energex is not required to apply an X factor for 2020–21 because we set the 2020–21 expected revenue in this decision. The expected revenue for 2020–21 is around 14.9 per cent lower than the approved total annual revenue for 2019–20 in real terms, or 13.0 per cent lower in nominal terms.

1.2 Energex's revised proposal

Energex's revised proposal included total expected revenues (smoothed) of \$5900.3 million (\$ nominal) for the 2020–25 regulatory control period.

Table 1.2 shows Energex's revised proposed ARR, the annual expected revenue, and the X factor for each year of the 2020–25 regulatory control period.

Table 1.2 Energex's revised proposed ARR, annual expected revenue, and X factors (\$ million, nominal)

	2020–21	2021–22	2022–23	2023–24	2024–25	Total
Return on capital	601.0	596.8	592.2	586.6	579.0	2955.7
Regulatory depreciation ^a	146.4	135.2	157.1	179.9	203.5	822.0
Operating expenditure ^b	373.8	380.3	387.3	394.7	401.8	1937.8
Revenue adjustments ^c	-14.8	59.8	59.0	57.1	22.8	183.8
Net tax allowance	0.0	0.0	0.0	0.0	0.0	0.0
Annual revenue requirement (unsmoothed)	1106.3	1172.1	1195.6	1218.3	1207.1	5899.4
Annual expected revenue (smoothed)	1125.4	1152.1	1179.4	1207.4	1236.0	5900.3
X factor	n/a ^d	0.00%	0.00%	0.00%	0.00%	n/a

Source: Energex, *Revised regulatory proposal 2020–25*, 10 December 2019, p. 14; Energex, *EGX - 4.002 PTRM - SCS*, 10 December 2019.

- (a) Regulatory depreciation is straight-line depreciation net of the inflation indexation on the opening RAB.
- (b) Includes debt raising costs.
- (c) Includes revenue adjustments from EBSS, CESS and DMIAM.
- (d) Energex is not required to apply an X factor for 2020–21 because we set the 2020–21 expected revenue in this decision.

1.3 Assessment approach

We did not change our assessment approach for the ARR from our draft decision. Attachment 1 (section 1.3) of our draft decision details that approach.¹

1.4 Reasons for final decision

For this final decision, we determine a total ARR of \$6017.2 million (\$ nominal, unsmoothed) for Energex for the 2020–25 regulatory control period. This is an increase of \$117.9 million (\$ nominal) or 2.0 per cent to Energex's revised proposed total ARR of \$5899.4 million (\$ nominal) for this period. This reflects the impact of our final decision on the various building block costs.

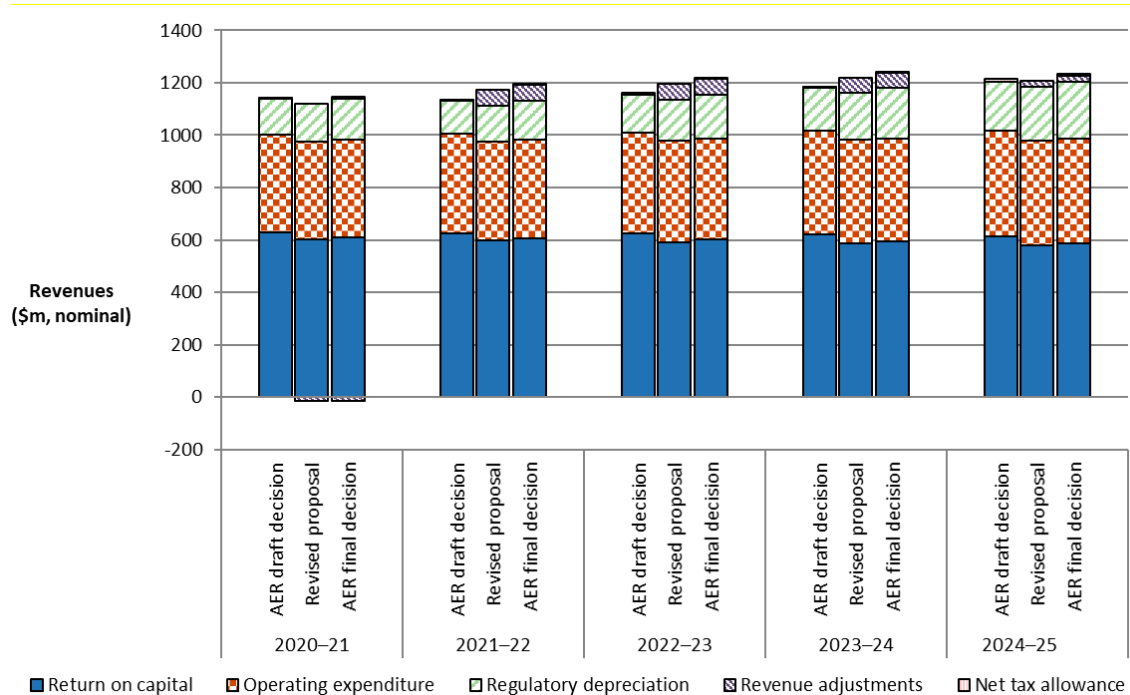
Figure 1.1 shows the building block components from our determination that make up the ARR for Energex, and the corresponding components from its revised proposal and our draft decision.

