FINAL DECISION

SA Power Networks Distribution Determination 2020 to 2025

Attachment 4 Regulatory depreciation

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

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4 Regulatory depreciation

Depreciation is the allowance provided so capital investors recover their investment over the economic life of the asset (return of capital). In deciding whether to approve the depreciation schedules submitted by SA Power Networks, we make determinations on the indexation of the regulatory asset base (RAB) and depreciation building blocks for SA Power Networks' 2020–25 regulatory control period.[1] The regulatory depreciation allowance is the net total of the straight-line depreciation less the indexation of the RAB.

This attachment sets out our final decision on SA Power Networks' regulatory depreciation allowance. It also presents our final decision on the proposed depreciation schedules, including an assessment of the proposed standard asset lives used for forecasting depreciation.

4.1 Final decision

Our final decision is to determine a regulatory depreciation allowance of $1230.1 million ($ nominal) for SA Power Networks for the 2020–25 regulatory control period. This amount represents an increase of $11.1 million (or 0.9 per cent) to the $1219.0 million ($ nominal) in SA Power Networks' revised proposal.[2] It is $42.3 million (or 3.6 per cent) higher than the regulatory depreciation allowance determined in the draft decision. In coming to this decision:

- We accept SA Power Networks' revised proposed straight-line method to calculate the regulatory depreciation, which is consistent with our draft decision.
- We accept SA Power Networks' revised proposal to continue with the year-by-year tracking approach to implement straight-line depreciation of existing assets, consistent with our draft decision. However, we have updated the inflation input in the year-by-year tracking calculations with actual consumer price index (CPI) for 2019–20 which is now available.
- We accept SA Power Networks' revised proposed asset classes and standard asset lives, which are consistent with our draft decision. For this final decision, we accept SA Power Networks' corrections to its revised proposal allocation of capital expenditure (capex) activities to the new short life asset classes in accordance with the draft decision. We also accept SA Power Networks' four additional activities for allocation to the new asset class of 'Electronic network assets'.

We have also made determinations on other components of SA Power Networks' revised proposal, which affect the RAB and in turn impacts the forecast regulatory depreciation allowance. The increase to the regulatory depreciation allowance from the revised proposal primarily reflects our final decision expected inflation rate for the

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1 NER, cll. 6.12.1, 6.4.3.

2 SA Power Networks, *1.1 - PTRM,* 10 December 2019.

2020–25 regulatory control period. Our final decision for SA Power Networks' straight-line depreciation component of regulatory depreciation is lower than the revised proposal by $13.7 million due to our determination of the opening RABs (attachment 2) and the forecast capex (attachment 5). However, this reduction is offset by our final decision on the indexation of the RAB, which is $24.8 million lower than the revised proposal. This is largely due to applying a lower expected inflation rate of 2.27 per cent per annum in this final decision (attachment 3) compared to SA Power Networks' revised proposal of 2.36 per cent per annum. Subsequently, the net effect is an increase in the regulatory depreciation allowance of $11.1 million.

Table 4.1 sets out our final decision on the forecast regulatory depreciation allowance for SA Power Networks over the 2020–25 regulatory control period.

Table 4.1 AER's final decision on SA Power Networks' depreciation allowance for the 2020–25 regulatory control period ($million, nominal)

	2020–21	2021–22	2022–23	2023–24	2024–25	Total
Straight-line depreciation	323.7	340.1	356.2	366.2	364.2	1750.5
Less: inflation indexation on opening RAB	99.2	101.8	104.5	106.5	108.4	520.4
Regulatory depreciation	**224.5**	**238.3**	**251.8**	**259.7**	**255.8**	**1230.1**

Source: AER analysis.

Year-by-year tracking approach

For this final decision, we accept SA Power Networks' revised proposal to continue using the year-by-year tracking approach to calculate the forecast straight-line depreciation amounts for its asset values as at 1 July 2020. This approach (in addition to grouping assets by type via asset classes) tracks the asset classes on a year-by-year basis to implement straight-line depreciation. This is consistent with our determination for SA Power Networks' previous regulatory control period of 2015–20.

In the draft decision, we required various minor modelling adjustments to SA Power Networks' depreciation model used for implementing the year-by-year tracking approach.[3] SA Power Networks' revised proposal adopted all our draft decision changes. It also updated the 2018–19 and 2019–20 capex, and 2019–20 expected inflation figures in the revised proposed depreciation model to be consistent with its revised proposed RFM.[4]

For the reasons discussed in attachment 2, we accept the updated 2018–19 and 2019–20 capex inputs to the RFM. As a result, we also accept these updates for the year-by-year tracking depreciation model. However, we have updated the depreciation

[3] AER, *SA Power Networks 2020–25 – Draft decision – Attachment 4 – Regulatory depreciation*, October 2019, pp. 12–13.

