FINAL DECISION

SA Power Networks
Distribution Determination
2020 to 2025

Attachment 1
Annual revenue requirement

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 SA Power Networks 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

Attachment 14 – Pass through events

Attachment 15 – Alternative control services

Attachment 17 – Connection policy

Attachment 18 – Tariff structure statement

Attachment A – Negotiating framework

Contents

Note 1-2

Contents 1-3

1 Annual revenue requirement 1-4

1.1 Final decision 1-4

1.2 SA Power Networks' revised proposal 1-5

1.3 Assessment approach 1-6

1.4 Reasons for final decision 1-6

1.4.1 X factor and annual expected revenue 1-7

1.4.2 Shared assets 1-10

1.4.3 Indicative average distribution price impact 1-11

1.4.4 Expected impact of decision on electricity bills 1-13

Shortened forms 1-16

1 Annual revenue requirement

This attachment sets out our final decision on SA Power Networks' 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 SA Power Networks' 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 $3919.6 million ($ nominal, unsmoothed) for SA Power Networks for the 2020–25 regulatory control period, reflecting our final decision on the various building block costs. This is a reduction of $17.4 million ($ nominal) or 0.4 per cent to SA Power Networks' revised proposed total ARR of $3937.0 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 ARRs. Our final decision is to approve total expected revenues of $3914.2 million ($ nominal) for SA Power Networks 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 SA Power Networks' ARR, annual expected revenues, and X factors ($ million, nominal)

	2020–21	2021–22	2022–23	2023–24	2024–25	Total
Return on capital	207.0	205.2	203.0	199.2	195.0	1009.3
Regulatory depreciation[a]	224.5	238.3	251.8	259.7	255.8	1230.1
Operating expenditure[b]	294.4	304.4	314.9	324.9	334.9	1573.6
Revenue adjustments[c]	27.7	–3.2	24.4	18.4	16.5	83.8
Net tax allowance	3.3	3.5	4.8	5.7	5.4	22.7
Annual revenue requirement (unsmoothed)	756.9	748.2	798.9	807.9	807.7	3919.6
Annual expected revenue (smoothed)	**775.9**	**779.4**	**782.8**	**786.3**	**789.8**	**3914.2**

	2020–21	2021–22	2022–23	2023–24	2024–25	Total
X factor[d]	n/a[e]	1.79%	1.79%	1.79%	1.79%	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), shared assets adjustments 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) SA Power Networks 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 9.4 per cent lower than the approved total annual revenue for 2019–20 in real terms, or 7.3 per cent lower in nominal terms.

1.2 SA Power Networks' revised proposal

SA Power Networks' revised proposal included total expected revenues (smoothed) of $3933.4 million ($ nominal) for the 2020–25 regulatory control period.

Table 1.2 sets out SA Power Networks' revised proposed ARR, the annual expected revenue, and the X factor for each year of the 2020–25 regulatory control period.

Table 1.2 SA Power Networks' 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	208.9	209.3	209.7	209.3	208.6	1045.7
Regulatory depreciation[a]	220.8	235.2	249.4	258.3	255.3	1219.0
Operating expenditure[b]	294.7	304.9	315.7	326.0	336.4	1577.7
Revenue adjustments[c]	27.7	–3.3	24.5	18.5	16.6	84.1
Net tax allowance	1.1	0.8	2.0	3.3	3.3	10.5
Annual revenue requirement (unsmoothed)[d]	753.2	746.9	801.4	815.3	820.1	3937.0
Annual expected revenue (smoothed)[e]	**762.8**	**774.6**	**786.5**	**798.6**	**810.9**	**3933.4**
X factor	n/a[e]	0.80%	0.80%	0.80%	0.80%	n/a

Source: SA Power Networks, *Attachment 1 - Annual revenue requirement and control mechanism - 2020–25 Revised Regulatory Proposal,* 10 December 2019, p. 8; SA Power Networks, *SAPN - 1.1 - PTRM*, 10 December 2019.

(a) Regulatory depreciation is straight-line depreciation net of the inflation indexation on the opening RAB.

(b) Includes debt raising costs and a new opex step change (resubmitted on 10 February 2020).

(c) Includes revenue adjustments from EBSS, CESS, shared assets adjustments and DMIAM.