¹ AER, *Energex 2020–25 Determination – Draft decision – Attachment 1 – Annual revenue requirement*, October 2019, pp. 7–9.

The changes we made to Energex's revised proposed building blocks include (in nominal terms):

- an increase in the return on capital allowance of \$40.4 million or 1.4 per cent (attachments 2, 3 and 5)
- an increase in the regulatory depreciation allowance of \$60.4 million or 7.4 per cent (attachments 2, 4 and 5)
- a reduction in the operating expenditure (opex) allowance of \$5.5 million or 0.3 per cent (attachment 6)²
- an increase in the cost of corporate income tax allowance of \$22.5 million compared to the zero allowance proposed (attachment 7)
- an increase in the revenue adjustments of \$0.1 million or 0.1 per cent (attachments 8, 9 and 11).

Figure 1.1 AER's draft and final decisions and Energex's revised proposed annual revenue requirement (\$ million, nominal)



Source: Energex, *EGX - 4.002 PTRM - SCS*, 10 December 2019; AER analysis.

Note: Revenue adjustments include EBSS, CESS and DMIAM amounts. Opex includes debt raising costs. While our draft decision reflected Energex's proposal to not include EBSS and CESS rewards, our final decision reflects Energex's revised proposal to include EBSS and CESS rewards as revenue adjustments.

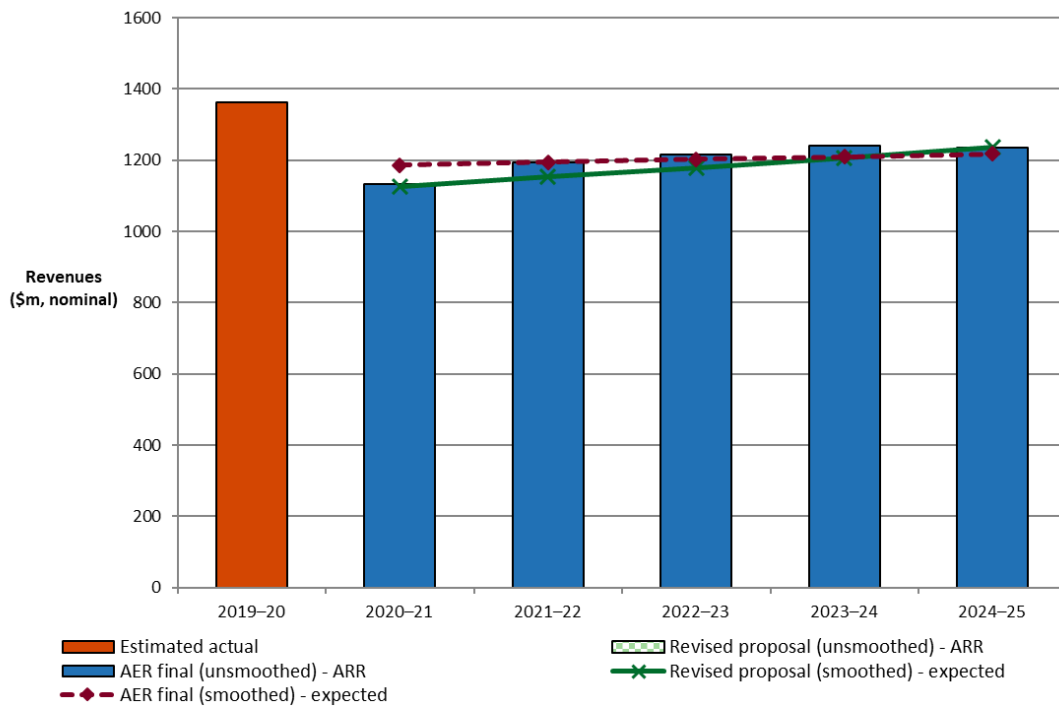
² Although we have accepted the opex proposal, there were some updates for expected inflation which results in this small difference in nominal dollar terms.