[4] SA Power Networks, *Revised Proposal Attachment 4 – Regulatory Depreciation*, 10 December 2019, p. 7.

model for the actual CPI for 2019–20 to be consistent with the final decision RFM, which became available after SA Power Networks submitted its revised proposal.

Activities associated with the new short life asset classes

For this final decision, we accept SA Power Networks' revised proposal to reallocate assets associated with certain activities to the new asset class of 'Electronic network assets' from the 'Communications', 'IT assets' and 'In-house software' asset classes.[5] We also accept that the assets associated with the activity of 'Low voltage two way network' should be allocated to the new asset class of 'Electronic network assets'. We are satisfied the assets associated with these activities have an economic life that is consistent with that assigned to this asset class. Further, our final decision corrects several allocation of refurbishment activities to asset classes in SA Power Networks' revised proposal capex modelling to reflect our draft decision.

In our draft decision, we accepted SA Power Networks' proposal to introduce the following three new asset classes with shorter standard asset lives: 'Sub-transmission and distribution lines - short life', 'Substations and transformers - short life', and 'Electronic network assets'. The forecast capex allocated to the first two asset classes is associated with asset refurbishment activities. We accepted that asset refurbishment has shorter economic lives compared to a brand new asset.[6] The 'Electronic network assets' asset class relates to low voltage monitors, protection relays and DC auxiliary supplies. We accepted that this asset class has a shorter economic life than other network assets after reviewing the mix of the assets proposed for allocation to it.[7]

While we accepted the addition of the three new shorter life asset classes, our draft decision did not accept the proposed forecast capex allocated to these new asset classes for the 2020–25 regulatory control period. We considered some of these assets were either not capable of refurbishment and/or were assets that could be redeployed to other parts of the network once the underlying assets expired.[8] Our draft decision also removed assets not included in our substitute capex forecast from these asset classes as SA Power Networks has not provided sufficient evidence demonstrating the need for the program.[9]

SA Power Networks' revised proposal did not adopt our draft decision in full and allocated $183.1 million ($2019–20) of forecast capex to the three new shorter life

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5 These activities relate to SCADA improvement project; SCADA data concentrator; and Low voltage management.

6 AER, *SA Power Networks 2020–25 – Draft decision – Attachment 4 – Regulatory depreciation*, October 2019, pp. 14–16.

7 AER, *SA Power Networks 2020–25 – Draft decision – Attachment 4 – Regulatory depreciation*, October 2019, pp. 14–16.

8 AER, *SA Power Networks 2020–25 – Draft decision – Attachment 4 – Regulatory depreciation*, October 2019, pp. 15–18.

9 'Low voltage two way network (also referred to Low Voltage transformer monitoring)' and 'Protection compliance' projects. AER, *SA Power Networks 2020–25 – Draft decision – Attachment 4 – Regulatory depreciation*, October 2019, pp. 17–19; AER, *SA Power Networks 2020–25 – Draft decision – Attachment 5 – Capital Expenditure*, October 2019, pp. 28, 38.

asset classes. It adopted in part our draft decision, which reallocated the assets that were allocated to the new shorter life asset classes at the initial proposal stage back to the existing asset classes. However, the revised proposal allocated many of these assets that were reallocated to the existing asset classes in our draft decision back to the shorter life asset classes.

SA Power Networks' revised proposal also allocated capex associated with the 'Low voltage (LV) two way network' activity to the shorter life asset class of 'Electronic network assets'. This activity was not accepted as part of our draft decision substitute capex program.

We made inquiries with SA Power Networks to better understand the reasons for these reallocations because they were not clearly set out in the revised proposal and only reflected in the revised proposal capex modelling.[10] In its response, SA Power Networks submitted that many of the asset reallocations were unintended and should reflect the draft decision. SA Power Networks rectified these errors and submitted a revised capex model as part of its response.[11] We have accepted the revisions as they correctly reflect the draft decision.

After correcting the acknowledged errors, SA Power Networks allocated $120.9 million ($2019–20) of forecast capex to the three new shorter life asset classes. There remained an additional set of four activities that SA Power Networks' revised proposal classified into shorter life asset classes compared to our draft decision. SA Power Networks allocated the assets associated with the 'SCADA improvement project', 'SCADA data concentrator', 'Low voltage management' activities to the asset class of 'Electronic network assets'. SA Power Networks submitted that the activities related to the installation of electronic devices which have a shorter asset life.[12] The capex associated with the 'LV two way network' activity also remained after the error correction.

After examining the additional information provided, we accept the proposed allocation of assets associated with the 'SCADA improvement project', 'SCADA data concentrator', 'Low voltage management' and 'LV two way network' activities to the asset class of 'Electronic Network assets'. We consider that the nature of the assets are consistent with the economic life assigned to that asset class.