(d) Due to the opex step change submitted by SA Power Networks on 10 February 2020, we have updated the revised proposed ARR and expected revenues to reflect this change.

(e) SA Power Networks 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 $3919.6 million ($ nominal, unsmoothed) for SA Power Networks for the 2020–25 regulatory control period. This is a reduction of $17.4 million ($ nominal) or 0.4 per cent to SA Power Networks' revised proposed total ARR of $3937.0 million ($ 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 SA Power Networks, and the corresponding components from its revised proposal and our draft decision.

The changes we made to SA Power Networks' revised proposed building blocks include (in nominal terms):

- a reduction in the return on capital allowance of $36.5 million or 3.5 per cent (attachments 2, 3 and 5)
- an increase in the regulatory depreciation allowance of $11.1 million or 0.9 per cent (attachment 4)
- a reduction in the operating expenditure (opex) allowance of $4.1 million or 0.3 per cent (attachment 6)[2]
- an increase in the cost of corporate income tax of $12.3 million or 116.8 per cent (attachment 7).
- a reduction in the revenue adjustments of $0.3 million or 0.4 per cent (section 1.4.2 and attachments 8, 9 and 11).

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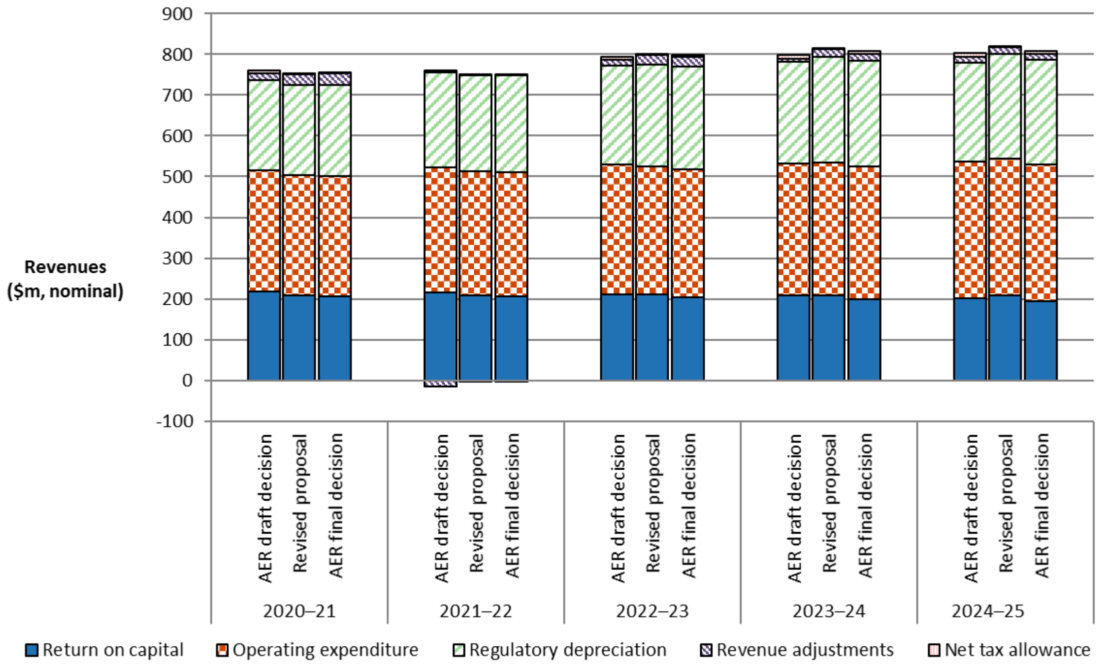
1 AER, *SA Power Networks 2020–25 Determination – Draft Decision – Attachment 1 – Annual Revenue Requirement,* October 2019, pp. 8–9.

2 Although we have accepted the opex proposal and the step change, we have updated expected inflation which resulted in this reduction.

Figure 1.1 AER's draft and final decisions and SA Power Networks' revised proposed annual building block revenue requirement ($ million, nominal)



Source: AER analysis; SA Power Networks, *SAPN - 1.1 - PTRM*, 10 December 2019.

Note: Revenue adjustments include EBSS, CESS, shared assets adjustments and DMIAM amounts. Opex includes debt raising costs.