1.4.1 X factor and annual expected revenue

For this final decision, we determine an X factor for Energex of 1.56 per cent per annum for the four years of the regulatory control period from 2021–22 to 2024–25.³ The net present value (NPV) of the ARR is \$5264.2 million (\$ nominal) as at 1 July 2020. Based on this NPV and applying the CPI–X framework we determine that the expected revenue (smoothed) for Energex is \$1185.7 million in 2020–21 increasing to \$1218.2 million in 2024–25 (\$ nominal). The resulting total expected revenue for Energex is \$6009.6 million for the 2020–25 regulatory control period.

Figure 1.2 shows the difference between Energex's annual expected revenue (smoothed revenue) and the ARR (unsmoothed revenue) for the 2020–25 regulatory control period.

Figure 1.2 AER's final decision on Energex's revenue for the 2020–25 regulatory control period (\$ million, nominal)



Source: AER analysis; Energex, *EGX - 4.002 PTRM* - SCS, 10 December 2019.

We have taken into account the building block costs determined in this final decision when smoothing the expected revenues for Energex over the 2020–25 regulatory control period. In doing so we have set the expected revenue for the first regulatory year at \$1185.7 million (\$ nominal) which is \$54.0 million higher than the ARR for that

³ Energex is not required to apply an X factor for 2020–21 because we set the 2020–21 expected revenue in this decision.

year. We then apply an expected inflation rate of 2.27 per cent per annum and an X factor of 1.56 per cent per annum to determine the expected revenue in subsequent years.⁴ We consider that our profile of X factors results in an expected revenue in the last year of the regulatory control period that is as close as reasonably possible to the ARR for that year.⁵

Our final decision results in an average decrease of 2.2 per cent per annum (\$ nominal) in the expected revenue over the 2020–25 regulatory control period.⁶ This consists of an initial decrease of 13.0 per cent from 2019–20 to 2020–21, followed by average annual increases of 0.7 per cent during the remainder of the 2020–25 regulatory control period.⁷ Our final decision also results in a decrease of 15.4 per cent in real terms (\$2019–20) to Energex's average ARR relative to that in the 2015–20 regulatory control period. This is largely due to a lower weighted average cost of capital (and therefore lower return on capital) and a lower corporate income tax allowance in this final decision for the 2020–25 regulatory control period than that approved in the 2015–20 determination.

Figure 1.3 compares our final decision building blocks for Energex's 2020–25 regulatory control period with Energex's revised proposed revenue requirement for the same period, and the approved revenue for the 2015–20 regulatory control period.