Our final decision is to approve $111.9 million ($2019–20) of forecast capex for the activities in the revised proposal to be allocated to the new asset classes for the 2020–25 regulatory control period. Our final decision reflects a lower capex allowance for

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10 SA Power Networks, *5.1 - Revised Regulatory Proposal Capex Model*, 10 December 2019.

11 SA Power Networks, *Response to AER information request #086*, 23 January 2020; SA Power Networks, *5.1 - Revised Regulatory Proposal Capex Model - Rev 1*, 23 January 2020.

12 SA Power Networks, *Response to AER information request #086*, 23 January 2020, pp. 7–8

poles refurbishment (plating) activities, which is a subset of reduction to poles replacement capex. This reduction is discussed in attachment 5.[13]

Table 4.2 sets out our draft decision, SA Power Networks' revised proposal after error corrections, and our final decision on the allocation of particular activities to the new asset class of 'Electronic networks assets'.

Table 4.2 Summary of SA Power Networks' revised proposal after error correction and the AER's assessment of activities to asset class of 'Electronic network assets'

Activities for new asset class	AER draft decision	Revised proposal after error correction	AER final decision
Low voltage two way network (also referred to as Low voltage monitoring)	Not included in the substitute capex forecast	Included in revised capex forecast and allocated to 'Electronic network assets'	Electronic network assets
SCADA improvement project (incl TDU & RTU)	Allocated to 'Communications', 'IT' and 'In-house software' asset classes as per initial proposal	Electronic network assets	Electronic network assets
SCADA data concentrator	Allocated to 'Communications', 'IT' and 'In-house software' asset classes as per initial proposal	Electronic network assets	Electronic network assets
Low voltage management (also referred to as Distribution system operator transition program)	Allocated to 'Communication', 'IT' and 'In-house software' asset classes as per initial proposal	Electronic network assets	Electronic network assets

Source: SA Power Networks, *Response to AER information request #086*, 23 January 2020; AER analysis.

Standard asset lives

For this final decision, we accept SA Power Networks' revised proposed standard asset lives for its asset classes in respect of the forecast capex to be incurred for the 2020–25 regulatory control period. They are consistent with our draft decision.

SA Power Networks' revised proposal did not forecast any benchmark equity raising costs for the 2020–25 regulatory control period, based on the method employed in the post-tax revenue model (PTRM). Consistent with this, for the final decision PTRM we estimate zero equity raising costs. Accordingly, we do not need to set a standard asset life for the 'Equity raising costs' asset class.

[13] AER, *Final decision: SA Power Networks distribution determination 2020 to 2025*, *attachment 5*, June 2020, pp. 19–37.

Table 4.3 sets out our final decision on SA Power Networks' standard asset lives for the 2020–25 regulatory control period. We are satisfied the standard asset lives would lead to a depreciation schedule that reflects the nature of the assets over the economic lives of the asset classes. Further, the sum of the real value of the depreciation attributable to the assets is equivalent to the value at which the assets was first included in the RAB for SA Power Networks.[14]

Table 4.3 AER's final decision on SA Power Networks' standard asset lives for the 2020–25 regulatory control period (years)

Asset class	Standard asset life
Sub-transmission lines	55.0
Distribution lines	55.0
Substations	45.0
Distribution transformers	45.0
LVS	55.0
Communications	15.0
Contributions	n/a
Land	n/a
Substation land	n/a
Easements	n/a
Buildings	40.0
Heavy vehicles - 15 year	15.0
Heavy vehicles - 10 year	10.0
Light vehicles	5.0
IT assets	5.0
Plant & tools/office furniture	10.0
Sub-transmission and distribution lines - short life	25.0
Substations and transformers - short life	20.0
Electronic network assets	15.0
Buildings - capital works	40.0
In-house software	5.0
Equity raising costs[a]	n/a

[14] NER, cll. 6.5.5(b)(1)–(2).

Source: AER analysis.

(a) For this final decision, the forecast capex determined for SA Power Networks does not meet a level to trigger any benchmark equity raising costs.

n/a: not applicable. We have not assigned a standard asset life to some asset classes because the assets allocated to those asset classes are not subject to depreciation or not have any future assets being allocated to them.

4.2 Assessment approach

We did not change our assessment approach for regulatory depreciation from our draft decision. Attachment 4 (section 4.3) of our draft decision details that approach.[15]

[15] AER, *SA Power Networks 2020–25 – Draft decision – Attachment 4 – Regulatory depreciation,* October 2019, pp. 7–11.

Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
capex	capital expenditure
CPI	consumer price index
NER	national electricity rules
PTRM	post-tax revenue model
RAB	regulatory asset base