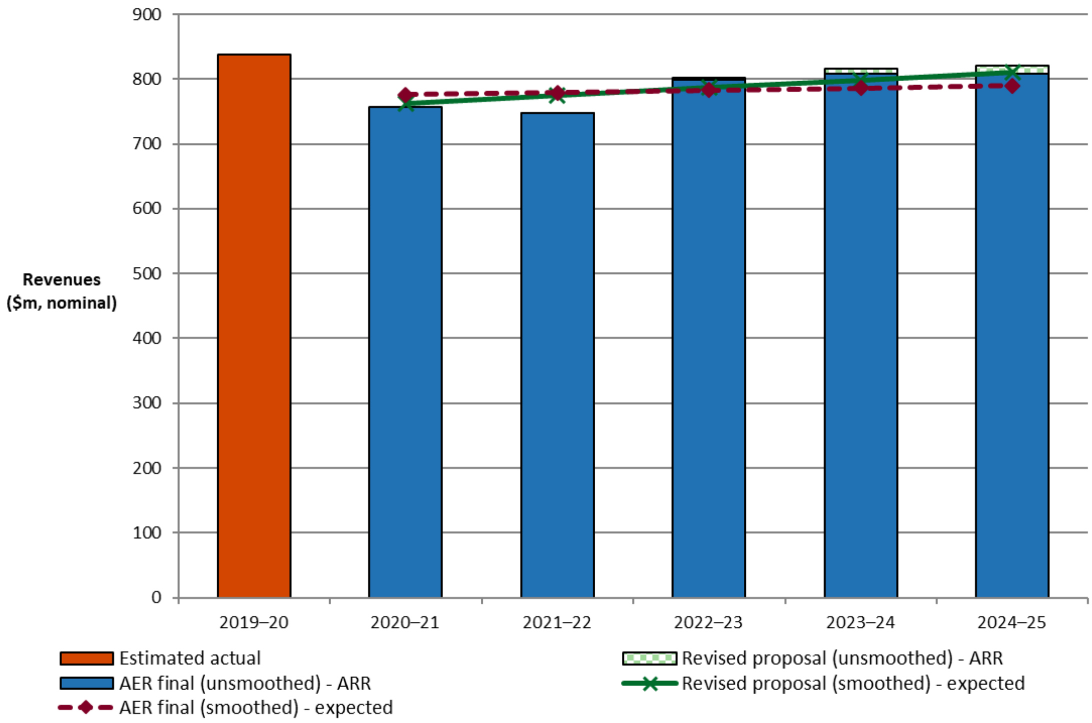
1.4.1 X factor and annual expected revenue

For this final decision, we determine an X factor for SA Power Networks of 1.79 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 $3432.2 million ($ nominal) as at 1 July 2020. Based on this NPV and applying the CPI–X framework we determine that the expected revenue (smoothed) for SA Power Networks is $775.9 million in 2020–21 increasing to $789.8 million in 2024–25 ($ nominal). The resulting total expected revenue for SA Power Networks is $3914.2 million for the 2020–25 regulatory control period.

Figure 1.2 shows our final decision on SA Power Networks' annual expected revenue (smoothed revenue) and the ARR (unsmoothed revenue) for the 2020–25 regulatory control period.

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

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



Source: SA Power Networks, *SAPN - 1.1 - PTRM*, 10 December 2019; AER analysis.

We have taken into account the building block costs determined in this final decision when smoothing the expected revenues for SA Power Networks over the 2020–25 regulatory control period. In doing so, we have set the expected revenue for the first regulatory year at $775.9 million ($ nominal) which is $19.0 million higher than the ARR for that year. We then apply an expected inflation rate of 2.27 per cent per annum and an X factor of 1.79 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] We have accepted the smoothing profile adopted by SA Power Networks in its revised proposal, which reflected an alternative profile we explored in the draft decision.[6] This alternative smoothing profile passes on savings in

[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 SA Power Networks, this divergence is around 2.2 per cent.