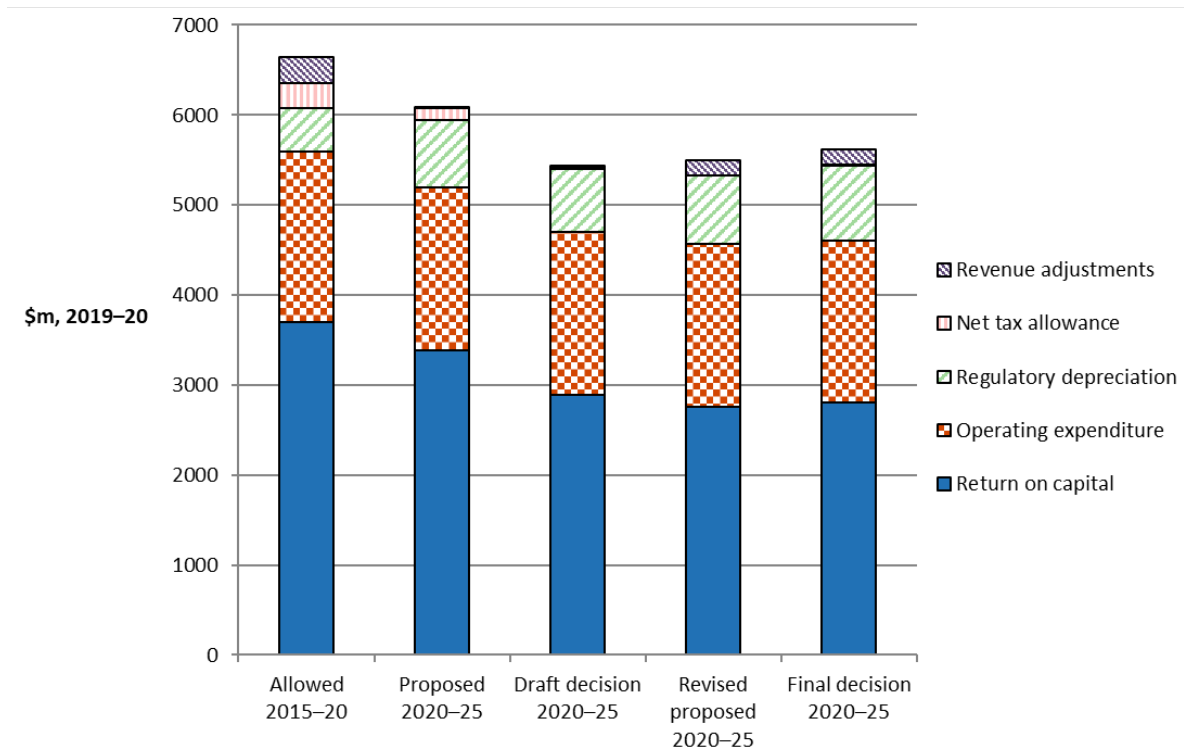
⁴ NER, cl. 6.5.9(a).

⁵ NER, cl. 6.5.9(b)(2). We consider a divergence of up to 3 per cent between the expected revenue and ARR for the last year of the regulatory control period is appropriate, if this can achieve smoother price changes for users over the regulatory control period. In the present circumstances, based on the X factors we have determined for Energex, this divergence is around 1.3 per cent.

⁶ In real 2019–20 dollar terms, our approved expected revenue for Energex results in an average decrease of 4.4 per cent per annum over the 2020–25 regulatory control period.

⁷ In real 2019–20 dollar terms, this consists an initial decrease of 14.9 per cent from 2019–20 to 2020–21, followed by average annual decreases of 1.6 per cent during the remainder of the 2020–25 regulatory control period.

Figure 1.3 Total revenue by building block components (\$ million, 2019–20)



Source: AER analysis; Energex, *EGX - 4.002 PTRM - SCS*, 10 December 2019.

1.4.2 Shared assets

Our final decision is not to apply a shared asset revenue adjustment to Energex's total expected revenue for the 2020–25 regulatory control period.

In our draft decision, we did not apply a shared asset revenue adjustment to Energex's revenues because we estimated that the unregulated revenues were less than one per cent of its expected revenues in each year of the 2020–25 regulatory control period. Therefore, the materiality threshold was not met in any year of the 2020–25 regulatory control period.⁸ Using the same assessment approach as the draft decision, we consider that this materiality threshold is also not met in any year of the 2020–25 regulatory control period for this final decision, and we do not apply a shared asset revenue adjustment.

Energex's revised proposal noted that following the announcement by the Queensland Government that Powerlink and Energy Queensland would jointly operate a new optic fibre network business, QCN Fibre (previously FibreCo), it does not currently expect an

⁸ AER, *Energex 2020–25 Determination - Draft Decision - Attachment 1 - Annual revenue requirement*, October 2019, pp. 11–12.

increase in the scope or volume of unregulated services using its shared assets as a result of the formation of QCN Fibre.⁹ Customer contracts (for services currently provided by Powerlink and to a lesser extent by Ergon Energy and Energex) are initially being novated to QCN Fibre. Energex submitted that any increased activity on its network over and above existing arrangements being novated were expected to be insignificant in the short to medium term and subject to high levels of uncertainty over the longer term. We will monitor the use of shared assets by QCN Fibre in future regulatory control periods.