[6] AER, *SA Power Networks 2020–25 Determination – Draft Decision – Attachment 1 – Annual Revenue Requirement,* October 2019. pp. 11-12.

a more progressive manner. AGL's submission supported SA Power Networks' revised proposed revenue smoothing profile.[7]

Our final decision results in an average decrease of 1.2 per cent per annum ($ nominal) in the expected revenue over the 2020–25 regulatory control period.[8] This consists of an initial decrease of 7.3 per cent from 2019–20 to 2020–21, followed by average annual increases of 0.4 per cent during the remainder of the 2020–25 regulatory control period.[9] Our final decision also results in a decrease of 5.6 per cent in real terms ($2019–20) to SA Power Networks' 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 SA Power Networks' 2020–25 regulatory control period with SA Power Networks' revised proposed revenue requirement for the same period, and the approved revenue for the 2015–20 regulatory control period.

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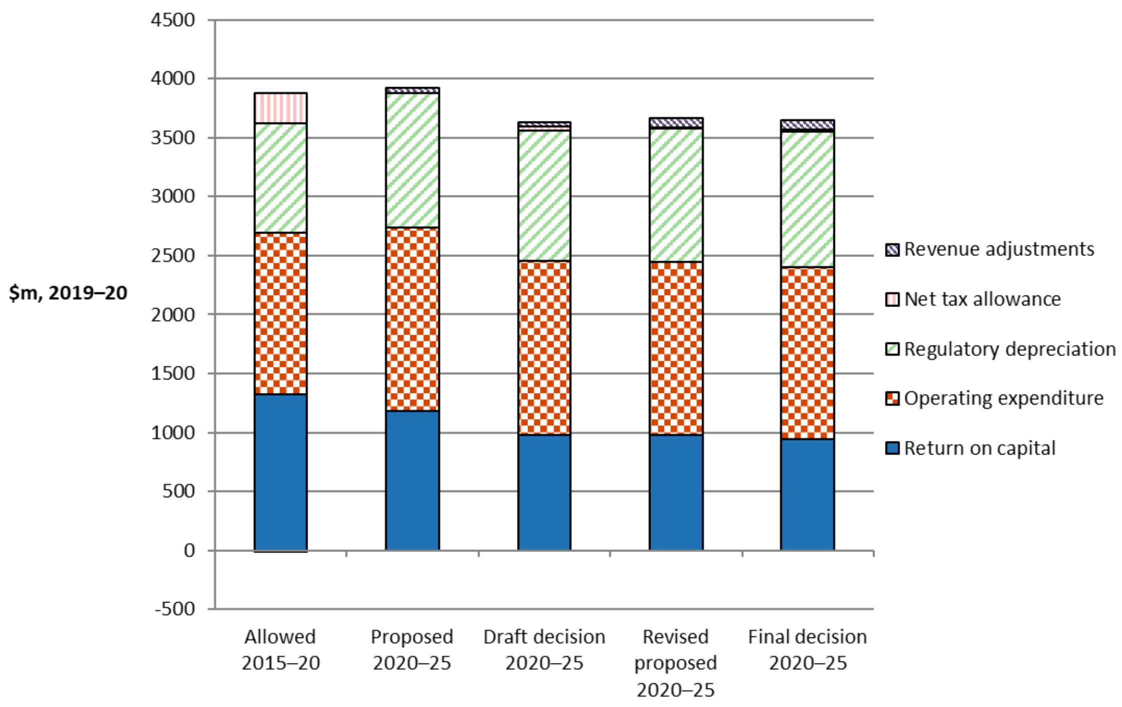
7 AGL, *Submission on SA Power Networks Draft Decision 2020–25*, January 2020, p.4; A submission by John Herbst suggested another approach of using actual revenues and making relevant adjustments through the unders and overs account at pricing time. We do not consider this a good approach as it effectively removes any smoothing of revenues. The expected revenues under our approach provide targets for SA Power Networks to aim for. These amounts are smoothed to reduce the potential for prices fluctuations to customers. However, actual revenues will need to be accounted for through the unders and overs account. Under our approach, compared the one suggested, the degree of true up in the unders and overs account is markedly reduced. John Herbst, *Submission to draft decision*, p.6.

8 In real 2019–20 dollar terms, our approved expected revenue for SA Power Networks results in an average decrease of 3.4 per cent per annum over the 2020–25 regulatory control period.

9 In real 2019–20 dollar terms, this consists an initial decrease of 9.4 per cent from 2019–20 to 2020–21, followed by annual average decreases of 1.8 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; SA Power Networks, *SAPN - 1.1 - PTRM*, 10 December 2019.