1.4.3 Indicative average distribution price impact

Our final decision on Energex's expected revenues ultimately affects the prices consumers pay for electricity. There are several steps required in translating our revenue decision into indicative distribution price impact.

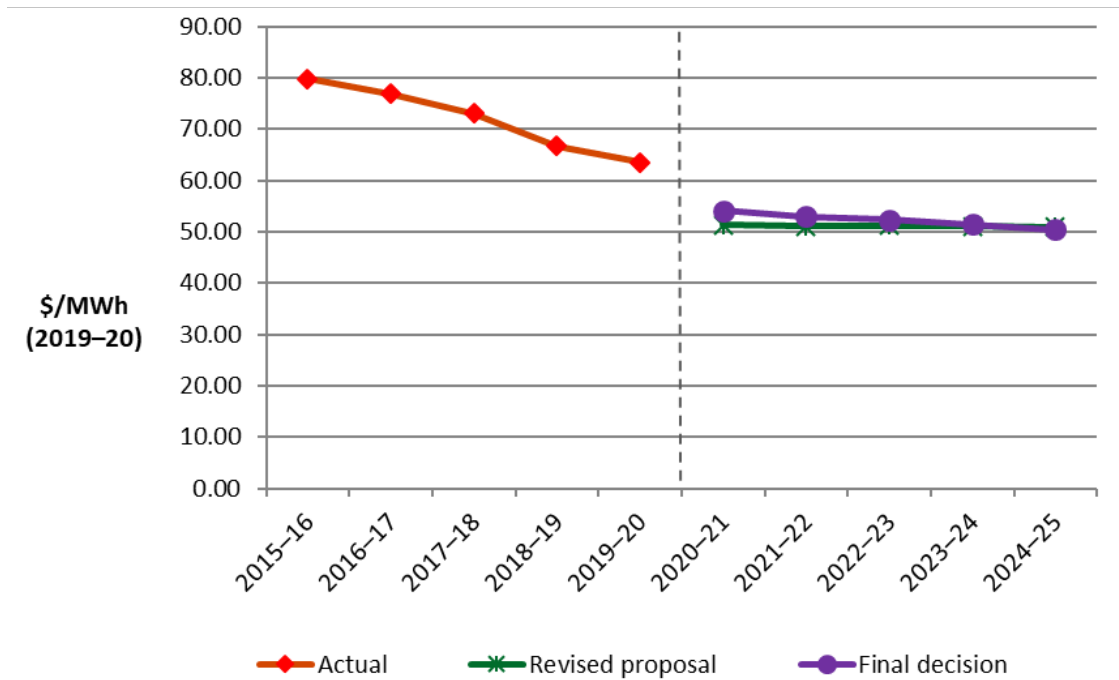
We regulate Energex's SCS under a revenue cap form of control. This means our final decision on Energex's expected revenues does not directly translate to price impacts. This is because Energex's revenue is fixed under the revenue cap form of control, so changes in the consumption of electricity will affect the prices ultimately charged to consumers. We are not required to establish the distribution prices for Energex as part of this determination. However, we will assess Energex's annual pricing proposals before the commencement of each regulatory year within the 2020–25 regulatory control period. In each assessment we will administer the pricing requirements set in this distribution determination.

For this final decision, we have estimated some indicative average distribution price impacts flowing from our determination on the expected revenues for Energex over the 2020–25 regulatory control period. In this section, our estimates only relate to SCS (that is, the core electricity distribution charges), not alternative control services (such as metering charges). These indicative price impacts assume that actual energy consumption across the 2020–25 regulatory control period matches Energex's revised forecast energy consumption, which we have adopted for this final decision.

Figure 1.4 shows Energex's indicative average price path over the period 2015–16 to 2024–25 in real 2019–20 dollar terms based on the expected revenues established in our final decision compared to Energex's revised proposed revenue requirement.

⁹ Energex, *Revised regulatory proposal 2020–25*, 10 December 2019, p. 18.

Figure 1.4 Indicative distribution price path for Energen (\$/MWh, 2019–20)



Source: AER analysis.

We estimate that our final decision on Energen's annual expected revenue will result in a decrease to average distribution charges by about 4.5 per cent per annum over the 2020–25 regulatory control period in real 2019–20 dollar terms.¹⁰ This compares to the real average decrease of approximately 4.3 per cent per annum in Energen's revised proposal for the 2020–25 regulatory control period.¹¹ These high-level estimates reflect the aggregate change across the entire network and do not reflect the particular tariff components for specific end users.

Table 1.3 compares the revenue and price impacts of Energen's revised proposal and our final decision.

¹⁰ In nominal terms we estimate average distribution charges to decrease by 2.4 per cent per annum. This amount reflects an expected inflation rate of 2.27 per cent per annum as determined in this final decision.

¹¹ In nominal terms Energen's revised proposal would decrease distribution charges by 2.1 per cent per annum. This amount reflects an expected inflation rate of 2.37 per cent per annum as proposed by Energen in its revised proposal.

Table 1.3 Comparison of revenue and price impacts of Energex's revised proposal and the AER's final decision (\$ nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25
AER final decision						
Revenue (\$ million)	1362.4	1185.7	1193.8	1201.9	1210.0	1218.2
Price path (\$/MWh) ^a	63.59	55.29	55.48	55.94	56.24	56.43
Revenue (change)		-13.0%	0.7%	0.7%	0.7%	0.7%
Price path (change)		-13.0%	0.3%	0.8%	0.5%	0.3%
Energex revised proposal						
Revenue (\$ million)	1362.4	1125.4	1152.1	1179.4	1207.4	1236.0
Price path (\$/MWh) ^a	63.59	52.48	53.54	54.90	56.12	57.26
Revenue (change)		-17.4%	2.4%	2.4%	2.4%	2.4%
Price path (change)		-17.5%	2.0%	2.5%	2.2%	2.0%

Source: AER analysis; Energex, *EGX - 4.002 PTRM - SCS*, 10 December 2019.

(a) The price path is in nominal terms and is constructed by dividing nominal expected revenue for SCS by forecast energy consumption for each year of the regulatory control period.

1.4.4 Expected impact of decision on electricity bills

Our bill impact calculation does not take into account the Queensland Government's electricity asset ownership dividend which offsets the residential bill amount by \$50 for each year in the 2020–23 period.¹² It also does not take into account the household relief package for COVID-19 impacts announced by the Queensland Government, which reduces the residential bill amount by a further \$50.¹³ It also does not take into account the impact of Solar Bonus Scheme costs currently being funded by the Queensland Government.¹⁴ This subsidy is due to end on 1 July 2020. The end of the subsidy will have an upward impact on the network component of electricity bills. This is because the Solar Bonus Scheme costs will be recovered from consumers as jurisdictional scheme amounts through network charges. Energy Queensland has advised that the Solar Bonus Scheme costs to be recovered in 2020–21 is estimated to be around \$148 million for Energex and \$90 million for Ergon Energy.

The annual electricity bill for consumers in Energex's network reflects the combined costs of all the electricity supply chain components—wholesale energy generation,

¹² Queensland Government, *QLD power assets continue to pay dividends*, 15 March 2020.

¹³ Queensland Government, *Palaszczuk Government unveils \$4 billion package to support health, jobs, households and Queensland businesses*, 24 March 2020; Queensland Government, *Electricity Relief for Households and Businesses Q&A*, 24 March 2020.

¹⁴ Queensland Competition Authority, *Draft Determination—Regulated retail electricity prices for 2020–21*, pp. 13–16.

transmission, distribution, metering, and retail costs. This final decision primarily relates to the distribution charges for SCS, which represent approximately 35.5 per cent on average for residential consumers' and 28.4 per cent on average for small business consumers' annual electricity bills in Energex's network area.¹⁵

We estimate the expected bill impact by varying the distribution charges in accordance with our final decision, while holding all other components—including the metering component—constant. This approach isolates the effect of our final decision on the core distribution charges only. However, this does not imply that other components will remain unchanged across the regulatory control period.¹⁶

Based on this approach, we expect that our final decision on the distribution component will decrease the average annual residential electricity bill in 2024–25 by about \$63 (\$ nominal) or 4.0 per cent from the 2019–20 total bill level. By comparison, had we accepted Energex's revised proposal, the expected change in the distribution component would decrease the average annual residential electricity bill in 2024–25 by about \$55 (\$ nominal) or 3.5 per cent from the 2019–20 total bill level.