1.4.2 Shared assets

Our final decision is to apply a shared asset revenue adjustment to SA Power Networks' total expected revenue for the 2020–25 regulatory control period.

In our draft decision, we applied a shared asset revenue adjustment to SA Power Networks' revenues.[10] SA Power Networks' revised proposal adopted our draft decision approach.[11]

Consistent with the draft decision, we confirm our assessment that SA Power Networks' forecast unregulated revenues from shared assets for the 2020–25 regulatory control period are reasonable. Therefore, our final decision will see $6.3 million ($2019–20) shared with customers across the 2020–25 regulatory control period, using the same assessment approach as the draft decision.

10 AER, *SA Power Networks 2020–25 Determination – Draft Decision – Attachment 1 – Annual Revenue Requirement,* October 2019, p. 13.

11 SA Power Networks, *Attachment 1 - Annual revenue requirement and control mechanism – 2020–25 Revised Regulatory Proposal*, 10 December 2019, p. 10.

1.4.3 Indicative average distribution price impact

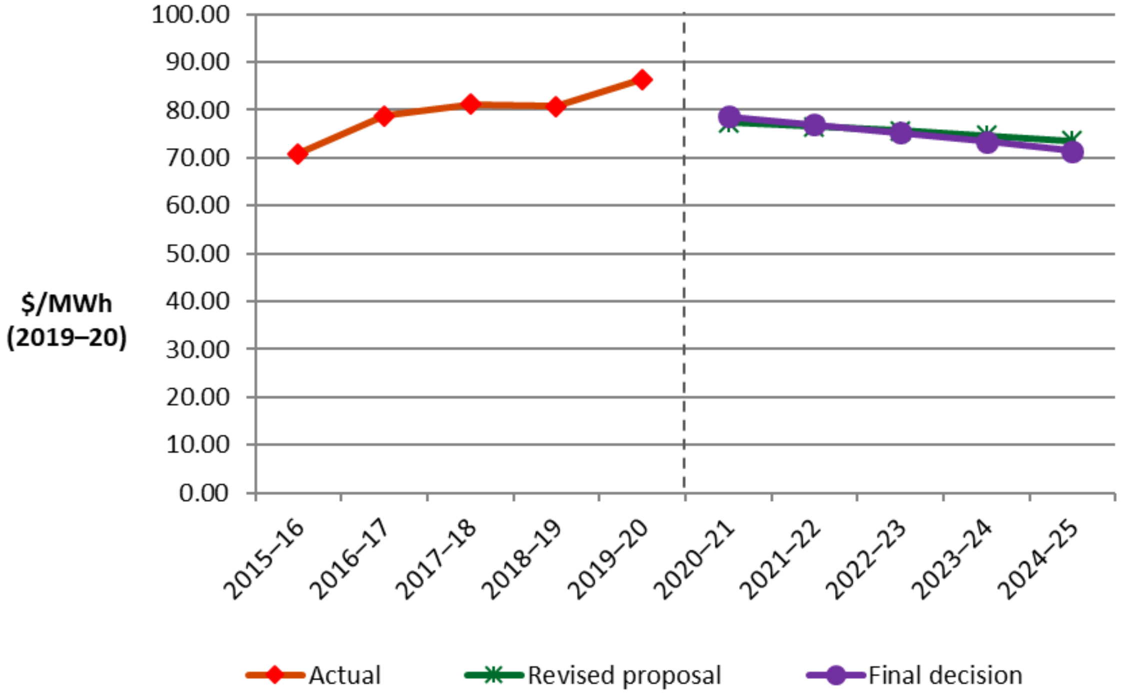
Our final decision on SA Power Networks' expected revenues ultimately affects the prices consumers pay for electricity. There are several steps required in translating our revenue decision into indicative distribution price impact.

We regulate SA Power Networks' SCS under a revenue cap form of control. This means our final decision on SA Power Networks' expected revenues does not directly translate to price impacts. This is because SA Power Networks' 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 SA Power Networks as part of this determination. However, we will assess SA Power Networks' 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 final determination on the expected revenues for SA Power Networks 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 SA Power Networks' forecast energy consumption, which we have adopted for this final decision.

Figure 1.4 shows SA Power Networks' 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 SA Power Networks' revised proposed revenue requirement.