Similarly, for an average small business consumer, we expect that our final decision on the distribution component will decrease the average annual electricity bill in 2024–25 by about \$71 (\$ nominal) or 3.2 per cent from the 2019–20 total bill level. By comparison, had we accepted Energex's revised proposal, the expected change in the distribution component would decrease the average annual small business electricity bill in 2024–25 by about \$63 (\$ nominal) or 2.8 per cent from the 2019–20 total bill level.

Our estimated impact is based on an average annual electricity usage of around 4600 kWh per annum for residential households¹⁷ and 6831 kWh for small businesses.¹⁸ Therefore, consumers with different usage will experience different changes in their bills. We also note that there are other factors, such as metering, wholesale and retail costs, which affect electricity bills.

Table 1.4 shows our estimated impact of our final decision and Energex's revised proposal on the average annual electricity bills for residential and small business consumers in its network over the 2020–25 regulatory control period.

¹⁵ AEMC, *Residential electricity price trends 2019 data – trends in QLD supply chain components*, December 2019; AER, *Final decision – Determination of default market offer prices 2020–21*, April 2020.

¹⁶ It also assumes that actual energy consumption will equal the forecast adopted in our final decision. Since Energex operates under a revenue cap, changes in energy consumption will also affect annual electricity bills across the 2020–25 regulatory control period.

¹⁷ AER, *Final determination, Default Market Offer Prices 2019–20*, April 2019, p. 8.

¹⁸ Queensland Competition Authority, *Draft Determination—Regulated retail electricity prices for 2020–21*, p. 5.

Table 1.4 Estimated impact of Energex's revised proposal and AER's final decision on annual electricity bills for the 2020–25 regulatory control period (\$ nominal)

	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25
AER final decision						
Residential annual bill	1570 ^a	1497	1499	1503	1506	1507
Annual change ^c		-73 (-4.6%)	2 (0.1%)	4 (0.3%)	3 (0.2%)	2 (0.1%)
Small business annual bill	2222 ^b	2140	2142	2146	2149	2151
Annual change ^c		-82 (-3.7%)	2 (0.1%)	5 (0.2%)	3 (0.1%)	2 (0.1%)
Energex revised proposal						
Residential annual bill	1570 ^a	1473	1482	1494	1505	1515
Annual change ^c		-97 (-6.2%)	9 (0.6%)	12 (0.8%)	11 (0.7%)	10 (0.7%)
Small business annual bill	2222 ^b	2112	2122	2136	2148	2159
Annual change ^c		-110 (-5.0%)	11 (0.5%)	13 (0.6%)	12 (0.6%)	11 (0.5%)

Source: AER analysis; AER, *Final determination, Default Market Offer Prices 2019–20*, April 2019, p. 8; Queensland Competition Authority, *Draft Determination—Regulated retail electricity prices for 2020–21*, p. 5.

- (a) Annual bill for 2019–20 is sourced from our final determination on Default Market Offer Prices for 2019–20, and reflects the average consumption of 4600 kWh for residential consumers in Queensland.
- (b) Annual bill for 2019–20 is sourced from Queensland Competition Authority's Draft Determination on regulated retail electricity prices for 2020–21, and reflects the average consumption of 6831 kWh for small business consumers in Queensland.
- (c) Annual change amounts and percentages are indicative. They are derived by varying the distribution component of the 2019–20 bill amounts in proportion to yearly expected revenue divided by forecast energy as provided by Energex. Actual bill impacts will vary depending on electricity consumption and tariff class.

Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
ARR	annual revenue requirement
CESS	capital expenditure sharing scheme
DMIAM	demand management innovation allowance mechanism
EBSS	efficiency benefit sharing scheme
NER	National Electricity Rules
NPV	net present value
opex	operating expenditure
PTRM	post-tax revenue model
RAB	regulatory asset base
SCS	standard control services