Figure 1.4 Indicative price path for SA Power Networks ($/MWh, 2019–20)



Source: AER analysis.

We estimate that our final decision on SA Power Networks' annual expected revenue will result in a decrease to average distribution charges by about 3.6 per cent per annum over the 2020–25 regulatory control period in real 2019–20 dollar terms.[12] This compares to the real average decrease of approximately 3.2 per cent per annum in SA Power Networks' revised proposal for the 2020–25 regulatory control period.[13] 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 SA Power Networks' revised proposal and our final decision

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12 In nominal terms we estimate average distribution charges to decrease by 1.4 per cent per annum. This amount reflects an expected inflation rate of 2.27 per cent per annum as determined in this final decision.

13 In nominal terms SA Power Networks' revised proposal would decrease distribution charges by 0.9 per cent per annum. This amount reflects an expected inflation rate of 2.36 per cent per annum as proposed by SA Power Networks in its revised proposal.

Table 1.3 Comparison of revenue and price impacts of SA Power Networks' 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)	837.3	775.9	779.4	782.8	786.3	789.8
Price path ($/MWh)[a]	86.39	80.50	80.65	80.81	80.75	80.43
Revenue (change)		–7.3%	0.4%	0.4%	0.4%	0.4%
Price path (change)		–6.8%	0.2%	0.2%	–0.1%	–0.4%
SA Power Networks revised proposal						
Revenue ($ million)	837.3	762.8	774.6	786.5	798.6	810.9
Price path ($/MWh)[a]	86.39	79.14	80.15	81.19	82.02	82.59
Revenue (change)		–8.9%	1.5%	1.5%	1.5%	1.5%
Price path (change)		–8.4%	1.3%	1.3%	1.0%	0.7%

Source: AER analysis; SA Power Networks, *SAPN - 1.1 - PTRM,* 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

The annual electricity bill for consumers in SA Power Networks' network reflects the combined costs of all the electricity supply chain components—wholesale energy generation, transmission, distribution, metering, and retail costs. This final decision primarily relates to the distribution charges for SCS, which represent approximately 30.2 per cent on average for residential consumers' and 26.6 per cent on average for small business consumers' annual electricity bills in SA Power Networks' network area.[14]

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.[15]

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

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

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 $40 ($ nominal) or 2.1 per cent from the 2019–20 total bill level. By comparison, had we accepted SA Power Networks' revised proposal, the expected change in the distribution component would decrease the average annual residential electricity bill in 2024–25 by about $26 ($ nominal) or 1.3 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 $167 ($ nominal) or 1.8 per cent from the 2019–20 total bill level. By comparison, had we accepted SA Power Networks' revised proposal, the expected change in the distribution component would decrease the average annual small business electricity bill in 2024–25 by about $107 ($ nominal) or 1.2 per cent from the 2019–20 total bill level.

Our estimated impact is based on an average annual electricity usage of around 4000 kWh per annum for residential households and 20000 kWh for small businesses.[16] 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 SA Power Networks' revised proposal on the average annual electricity bills for residential and small business consumers in its network over the 2020–25 regulatory control period.

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

Table 1.4 Estimated impact of SA Power Networks' 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	1941[a]	1901	1902	1903	1903	1901
Annual change[c]		–40 (–2.1%)	1 (0.1%)	1 (0.1%)	–0 (–0.0%)	–2 (–0.1%)
Small business annual bill	9120[b]	8954	8959	8963	8962	8953
Annual change[c]		–166 (–1.8%)	4 (0%)	5 (0.1%)	–2 (–0.0%)	–9 (–0.1%)
SA Power Networks revised proposal						
Residential annual bill	1941[a]	1892	1899	1906	1911	1915
Annual change[c]		–49 (–2.5%)	7 (0.4%)	7 (0.4%)	6 (0.3%)	4 (0.2%)
Small business annual bill	9120[b]	8916	8945	8974	8997	9013
Annual change[c]		–204 (–2.2%)	28 (0.3%)	29 (0.3%)	23 (0.3%)	16 (0.2%)

Source: AER analysis; AER, *Final determination, Default Market Offer Prices 2019–20*, April 2019, p. 8.

(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 4000 kWh for residential consumers in South Australia.

(b) 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 20000 kWh for small business consumers in South Australia.

(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 SA Power Networks. 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